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Two years, ten issues, and hundreds of pages—that's the journey of *RETRO Videogame Magazine* in a nutshell. What better time to pull off to the side of the road and reflect on where we were and where we're going from here?

I pitched Mike Kennedy the idea of rounding up the cream of *RETRO*'s crop when I began my tenure as editor-in-chief during the summer of 2015. This book began as a way for me to understand the magazine's roots, and ended up becoming a sort of mission statement. *RETRO*'s future lies in publishing articles that, like our favorite old-school games, stand the test of time.

RETRO Replay Volume 1 emblemizes that mission. Mike and I worked together to narrow down our lists of favorites from the magazine's first 10 issues. It wasn't easy, but we're pleased with the results. I enjoyed each of these articles the first time around, and I think you will, too—today, tomorrow, and beyond.

Before I turn you loose on *Replay*'s 150+ pages of retro goodness, Mike and I would like to extend a massive thank-you to all our subscribers, past and present, as well as Kickstarter backers who have supported us on this journey. This issue is for you. Enjoy.

Happy reading,

DAVID L. CRADDOCK,
EDITOR-IN-CHIEF

In addition to serving as editor-in-chief of RETRO Magazine, ***DAVID L. CRADDOCK*** *writes fiction as well as books chronicling videogame design and culture. His publication credits include* Stay Awhile and Listen *and* Dungeon Hacks. *Follow him online at @davidlcraddock.*

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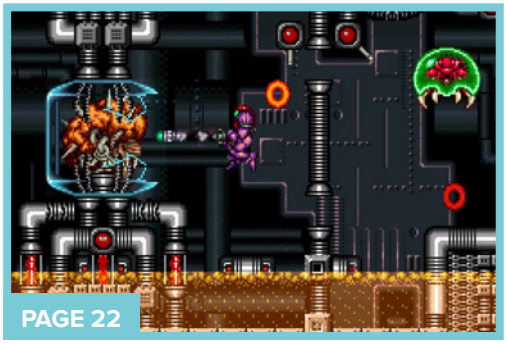

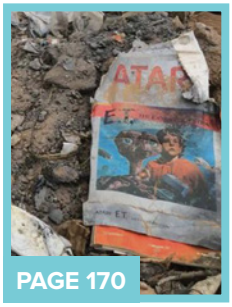

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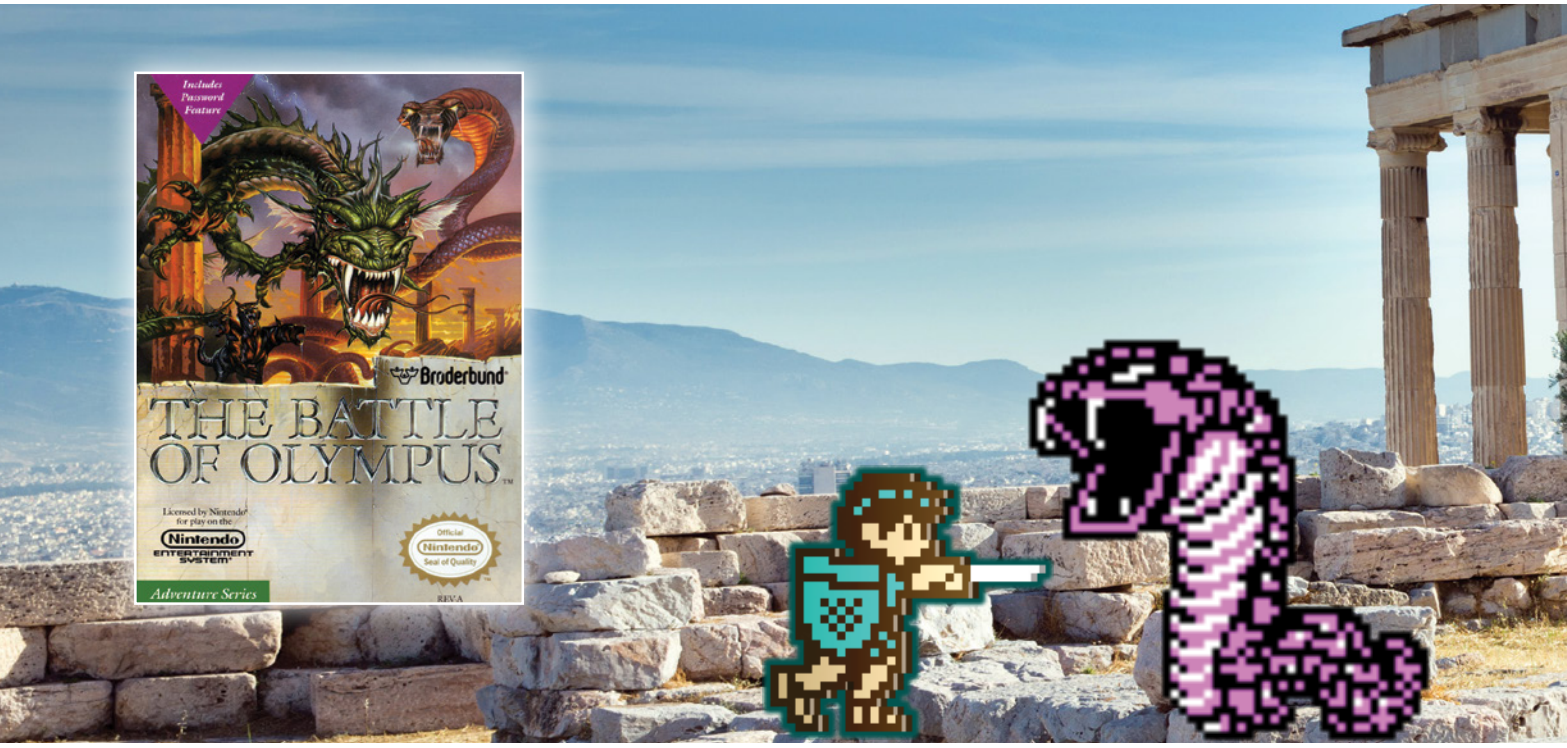


THE BATTLE OF OLYMPUS

by Kat Bailey

PUBLISHER: **Brøderbund** PLATFORM: **NES** RELEASE DATE: **03.23.88 JP/12.89 US**

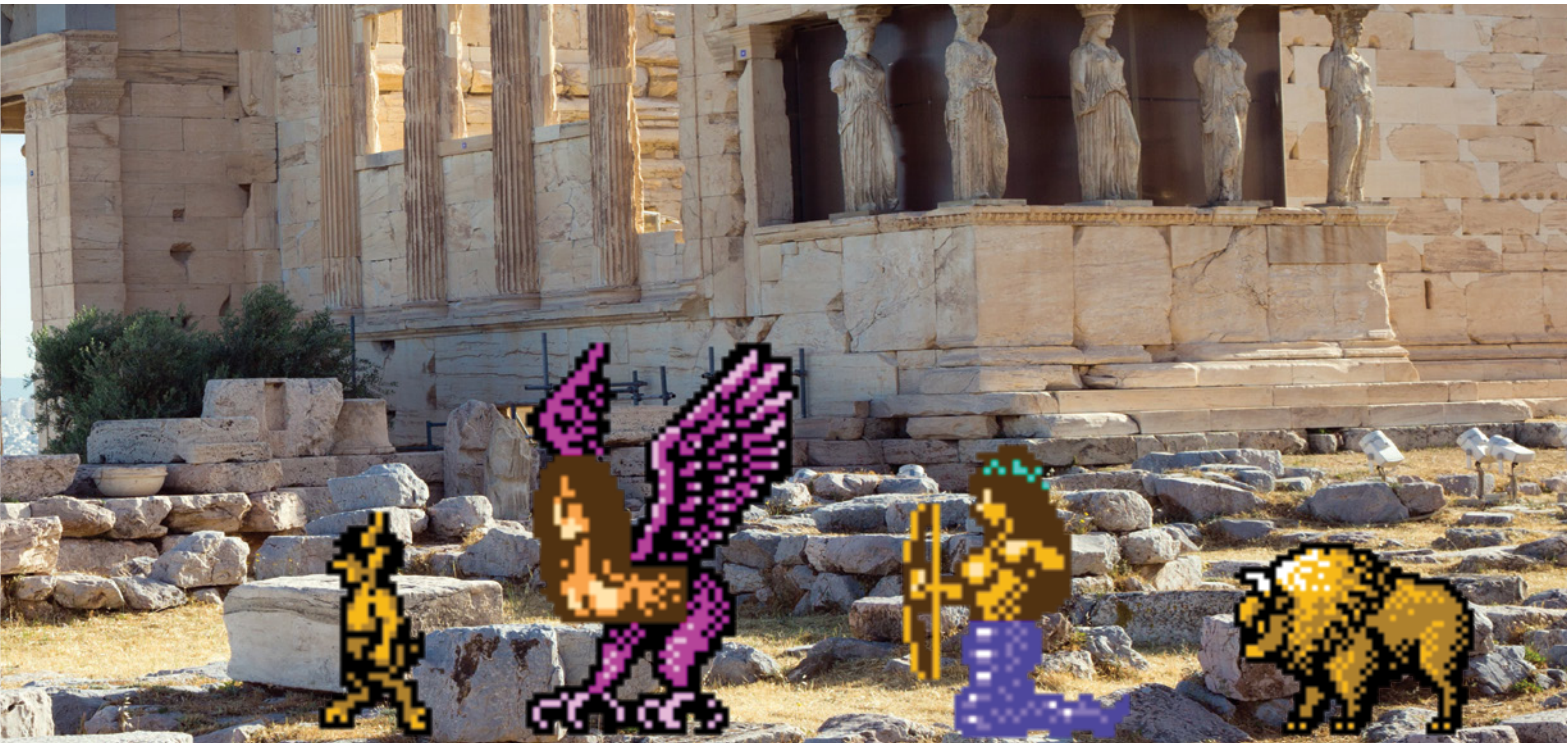
THE *BATTLE OF OLYMPUS* is the quintessential example of the NES game that fell between the cracks of history. It's neither as terrible as LJN's *Back to the Future*, as memorably cheesy as *Bad Dudes*, or as daringly experimental as *The Guardian Legend*. It's perfectly decent, which means it inspires neither devotion nor blind hatred. But it's nevertheless remembered fondly by those who dug it up from the bottom of discount bins or grabbed it at random from the video store shelf.

In the Shadows of Greece (and *Zelda II*). So what made *The Battle of Olympus* stand out to these fans? Some of it was merit — it was a pretty solid game. Some of it was the coincidence of discovery. Fair or not, *Battle of Olympus* didn't receive much attention in mainstream outlets, making its discovery by other means practically mandatory.

It arrived in a somewhat chaotic period for the medium. The fall of 1989 was something of a transitional period for gaming, with the Game Boy, the first 16-bit consoles, and (hilariously) the Power Glove all arriving at the same time. For many of the major developers it was a chance to be experimental. Emboldened by past successes, studios went all out to create the most ambitious NES games ever made. The games they created, like *Zelda II* and *Simon's Quest*, didn't quite reach the high-water mark that their creators envisioned, but such daring earned them their share of fans.

Amid this chaotic milieu, *Battle of Olympus* came off rather unassumingly. It was a side-scrolling adventure game set in ancient Greece, and it starred a warrior named Orpheus, who was on a quest to save his beloved from Hades. Developed by a little-known Japanese studio called Infinity, it was originally titled *The Olympus Fight: The Legend of Love*. In the U.S. it was published by Brøderbund, which had earlier made a name for itself on PC with the *Carmen Sandiego* series.

It didn't have the most compelling or unique pitch, but *Battle of Olympus* had a couple things going for it out of the gate. First, the box art was great. The massive, serpentine hydra wrapped around the familiar pillars of ancient Greece were eye-catching in an era when box art was mostly awful (think *Mega Man*). Second, the setting itself was enough to set *Battle of Olympus* apart from other games in the genre. Outside of *Kid Icarus*, hardly any games drew upon ancient Greece.



There was also its rather unique relationship with *Zelda II*. Released a year after Nintendo's game, *Battle of Olympus* was regarded by many at the time as a simple knockoff, making it a common footnote in *Zelda II* retrospectives. The two games do look strikingly similar, and in fact share some of the same glitches, including one commonly used for speedruns that allows the main characters to zoom through the game.

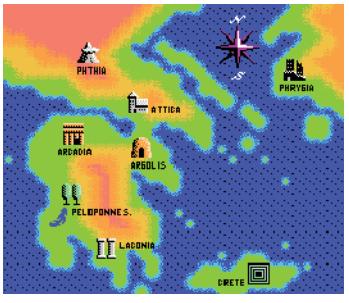
Because of those similarities, *Battle of Olympus* has been mostly condemned to live in *Zelda II*'s shadow. But regardless of its reputation, it's not a complete rip-off. In fact, it even does a few things better than its more famous sibling.

Journey to the Underworld. The first thing you'll notice is that *Battle of Olympus* does away with the overworld map from *Zelda II*, opting instead to focus entirely on the side-scrolling platforming. It's an immediate improvement, since it makes *Battle of Olympus* feel more focused without sacrificing a sense of exploration. As a side benefit, it also dispenses with *Zelda II*'s random encounters, which were annoying for their frequency and random difficulty.

There are a lot of other little differences as well. An untimely death won't send you all the way back to the beginning area, but it will lose you half of your olives, which are used to purchase items from the gods. The items are based on Greek mythology, and include the likes of the Sandals of Hermes, which send you shooting up to the ceiling when you hold the jump button (definitely a shock the first time it happens). While it differs in the particulars, though, it still manages to feel a great deal like its contemporaries. That's because *Battle of Olympus* is built on the principles set down by old PC adventure games like *Zork*. It offers hints on where to go, but for the most part, it's content to back off and let you find your own way.

The opening area is typical of adventure games of that era. The first screen consists of a handful of houses, with no enemies to fight, and no real inkling of where to go. You'll spend the first several minutes rummaging around, killing slimes, and talking to townspeople. If you look hard enough, you will eventually find the Temple of Zeus. More likely, though, you'll end up wandering into the first real "level" and dying.

It's not a bad approach, per se. It puts the onus on you to explore and discover the world for yourself, thus setting the tone for the rest of the game. And for some, that was magic. Nowadays, *Battle of Olympus* would be eviscerated for failing to steer players in exactly the right direction, but there's nevertheless a certain charm in taking a hesitant first step into ancient Greece, uncertain of what to do or where to go. In this day and age it's downright novel.



Ares is a Jerk

MOST OF THE GODS IN *THE BATTLE OF OLYMPUS* FUNCTION LIKE THE STATUES IN *METROID*. WHEN YOU FIND THEM THEY GIVE YOU AN ITEM, AND THAT'S THAT. NOT ARES, THOUGH. IF YOU SHOW UP WITH THE 80 OLIVES YOU NEED TO BUY HIS BRACELET OF POWER, EVERYTHING IS FINE. BUT IF YOU DON'T HAVE ENOUGH OLIVES TO PAY THE BILL HE'LL ACTUALLY STEAL YOUR SANDALS. IT'S A MOVE REMINISCENT OF *LINK'S AWAKENING*, IN WHICH THE SHOPKEEPER WILL ACTUALLY KILL YOU FOR STEALING. MORAL OF THE STORY: PAY YOUR BILLS OR DIE. OR LOSE YOUR SANDALS.

THE BATTLE OF OLYMPUS IS AN ADVENTURE GAME WHERE YOU CAN CHOOSE TO ACCESS MANY DIFFERENT LOCATIONS AT VARIOUS TIMES THROUGHOUT THE GAME. HOWEVER, MANY OF THE AREAS IN THE GAME WILL REMAIN INACCESSIBLE TO YOU UNTIL YOU COLLECT THE PROPER ITEM, OR GAIN THE PROPER POWER, THAT ENABLES YOU TO SURVIVE IN THAT AREA.

A Pleasant Surprise. The rest of *The Battle of Olympus* is up and down. Many of the enemies lack patterns, making them very difficult to kill, and bats love to knock you into pits, which can be frustrating. Some of the music is first-rate, particularly the pulsating Phthia track, but the graphics are mediocre even for the NES. It can also be grind-heavy, frequently requiring you to spend upward of 10 minutes grinding olives to buy the next item.

For better or worse, it also can't quite escape its association with *Zelda II*. The final battle with Hades, for instance, is quite reminiscent of *Zelda II*'s Shadow Link encounter. Though it has a few wrinkles to make it unique, Hades is essentially a larger version of Orpheus, making it a mirror battle that needs to be conquered with pure swordplay. Thankfully, Hades isn't nearly as tough to beat as Shadow Link, despite starting out the battle invisible. It's much easier to grab the initiative and avoid his blows, requiring only patience and perseverance (and the Moon Crystal item) to win.

It's fair to say that *Battle of Olympus* doesn't reach the lofty peaks shared by the NES's best games, but nevertheless it's not hard to see why a small section of fans fell in love with it. Though it doesn't excel in any particular category, it must have been a pleasant surprise to anyone who randomly came across it. It has the right balance of challenge and exploration, some of the music is pretty great, and most importantly, it's not nearly as frustrating as *Zelda II*. Given how bad bargain-bin games could be in those days, it must have seemed like a real find.

That it's not more popular is partly down to circumstance. If it had been picked up by a larger publisher than Brøderbund and gotten a little more coverage in *Nintendo Power*, who knows? It might have become a cult classic. As it is, it's mostly remembered for being a relatively average *Zelda II* knockoff, which doesn't seem entirely fair. Its strong music, richly realized setting, and compelling sense of adventure were all enough to earn it a permanent place in the hearts of a small and dedicated niche. In its own way, *The Battle of Olympus* is immortal.

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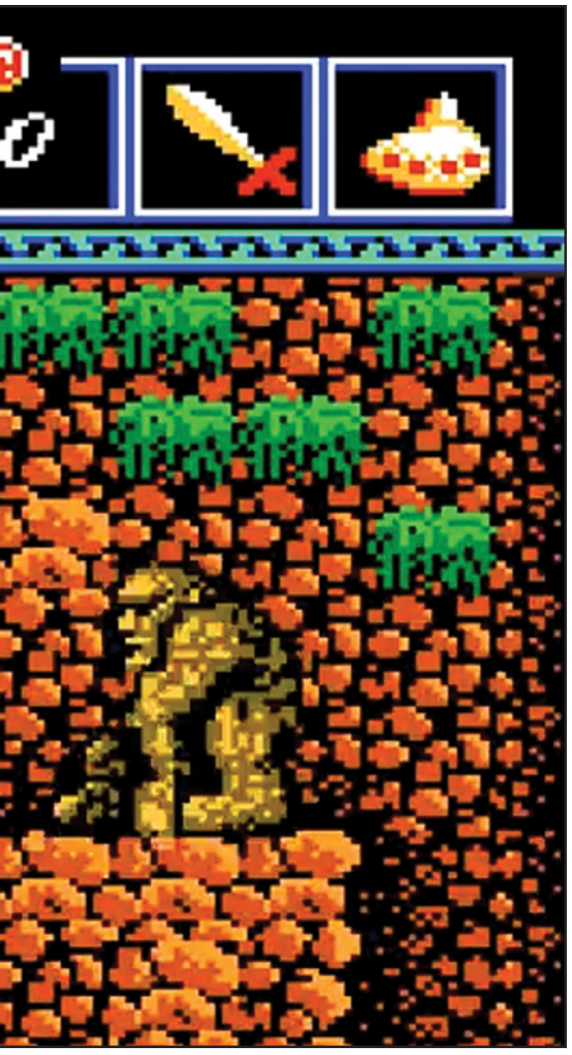
Kat Bailey (@The_Katbot) is a freelance writer specializing in RPGs, Japanese culture, and oddly enough, sports games. She wishes that she could have seen Akihabara during its heyday in the late '80s and early '90s.



Orpheus' Arsenal

STAFF OF FENNEL

The first upgrade you get over Orpheus' default club. You receive it for rescuing a child, which is one of the few distractions in an otherwise-focused game. It likely refers to the Thyrsus, which is a wand of giant fennel that is topped with a pine cone. The pine cone is meant to represent...well, figure it out.

DIVINE SWORD

Orpheus' most powerful weapon. It has the power to shoot magic, but at the expense of using some of Orpheus' life bar. Seems like a bit of a waste until you get a Bracelet of Power to stop the bleeding.

HARP OF APOLLO

Summon a Pegasus as a means of transport. Can also be used to avoid being hypnotized by the Siren. In Greek mythology, Apollo is credited with discovering the precursor to the harp and presenting it to Zeus as an apology for stealing his cows. The harp makes frequent guest appearances in *Final Fantasy*.

OCARINA

No, not that ocarina. This one summons dolphins. And let's face it, would you rather be able to summon dolphins or travel through time? Exactly. Dolphins are the best.

SANDALS OF HERMES

Lets you jump higher than normal, as well as stick to ceilings. It's an odd but entertaining ability. No word on whether it inspired Gravity Man in *Mega Man V*.

A Tiny Titan

Believe it or not, *The Battle of Olympus* was ported to the Game Boy. And even more surprising than that, it was pretty good. Unlike many other Game Boy translations, which were completely different from their NES counterparts, *Battle of Olympus* was a faithful port. The framerate is slightly jerkier and a couple tracks are missing, but otherwise it's not bad at all. The sprites even manage to look a little better on the little Game Boy screen, due to the fact that they take up more real estate. It's not even hurt that much by the screen's drab colors, since *Olympus*' colors weren't that vibrant to begin with.

Given the technical limitations of the Game Boy, it's actually pretty impressive that Infinity managed to squeeze an expansive game like *Battle of Olympus* onto one of its tiny carts. Making it even more impressive is how rare it was back then to see a console-sized experience on a portable system. The games that pulled it off are mostly classics — *Super Mario Land 2, Link's Awakening*, and *Metroid II*. To even be mentioned in the same breath as those games is impressive, especially considering that *The Battle of Olympus* was released right at the beginning of the Game Boy's lifecycle.

Sadly, like its NES counterpart, it's been mostly lost to history. But for those who randomly discover it on eBay or at a local flea market, it's a gem of a portable NES port.

CHRONO TRIGGER

IN 1995, SQUARESOFT CAUGHT LIGHTNING IN A BOTTLE.

by Wes DeSantis

It's been 19 years, yet people who've played *Chrono Trigger* continue to gush with praise, exhorting fellow gamers, "You've gotta play this, it's the best game ever!" But *CT* goes beyond being an amazing game that has a nostalgic group of fans who won't shut up about it. Its story, music, characters, and gameplay were so ahead of the curve that they pioneered many of the design and storytelling practices we see in more modern games, giving us all a reason to celebrate its legacy.

GAME INFO:

Publisher:
Squaresoft
Developer:
Squaresoft
Platforms:
SNES, PS, Wii VC, NDS, Android, iOS
Release:
08.22.95
Players:
Single-player
ESRB Rating:
E

Castle Crashers: A gauntlet of magic and monsters, the Fiendlord's Keep was a formidable fortress, indeed.

HOW OFTEN DOES A GAME COME ALONG THAT IS REMARKABLE IN ITS GENRE AND PIONEERS SO MANY GAMEPLAY TECHNIQUES THAT ARE STILL USED TWO DECADES LATER?

The game starts out simply enough. A young teen named Crono wakes up late for the fair, his friend Lucca exhibits a teleportation device, and Marle, a fairgoer who turns out to be a princess, has a mishap with the teleporter, sending her back in time. Boom! Now we have the start of a classic JRPG. Events happens, you go on a journey to save your friend, and (of course) you save the world! But these tropes don't feel generic, because of the ability of *Chrono Trigger*'s deep universe and mechanics to make you feel invested.

CT was very forward-thinking. One example: It was one of the first games to feature multiple endings. While a few games like *Sonic* offered good and bad endings depending on simple factors, in *CT* the endings were connected to the decisions you made in the story. Decisions made right at the beginning of the game could come back to haunt you later. For example, when Crono's at the fair you see an item on a table and take it, in typical RPG fashion. It's food, your health is restored, and you go on your merry way. But a bit later in the game Crono is on trial. A witness appears on the stand, and flashing back to earlier tells the jury, "This guy stole my lunch." Just one of many examples of your actions shaping the game's story.

Conveying story by showing rather than telling is another strong, forward-thinking aspect of *CT*. We learn about the characters through their actions. Crono's nerdy sidekick

Take It to the Bridge: The Zenan Bridge is yet another example of the game's rich history.

A Familiar Tune: While *Chrono Trigger*'s story offers many twists and turns, it's no stranger to princess problems.

Illustration by Thor Thorvaldson

has a mother who is disabled due to an accident. Lucca has a chance to go back to the event to stop her mother from being hurt. In this short time we learn, through Lucca's actions, that this event made her feel helpless and fueled her desire to help others with her intelligence. She never comes right out and says these things, but the events we witness bring Lucca's character into focus.

The game has a traditional turn-based battle system, but unlike most of its contemporaries, there aren't any random encounters. You can see the enemies and in many cases avoid them. Sometimes, the game gives you clues that an enemy is tough, and that you might want to come back later when you're stronger. When you do battle, the conflict takes place on the same screen you were just traversing. This keeps the battles quick, and the uniform design language across the game helps keep you feeling connected to the action.

As I'm writing this article I'm in the middle of playing *Dark Souls II,* which shows a little *CT* influence of its own with its "new game plus" feature. New Game Plus was a new idea in *CT* that let you start over after you beat it but retain all your items and stats. It let you easily replay the game many different ways to experience the different endings and game paths. This idea has been used in countless games since, because it's always nice to feel like a badass cutting down enemies that once gave you so much trouble.

And though many missed it on its initial run, *CT* continues to impact new gamers. In 2008, a version was rereleased on the Nintendo DS. Many see it as the best overall version because of a more accurate translation, animated cutscenes, and smart use of the system's second screen. Unlike other 8- and 16-bit remakes, Square Enix mostly left *CT* alone. Theories regarding this approach abound, but I'd like to think the reason for this is that Square got it right the first time. How often does a game come along that is remarkable in its genre and pioneers so many gameplay techniques that are still used two decades later? With *Chrono Trigger* Square caught lightning in a bottle...lightning that many others have tried in vain to reproduce.

SNATCHER

BEFORE METAL GEAR TURNED SOLID, KOJIMA HAD ANOTHER SCI-FI STORY TO TELL.

by James Paton

The NEC PC-8801 may be unfamiliar to the majority of gamers, but it will forever have the honor of launching one of the greatest cyberpunk adventures ever created. In 1988 Hideo Kojima wrote and directed a noir thriller in the style of a PC adventure game, completely linear in structure but nevertheless a bold step forward in both videogame storytelling and the mature nature of its content. I am, of course, referring to the magnificent fusion of cult film influences and gorgeous artwork that is *Snatcher*.

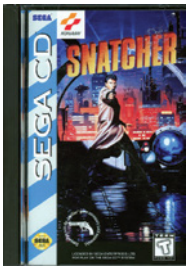
In *Snatcher*'s alternate 1996, a catastrophe strikes the Earth, seeing over half the human populace wiped out by a mysterious bio-weapon known as Lucifer-Alpha, developed and released from the fictitious Russian locale of Chernoton. The area of the original outbreak remained uninhabitable for 10 years, but the virus mutated into a non-lethal form over time, which brings us to the start of *Snatcher*, 50 years after the catastrophe. On Japan's artificial island of Neo Kobe, strange bio-mechanical creatures known as Snatchers start appearing, murdering humans and taking their places within society, near indistinguishable from their victims. A special task force, known as J.U.N.K.E.R., rises to combat this new threat, and you take control of an amnesiac member of this anti-Snatcher team, Gillian Seed, who must discover who he is and what his connection to the Snatchers is.

The story plays out over three acts, the first of which concerns Gillian's first day on the job as a Junker, when he is welcomed to the team and then promptly sent out to investigate an alarm triggered by his colleague, Jean-Jack Gibson, which sets into motion a series of gripping events of life-or-death intrigue.

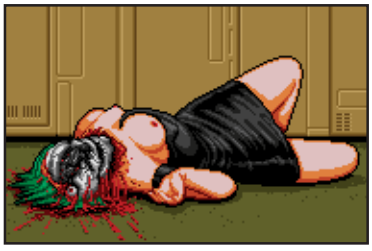
The bulk of the game plays out in a first-person perspective. You progress by selecting options from various menus, sometimes selecting the same action multiple times in a row to elicit different responses. Between its cinematic styling and lengthy exposition,

GAME INFO:

Publisher:
Konami
Developer:
Konami
Platforms:
PC-8801, MSX2, PCE SCD, Sega CD, PS, Saturn
Release:
11.26.88
Players:
Single-player
ESRB Rating:
NA



IT'S NOT MUCH MORE THAN WHACK-A-MOLE, BUT THE SEGA CD VERSION ALSO SUPPORTED KONAMI'S JUSTIFIER LIGHT GUN.



ADULT-ORIENTED: An early trail-blazer for mature themes, Snatcher didn't shy away from startling imagery.

SHADES OF BLADE (RUNNER): The influences of Ridley Scott's sci-fi classic are undeniable.

MENU ACTION: It's way more fun than it looks.

Snatcher stands apart from more traditional PC-based puzzle and adventure games, earning the moniker of visual novel. Perhaps it could even be described as an interactive movie.

The basic gameplay flow involves searching the current area for clues and color commentary, using items in your inventory to solve puzzles, chatting with other members of the game's cast, and moving to other areas. There are also action segments where you're tasked with shooting enemies by way of a 3x3 grid. It's not much more than *Whack-a-Mole*, but the Sega CD version also supported Konami's Justifier light gun. The PC Engine Super CD version added the third act, while the Sega CD release included additional exploration and action segments in that concluding chapter to add an increased level of interactivity.

Those were not the only changes the game saw over the years. In its original form, *Snatcher* had a violent scene involving the convulsing body of a dead dog, whose intestines can be seen through the gaping wound in its body. This was slightly censored in the Sega CD release — no twitching. Some names changed over time too, including the record store which was originally called Joy Division (it became Plato's Cavern in 1992). The definition of the J.U.N.K.E.R. acronym was altered in the English language version (the horrendous Judgement Uninfected Naked Kind and Execute Ranger became Japanese Undercover Neuro Kinetic Elimination Ranger), and, for some reason, Gillian's poster of Marilyn Monroe was changed into one of Madonna.

There are some scenes of nudity, including a shower scene with Katrina, whose age was changed from 14 in the original Japanese release to a more Western-friendly 18. Likewise, after the death of Jean-Jack, Gillian discovers that he had been eating whale meat (in the original release), which was changed to buffalo for those outside of Japan. Interestingly, the PC Engine version had a couple of features that were exclusive to it, including the ability to pick up Katrina's underwear and a very entertaining conversation that Gillian has on a sex line, where he also pays reference to the film *Wayne's World*. There were also additional changes to the visuals, and the addition of a CG video on both the 1996 Sony PlayStation and Sega Saturn releases. Sadly, the former also includes additional censorship.

Blade Runner (with a nod to *Invasion of the Body Snatchers*) was clearly the game's primary influence, with the setting, style, and even some of the character designs coming straight from Ridley Scott's bleak, sci-fi classic. The Snatchers themselves are biomechanical creations with flesh on top of a metal endoskeleton, a creature that can sweat and bleed, and is designed to become fully integrated into society — much like the replicants Rick Deckard hunts. However, with the flesh removed, the machines bear a more than slight resemblance to James Cameron's Terminator. The international release saw some subtle changes made to the Snatchers in order to reduce the similarities.

Regardless, *Snatcher* was set in a brilliantly bleak near-future venue with a cast of well-realized characters and a fairly complex story divulged through what was at the time extremely well-written dialogue. With the game mostly comprised of static images, you'd think that Kojima would struggle to convey the appropriate emotions needed to create a compelling experience, and you would indeed be correct, if Konami hadn't put so much effort into the voice acting, hiring professional actors for every role. Between this and the excellent score composed by Seiichi Fukami, Masahiro Ikariko, Mutsuhiko Izumi and M. Shirakawa, the atmosphere of *Snatcher*, and its ability to captivate audiences, was assured.

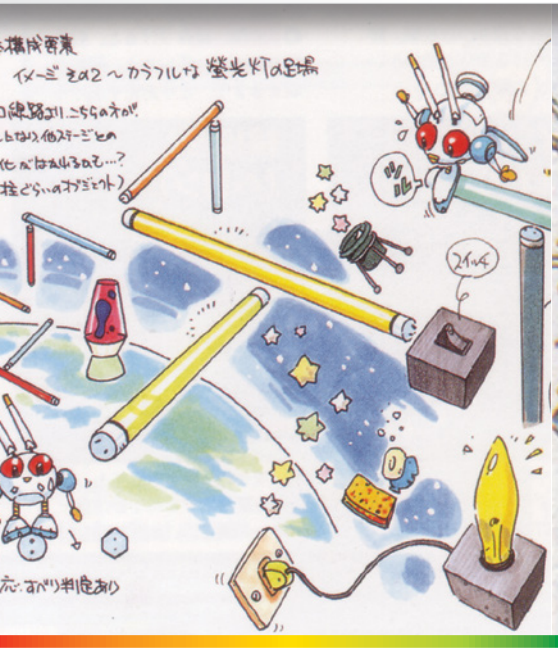
There is a severe lack of noir thrillers in videogames, which would probably go some way to explaining the ludicrous sums of money one has to part with to pick up a Sega CD version of this game. That, and the unfortunate sales the game tallied after its U.S. release. It shifted only a few thousand copies in total, thereby rendering it one of the rarest games available for the machine. As a result, a copy will likely set you back somewhere between $250 and $300, while import PC Engine, Sega Saturn, and Sony PlayStation copies usually range between $20 and $50 depending on condition. Whichever format that you choose to play it on, though, you'll find an envelope-pushing adventure game that stands the test of time and will remain fondly remembered as an important stepping stone in the evolution of videogame narratives.

As a side note, a spin-off title was released on the MSX2 in 1990. *SD Snatcher* swapped the gritty art style of the original game for a "super-deformed" variation, with the big-headed characters taking part in standard console RPG gameplay. In 2011 Kojima revisited his classic thriller to create a prequel story, *SDATCHER*, which was told in the form of a radio-style drama. This was actually written by Goichi "Suda51" Suda and produced by Kojima, with the soundtrack composed by none other than *Silent Hill* maestro Akira Yamaoka. If this is anything to go by, then Kojima hasn't quite managed to do everything that he would have liked with this legendary IP. If we're all lucky, who knows? There may even be another full-fledged *Snatcher* game in the future.

RETRO SPECTIVE

Jumping Flash! 2

by Alexandra Hall



GAME INFO:

Publisher: SCEA
Developer: Exact
Platforms: PS
Release: 08.31.96
Players: Single-player
ESRB Rating: E

Exact's 1996 charmer heralded a 3D platforming future that never came to be.

The venue: nerd forums. The topic: PlayStation, and how unbearably bad its graphics seem today. "Unplayable," charges one critic. "Intolerable!" agrees another. The consensus: Unsalvageable. Don't even bother.

I've always been a gameplay over graphics sort, but it's not hard to see where such folks come from. PlayStation's 3D graphics are usually chunky at best; other good words include low-res, grainy, jerky, swimmy… don't even mention that texture-warping.

It's too bad that such sentiments might stop modern players from discovering some of the most creative games of the '90s. PlayStation's primitive 3D fostered a creative renaissance, particularly in Japan. Its 360,000 polygons a second opened up whole new interactive worlds to explore, often resulting in entire new genres. *King's Field*. *Armored Core*. *Carnage Heart*. *Parappa the Rapper*. *LSD*. *Bemani*. *Ore no Ryouri*. Just about anything from Artdink. Our beloved 16-bit seems mundane by comparison.

Exact's *Jumping Flash!* was another of these early iconoclasts, and it arrived just a little after PlayStation hit America (some discovered it thanks to the console's pack-in demo disc). *Jumping Flash!* married platforming to first-person action, making for another completely unique, PlayStation-exclusive experience. It worked shockingly well, but today we're checking out its superior sequel, which, in early 32-bit fashion, came a mere eight months later.

LET'S TRY THAT AGAIN

Jumping Flash! 2 was typical of early PlayStation sequels: same engine, same gameplay, new levels, and slightly better tuning. But that was all it needed.

You play Robbit, a mechanical, space-faring rabbit tasked by Universal City Hall with taking out villainous threats to galactic peace. In this case that means Captain Kabuki, a planet-sized, banana-looking entity who's terrorizing Little Muu, home planet of both the adorable, tripod-like Muu Muus and Baron Aloha, the German-accented antagonist of the original adventure.

Jumping Flash! 2 retains the same novel first-person platforming as before. Robbit can not only leap several stories, but launch again at the peak of that jump, and

then yet one more time. This allows him to achieve some serious altitude, and the very vertical level design's built to accommodate that.

First-person jumping's always been a dicey proposition, plagued by general inaccuracy and a lack of depth cues. But the *Jumping Flash!* games have a very elegant solution: The camera tilts downward when you double-jump, which lets you see Robbit's shadow and know exactly where you're going to land. Problem solved: Suddenly you can leap around 3D environments with the accuracy of a 2D *Mario* game, if not the same lively, organic physics.

Six new worlds await, most containing two levels and one boss fight. Your goal each level is to locate and pick up the four stranded Muu Muus and ferry them to the exit platform. Various whimsical enemies (case in point: ambulatory hamburgers) make token efforts to stop you, but Robbit's pea shooter, jumping stomp, and single-use, fireworks-based special weapons more than tip the odds. Enemies just end up adding color; your real challenge is simply navigating the stage without falling into the abyss.

That, too, isn't very difficult. Completing the first loop unlocks slightly more challenging remix levels, "slightly" being the operative word. Like its predecessor, *Jumping Flash! 2* is a very easy game. The few times I died I'd find myself annoyed that I had to collect the Muu Muus again, rather than enjoying the process of doing so. To me, that's the hallmark of a game that could use more refinement in the gameplay department; the very best action games are always fun to tool around in, no matter that you just died 10 times.

PLAYGROUND IN THE SKY

So it's not super compelling as an action game. No, I like *Jumping Flash! 2* because of the outsized charm and good vibes it generates via handcrafted, fun-to-explore worlds, unique visuals, and a one-of-a-kind soundtrack.

The so-so level designs of the first game are no more, replaced with sprawling, floating worlds rife with interesting details. Every level has a unique theme, including a tropical resort, a snowy Japanese temple, Dr. Aloha's submarine, and an abstract orbital world composed of neon tubes and everyday household objects. An early highlight is the vacation-themed second level, with whales and giant turtles lazing through the tropical sky (you can ride them, of course) as kiwis hang-glide amid surfboards, beach chairs, and a fragmented golf course. I'll have what they're having.

In contrast to many modern games, little in *Jumping Flash 2!* feels pre-fab or cloned; you can tell every floating island and bit of quirky scenery was conceived and placed with care. There are lots of little details to observe, cute vignettes set up by the designers to catch your eye and elicit a smile. This is a game to explore and savor, not carelessly rush.

The a/v experience impresses, too. Not in a technical sense — PlayStation 3D, remember — but the often-vibrant, always colorful scenery transcends the limitations of low resolution, limited draw distance, and modest framerate, transporting you to an abstract world of skyborne archipelagos that recalls early PlayStation-era creativity at its best.

And the soundtrack? Killer. The late Takeo Miratsu also scored the first game, but he outdid himself here. Most of the eclectic, atmospheric tunes beautifully complement their corresponding scenes. In the first two worlds alone you'll hear elements of Hawaiian, funk, ancient Japanese, and a riff on *PilotWings*, and that's just the beginning. (Completing the second loop regales you with the transcendently goofy "Rap La Muu Muu" over the credits scroll.) *Jumping Flash! 2* has a foot in both the catchy, memorable melodies of 16-bit and the more sophisticated, intricate compositions of the PlayStation era. This is "videogame music" at its best.

ROBBIT, ADIEU

Alas, the series soon leapt into obscurity. Sony absorbed Exact and a few key staffers moved to new internal dev group Sugar & Rockets. In 1999 they released what may be the best PocketStation game (a dubious honor) in *Pocket MuuMuu*, and a strange sequel in the bite-sized-mission-based *Robbit Mon Dieu*, which got mixed reviews and never left Japan. (Any fan translators reading?)

This leaves the *Jumping Flash!* games a fascinating evolutionary dead end. Massive, first-person jumps through fantastic scenery could've paved the way for a wave of strange new 3D platformers, but the incredible success of *Super Mario 64* and its revolutionary, third-person camera soon butt-stomped that possibility into so many lingering sparkles.

You can still buy the first two *Jumping Flash!* games on PSN, though they'll look rough on LCDs. (To tame the jaggies play on original hardware and a CRT, or in an emulator with CRT shaders.) Playing *Jumping Flash! 2* recently, I realized how rad a game like this could be if developed for modern hardware, particularly with virtual reality support (vertigo!). There was nothing else like the *Jumping Flash!* games in 1996, and there still isn't today. If you can brave those chunky graphics, you too can enjoy vacationing in a universe far stranger than our own.

KINGS OF THE JUNGLE

THE MAKING OF *DONKEY KONG COUNTRY*

BY DAVID L. CRADDOCK

THE PRODIGAL APE

Long before Activision, EA, and Ubisoft began annualizing their hottest franchises, Nintendo established a reputation of going back to the well. New versions of *Super Mario*, *The Legend of Zelda*, and *Mario Kart* surface every three to six years, serving as invitations for gamers to experience familiar, tightly designed gameplay tropes — with a few new additions added for spice — all over again. Other Nintendo properties turn up less often. Galactic bounty hunter Samus Aran hasn't had a starring role since 2010's poorly received *Metroid: Other M*, and players have taken command of Captain Olimar and his Pikmin only three times.

For a time, Donkey Kong was even more elusive than Samus Aran. Designed as the antagonist in 1981's Donkey Kong arcade game, Nintendo's simian got his start capturing maidens and holding them hostage at the top of construction sites. From on high, DK lobbed springs and barrels in an attempt to thwart Jumpman, a carpenter-turned-hero who dodged obstacles as he worked his way up. Just a few years later, Nintendo rechristened Jumpman as Mario and cast him as the company's mascot. By 1990, Mario's mustachioed mug had become more recognizable to American children than the circular head and ears of Mickey Mouse.

Meanwhile, Donkey Kong languished. That long vacancy would hold great appeal for Tim and Chris Stamper.

Former coin-op developers, the Stamper brothers left the arcade scene and founded Ultimate Play the Game, a development studio based in the U.K. that targeted the ZX Spectrum home computer. Ultimate's early titles were revolutionary thanks in large part to their aesthetics. While Blizzard North's *Diablo* later popularized the isometric camera angle — like a chess board viewed from a corner instead of straight on — Ultimate's *Knight Lore* was one of the first games to implement the unique point of view, giving it a pseudo-3D look.

As hardware grew more sophisticated, the Stampers' interest in hewing cutting-edge graphics deepened. In 1985 they jettisoned the ZX Spectrum, rebranded their company as Rare, and set their sights on developing for Nintendo's NES. When Nintendo introduced the Super NES in 1991, Rare's cofounders saw the potential to create even better graphics.

"I started in the summer of 1992, and I remember being shown around by Kevin Bayliss, who was the head of graphics," recalls Steve Mayles. "The big film at the time was *Terminator 2* with the T-1000, the [liquid-metal terminator] that was all silvery and shiny. Kevin said, 'This is the machine they use for that.' It was a Silicon Graphics Workstation. He and Tim [Stamper] were learning to use that."

Through experimentation, the Stampers discovered a way to circumvent the SNES' inability to display highly detailed polygonal images. Using their Silicon Graphics Workstations, they could create prerendered graphics, 3D images flattened into sprites that retained their fluid animations. One of the first 3D images the Stampers put together depicted a boxer rotating on the screen. Fortuitously, higher-ups from Nintendo were visiting and saw the pre-rendered graphic. Impressed, Nintendo purchased a 49 percent ownership in Rare, locking down the studio as a second-party developer.

Nintendo's next move left the Stampers slack-jawed. Handing them the proverbial key to the city, Nintendo invited Rare to create a game starring any Nintendo character. Passing over the likes of Mario, Link, and Samus, the Stampers chose Donkey Kong.

Their decision was backed by sound logic. Nintendo was bound to keep a close eye on outside talent who worked with cash cows like Mario. Donkey Kong, in comparison, was practically a nonentity. "They wanted to choose a character that hadn't been seen for a while and bring them up to date," explains Gary Richards, a tester at Rare.

Rare got permission from Nintendo to retire the original DK and create a fresh take on the vestigial primate. Indeed, Rare envisioned shaping a brand-new world around their new Donkey Kong. They called their game *Donkey Kong Country*.

DOWN ON THE FARM

Breaking ground on DKC signaled change in Rare's company culture. The office wasn't a traditional office floor lit up by fluorescents and cordoned off in cube farms. "The site was an old farmhouse," remembers Chris Sutherland, "and after the main building space had been used up, the old barns were being converted into offices. It was in one of those barns that I started."

On his first day, Sutherland hauled his stuff up to the second floor of the barn that would become his home away from home. What he saw did not reconcile with what he expected. "I had this notion in my head that [developing games] would be a very scientific and methodical process, analyzing all aspects of the way players interact with games, and that I'd be guided through the secret recipes needed to make a great game. But in fact it was quite the opposite. You were given the tools you needed, and there was an implicit trust that you'd just get on with whatever needed doing."

As Rare grew, the company's self-motivated culture remained intact. Prior to *DKC*, most games at Rare were made by a single programmer and artist. *DKC*'s ambitious scope forced Rare's cofounders to bump the team size up to 16. Sutherland was one of two programmers assigned to *DKC*. His purview was the gameplay — making sure the controls were tight and the gameplay was fun.

ALL IN THE FAMILY

In the interest of creating their own Donkey Kong rather than working with Nintendo's original character, Rare aged the original DK and renamed him Cranky Kong. His grandson, Donkey Kong, became the protagonist of *DKC*. During the adventure, Cranky assisted his grandson by offering hints and reminiscing about the good ol' days scaling construction sites and kidnapping Jumpman's girlfriend.

"CREATING PRERENDERED GRAPHICS WAS A SIMPLE PROCESS WHEN YOU GOT THE HANG OF IT. IT ALMOST FELT LIKE CHEATING."

Big team sizes weren't the only first ushered in by *DKC*. "The programmers were also the designers in those days. Design positions didn't really exist at Rare until we worked on *Donkey Kong Country*," says Steve Mayles, whose brother, Gregg, was the chief designer on the game.

The core of *DKC*'s gameplay was agreed upon by everyone at Rare: a 2D platformer, like *Super Mario World*, but with pre-rendered graphics. Kevin Bayliss mocked up some of the characters — including the new DK, who wore a red necktie and was as friendly as he was brawny — but was busy drawing and modeling characters for Rare's upcoming coin-op fighter, Killer Instinct. The onus of transforming Kevin Bayliss' concept sketches into beautifully animated characters fell on Steve Mayles.

Having little experience animating apes that gallivanted through the jungle and jumped on enemy heads, Mayles and a few of the other developers headed to the zoo for research. "The apes didn't do what they were supposed to do," Mayles admits with a laugh. "They didn't run on cue; they just kind of stood around, picking fleas off each other. When they did move, their movement was different every time they ran. They ran sideways, their bodies would twist, they started off in different poses... It was pretty useless, to be honest."

Donkey Kong's movement ended up based on that of a horse: long, graceful strides when running, and a more ape-like, lumbering saunter when walking.

MAKING MAGIC

For Mayles, deciding on a style of movement was much simpler than manifesting movement on the screen. "In those days, there were no tutorials, no documents on the Internet that you could read over. You had to work out everything for yourself." Working on one of Rare's Silicon Graphics machines, Mayles groped around the Alias PowerAnimator software. Once he got the hang of the basics of creating 3D models and breaking them down to sprites, the rest came naturally.

"One of the benchmarks in animation was *Aladdin* [on Sega Genesis]," Mayles says. "That game was highly thought of. It had animation [created by Disney animators], and here we were, realizing that we could do anything, make anything look fantastic in 3D. It was a simple process when you got the hang of it. It almost felt like cheating: We learned this stuff in just a few weeks, and suddenly we were able to make animations that looked better than anything that anybody else had done up to that point."

Part of Sutherland's job involved importing characters and levels into the game. Oftentimes, that meant downsizing Mayles' lovingly crafted characters to work within the limits of the SNES hardware. "If I handed Chris Sutherland a disk with a 16-frame walk animation, he'd probably only use every other frame," Mayles says. "That was something beyond my control. It would really wind you up when you made this great-looking animation, only for the programmers to chop it to pieces. But that had to be done to fit it in the allotted space."

Creating levels and effects, such as a light snowfall that grows into a blizzard as players move through a level, required more technical wizardry. Early on, Sutherland and the Stampers worried that the SNES hardware would crack under the strain of the richly detailed levels the artists were turning out. Their doubts were assuaged after they enacted a two-step process. "The first part was taking a single prerendered background screen and then cutting it up into squares with the correct color palettes that could replicate that image on the SNES," Sutherland explains. "The second stage was to find places where pieces of the image could be repeated elsewhere to save video [memory] space whilst still remaining visually impressive overall."

Gameplay-wise, *DKC* came together smoothly. "Super Mario games definitely were a big influence. Those games do some nice work at introducing new features at a steady rate to keep the player interested, and that was something we wanted in *DKC*," Sutherland says. Every level in *DKC* overflowed with bonus stages, bananas, and K-O-N-G letters that netted players extra lives, and unique settings such as mining caverns, treehouses, and jungles.

Many levels were designed around unique mechanics. In Stop-and-Go Station, invulnerable golems charged blindly until you touched red STOP barrels, putting them to sleep for a short amount of time. Particularly memorable were two mine-cart-themed levels where you had to ride an out-of-control cart across broken rails, jumping at just the right moment to avoid plummeting into pits.

According to Gary Richards, "It was always the plan to have as much diversity as possible. The art guys experimented with the new technology and produced loads of backgrounds and ideas."

Arguably the biggest innovation in gameplay was the clutter-free UI, which let you soak up the game's drool-worthy graphics without visual distractions like remaining lives and a health bar. Of course, clearing the UI presented a problem: Gregg Mayles and Chris Sutherland needed a way to convey to players how much damage they could take before losing a life. Their solution was to give DK a partner, the diminutive Diddy Kong. Donkey and Diddy Kong effectively became the damage meter. Both characters could absorb one hit, and the player lost a life if both monkeys were defeated. Players could regain life by rescuing fallen partners from "DK" barrels scattered across each level.

To further distinguish *DKC* from *Super Mario* games, Rare devised dexterity-based challenges such as a sequence of barrels hanging in midair. You navigated them by shooting your characters from one barrel to the next. Most barrels swung back and forth quickly, making it hard to line up shots. "With *Mario*, you can often play at a faster pace as long as you are ready to react with good timing. That was something we wanted in *DKC*, such that when you were playing well, it all felt very fluid," Sutherland explains.

LAST GASP

The *Donkey Kong Country* team had approximately 14 months to turn out a hit if they wanted their game on shelves in time for 1994's holiday season. When the hours got long — 12- and 14-hour days, plus weekends, for several months — sleep deprivation set in. Sutherland recalled one day where he was expected at the office early to produce a prototype of the game. "I must have slept in, because I awoke to hear someone outside my upstairs flat throwing stones at my window. I looked out the window and saw Tim and Gregg. When I got in I saw they had placed a fast-food breakfast on my desk ready for me."

Not even a crunch schedule could deter the team from working on *DKC*, who viewed the project as a labor of love. "Everything was going in the right direction," Steve Mayles says. "When you saw Tim Stamper there as long as you were, putting in all the hours — that was the sort of thing that inspired you to go the extra mile."

For Rare and Nintendo, DKC was more than just another game. The flashy 3D graphics of the Sony PlayStation, Sega Saturn, and other new consoles looming on the horizon were catching the eyes of consumers, who had begun to view their SNES and Sega Genesis boxes as old and crusty. Nintendo was banking on *Donkey Kong Country* to be the game that convinced customers that the SNES was still a contender.

Rare's developers felt the pressure they were under, but didn't let it shake them. At the Consumer Electronics Show held in Chicago during the summer of 1994, Rare brought *DKC* to the show floor. Attendees took one look and assumed that the future of Nintendo had arrived a few years ahead of schedule. "Nintendo was building up hype around the Nintendo Ultra 64, which was called Project Reality back then. People saw our *Donkey Kong* game and thought it was running on Nintendo's new hardware. When they found out it was running on the SNES, they were just amazed," Steve Mayles recalls.

Donkey Kong Country landed in stores on November 21, 1994, just in time for a holiday push. Within months, the game accomplished exactly what Nintendo needed it to. Early reviews raved about the graphics, gameplay, and secrets to find. More than 20 years and nine million sales later, players are still having a blast running, jumping, and swinging through the jungle alongside Donkey and Diddy Kong.

For Sutherland, that was his hope all along. "For me, I've always wanted to reach as many people as possible with videogames, and this was one step toward that. Also, I recall Tim's intent was that *DKC* should still look good, even many years in the future. I think that's been proved out to be very much the case."

DID(DY) YOU KNOW?

- Many levels in *DKC* were designed in such a way that you could jump seamlessly from enemy to enemy, barrel to barrel. Giving players ample opportunity for such acrobatics was a point of pride at Rare. "In *Super Mario*, you can often play at a faster pace as long as you are ready to react with good timing. That was something we wanted in *DKC*: When you were playing well, it should all feel very fluid," explains Chris Sutherland.

- Graphics were priority #1 for Rare during development of *DKC*. For *DKC 2* and *DKC 3*, released in 1995 and 1996, Rare brought the first game's admittedly simplistic gameplay up to snuff by introducing more mechanics such as new animal buddies, greater level diversity, and coins awarded for finding secrets and used to unlock secret levels.

M.U.L.E.

This legendary multiplayer strategy game influenced generations yet only sold 30,000 copies.>>

by Marty Goldberg

For a game released way back in 1983, *M.U.L.E.*'s influence on many later classics is undeniable. As *Sims* creator Will Wright said in an interview with *Salon* in 2003, "Ask most game designers what their favorite computer game of all time is and you'll get *M.U.L.E.* as an answer more often than any other title." Even game designer legend Shigeru Miyamoto told 4gamer.net about *M.U.L.E.*'s influence on him (*translated from Japanese*): "I had exclusively made action games but at some point vaguely felt like 'ahh, I want to make a game like that.'"

So what's so special about this multiplayer strategy game that it captured the imagination of developers for decades to come, yet according to lead developer Danielle Bunten only managed to sell 30,000 copies in its original release? Read on.

BUNTEN IN THE OZARKS

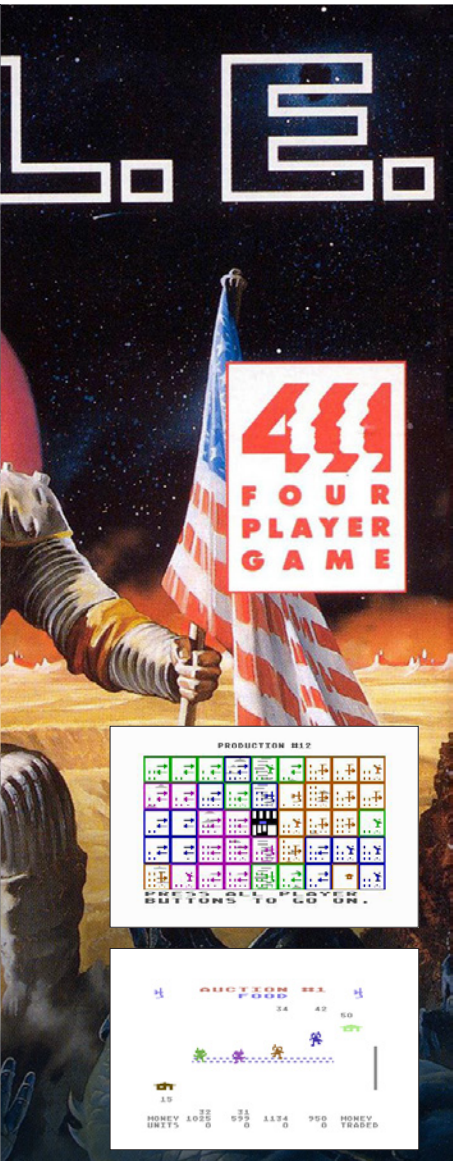
The seeds that lead to the creation of *M.U.L.E.* begin with Danielle Bunten (known as Dan Bunten before transitioning to female later in life) in the late 1970s. Graduating in 1974 with a degree in industrial engineering, Danielle's first job was the mathematical modeling of various urban systems for the National Science Foundation. With that educational and professional background, it's not hard to understand why Danielle eventually had a career in designing multiplayer games based on social and economic simulations.

In fact, the multiplayer aspect became a signature of her games based on her belief that games are a wonderful way for people to socialize. It was a novel concept for home computer games in the late '70s through mid '80s. Multiplayer gaming was still largely relegated to arcades games and large mainframe computers at universities. In the home, only Atari's and Bally's console offerings supported more than two players.

Bunten's first game, 1978's text-based business and stock market management auction simulation *Wheeler Dealers*, was also the first to employ some of the concepts later used to a greater degree in *M.U.L.E.* A four-player game designed for the Apple II computer (which did not support four controller inputs at the time), Danielle had to actually build a special controller with four buttons (one for each player) to bring her vision to players.

Followed by the two-player *Computer Quarterback* in 1979 (based on what was supposed to be her graduate masters thesis before dropping out to pursue a career in games, and really comparable to a text version of *Madden NFL*), it was the next two games that really set the stage for *M.U.L.E.*: 1981's *Cartels & Cutthroats* and 1982's *Cytron Masters*.

Published by the now-legendary Strategic Simulations, Inc. (SSI), *Cartels & Cutthroats* was another business simulation game for the Apple II that did moderately well. *Wheeler Dealers* featured the concept of four players competing in real-time auctions for stock in companies, and now that concept was expanded to six players. Given the options to set their price, advertising, R&D, build more production, etc. and combined with the introduction of Danielle's unique sense of humor, players had the opportunity to experience what the average person might consider a boring work day in a fun and competitive game. This game also marks Danielle's first use of playtesters, a concept that was becoming more common in arcade and console games of the time but not so much in computer games.



GAME INFO:

Publisher:
Electronic Arts (U.S.), Ariolasoft (Europe), Bullet Proof Software (Japan)

Author(s):
Danielle Bunten, Bill Bunten, Jim Rushing, Alan Watson, Roy Glover

Platforms:
Atari 8-bit, Commodore 64, IBM PCjr, MSX2, NES, PC-8801 MKII, Sharp X1

Release:
1983

Players:
Multiplayer

ESRB Rating:
NA

If *Cartels & Cutthroats* brought the simulation aspect to a new level, it was *Cytron Masters* that introduced the action and graphical elements that would lead to *M.U.L.E.* A game of firsts, it is considered by many to be the first to combine strategy and real-time action. It was also Danielle's first game to feature computer graphics. With the addition of a graphics programmer to the growing team, the core group that would form Ozark Softscape and create *M.U.L.E.* was in place.

TRIPPING INTO M.U.L.E.

Plain and simple, *M.U.L.E.* came about because of Trip Hawkins wanting to get *Cartels & Cutthroats* as part of the launch lineup for his new company, Electronic Arts (EA). A former director of strategy and marketing at Apple Computer, he had quit Apple to found EA under the vision of doing for computer games what Activision had been doing for console games: creating fun, cutting-edge games that were marketed as well as any other entertainment medium, while treating the developers like rock stars. As Hawkins told *Gamasutra* in 2007, " I wanted to help the world transition from brain-deadening media like broadcast television to interactive media that would connect people and help them grow."

SSI wouldn't relinquish or license *Cartels & Cutthroats* however, and Trip wasn't known for not getting what he wanted. Danielle came up with a solution: Her group would make a new game that would be even better.

The vision for the initial gameplay was laid, if not obvious to Danielle. Take the graphical and real-time elements from *Cytron*, the resource management from *Cartels & Cutthroats*, and the auctioneering from *Wheeler Dealers* and combine it into a four-player game for the Atari 800.

Why the Atari 800? It had the perfect combination of necessary resources, such as (then) second-to-none graphics processing prowess and four controller ports. So not only was *M.U.L.E.* going to be multiplayer from the ground up, but it would also be Danielle's first game to start with a graphical environment in mind. It would also be one of the first games designed around extensive playtesting during the game's development. As Danielle stated, "We had *M.U.L.E.* testing parties several times a week to try out features and tweak numbers."

M.U.L.E.'s team was just as much a family as it was a talented group of individuals. Formally naming themselves Ozark Softscape during the nine-month process, the Little Rock, Arkansas-based collective consisted of Danielle, her brother Bill Bunten (design and playtesting logistics), Jim Rushing (programming), Alan Watson (graphics), and Roy Glover (sounds and music).

Hawkins also helped with some of the simulation aspects of the game as he explained to *Edge* in 2012: "It was my personal mission to bring to market a more visual and playful business simulation than *Cartels & Cutthroats*. I taught [Bunten] the many economic principles that are built into the game's design, including supply and demand, economies of scale, the learning curve theory of production, monopolies, auction principles, and other details." Wanting to make sure all aspects fit into his vision for EA, he also personally wrote the game's manual.

And so it was done. In 1983 *M.U.L.E.* was unveiled to the computer gaming world as part of EA's grand "We See Farther" campaign to promote the new company.

PLAYING M.U.L.E.

M.U.L.E. stands for Multiple Use Labor Element, a unique robotic play on the pack mules used by miners and settlers of old. As the tagline on the box reads, "A game in which up to four players attempt to settle a distant planet with the so-called help of a mule-like machine they all learn to hate."

You and your four game partners (or you and the other computer-controlled players) play settlers using your robotic M.U.L.E.s to till the soil, set up energy stations, and dig mines. You get a choice of eight different settler types, each with its own advantages and disadvantages. Your strategy as a capitalist/player tells the outcome, but everyone still has to keep the common goal of building a thriving colony in mind. During the year's time the full game is meant to represent you're challenged with many real-life events, everything from food and energy shortages to supplies being stolen, or even fires taking down your buildings.

That time element is important, as it adds an entertaining arcade-style element that forces you to race against time at every turn. This is also where the quick "hit the button first" gameshow-style play first pioneered in *Wheeler Dealers* comes to play in places like selecting a new plot of land, where you compete against other players for choice parcels.

At the start of each round your characters march onto the screen, which is when the turns and the fun begin. There's five parts to each turn: status report, land selection, land improvement, production, and auction. It's that final stage where the wheeling and dealing competitive nature of the game really comes out. You can sell the products to other players, buy up important resources before others can get to them, and even resell to competitors at higher prices. All these aspects can affect the game in important ways, such as cutting the amount of time you have for a turn because you don't have enough food or energy. The strategies surrounding the laws of supply and demand leave the savvy player many opportunities to rise to the top of the capitalistic heap in the course of that fateful year, which is the ultimate goal of the game.

BECOMING A LEGEND ON 30,000 COPIES

When you hear 30,000 copies were sold, the idea of "well-distributed legendary game" doesn't come to mind. However, the numbers sold don't actually take into account the game's main distribution method: piracy. The early '80s was a golden age of software piracy, with games and software for all the major platforms getting much higher distribution and play rates than their official sales would suggest.

Danielle even stated that she knew more people who had a pirated copy of *M.U.L.E.* than who had legit copies of her later top-selling games, like *Seven Cities of Gold* or *Global Conquest*. As she further elaborated during a 1997 lecture at the Computer Game Developers Conference, "I used to tell folks who bought my games that by the time EA got done with it all, I only got about $2 a copy, so if they ever wanted to clear their conscience for pirating *M.U.L.E.* they could just send the $2 straight to me."

Keep in mind though, this 30,000 figure relates to the main version of the game for the Atari 800. EA also released a Commodore 64 version (though this lacked support for four controllers) and later ports went to the IBM PCjr, MSX2, PC-8801 MKII, Sharp X1, and NES.

More recently fans took the Atari 800 version and made the necessary changes to allow it to play on the Atari 5200 as well (making it one of the few games that uses all four of the original 5200's controller ports). Between its continued popularity among fans and its immense influences on the gaming industry at large, the true success of *M.U.L.E.* is truly immeasurable.

SUPER METROID

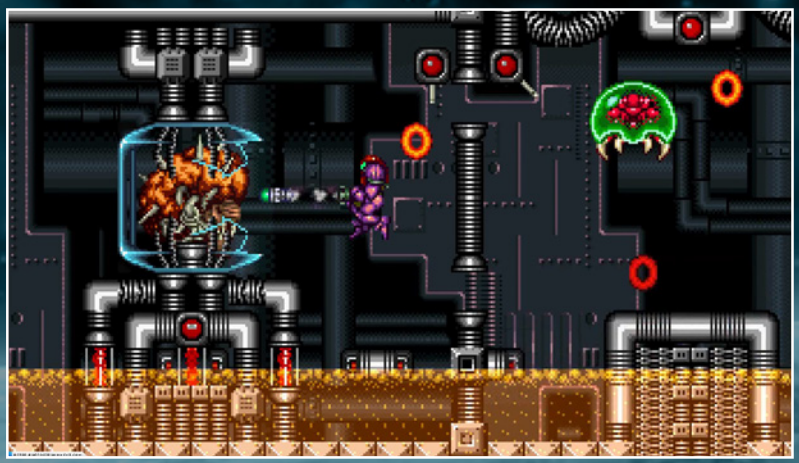
TM by Brady Fiechter

NOT JUST A CLASSIC, THIS MAGNIFICENT SCI-FI ADVENTURE INFLUENCED ENTIRE GENRES.

GAME INFO:

Publisher: Nintendo
Developer: Nintendo R&D1
Platforms: SNES
Release: 04.18.94
Players: Single-player
ESRB Rating: NA

Deep within the hostile alien planet of Zebes, Samus comes across a cavernous region known as Meridia. An aquatic network of water and sand and strange life, this tomb-in-waiting is at once elegant, flowing, and unsettling. Minutes before, Samus has just activated the power on a wrecked ship — its presence so cold and abandoned — and she uses one of her most recent empowerments — a hugely destructive super bomb — to shatter the glass walkway that separates the suffocating fire and brimstone of Brinstar from Meridia. Oddly soothing, but also oppressive as Samus stumbles into the pockets of quicksand that define both atmosphere and metaphor in this beautiful area.



Every layer of this subterranean alien world contains something wonderful and dark, something mysterious and deadly, and it all comes together as one perfect whole, folding back on itself like a roiling nonlinear narrative. Every second of *Super Metroid* contains some form of expression, some bit of information that tells a further, deeper story, its quiet atmosphere always threatening. There may never be anything quite like it again.

TRULY ALIEN

We all have our favorite memories of this classic adventure. I don't know exactly why I so vividly recall that ghostly area known as Wrecked Ship, and exploding a tunnel of glass, and getting so terrifically frustrated in Meridia. I can't exactly explain why being weighed down by sheets of sand felt so damned tactile and heavy. *Super Metroid* occupies such an epochal place in gaming, and fans like me really do believe it's one of the most important and memorable gaming experiences ever, inspiring player and creator alike.

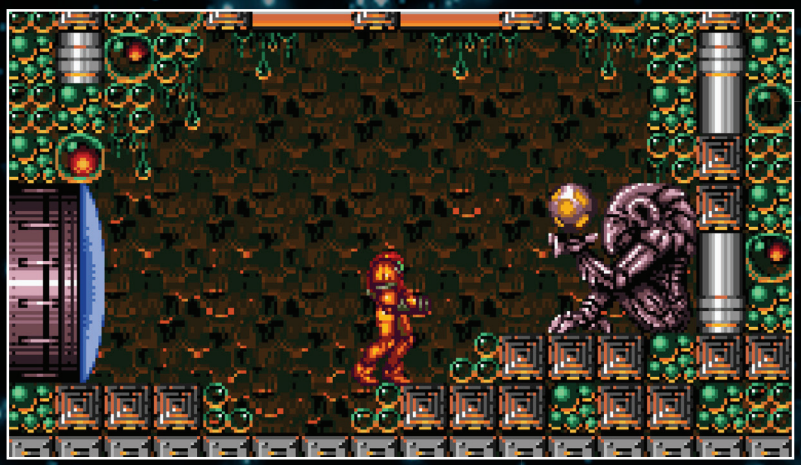
But there is a lyricism and artistry behind the game that is not so easily deconstructed. Replicating greatness takes a lot more than backtracking and looping levels and gradual power-ups and exploration. If we're ever going to get another *Super Metroid*, someone with a grand yet controlled vision will have to come along and be the imagination that instinctively understands why *Super Metroid* was so awesome. It's a very personal sci-fi adventure that transports us, utterly and wholly, to another little world, rich and complete.

SUPER IN MANY DIMENSIONS

Super Metroid is often remembered and discussed lovingly as the "super" version of *Metroid*. In simple terms, there was a 16-bit generator powering the core design, so we did get a bigger game, with twice the exploration and twice the weapons and twice the bosses. I wouldn't call this scope inconsequential, but the idea of being big is not the beauty of *Super Metroid*, and to be transported to that other world — is this not the ultimate request for any of us looking for an adventure born from *Metroid*'s DNA? — we simply must believe in everything around us. Contrary to the misguided push of a lot of modern games, what exists in our minds is rarely dependent on scale and girth. Most games today succeed at being aesthetic and mechanical delivery devices and fail at making me believe in their worlds. They fail at connection. *Super Metroid*, at its purest engagement, had me in a specific place and time and conflict, and it was only as big as the moment I was lost inside its walls.

Being taken away is part of *Super Metroid*'s essence. Lost in its fantasy, and always a little bit lost as you just never quite know what's next, or where you are, or what that new device ends up doing to take you deeper into that mystery you are so intrigued to be adventuring through. As an experience designed by very rigid, very contrived level structure and mechanical gameplay beats, punctuated with plenty of shooting and action and jumping, there is an emotional component to *Super Metroid* that will always stand above the blueprinting.

You will often hear players talk about the isolation and aloneness to the world, that feeling...It's so expertly crafted into a gameplay experience, without question, but to be completely captured by anything, I need intimacy. *Super Metroid* is this silly little 20-year-old game on a primitive and limiting and small SNES, and somehow the isolation of Samus' battle through Zebes is one of the great examples of the intimate. It's quiet, and isolated, and always creating a personal dialogue with your senses that is a subconscious intoxication. It's beautiful science fiction.



COMMUNICATIONS WITH SAMUS

A dialogue is a back and forth. When we experience a satisfying and immersive game, the feedback loop should be natural and nuanced. Actions in a game only take you so far. It is the reaction, the response, that creates a dialogue with the world. A game like *Super Metroid* will always speak the language I crave. You are always touching the edges of its surface, digging deeper underneath, discovering along the way. Something as simple as an energy tank tucked behind a corner of a ceiling means something in its setup, but consider too how the designers textured the delivery of empowerment.

The world is giving back to Samus, growing her and rewarding her to want to touch something more, see something more, reveal a deeper entrance into the narrative of adventure. Everything is a bit soft and porous, alien and decayed. When you use a missile to push through a wall, it crumbles like uncovering a treasure. You're inside these walls, a little trapped and liking it; find an ice beam, and you now get to ascend those walls, freeze the little brainless rippers and go higher. Recall how you got the screw attack and could rip through enemies and earth with immense force? You, once again, feel this place, now in full command of its dangers, and it seems like it feels you back.

When I think of dialogue, I also think of narrative, and I will always look at *Super Metroid*, and all its lack of words, as a magnificent example of how showing and not telling expresses volumes; a prime example of the power, and restraint, of interactive immersion. It is a cinematic achievement, so astoundingly strong with mood and movement and setting, and perhaps abstractly: A good movie narrative is concerned not with action, but what happens after, the why. As you assume the role of Samus the adventurer, your actions do have the kind of consequences that all seem to fit logically within the fiction of the world. The game is authentic.

UNCOVERING THE POWER

Super Metroid will always stand, to me, as the archetype of character progression; and character is what every great game will always embody. Samus began in a vulnerable, stripped-down state, exiting a frantic action scene in a collapsing lab and dumped out into a place of complete quiet and mystery. There was a feeble feeling, a lack of any real power against the threats around you — a driving need to escape and ultimately survive in an inhospitable alien world. Every power, every weapon, was a component of character growth, far more than a tool for enemy disposal.

Power must feel earned, worth the price, and the payoff so satisfying that there is a sense of purpose to everything that came before — to that backtracking brilliance the game is known for. So much of *Super Metroid*'s level presentation and progression is deceptively nuanced, and when a new level of growth occurred — a super missile, a new suit — it felt so immediately empowering and an invaluable next step to resolving the adventure. Everything in the game was a slow burn, with those immensely satisfying beats that cut through the vulnerability. There was always the anticipation of making the impossible possible.

PRIMAL SOUP

THE INFLUENCE OF MANIAC MANSION

by Jeremy Parish

The old-school adventure game has managed to fight its way back from the edge of extinction in recent years, but for roughly a decade the genre sat at the desperate edge of doom — the California Condor of videogames. Blame changing tastes and technology if you like, but to some degree the adventure genre bore much of the blame for its own troubles. It was less manslaughter by neglect than suicide by contempt for players.

The popular image of adventure games at the turn of the century came in two clichés: excessively complex exercises in second-guessing the developers' counterintuitive "logic" process, or vapid point-and-click romps through pretty but ultimately empty environments. The former is probably best embodied by *Gabriel Knight 3*'s infamous "cat hair mustache" puzzle (which required not only intuiting that you needed to use cat hair and syrup to make a fake mustache to use someone else's ID, but that you also needed to draw a mustache on that ID to justify using the mustache), but that sort of inanity was common to adventures of the era. *Dark Seed*, for example, was completely unwinnable without suffering through trial-and-error failed playthroughs in which you'd discover various untelegraphed, unknowable actions required to complete the game before starting over. On the other side, you had games derived from *Myst*, which stripped out the complexity of inventory management, turning the genre into a lonely journey of poking at switches and throwing levers until you reached the end.

But it didn't have to be that way. All the way back in 1987, Lucasfilm Games (later LucasArts) showed the world another way. The adventure genre's third option. And while the industry largely ignored the LucasArts way to its own detriment, the modern-day adventure revival owes much of its existence to those games — games like *Maniac Mansion*.

In fairness, the *Maniac Mansion* way of game design is not an easy way, in large part because its success rides heavily on the cleverness of LucasArts' writing. Witty, warm, and subversive all at once, *Maniac Mansion* maintained a tricky balance in a genre where characterization unfolds largely as a result of your actions, and where actions have a largely experimental flavor. What happens if you touch this panel? Pick up this item? Attempt to use that object on this other character? The writing in *Maniac Mansion* had to convey a story, define a surprisingly large cast of characters, accommodate a flexible team of teenagers, and account for all the wacky things you might think to try in the course of seeing the adventure through to the end. LucasArts managed to capture the wry wit of Infocom's seminal text adventures while adding lively, elastic animated characters to the mix.

Much of what made *Maniac Mansion* so memorable was the simplified interface, which presented all possible commands onscreen. Rather than dumbing down the adventure genre, this engine (Scenario Creation Utility for *Maniac Mansion*, or SCUMM for short) simply removed the guesswork and blind uncertainty from the adventure experience. It worked in the player's benefit without removing the underlying complexity possible in the game design, making it the platonic ideal of the word "innovation."

The technical underpinnings of *Maniac Mansion* definitely put it heads and shoulders above its contemporaries, but perhaps even more essential was the game's relatively forgiving nature. Compared to its competitors — clever but ruthless adventures like *King's Quest* — *Maniac Mansion* was surprisingly slow to treat you to the game over screen. It's not that Lucasfilm Games lacked fangs (ask anyone who's ever shown Weird Ed the results of microwaving a hamster), just that they didn't adhere to the philosophy that a good game had to be a punishing one.

Rather than providing you with countless ways to fail, *Maniac Mansion's* designers instead poured more thought into creating multiple ways to *win*. The game wasn't unloseable by any means, but failure was presented with a light touch and generally only

resulted from decidedly foolhardy actions on your part, such as forgetting that the mansion's swimming pool also doubled as the cooling system for a nuclear reactor. That sort of thing.

At the time, *Maniac Mansion* was a tour-de-force of player choice. You always played as clean-cut protagonist Dave, but Dave alone couldn't complete the game. So you needed to bring along one of a half-dozen other characters, each of whom had unique skills that opened specific paths through the story while making others inaccessible. Super-nerd Bernard could science his way through the adventure, while punk rocker Razor could use her musical talents to thrash her way to an entirely different finale. Where you replayed other adventure games because their design inevitably led to a dead-end, unwinnable situation, you replayed *Maniac Mansion* to see if you could figure out how to conquer the scenario with each character's talents.

Even today, *Maniac Mansion* feels like the gold standard of great game design. Sure, its visuals have aged pretty badly, but it remains funny, surprising, and creative. Most of all, it rewards you for being as clever as the writers. While its creators have admitted it wasn't completely perfect, *Maniac Mansion* opened the door to better, smarter, more considerate adventure game design. Every Lucasfilm/LucasArts game to follow in *Maniac Mansion*'s wake used the SCUMM system (or its highly similiar successor, GRIME)...and, more than that, they used *Maniac Mansion*'s commitment to great writing, fair design, and respect for the player as a guide post.

Maniac Mansion even offered game historians a window into the mysterious inner workings of Nintendo at the height of its power: Douglas Crockford's famous "The Expurgation of *Maniac Mansion*" feature recounted in sometimes hilarious detail the bizarre and convoluted censorship imposed on NES games in order to be deemed fit for release in the U.S.

While the adventure genre continued to double down on needlessly opaque design or total minimalism even after *Maniac Mansion* lit the way to better design, it nevertheless inspired its fair share of imitators — most of which (including *Broken Sword*, *Discworld Noir*, and *Flight of the Amazon Queen*) number among the most beloved adventure classics of the '90s. Today, the spirit of the game lives on through the adventure games of Telltale, Double Fine, and other studios inspired by (or even directly connected to) the golden age of LucasArts creations that *Maniac Mansion* kicked off.

And most of all, it taught millions of children that abusing pets in microwave ovens is a crime punishable by death.

Jeremy Parish works as senior editor at USgamer.net, *co-host of the* Retronauts *podcast, and grim overlord of gaming blog* 2-Dimensions.com. *He is also believed to moonlight as a masked vigilante.*

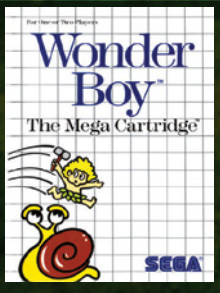
GAME INFO:

Publisher: Sega
Developer: Escape
Platforms: SG-1000, Master System, NES, Game Gear, MSX, C64, CPC, ZX Spectrum, PS2, Wii
Release: 1986
Players: 1-2 players
ESRB Rating: NA

JOIN US AS WE EXAMINE THE FUN AND FOLLY IN THIS FRAGMENTED FRANCHISE.

by Aaron Dennis-Jackson

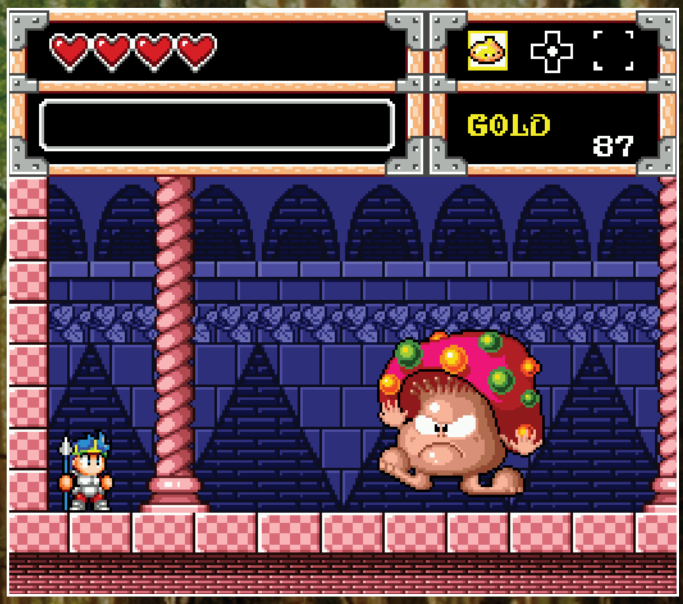
Wonder Boy **was a delightful arcade romp for many a gamer, branching out with various home ports and, eventually, console-only releases. Sega distributed the series but it was developed by Escape (now Westone Bit Entertainment), and it was a success for both. The game spawned many sequels, but things went a little, well,** ***weird*****. In fact, the Marvel universe timeline almost makes sense by comparison. With a few different series, as opposed to one coherent whole, it is as frayed and tangled as a game series can be. But there's much gold here, so let's take a look back at** ***Wonder Boy*****'s good times.**

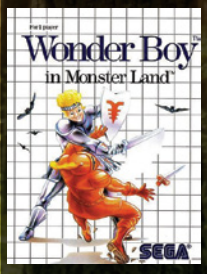


WONDER BOY

In the beginning there was the original *Wonder Boy*, starring the titular Tom-Tom and his cute little blonde hairdo. It was pure run-and-jump fun, though it did put a few twists on the concept. The vitality bar was sapped by running into obstacles like stones, and also depleted over time, necessitating grabbing lots of food items to sustain it. This interesting mechanic kept the action moving forward, and was unusual for 1986. There was also an angel, found in certain eggs (the chosen style of loot container for *WB*) that allowed you to straight-up steamroll your way through any and all obstacles and enemies. And then there's something every '80s game tried to have: a skateboard. *Wonder Boy* also looked great, with its big sprites and bold colors, and I doubt if a single person who's played it couldn't hum the main tune on command.

But then things changed up, big time.





WONDER BOY IN MONSTER LAND

The next entry in the series was incredibly different from the original. It kept the platforming — though it was definitely a different, more considered style of it — but ditched the speed and picked up some RPG elements. This time, our hero wielded a sword (and donned what appeared to be some spiffy underwear), moving through the land whilst stabbing enemies and talking to NPCs located behind the various doors scattered around each stage. For western players, this lead to many an encounter with "Engrish," especially when it came to the bartenders that gave you information in exchange for buying their product. One of these days I expect my life to become complete when I walk into a store and am greeted with "WELCOME! WHAT YOU WANT?"

Like many games of the era that were all about milking cash from kids, *Monster Land* was hard as hell, but lacked the replayability of the original due to the fact that it was much more linear, and not in a way that better allowed you to complete it. And as with the original, there were approximately a bajillion home ports, though the difficulty was softened considerably, and the translations were cleaned up and therefore rendered more understandable / less fun. And that was the last time the series made any sense in terms of continuity.

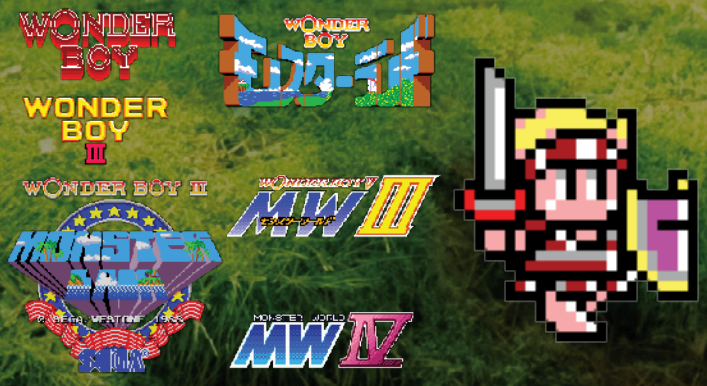
WONDER BOY 3, WONDER BOY III, AND WONDER BOY V: MONSTER WORLD III

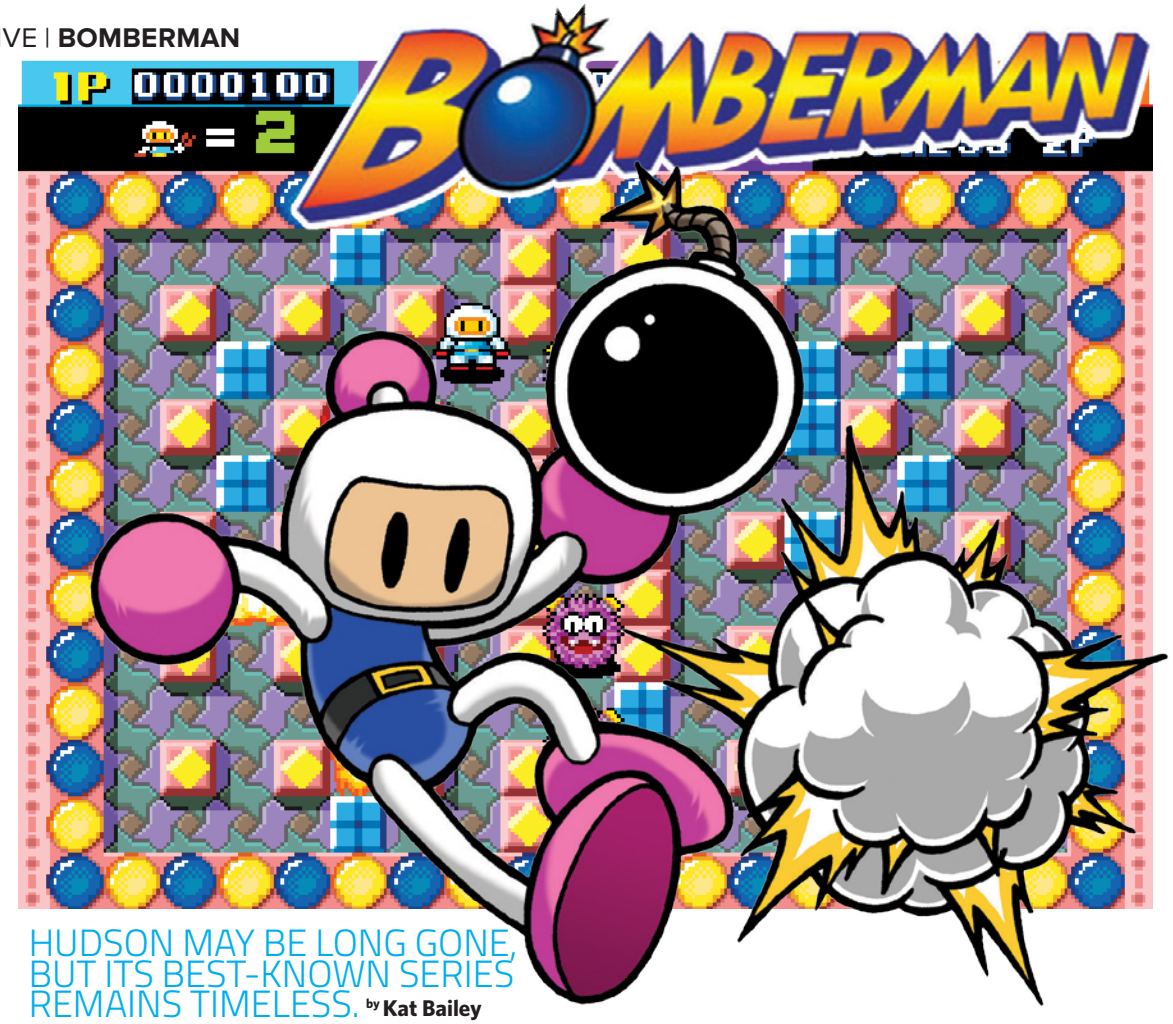
Speaking of which, let's take a bit of a look at the thorny issue of what comes next (and completely ignore the whole *Adventure Island* clone issue); *Wonder Boy 3: Monster Lair* seems to be next cab off the rank, and this was, in my opinion, the series' first real low. It takes the nuanced platforming and adventure from the first two games and replaces it with autoscrolling stages, a projectile-spewing sword, and segments riding on a teeny flying dragon. It does try to hark back to the original, with a variation on the vitality meter and the need to constantly collect food, but really, you could have slapped any name on the cabinet and no one would have said "Hey, this seems like a *Wonder Boy* ripoff!" The series had already shown it wasn't afraid to change it up, but this was a few steps too far.

Next up is my personal favorite in the series, the Master System's *Wonder Boy III: The Dragon's Trap*. What made this action-RPG hybrid (in a similar vein to *Monster Land*) so compelling wasn't the story, and it wasn't really the action; it was the nonlinear format (what would be called a "Metroidvania" game today), and it was the variety of forms your avatar could assume, each with different abilities; there's Hu-Man, Lizard-Man, Mouse-Man, Piranha-Man, Lion-Man, and my personal fave, Hawk-Man. Each had varying abilities, and each was represented by clear and gorgeous sprites; in fact, on the whole this game is easily one of the best-looking titles ever produced for the Master System.

Finally, we have *Wonder Boy in Monster World* (known as *Wonder Boy V: Monster World III* in Japan), which is what we would call a reboot today, specifically of *Wonder Boy in Monster Land*; apart from the graphical upgrade in this Genesis title, it really brings nothing new to the series apart from the companions, and even that doesn't change things up a great deal.

So there we have it! From cave-child Tom-Tom's initial adventure through to the action-RPG hero with a variety of forms, the *Wonder Boy* series has split, refined, failed, and succeeded. Scattered though it is, there's one hell of a weekend in store for anyone willing to tackle these games in sequence, and if you do, be sure to tell us about it!





SERIES INFO:

Publisher:
Hudson Soft
Developer:
Hudson Soft
Platforms:
NEC PC-8801, NEC PC-6000 Series, Fujitsu FM-7, Sharp X1, Sharp MZ-700, Sharp MZ-2000, MSX, ZX Spectrum
Release:
1983
Players:
Single-player
ESRB Rating:
NA

HUDSON MAY BE LONG GONE, BUT ITS BEST-KNOWN SERIES REMAINS TIMELESS.

by **Kat Bailey**

In early 2012, word hit that Hudson Soft was closing its doors after nearly 40 years in the videogame business. Among the biggest casualties was *Bomberman*, which had been kicking around since the mid-'80s heyday of the MSX.

***Bomberman* was a long way from its 16-bit glory days when Hudson closed its doors in 2012 — a darker and edgier 2006 reboot was among the series' missteps in its final years — but it had nevertheless managed to retain a devoted audience thanks to its particularly addictive brand of multiplayer. To lose *Bomberman* was to lose an indelible piece of gaming history — a period defined by multitaps, 10-player local multiplayer, and lots and lots of explosions.**

But despite its apparent demise in the west, *Bomberman* is still remembered as one of the best of the early party games and a fixture of the early 1990s, putting Hudson's little white robot with the pink antenna in the same company as Mario and Sonic. Here's how it happened, and where it is today.

BOMBERMAN AND THE FLOATERS

Bomberman began life a little more than 30 years ago when programmer Shinichi Nakamoto conceived of a maze game for the MSX in which the main character defended himself with bombs.

The resulting game was a far cry from the *Bomberman* we know today. Instead of a tiny robot, the original *Bomberman* was a small man wearing overalls and a boater hat. When it was ported to the ZX Spectrum in the U.K., the game was dubbed *Eric and the Floaters*, in part because of the balloon-like enemies.

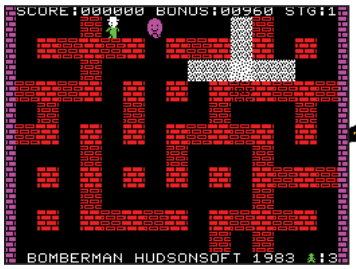
Hudson's familiar robot wouldn't make its debut until two years later, when *Bomberman* was ported to the Famicom. In an apparent bid to save money, Eric was replaced by one of the enemies from the Hudson-developed Famicom port of Lode Runner — a fact referenced in Bomberman's quest to become human as well as the game's final screen, which contained the message, "Congratulations. Bomber Man becomes Runner. See you again in Lode Runner."

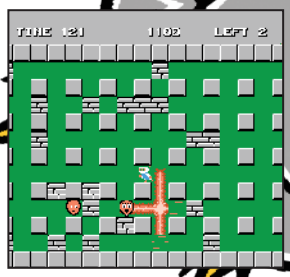
Many of the elements that would come to define *Bomberman* were in place in the original game, including the maze-like overhead levels and the multi-directional explosions. But fun as it was to try and bomb AI-controlled enemies without getting caught in the blast radius, the original *Bomberman* nevertheless lacked one crucial ingredient: multiplayer.

That changed with the 1990 TurboGrafx-16 update, which could in many ways be considered the first "true" entry in the series. Featuring a 16-bit color palette, larger sprites, and more varied levels, *Bomberman* was an attractive and entertaining game for its day. But what really grabbed everyone's attention was the insanity that inevitably came with carefully navigating a maze to avoid your opponent's explosions while trying to drop bombs of your own.

As it turned out, *Bomberman*'s simple but addictive formula — taking advantage of the maze's walls to direct your bomb's explosion toward your opponent without getting hit yourself — was perfect fodder for a multiplayer game. Matches could be tense affairs, as players worked to take advantage of the level geometry to bait their opponent into making a mistake, or could end almost immediately. Either way, they were almost always apt to end with shouts of excitement and laughter as players made narrow escapes or fell into carefully constructed traps.

Evolution of Bomberman (L to R):
MSX, NES, TurboGrafx-16, PS3





Bomberman ultimately worked well as a single-player puzzle game — levels were complex and featured a variety of attractive tilesets — but the TurboGrafx-16 version and the many sequels and spin-offs proved that it was a party game first, and that was ultimately what helped it to remain relevant even as its peers struggled to adapt to the 32-bit era and beyond.

INTO THE NEXT GENERATION

The onset of the 32-bit era was traumatic for many classic gaming franchises as they struggled to transition from 2D to 3D, but *Bomberman* made the leap relatively easily by hewing to the formula that had served it well on the TurboGrafx-16, Super Nintendo, and elsewhere. In some ways, it even got better.

Most fans remember *Bomberman 64*, which was a natural fit for the Nintendo 64 with its tried-and-true multiplayer. But the series was arguably at its best on the Sega Saturn, which had become a kind of safe haven for all sorts of old-school games. Sporting highly attractive sprites and amusing animated cutscenes, *Bomberman* looked better than ever on the Saturn. But what really set it apart was the fact that it could support up to 10 players — a truly fantastic number in the days before widespread online multiplayer on consoles.

Practically speaking, of course, *Bomberman* rarely reached those numbers. Doing so required 10 controllers, two multitaps, and a lot of friends. Nevertheless, the fact that it was even an option was impressive. What's more, *Bomberman* on the Saturn supported online play via direct dial on Sega's NetLink modem, giving it a foothold in the online space well before the Xbox or even the Dreamcast began to popularize online console multiplayer. The lag wasn't too bad, either.

Unfortunately for Hudson, *Bomberman*'s popularity slipped in the years that followed, moving first to handhelds such as the Game Boy Advance and Nintendo DS, then to download services such as Xbox Live Arcade. Nevertheless, a new *Bomberman* game was released almost every year between 1990 and 2010, appearing on everything from handheld to mobile to the N-Gage. When Hudson closed their doors in 2012, they were developing a *Bomberman* game for the Nintendo 3DS, which would have kept the torch lit for another year.

Since then, *Bomberman* has reemerged on iOS and Android in Japan, where it is being sold exclusively as a multiplayer game. Now under the control of Konami, it joins a portfolio of titles that includes the phenomenally successful online game *Dragon Collection*. Given Konami's success in the mobile space and its struggles elsewhere, it seems unlikely to return to console anytime soon.

No matter what platform it's on though, *Bomberman* will continue to be *Bomberman*. The series has proven impervious to change over the years, its greatest strength being its simplicity as it has adapted to one platform after another. For that reason, it's hard to imagine *Bomberman* dying outright, if only because the core of the gameplay works as well as ever.

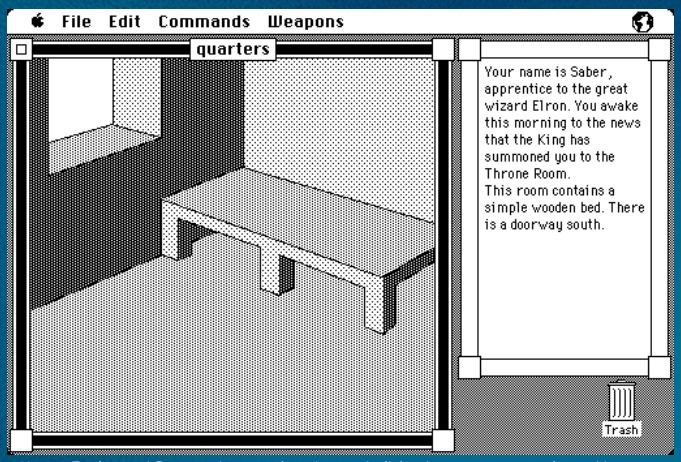
Getting Back to the POINT (and Click)

AFTER DECADES OF STRUGGLE, ADVENTURE GAMING IS FINALLY BACK ON TRACK.

by Matt Barton

The point-and-click design is simple yet effective, and well suited to mouse-equipped PCs. It's driven some of the best games ever made for DOS and Windows, including such beloved titles as Sierra's *King's Quest* and *Gabriel Knight* series, Lucasfilm Games' *The Secret of Monkey Island* and *Sam & Max Hit the Road,* Funcom's *The Longest Journey,* and Microids' *Syberia*. A wide demographic played these and other point-and-click adventures; there really was something for everyone, regardless of their age, gender, or reflexes. These games let players enjoy participating in great stories, interacting with fun and memorable characters, and solving clever, if occasionally maddening, logic puzzles.

THE ADVENTURE BEGINS...

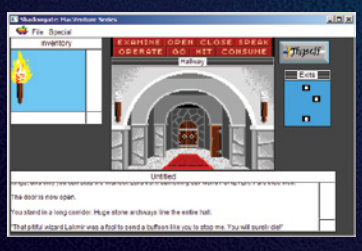


Above: *Enchanted Scepters* is an early point-and-click adventure game, released in 1984.

The first point-and-click adventure is hard to pin down. It really depends on whether we make mouse control a defining factor. According to Wikipedia, the honor should go to a Japanese game for the FM-7 computer called *Planet Mephius*, published in 1983 by T&E Soft. *Wingman,* another Japanese-only title, was published for the NEC PC-8801 the following year. In both games, the cursor (rather than a mouse pointer) can interact with objects on the screen.

The first mouse-driven point-and-click adventure is probably Silicon Beach Software's *Enchanted Scepters,* a 1984 game for the Apple Macintosh. It was an interesting combination of text and graphic adventure; one window held textual descriptions of the room, but the other showed a depiction of the room and objects that could be clicked on with the mouse. Some commands had to be typed, however, and simple RPG elements made it more of a hybrid than a pure adventure game. If you haven't heard of this game before, don't worry — it was only released for the Mac. One cool thing about this game, though, is that the company released its engine, World Builder, as a separate product in 1986, and aspiring authors used it to make dozens of games. You can download and play *Fred Rogers: Terrorist, Mormonoids of the Deep* and many others at macintoshgarden.org/games/world-builder.

AN ICOM-IC ARRIVAL



The first point-and-click I ever played was ICOM Simulations' *Déjà Vu: A Nightmare Comes True,* a film noir-inspired game published in 1985 for Mac and later ported to a variety of systems, including Apple IIgs, DOS, Atari ST, and the Commodore Amiga, on which I played it. ICOM Simulations followed up this hit with several other classics, including the fantasy-themed *Shadowgate* and horror-themed *Uninvited* in 1987. These remain some of my favorite games, and I still remember the fun I had as a kid playing blackjack in *Déjà Vu II* and trying to grab one more piece of loot before the dragon fried me into a crispy critter in *Shadowgate.*

Unlike most of their competition, ICOM's adventures used a GUI similar to the windows and icons interface of the Mac or Amiga's Workbench. ICOM designer Dave Marsh said that was intentional: "Our windows looked like something you'd see right off the desktop, but it was so new and different that a lot of people enjoyed it."

The company's next ventures, *Sherlock Holmes: Consulting Detective* (1991) and *Dracula Unleashed* (1993), were FMV titles utilizing the then-nascent CD-ROM technology. However, they're probably best known for the NES port of *Shadowgate* published in 1989 by Kemco/Seika. According to Marsh, ICOM was skeptical that their interface would work on the console, but the Japanese company persisted, eventually showing them an excellent prototype. Marsh attributes its success to its uniqueness: "It was really different than the side-scrolling games that were out there at the time." Marsh jokes that two out of every three fan emails he receives praise him for the NES version, especially its catchy music, neither of which he had anything to do with.

Marsh formed Zojoi in 2012 and acquired the rights to ICOM Simulations' titles. So far, they've released an updated version of *Shadowgate* and are now working on an enhanced version of *Sherlock Holmes: Consulting Detective.*

SIERRA'S TURN

Sierra On-Line, known originally as On-Line Systems, published the first graphical adventure game in 1980 for the Apple II. Its interface and artwork may look crude today, but it was arguably a giant leap forward from the text-only alternatives from Infocom. Its designer, Roberta Williams, continued refining the interface with her husband Ken Williams, founder of the company. Despite the innovations introduced by *Mystery House* and later "Hi-Res Adventures," they owed much of their success to an off-color text game by Chuck Benton called *Softporn Adventure.* Indeed, the Williamses said that this single title (whose box sported a naked Roberta in a hot tub!) doubled the sales of their other games, since game stores preferred buying multiple titles from each publisher. Incidentally, Al Lowe would base his infamous *Leisure Suit Larry* series on *Softporn Adventure.*

The first big graphical adventure game for Sierra was *King's Quest,* which debuted as an exclusive title for the short-lived IBM PCjr platform. Thankfully it was subsequently ported and released for other platforms, and soon Graham and the magical kingdom of Daventry were household names among PC gamers. Known largely for their mythical fairy-tale themes, sardonic humor (including countless grisly ways for the character to die), and unforgiving puzzles, *King's Quest* would remain a PC-gaming staple until well into the '90s. Sierra brought on other

designers to better leverage the engine they'd developed for *King's Quest,* resulting in Mark Crowe and Scott Murphy's *Space Quest,* Jim Walls' *Police Quest,* Lori Ann Cole's *Hero's Quest* (later *Quest for Glory*), and the aforementioned *Leisure Suit Larry.* All of these games sold remarkably well and helped establish the graphical adventure game as a cornerstone of the computer games industry.

However, it wasn't until the publication of *King's Quest V: Absence Makes the Heart Go Yonder!* in 1990 that Sierra could boast of a true point-and-click interface. Hitherto, the games had relied on keyboard controls and a text parser. To make this game, Sierra developed a new engine called the Sierra Creative Interpreter, which could take advantage of mice, icons, and 256-color graphics. It won numerous awards and high praise from *Computer Gaming World:* "By using digitized paintings, [a] parserless interface, the exceptional musical talent at Sierra and her own unique blend of fairy-tale-based puzzles, Roberta has created perhaps the crowning glory of her *King's Quest* series." A later "talkie" version for CD-ROM introduced voice acting to the mix — specifically, the talents of Sierra's own untrained office staff. With the exception of Josh Mandel, who'd had some theater experience, the results were unimpressive.

Above: This 1990 *King's Quest* remake used Sierra's Creative Interpreter.

Mandel produced a reboot of the first *King's Quest,* in which he not only updated the graphics and interface, but some of the puzzles' solutions as well. I asked him about the challenges he faced in making this transition: "It was tortuous. Every designer at Sierra, including me, had been brought up using the parser interface, which allowed us to create any type of puzzle we could imagine. Now we were reduced from using an entire dictionary's worth of verbs, to four or five. It was difficult and painful for every designer to adjust their thinking to come up with ways to present, at least, an illusion of the old flexibility. I felt like my arms and legs were cut off." Despite Mandel and others' misgivings about the new format, the point-and-click interface quickly became the industry standard.

In 1993, Sierra published *Gabriel Knight: Sins of the Fathers,* a supernatural detective game designed by Jane Jensen. Noted for its mature tone and emphasis on characters and dialogue, it attracted new fans to a genre dominated by juvenile themes and graphics.

Above: It wasn't a looker, but *Maniac Mansion* was revolutionary.

LUCASFILM GAMES ENTERS THE MIX

Lucasfilm Games' first foray into the adventure-game market came in 1986, when it published *Labyrinth: The Computer Game.* Lucasfilm Games had been founded in 1982 as a videogame wing of George Lucas' film production company, and was thus able to leverage the tremendous popularity of hit movies like *Labyrinth* and later *Indiana Jones* for its adventure-game series.

Labyrinth enjoyed the contributions of celebrated author Douglas Adams of *Hitchhiker's Guide to the Galaxy* fame. Unfortunately, one of Adams' wildest ideas, which got implemented into the game, was to open it as a text adventure — a move similar to the black-and-white opening of the classic film *Wizard of Oz.* Designer David Fox later regretted this decision, noting that "we advertised this as a graphics adventure, and I wonder how many people bought the game and gave up...They might have stopped before they got to [the graphics]. It sounded really fun, but it wasn't."

The adventure that really put Lucasfilm Games on the map was *Maniac Mansion,* released in 1987 for the Commodore 64, and ported later to a variety of platforms including the NES. Designed by Ron Gilbert and Gary Winnick, *Maniac Mansion* was significantly less difficult than *King's Quest,* but that's more to do with its streamlined interface and more forgiving nature than dumbed-down puzzles. Instead of the text-based parser of the original *King's Quest,* you simply choose among 12 verb commands, neatly printed at the bottom of the screen.

The campy sci-fi/horror plot has you controlling a variety of characters through a mansion reminiscent of *The Rocky Horror Picture Show* (but actually inspired by the Main House at George Lucas' Skywalker Ranch). It introduces tropes that routinely show up in the later Lucasfilm adventure games, such as Chuck the Plant and tentacle-waving aliens. It also contains one of the most infamous scenes in all of adventure games — I won't spoil it for you here, but it involves a microwave and a

hamster. Later versions of the game made significant modifications, some welcome (George "The Fat Man" Sanger contributed to the soundtrack of the NES version), but others not so much (especially Nintendo's stringent censorship).

Gilbert's design philosophy differed sharply from his contemporaries, views he made clear in a scathing 1989 article called "Why Adventure Games Suck and What We Can Do About It." According to Gilbert, too many adventure games were ruined by bad puzzles, which served more to frustrate or distract players from what was really important: the story. Gilbert still maintains that, "Puzzle solving and storytelling can get in the way of each other if the puzzles are not serving the story. If the puzzle exists simply to slow the player down and doesn't help build the character, world, or story, then it has no place in the game. Adventure games where the puzzles just seem to be random stuff thrown in drive me crazy. I want the puzzle to tell me something."

Although we can see Gilbert's ideas at work in *Maniac Mansion,* they really reached fruition in *The Secret of Monkey Island.* Released in 1990, this game brought the point-and-click adventure to a new height, with superb music (composed by Michael Land), an unforgettable cast of characters (Guybrush Threepwood and LeChuck the pirate are my favorites), and terrific artwork. What really sets the game apart, however, is the well-paced narrative and hilarious, often self-deprecating and self-referential scenarios, which soon became a trademark of the company.

Above: You've got nine verbs. Go get 'em, kid.

Unfortunately for Lucasfilm, despite the critical success of *Monkey Island* and later hits, they were never able to top Sierra's adventure games in the American market. According to Fox, "[Sierra] had the market share. We felt like they were our competitors, but they probably didn't even know we existed. We looked at their games, took them apart, and talked a lot about what we liked and didn't like about them...We didn't have their competition in Europe, so our games were a lot more popular there."

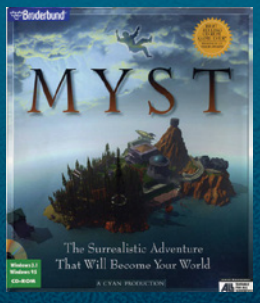
Another Lucasfilm designer, Noah Falstein, echoed similar sentiments: "We always felt it was unfair. *The King's Quest* games were good, and Roberta Williams was good at tapping the heart of the masses. On the other hand there were lots of cases where they killed players off left and right. In a later *Monkey Island* game we satirized that with a window that would pop up like Sierra's when you die."

The Secret of Monkey Island was only the first in a long line of masterpieces from Lucasfilm Games. Like Sierra, the company's designers were able to leverage the power of a single interpreter engine. For Lucasfilm, that engine was called SCUMM (Script Creation Utility for Maniac Mansion), which, as the name implies, had been in development since *Maniac Mansion.* Some of the best games made with SCUMM include *Indiana Jones and the Fate of Atlantis* (1992), *Day of the Tentacle* (1993), *Sam & Max Hit the Road* (1993), and Tim Schafer's *Full Throttle* (1995).

In 1998, the company (now LucasArts) released Schafer's *Grim Fandango,* widely regarded as the best point-and-click ever made. Borrowing elements from classic films and Aztec beliefs, the game immerses you in one of the most imaginative settings you'll ever experience. While there's plenty of humor here, the game as a whole feels deeper, leaving a lasting impression on anyone who's played it. While not everyone liked the new interface (its engine, GrimE, was designed with a controller in mind), such issues are quickly forgotten once you get absorbed in the fascinating story.

Although the game won plenty of awards and remains on many players' "best of" lists, it sadly didn't sell enough copies to please shareholders. This high-profile "disaster" led to the dissolution of the company's adventure-game team! Undeterred, Schafer and his new company Double Fine Productions never gave up on the game, and even delivered a remastered version of the classic for modern systems earlier this year.

MISSING THE POINT: THE "FAD" DIES



The early- to mid-1990s represent the apex of the point-and-click genre. Business was booming, the magazines were buzzing with rumored sequels and new franchises, and the genre seemed to have a long life ahead of it. Sadly, both Sierra and LucasArts were hit with a one-two punch. The first blow was CD-ROM technology, which up-and-comers Trilobyte and Cyan Worlds leveraged to produce their monster hits *The 7th Guest* and *Myst* in 1993. Unlike the competition, these games featured first-person viewpoints, prerendered graphics, and digitized soundtracks. Suddenly, both Sierra and Lucasfilms' games looked antiquated by comparison, and the companies struggled to find ways to use the exponential increase in data storage brought by CD-ROM.

The second blow was *Wolfenstein 3D* and *Doom,* id's breakthrough shareware titles that introduced the world to the genre now known as the first-person shooter. Compared to the immersive, high-octane thrills of these games, point-and-click adventures seemed dull and primitive. Furthermore, the intense demands these and later games made on computer hardware led to the introduction of dedicated 3D graphics processors. After investing thousands on a powerful gaming rig, few gamers were interested in playing 2D, sprite-based point-and-click adventure games. LucasArts thought it saw the writing on the wall, and, as mentioned above, canned its adventure-game team to focus harder on

"modern" genres, such as those represented by its best-selling *X-Wing* and *Dark Forces* series.

Sierra struggled on longer, trying desperately to recapture the market share its adventure-game studio had lost in the latter half of the decade. Jane Jensen designed 1995's *The Beast Within (*a sequel to *Gabriel Knight),* a well-received game produced entirely with full-motion video. One of the most interesting games from this era is their 1996 survival horror, *Phantasmagoria,* billed as an "interactive movie." Featuring a live actor and tons of digitized video footage, it was bashed by critics for its "lame" script and gratuitous violence.

Above: Despite valiant efforts, Sierra's heyday was past.

On paper, Sierra's 1998 game *King's Quest: Mask of Eternity* seemed well poised to do precisely that. It boasted a full 3D engine, a dynamic cursor, and action-based combat and other sequences. Ken Williams summed up the team's thoughts in a 1997 interview with *Interaction Magazine*: "The traditional adventure game is dead. It's time to change adventure games at least as much as the gamers themselves have changed over the last few years. It's time to make them less pretentious. More open-ended, faster paced, and just more fun to play than they have been. What's the use of creating these super-serious, overly literary, and downright studious games when the major audience that will play them played a Nintendo or a Sega last year? These folks are used to playing games where the correct answer to any problem might be jumping over something, hitting it with a hammer, or maybe even shooting it with a big bazooka. Why hassle through all the literary pretense when most of today's gamers just want to blow something up?"

In retrospect, Sierra's quest to appeal to this perceived "modern" gamer may have thrown out the baby with the bathwater. While initial *Mask of Eternity* reviews and sales were positive (it outsold *Grim Fandango* two to one), even the most complimentary reviews mentioned that longtime fans of the genre may be turned off by the action sequences. They might as easily have been turned off by the new setting, characters, and age requirements. For some fans, at least, it just didn't feel like a *King's Quest* game.

Jensen returned in 1999 with *Gabriel Knight III: Blood of the Sacred, Blood of the Damned,* which also updated the interface into full 3D. Unfortunately, despite receiving critical acclaim, by this point the adventure-game genre had been reduced from mainstream to niche status. It didn't sell nearly as well as its predecessors, and was Sierra's last attempt at an adventure game.

Sierra's real problems, however, may have had less to do with the decline of the adventure-game genre than a series of unrelated business decisions. The first was the launch of the *ImagiNation* network, which began as a way for founder Ken Williams to play bridge with his family over a modem. Eventually this idea spawned into a series of themed "lands," mostly based around card and board games, but eventually including action games (including the popular *Red Baron*).

For various reasons the whole affair ended up as an albatross for Sierra, costing them millions of dollars per year. Still, the company was making plenty of money in 1996, when it was sold to CUC International for $1.5 billion. Ken stayed on for a while as CEO, but he and Roberta stepped down a year later. According to Ken, "The company that acquired Sierra turned out to have falsified its financials, and several members of its management team are facing very possible jail time. The Sierra acquisition turned out to be a total disaster, both for shareholders (and option holders) and for employees — most of which lost their jobs. Neither Roberta, Al, or me were ever offered another game at Sierra. It just hasn't happened."

ADVENTURE GAME IMPORTS

Sierra and Lucasfilm are the best known in the point-and-click business, but they are far from the only two companies who have put out awesome games. In 1990, Revolution, a developer based in the United Kingdom, published a fun point-and-click adventure called *Lure of the Temptress.* This was followed in 1994 with the cult classic *Beneath a Steel Sky,* a cyberpunk adventure. Two years later, they launched the *Broken Sword* series, which is still going strong today.

In 1999, a Norwegian company named Funcom developed *The Longest Journey,* a mature and often-dark adventure game that many consider among the best ever made. Following the story of a young artist named April Ryan, *The Longest Journey* is almost psychoanalytical in its depth, exploring issues and territory far removed from the lighthearted settings of most point-and-clicks.

Another brilliant game is *Syberia,* developed by a French company named Microids and released in 2002. Like *The Longest Journey,* this game stars a female protagonist, this time a lawyer named Kate Walker. Kate's adventure concerns a wonderfully weird toy factory, but the game quickly gets into political and philosophical territory. The game's designer, Benoît Sokal, is a noted comic-book writer and illustrator, a background that served him well in creating the gorgeous scenery and sharp dialogue of the game. *Syberia* and *The Longest Journey* are deeply rewarding adventures that rival the best of Sierra or Lucasfilm. Tellingly, in most reviews of these games, the tone is that these games are successful *in spite of* being point-and-clicks.

THE RESURRECTION

In 2004, Kevin Bruner, Dan Connors, and Troy Molander founded an independent game publishing house in San Rafael, California. The name of their company was Telltale Games. Determined to debunk the "industry wisdom" that the adventure-game market was dead, the company decided on a new approach. Instead of making huge, epic adventures that would take years to develop, they proposed "episodes," or brief adventures that could be released on a faster schedule. The adventure

game may have been dead and rotten, but the trio suspected they might live to see it rise from the grave.

They first appeared on my radar with *Sam & Max: Season One*, which both reunited old fans with two of their favorite characters and laid the groundwork for future episodic releases. From there, they developed series based on *Wallace & Gromit* and *Homestar Runner* before making their mark on the *Monkey Island* franchise with *Tales of Monkey Island*.

Though all these products were successful, they were minor compared to their monster hit, *The Walking Dead,* which hit the market in 2012, just as the television show had blasted Robert Kirkman's humble black-and-white comic book to worldwide attention. The association with the show alone would probably have spiked sales of the game, but Telltale's designers had done much more than just rehash the stories in the comics.

Introducing new characters, plots, an aesthetic best described as a "living comic book," and exciting interface innovations, *The Walking Dead* was the right game at the right time. Much like during the glory days of the genre, these adventure games catered to folks who would never touch a *Call of Duty* or *Madden* game, but also won over gamers long accustomed to AAA-quality 3D graphics. Perhaps this is a sign that gamers' obsession with "cutting-edge" graphics is at last dying down, and there is room once again for games that are more concerned with story arcs than pixel pipelines.

As if to show that *The Walking Dead* was more than a fluke, Telltale enjoyed another wave of hit sales with their *Wolf Among Us* series, based on Bill Willingham's *Fables* comics. Once again, the team showed a keen understanding of the nature of comics and games, and managed to fuse the two into a perfect combination.

POINT-AND-KICK(STARTER)

Telltale's widely publicized success may help explain the triumphant return of Tim Schafer, Ron Gilbert, and Garry Winnick to the forefront of the games industry. In March 2012, Tim Schafer's team launched a *Double Fine Adventure* Kickstarter with a modest $400,000 goal. They ended up with $3.3 million, and have since released *Broken Age: Act I* and *Grim Fandango Remastered,* and are planning a special edition of *Day of the Tentacle.*

In December of last year, Gilbert and Winnick launched a Kickstarter for a retro-themed point-and-click called *Thimbleweed Park.* Though they nearly doubled their initial goal of $375,000, they didn't raise the millions of Schafer's project. Perhaps this is due to "Kickstarter fatigue," or the intentionally dated look of the project's 2D graphics. According to Gilbert, although there's clearly an homage here to his early games, there will be innovations: "We're no longer limited by palette and basically have unlimited RAM and HD space, so you'll see a lot of the sorts of fun animations and extra rooms that we would have liked to do back then, but had to cut due to space issues. Also, game design took a huge leap between *Maniac Mansion* and *Monkey Island* and we do plan on using all those lessons we learned."

Gilbert argues that the success of these and related Kickstarters show that there are still plenty of gamers interested in the genre despite rejection from publishers: "With crowdfunding, developers are going right to the fans. That said, even before Kickstarter, adventure games were still being made and in some ways they're still selling just as well as they did in the '80s. The issue is that the rest of the market got bigger and adventure games didn't. Will 2D point-and-click games take off again? I don't know. I don't think they will ever sell as well as games like *Dragon Age*, but I'm not sure I want them to. With any game I make, the goal is to make enough money that I can make another one."

Above: Funded by fans on Kickstarter, *Thimbleweed Park* keeps the genre alive.

THE FUTURE

The future of the point-and-click adventure genre seems bright at the moment. Telltale shows no signs of slowing down, and crowdfunding seems like a viable option for legacy developers who want to get back on the wagon. Though I agree with Gilbert that it's unlikely an adventure game will outperform the latest AAA console title anytime soon, thanks to digital distribution via Steam, Good Old Games, and others, we're not in a zero-sum game anymore. Like Gilbert says, if you can make enough money from your "niche" game to make another one, what more could you ask for?

That said, I'm personally thrilled at the possibilities of Oculus Rift and Microsoft's HoloLens for adventure gaming. The next "point and click" might have me literally pointing and touching things right in front of me. After all, how cool would it be to stuff a virtual hamster into your real microwave oven and watch it explode?

BY PATRICK MILLER (@pattheflip)

FIGHTER'S HISTORY 101

TRACING THE FIGHTING GAME CANON TO THE CURRENT ERA

As of this writing, Capcom has announced that it will fund another year of its professional *Street Fighter* tournament circuit — this time to the tune of $500,000 in overall prizes. While the competitive fighting-game community has not seen the same growth as games like *League of Legends or Dota 2*, it has nevertheless managed to grow into a proper dedicated scene, with its own heroes and weird nerd cool. For most people, though, the fighting-game genre started with *Street Fighter II*, faded to obscurity shortly after a series of "SF clones," and then came back with *Street Fighter IV*; what did you miss during the decades in-between?

Fighting games are my rock music; Evolution 2004, my Woodstock; this article is my syllabus for Intro to Fighting Game History. You won't feel what it was like to be there, but at least you can learn what you missed out on.

THE CLASSICS

Super Street Fighter II Turbo (1994)

Capcom's *Street Fighter II: The World Warrior* (1991) wasn't the first fighting game, but it was the game that started it all. *Karate Champ* (1984), *Yie Ar Kung-Fu* (1985), and the original *Street Fighter* (1987) came earlier, but it was *SF2* that transformed arcades everywhere into winner-stays-loser-pays proving grounds.

Of the five versions of *Street Fighter II*, only *Hyper Fighting* and *Super Turbo* hold up well, and *ST* actually still gets a small amount of competitive play in local scenes or side events at major fighting-game tournaments. It's fairly well-balanced, and people are still discovering new tactics and techniques for this game even now. *Street Fighter II* was the beginning of the modern fighting games, and *Super Turbo* is the most complete and refined final version of *SF2*.

Super Street Fighter II Turbo is great for learning fundamental fighting-game skills; its basic systems are standard for most modern fighting games (*SSF2T HD Remix*, the Xbox 360/PS3 version, is also acceptable). You'll be hard-pressed to find a 2D fighting game that doesn't share some systems or character templates with *ST*, and it doesn't bury you with complicated mechanics like newer fighters often do. (Plus, making a good-faith effort to learn *Super Turbo* will immediately win you brownie points with the old folks in fighting-game circles.)

Ultimate Mortal Kombat 3 (1996)

The original clash between *Street Fighter* and *Mortal Kombat* was a battle for the soul of the newborn genre as each franchise aimed to influence the future of fighting games: Tight design vs. shock appeal, cartoony vs. realistic aesthetics, hold-back-to-block vs. dedicated block button. Capcom undoubtedly won this hard-fought battle — nearly every fighting game has some strand of *Street Fighter* design DNA in it — but *Mortal Kombat* continues to survive and thrive even into the current era.

Of all the titles in the classic *Mortal Kombat* series, *Ultimate Mortal Kombat 3* is generally considered to be the high point (hey, it brought back all the ninjas). Like *Super Turbo* was to *Street Fighter II*, *Ultimate Mortal Kombat 3* is the culmination of the classic *Mortal Kombat* series as it existed then, before it went 3D, added weapons/different fighting, etc.

The King of Fighters '98 (1998)

Shortly after Capcom released *Street Fighter II*, rival arcade game developer SNK debuted *Fatal Fury* (1991) — another fighting game which was actually led by ex-*SF1* devs Takashi Nishiyama and Hiroshi Matsumoto. *Fatal Fury* became one of several long-running SNK fighting-game franchises, and in 1994 SNK came out with *King of Fighters '94*, a new flagship fighting game that included characters from *Fatal Fury* and *Art of Fighting*, among others (heck, even the *Ikari Warriors* show up). *King of Fighters* games generally shared second-banana status with *Mortal Kombat* in North America, but where *MK* looked, played, and felt drastically different from Capcom's fighting games, *KOF* was similar enough in design and aesthetics that it shared some crossover appeal. (In other regions, *KOF* is actually the dominant fighting game — in fact, a recent *KOF '97* tournament in China was reportedly streamed by 500,000 viewers.)

KOF '98, like *UMK3* and *ST*, was an inflection point for the series. Having had four prior titles to refine and iterate on the core of the game and complete a story arc ("The Orochi Saga"), SNK decided to throw canon storylines to the wind and dump practically every character that had ever shown face in a *King of Fighters* game into one glorious "dream match." While *KOF* shares much of *SF2*'s design DNA at the basic level, it celebrates movement and positioning in a way that *Street Fighter* never has. *Street Fighter* is measured and plodding in comparison to *KOF*, which gives you four different jump angles, options to hop or run, roll or dodge, and otherwise bounce all over the place.

The next few *King of Fighters* games would pivot in plot, aesthetic, and character design from the martial-arts mysticism of the Orochi saga to the more science-fiction-y material of the NESTS saga — clones, jumpsuits, and dedicated assist characters — which turned off a lot of fans. So while it's hard to say that *KOF '98* is unequivocally the best *King of Fighters* game ever, it's certainly up there — and if you want to understand the roots of the series, *KOF '98* is the best place to start.

THE CAPCOM CANON

Street Fighter III: Third Strike (1999)

No list of fighting-game canon would be complete without mentioning *Third Strike*, the final installment of the *SF3* series — a series which got off to a rough start, as it ditched most of the now-iconic *SF2* roster for a bunch of weirdos. It also introduced a new mechanic called Parry, which let you tap forward right before your enemy was about to hit you in order to deflect the attack and immediately counter without the normal delay from blocking.

Parry essentially gutted the ranged zoning element of prior *SF* games and centered the game around high-speed, close-range guessing games, which alienated many genre fans. However, it was Daigo's full parry of Justin Wong's 15-hit super in the late rounds of Evo 2004, immortalized in the notorious "Evo Moment #37" video, that single-handedly revived both *Third Strike* and the North American fighting-game scene.

Prior to 2004, *Third Strike* was considered a niche game that relatively few NA players took seriously — it came out in 1999, but never really got that much competitive traction. After the Daigo Parry, *Third Strike* experienced a revival that not only surged it to the forefront of the fighting-game competitive scene for the next five years, but also breathed new life into the community that helped sustain competitive fighting games during the several-year drought in the mid/late '00s that most fighting fans refer to as "The Dark Ages."

Marvel vs. Capcom 2: New Age of Heroes (2000)

Long before Marvel's movie lineup took the world by storm, Capcom made two licensed Marvel fighting games — *X-Men: Children of the Atom* (1994) and *Marvel Super Heroes* (1995) — and then rerolled the recipe with *X-Men vs. Street Fighter* (1996). *XvSF*'s fast pace and flexible combo engine were a welcome divergence from the genre's standard one-on-one combat, so Capcom followed it up with *Marvel Super Heroes vs. Street Fighter* (1997), then dusted off some characters outside of *Street Fighter*, like Strider Hiryu, Mega Man, and Captain Commando, for *Marvel vs. Capcom* (1998).

But none of those games were *Marvel vs. Capcom 2* (2000). *MvC2* had 56 playable characters, switched the format to 3-on-3, and basically cranked up the crazy with flashier combos and faster movement than any other fighting game. All of a sudden, Capcom fighting-game players were separated into two groups: those who played the games that more closely resembled *Street Fighter*, and those who only played *Marvel*.

Street Fighter is measured; *Marvel* is madness. *Street Fighter* matches attempt to replicate the feeling of fighting; comic books attempt to replicate the feeling of *Marvel* matches. If cocaine were a fighting game, it'd be *Marvel vs. Capcom 2*. And while the later *MvC* games would successfully translate the core hype that set Marvel apart from other fighting-game franchises, they could never hope to match *MvC2*'s legacy.

Capcom vs. SNK 2: Mark of the Millennium 2001 (2001)

Capcom vs. SNK 2 is basically the tl;dr of 2D fighting-game history.

At one point in the late 1990s, Capcom and SNK agreed to collaborate on a series of crossover games that drew not just from *Street Fighter* and *King of Fighters*, but from a wide spread of both companies' fighting games. SNK made the *SNK vs. Capcom* series — which included a portable fighting game, a few card games for the Neo Geo Pocket Color, and the legendarily bad *SNK vs. Capcom: Chaos* (2003) — and Capcom made two *Capcom vs. SNK* fighting games.

Capcom vs. SNK: Millennium Fight 2000 was promising. The game introduced the Ratio System where each character is rated with a certain number of points ranging from 1–4 with you picking a combination of up to four characters that totaled 4 points. The game also gave us the Groove System, which allowed you to play your team with either a *Street Fighter Alpha*–style Super meter ("Capcom Groove") or a manually chargeable meter like *King of Fighters '98*'s Extra mode ("SNK Groove"). But balance issues quickly made the game rather frustrating at the competitive level.

Capcom vs. SNK 2 loosened up the ratio system (same 4 points, but now you could allocate them among any characters you liked, with up to 3 characters), blew the character count up from 33 to 48, and expanded the Groove System to include six different combinations of systems: "C-Groove" plays like *Street Fighter Alpha*, P-Groove has the Parry from *Street Fighter III*, S- and N-Groove resemble Extra and Advanced modes from *King of Fighters '98*, and so on.

CvS2 is an amazing game in its own right, and it still has holdout pockets of players here and there. But it's not just a game so much as a love letter to the genre, and many (myself included) think that it has set a bar for fighting games that has not yet been met.

THE BEST OF THE REST

Tekken Tag Tournament (1999)

Sega brought the third dimension to fighting games with *Virtua Fighter* (1993); Namco followed with *Tekken* in 1994. The two games were the flagship fighting-game franchises for Sega and Sony consoles, respectively, and they both brought new and lapsed players back to the fighting-game fold with their more-realistic (read: no fireballs) movesets. While the core *Tekken* game design has much in common with the *Street Fighter* template, the ability to sidestep attacks and counter turn the game into a more close-ranged slugfest than traditional 2D games are.

Where *Virtua Fighter* is a bit more sober and serious, *Tekken* is splendidly shlocky; the main plot involves inter-generational family infighting between Japanese Karate Businessmen, but the character cast includes bears, boxing kangaroos, cyborg brawlers, and other eccentric additions to your standard *Street Fighter*–esque range of international fighting styles. Most *Tekken* fans identify the apex of the series as *Tekken Tag Tournament* (1999), the two-on-two tag-team spin-off; at a time when 2D fighters seemed more same-y than ever, *Tekken Tag* was new and hot (and also a PlayStation 2 launch title).

It's worth noting that while competitive *Tekken* play never really eclipsed the *Street Fighter* fanbase in North America, it's much more popular in Japan and Korea.

Super Smash Bros. Melee (2001)

Smash is a fighting game in disguise. It started out with *Super Smash Bros.* (1999), an innocuous party game (have fun with your friends and your favorite Nintendo characters!) so divergent from the traditional *SF2* paradigm (two players on a flat stage with health bars) that it almost didn't feel like a fighting game at all. Over time, though, the casual *Smash* player can turn competitive, developing the fundamental skills — and the same thirst for blood — as any other fighting gamer.

The series-defining game is *Super Smash Bros. Melee*; it was built on a seemingly unintentionally permissive engine that gives dedicated players a lot of room to master high-level combos, setups, and movement techniques. *Melee* spawned the competitive *Smash* community, and when series director Masahiro Sakurai decided that competition was not the direction he wanted to take for *Super Smash Bros. Brawl* (2008), it was *Melee* that kept the *Smash* community alive while allowing it to grow into what it is today.

Virtua Fighter 4: Evolution (2003)

In the broader history of videogames, *Virtua Fighter* (1993) is notable because it was the first 3D fighting game. Among fighting-game enthusiasts, the *Virtua Fighter* franchise is memorable because *Virtua Fighter 4: Evolution* (2003) showed us that sometimes fighting games are far more elegant and powerful than the people who play them.

VF4: Evolution had it all. A rich-yet-simple core design, a character roster that was both highly diverse in playstyle *and* fairly balanced, and unending depth with plenty of potential for mind games. It was the closest thing to the perfect fighting game that anyone had ever seen, and this was during an age when most high-level players wouldn't shut up about how competitively broken and shallow all the popular fighting games were.

But it just didn't catch on with the core North American fighting-game scene. Never mind that it had the best tutorial in any fighting game ever, or that the PS2 Greatest Hits rerelease only cost $20 — *Virtua Fighter 4: Evolution* had (and still has) a strong scene in Japan, but most competitive players decided to stick with the familiar yet broken games we knew and loved instead of risking involvement with a game that would expose our fraudulence. It turns out that we need a little brokenness, rough edges, and grime in our games to really get behind them. *VF4: Evo*, we didn't deserve you.

Guilty Gear X2 #Reload (2003)

Delve past the surface level of fighting games, and you'll come across a subgenre known collectively as "anime" (due to their aesthetic) or "airdashers" (because they often include lots of aerial movement options). This genre has its roots in Capcom's flashier fighting games, like *Darkstalkers* (1994), as well as Japanese small-studio games like *Melty Blood* (2002), but Arc System Works' *Guilty Gear* (1998) is the anime community's long-time anchor.

The original *GG* made a splash largely for its outlandishly beautiful anime art, badass metal soundtrack, and bizarre characters; *Guilty Gear X* (2000) and *Guilty Gear X2* (2002) refined the design into a competitively playable fighter while expanding on both systems and roster. *X2 #Reload* was a rebalanced effort that hit the 2D fighting-game playerbase with something new, different, and refreshing right when people were beginning to burn out on the established competitive games of the era.

Guilty Gear is a game for people who love 2D fighting games — the repetitive voice samples, the crunchy combos, the frenetic pace and hand-twisting motions. *X2#R* in particular is deserving of perhaps the nicest thing I can say about a fighting game: It feels fair when you're losing and broken when you're winning.

Final Round!

That concludes *RETRO*'s recap on these historically significant fighting games, but also leads us to a question — Which fighting game do you consider your favorite? Let us know by tweeting @ReadRETRO or visit ReadRETRO.com to participate in our interactive poll!

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PANZER DRAGOON SAGA

Publisher: Sega **Platform:** Sega Saturn **Release Date:** 04.30.98 **Players:** Single-player

by Graham Cookson

SWAN SONG

Released in mid-1998, the same year the Sega Saturn was discontinued, *Panzer Dragoon Saga* was loved by critics and cherished by fans, and is often seen as the Saturn's swan song.

Developed by Sega's internal studio Team Andromeda, it is the third main entry in the *Panzer Dragoon* series, one that took a departure from the series' trademark rail-based shooting. Instead, Team Andromeda created a full RPG based in the *Panzer Dragoon* universe, bringing the world and characters to life in a whole new way.

Unfortunately, the game's late-bloomer status meant that few fans got the chance to experience this evolution, as little more than 30,000 copies shipped in the U.S. Over the years, *Panzer Dragoon Saga* has continued to receive acclaim, consistently appearing in top-100 lists from the media and garnering high scores in retro reviews. It's no wonder many gamers are willing to shell out more than $200 for the opportunity to own it.

WHY ALL THE LOVE?

Despite its small print run, *Panzer Dragoon Saga* captured the attention of the RPG community by offering one of the most engaging and original adventures available at the time. Its fully voiced dialogue, free flight through large, open environments, and unrivalled sense of freedom were impressive, to say the least. Spanning four discs, the game's story is wonderfully told through engaging CG cutscenes that help bring the world to life.

TELL ME A TALE

As the game opens, you're treated to a 20-minute CG intro, something that was unusual and impressive at the time. Due to the Saturn's limitations, the video quality isn't quite as strong as other RPGs of the day, but the content certainly is.

The *Panzer Dragoon* franchise takes place in a post-apocalyptic world, where bio-engineered monsters roam freely, and there is an ongoing struggle to obtain the technology left by the "Ancients," an advanced civilization destroyed by a massive war.

On the surface, the game appears to be the classic tale of revenge, when protagonist Edge and his captain are left for dead in a fight against a rogue segment of the Empire led by a man called Craymen. As Edge's captain succumbs to his wounds, Edge vows vengeance on his attackers and takes off in pursuit. But it's not as simple as that. The plot soon delves into the mysteries of the Ancients' technology and a girl named Azel — who Craymen started his rebellion to obtain. These added plot points keep you hooked as they're slowly revealed throughout the course of the game.

AN ADVENTURE LIKE NO OTHER

Panzer Dragoon Saga departs from the standard "walk around, explore, and fight" routine of most RPGs by splitting them into distinct forms of on-foot, flight, and battles.





Throughout the game, Edge visits small settlements and towns on foot, giving you a chance to explore, talk to NPCs, buy items, and sometimes find hidden treasures or unlock secrets.

As you explore the world, you'll notice hotspots selectable via cursor. Depending on what you choose, areas in the environment can give Edge additional information about items and locations or even allow him to overhear conversations of NPCs, leading to clues that help uncover the game's secrets.

However, the bulk of the *Panzer Dragoon Saga* experience is had on the wings of Edge's dragon. After leaving a settlement, Edge mounts his steed and takes to the skies, exploring some large, open environments. These flight segments act as RPG dungeons, albeit with the ability to explore in all directions, including up and down. You fly around, exploring the world, solving basic puzzles, finding items and (potentially) secrets, and engaging in random battle encounters.

I CHALLENGE YOU TO A DUET — I MEAN A DUEL!

To this day, few RPGs have come close to creating the unique experience of *Panzer Dragoon Saga's* fight sequences.

Its battles are dynamic in their presentation and execution. Your dragon can freely circle around enemies while the terrain whooshes past you, giving the illusion the battles take place in full flight.

Atop his dragon, Edge is capable of moving and attacking in realtime during combat. A combat gauge constantly charges throughout the battle, essentially measuring your attack energy. If it's completely depleted, you'll be left without an offensive option until it refills. Effectively maintaining your combat gauge is essential to the outcome of a battle, and choosing when to use a weaker attack to conserve your gauge for a more powerful assault adds to the game's complexity.

The enemies work on a similar basis, usually taking time to ready their attacks. As you're circling your enemy in flight, a radar depicts areas around the enemy that are safe, neutral, or dangerous. This allows you to plan attacks and strikes by positioning your dragon around the enemy.

To keep you on your toes, the more advanced enemies also move around you. So you could find yourself happily behind an enemy in a safe zone and then suddenly your enemy swoops behind you, maneuvering themselves into a better attack position.

This all combines to create an engaging, dynamic battle system that knows few rivals — though some might say that *Skies of Arcadia's* airship battles come close.

EVOLUTION OF DRAGOONS

A key element to *Panzer Dragoon Saga's* gameplay is the evolution of your dragon, which reflects both the style and success of your combat choices.

As in most RPGs, you level up by earning experience points in battle. You also unlock the ability to "morph" your dragon, skewing its growth toward one of five attributes to better suit your style of play.

You can make your dragon more nimble in combat, able to dodge and skip around your enemy like a giant hummingbird, or you can make it more powerful, tougher yet slower. By favoring a particular attribute over others you will unlock specific special attacks catered to that style of dragon.

As you progress and level up, you'll even find new dragon forms to evolve into. Depending on how well/differently you play compared to others, you'll likely end up with a very different dragon that looks unique with its own variety of special attacks and moves.

LOST TO THE ANCIENTS?

One of the biggest shames about *Panzer Dragoon Saga* is that it looks like we will never see a rerelease of the game. Not only are Saturn titles notoriously hard to port, but Sega and the game's director, Yukio Futatsugi, have said they lost the original source code for several Saturn games, including *Panzer Dragoon Saga*.

With so many original assets missing and the series' less-than-stellar name recognition some 15 years later, any sort of rerelease, let alone a modernized remake, seems unlikely at best.

That in and of itself makes *Panzer Dragoon Saga* feel all the more special. It's a game that was unique in 1998 and, as we will most likely never see it released again, will remain that way forever.

SPIRITS OF COMPETITION:

THE HISTORY OF SAMURAI SHODOWN

By David L. Craddock

IN AN INDUSTRY WITH A PENCHANT FOR IMITATION AND ITERATION, *SAMURAI SHODOWN* DARED TO PIONEER.

Attack of the Clones

When *Street Fighter II* ignited the one-on-one-fighter boom in 1991, publishers took one look at the buckets of quarters Capcom was drawing from the fighting-game well and ordered their developers to dive in.

Haohmaru joined the ranks of *Mortal Kombat*'s Liu Kang and *Street Fighter II*'s Ryu when SNK made him the star of *Samurai Shodown*.

Most of the games that followed were shameless cash grabs. *Fighter's History* by Data East saw fighters from around the globe compete in a tournament — the same premise as *SF2*. Konami shook the genre to the core when it placed the health bars in *Martial Champion* at the bottom of the screen instead of the top.

Amid the clones clogging arcades, two games stepped out of Capcom's shadow. *Mortal Kombat* showered players in gore by awarding victors the opportunity to sever heads, rip out spinal cords, and tear beating hearts from chests. SNK's *Samurai Shodown* deviated even further from *SF2*'s formula. Trading fisticuffs for polished steel, it garnered a cult following and spawned over a dozen sequels and spin-offs.

Then, at the height of *Samurai Shodown*'s popularity, financial troubles bled SNK dry, leaving its fate uncertain.

Fittingly, the man who had created SNK, only to later leave in defeat, was the one who stepped up to save it.

Capcom vs. SNK

Eikichi Kawasaki founded SNK (short for Shin Nihon Kikaku, which translates to "New Japan Project" in Japanese) in 1978 to manufacture hardware components for businesses. His priorities changed when coin-op games like *Space Invaders* stirred everyone from school kids to straight-laced executives into a quarter-spending frenzy. Watching the rapid growth of arcades with mounting interest, Kawasaki decided to expand and opened a coin-op division of SNK.

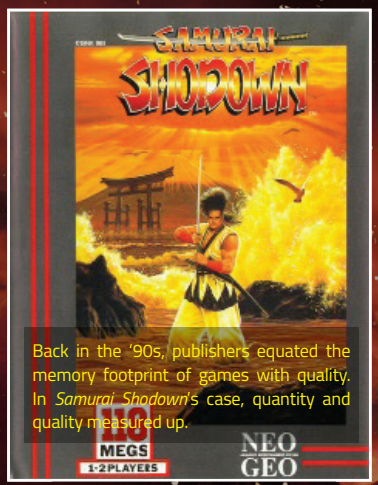
While its first wave of software was derivative of shoot-em-ups like *Space Invaders*, SNK broke new ground in 1989 by revolutionizing arcade hardware. Early coin-op games contained special circuit boards wired to play a single game. To make efficient use of limited floor space, arcade proprietors had to open the cabinet, rip out the guts of old games, and rewire them when hot new games hit the scene. Even the display had to be switched out.

SNK's solution for proprietors who wanted to save space and avoid the headache of rewiring circuitry was the Neo Geo Multi-Video System (MVS). MVS cabinets ran on hardcover-book-sized cartridges instead of circuit boards, and could hold as many as six cartridges. When a new SNK game arrived, all proprietors had to do was pop open the cabinet and plug in a cartridge.

MVS arcade machines used cartridges instead of circuit boards to store games, making them easier to maintain and update.

When *Street Fighter II* took arcades by storm, SNK entered the fray with *Fatal Fury: King of Fighters*, a fighter designed around MVS hardware and bearing a subtitle that bluntly stated SNK's opinion on where its game ranked against Capcom's. Despite impressive animations and a fighting system dependent on perfectly-timed attacks, which appealed to hardcore players, *Fatal Fury* failed to steal much attention from *SF2*.

Determined to carve out a niche in the crowded genre, SNK took a different approach to its next fighting game, *Samurai Spirits*. The foundation was simple:



Back in the '90s, publishers equated the memory footprint of games with quality. In *Samurai Shodown*'s case, quantity and quality measured up.

Everything *Street Fighter II* did, *Samurai Spirits* would do the opposite. Out were fisticuffs, in were weapons spanning shurikens, claws, a massive sickle affixed to a chain, and a slew of swords, most of Japanese design. Instead of letting you cower on the far side of the screen and spam fireballs, *Samurai Spirits* emphasized quick yet powerful strikes that established a furious pace.

Every facet of *Samurai Spirits* oozed personality. Characters were cartoonish, but moved fluidly and wielded their weapons realistically. Dealing a crushing blow triggered a slow-mo effect, and the referee trailing both fighters held up a colored flag to denote who had scored the hit, eliciting cries of delight or dismay from partisan onlookers. In the background, authentic Japanese instruments such as the shakuhachi, a wooden flute, and the shamisen, a three-string with a square base, gave each fight an atavistic, high-stakes feel.

In an era when the term "arcade perfect" usually meant "almost but not quite," SNK delivered a perfect adaptation of *Samurai Spirits* for its Neo Geo Advanced Entertainment System (AES) console in August 1993, the same month it debuted on MVS in arcades. The only sticking point was the exorbitant price points: $600 for the AES, and $200+ per game. *Samurai Spirits*' renown grew when an American version arrived under the name *Samurai Shodown*. In addition to delivering an AES version, SNK targeted Super NES, Genesis, and other consoles popular in the west.

As *Samurai Shodown* spread to new platforms, the growing fanbase demanded a sequel. SNK was happy to oblige.

Peaks and Valleys

While Capcom iterated on *Street Fighter II*, SNK opted to build *Samurai Shodown II* from the ground up. Designers gave defensive maneuvers lots of attention. You could roll backward out of harm's reach, or roll forward beneath attacks and dart in for the kill. Another defensive move, the parry, required more skill. Just before an attack landed, you could execute a command that stunned your challenger. Parrying was celebrated as highly innovative, and would not appear again in a fighting game until 1997's *Street Fighter III*.

Other improvements favored aggression. Performing attacks filled up your POW meter. Once topped off, you could pull off flashy moves like the power special, which shattered the opponent's weapon. Empty-handed players had to scramble to survive until a character in the background tossed them a replacement.

Boasting a cavalcade of new features as well as a more responsive control scheme, *Samurai Shodown II* earned widespread praise. *Electronic Gaming Monthly* awarded the AES version 9 out of 10. *GamePro*, although unhappy with a few imbalance issues between characters, lauded the game for its mechanical improvements and stunning hand-drawn art. *GameSpot* went so far as to give it a high spot on its list of the best games of all time.

Given *Samurai Shodown II*'s acclaim, it came as no surprise that SNK immediately set to work on a sequel. Also foreseeable was that the developer would once again retool mechanics to keep the series fresh. What no one saw coming was just how far SNK would go.

Aesthetically, *Samurai Shodown III* had little in common with its predecessors. The cartoonish visuals had been replaced with a darker art direction, and the change in tone carried over to the characters. Each character came in two flavors: Chivalry and Treachery. Choosing Chivalry gave you the virtuous form of a character, while Treachery presented an evil version.

Other mechanical changes elicited rumblings from fans. The first two games had used weak, medium, and hard slash buttons. *Samurai Shodown III* added a fourth button, kick, which caused concern among devotees that SNK was shying away from the series' weapons-only roots. More worrisome was a shift away from single, hard-hitting strikes in favor of cancellations, moves that could be segued into another move — the same process used to chain together combos in *Street Fighter II*.

Charging the POW meter let you perform special attacks such as shattering your opponent's weapon.

Samurai Shodown III fell flat. While critics gave it high marks and approved of changes such as the ability to slip around opponents and attack their exposed backs, they panned wild character imbalances, the needlessly gritty art style, and trifling gameplay differences between Chivalry and Treachery, which boiled down to a few different moves depending on the style you chose.

SNK took the criticisms lobbed at *Samurai Shodown III* to heart. Character balance received more attention in *Samurai Shodown IV*, and mechanical changes included pressing two buttons to initiate an opening strike that you could follow with a series of strikes strung together in a combo.

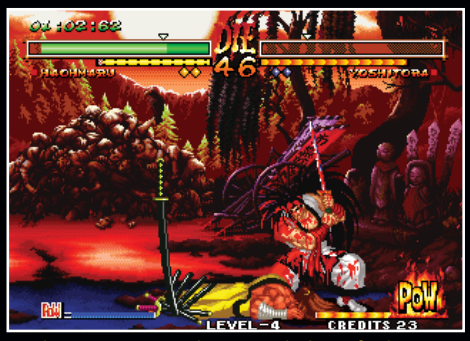
Although *Samurai Shodown IV* returned to a more whimsical aesthetic and tone, SNK's designers did introduce one jarringly morbid maneuver. If you thought you might lose a round, you could perform a suicide move that brought the round to a close but started you with a full POW meter for the next round.

Samurai Shodown IV's large and detailed character sprites, flowing animations, and frenetic pace returned the series to the good graces of fans and critics. But just as *Samurai Shodown* returned to top form, the bottom dropped out of SNK.

Revolving Door

Whereas *Street Fighter II* fans grew to assume that every character from previous iterations would carry over to new ones, SNK changed up *Samurai Shodown*'s roster fairly often. The only constant was Haohmaru, a wandering samurai. Like *SF2*'s Ryu, Haohmaru wears a white gi and meanders the globe in search of competition.

The similarities ended there. Ryu is stoic and clean-cut, while Haohmaru wears an arrogant smirk, lets his hair run wild, and blesses his weapon with liquor before a fight begins.



As the series progressed, *Samurai Shodown*'s fatalities grew more graphic.

Fatality

When a character's life bar dropped to 25 percent it flashed red, the signal for you to execute finishing moves that usually involved cutting your victim in two. SNK censored home versions of the games, changing the color of blood and removing fatalities.

Unlike in *Mortal Kombat*, though, you didn't have to input a code if you wanted to see red. SNK suppressed violence in the AES editions of *Samurai Shodown* by hardware instead of software. Playing the North American version on a North American AES showed white "sweat" instead of blood, but plugging the same cartridge into a Japanese AES reverted sweat to blood.

Off the Beaten Path

SNK tried to grow *Samurai Shodown*'s cult following by transplanting the characters and ideas across as many genres and systems as possible. *Shinsetsu Samurai Spirits Bushido Retsuden* was an RPG released for the ill-fated Neo Geo CD that followed the story-driven conventions of most JRPGs.

SNK's ill-fated Hyper Neo Geo 64 platform hosted *Samurai Shodown 3D 64*, a 3D game in the vein of *Virtua Fighter*, and the Neo Geo Pocket Color got a conversion of the game called *Samurai Shodown!* The 3D entries in the core series continued with *Samurai Shodown: Sen* on Xbox 360.

Death and Rebirth

By early 1995, the advent of PlayStation had sealed the fate of the Neo Geo AES. Sony's debut console launched for $299, half the price of the aging AES. Worse yet for SNK, affordable consoles had achieved a level of graphical fidelity previously exclusive to arcade games — and the MVS hardware. Over 1998 and '99, SNK shuttered its coin-op manufacturing plants.

The exorbitant price of the AES and its library of games made it attainable only to hardcore gamers with means.

Floundering, Eikichi Kawasaki accepted a buy-out from Aruze, a company known for making pachinko machines. Aruze shifted SNK's focus to third-party development for the PlayStation and other consoles, but channeled the bulk of resources into manufacturing pachinko machines featuring SNK's characters, leaving its development teams underfunded. Frustrated, Kawasaki and several other SNK executives left the company.

On October 22, 2001, the publisher filed for bankruptcy, leaving the future of *Fatal Fury*, *Samurai Shodown*, and other properties in jeopardy. Fortunately, Kawasaki had a plan.

Anticipating SNK's demise, Kawasaki founded another studio, Playmore, in August, and bought up all of SNK's intellectual properties. To appeal to loyal fans, Kawasaki rebranded his new company SNK Playmore.

Back at full operational capacity, SNK Playmore perused its catalog of games, many of which had been defunct for years. *Samurai Shodown* had collected several layers of dust; the fourth chapter had been released in 1996, seven years earlier. News of the series' revival was met with a mixed reaction when SNK Playmore announced it would be handing development over to Yuki Enterprise, a relatively unknown studio that had made a few simulation and board games for PlayStation 2.

Fans needn't have worried. *Samurai Shodown V* set an even faster pace, and overhauled mechanics to spice things up and address longstanding criticisms. Yuki and SNK scrapped the Chivalry/Treachery system and concentrated on honing a single fighting style per character. A context-sensitive defense button granted you greater elasticity in combat: Depending on how you held the joystick when you pressed defense, you could block, leap back or forward, or roll.

Samurai Shodown V hit arcades in October 2003 and made its way to AES, PS2, and Xbox just two months later. It was one of the final games released for the AES. Two years later, SNK Playmore took back the reins to develop *Samurai Shodown VI*. The developer invited four new characters and seven familiar faces who had been out of action since *Samurai Shodown II* to rejoin *Samurai Shodown V*'s roster of 28, giving fans the chance to engage in dream match-ups. Six fighting styles were at each character's disposal, each modeled after the numbered games in the enduring series.

The Spirit Still Burns

While *Samurai Shodown* never enjoyed the mainstream success of *Street Fighter* and *Mortal Kombat*, fans continue to hold it in high regard for its unique characters and gameplay. It was one of the first fighting-game series founded on weapons-based combat, the first to feature parrying, and — in *Samurai Shodown 64*, one of the series' 3D episodes — the first to incorporate multi-tiered stages, an honor falsely attributed to *Dead or Alive 2*.

The visual style of *Samurai Shodown*'s action holds up today.

Today, the series has cooled. *Samurai Shodown* fans green and grizzled have to load up *Samurai Shodown Anthology* on Wii and PS2, or wander the dusty halls of the Wii's Virtual Console to get their fix of feudal combat and reunite with Haohmaru and the gang. Still, one fact remains immutable.

Many of the videogame industry's most celebrated titles and characters stand on the shoulders of giants. In a bygone era when Xeroxing *Street Fighter II* was considered a shortcut to success, SNK and *Samurai Shodown* shouldered the giants aside and forged a legacy all their own.

SPLINTER CELL RETROSPECTIVE

BY DAVID GILTINAN

TAKE A LOOK BACK AT THE EXPLOITS, AND INFLUENCE OF, SAM FISHER.

It's difficult to avoid comparing *Splinter Cell* directly to the *Metal Gear Solid* series. Both are classified as being in the stealth-action genre, and feature protagonists who are gruff, cool secret agents. The similarities pretty much end there, however, as both properties sport vastly different gameplay styles and characters.

Whereas *Metal Gear* tends to be more "out there" with its plot, the *Splinter Cell* games have always been grounded in reality, with situations that could just as easily make the evening news on CNN. That's not to say *Splinter Cell* was better, just a different taste from the more "gamey" stories and characters typically found in other titles. It's a great mix of being a spy thriller, political drama, and action flick all rolled up into a videogame experience.

The original *Splinter Cell*, released in 2002, was the start of what would become one of Ubisoft's marquee franchises for years to come. Right off the bat, critics and gamers were impressed by the lighting engine's dynamic shadows. Darkness played a major role in gameplay, as sneaking around wasn't so much about getting behind a wall, but rather being one with the shadows to either sneak past enemies or pounce on them without warning. A light meter helped determine how concealed you were from enemies' vision.

To help combat the lack of light himself, series hero Sam Fisher sported what would become his patented trifocal goggles. These allowed him to see in the dark using night vision, or to pick up heat signatures with thermal vision. Although such a device was initially argued against by author Tom Clancy due to it not really existing, the game's developers convinced him that it was easier to implement from a gameplay standpoint instead of having to switch back and forth between two different pairs of goggles. The triangular green dots they emitted also served as a great signature image for the franchise.

Even though brute force was certainly an option, the *Splinter Cell* series has always heavily emphasized the importance of using stealth instead. It can even help with obtaining information, especially with the ability to interrogate enemies that Fisher grabs from behind. Firearms are at your disposal, namely a silenced pistol and assault rifle, but their use should be minimized if going the quiet route. Non-lethal takedowns with devices such as ring airfoil projectiles, gas grenades, and the ever-useful sticky shockers are almost always preferred.

Sam Fisher is not only skilled, he's also surprisingly agile. Climbing up and shimmying along ledges is no problem for him, as well as hanging off overhead pipes. One of his most impressive moves is the grossly underutilized split jump. If in a narrow hallway, Fisher can wall jump then use his legs as leverage to maintain a high vantage point. It's a cool way to pick someone off or get the drop on an unsuspecting soldier. It's just too bad the game (and the series as a whole) doesn't put you in nearly enough situations where this tactic is useful.

Some interesting changes made in the sequel *Pandora Tomorrow* remain completely unique to it. One of the more glaring differences is the voice of Third Echelon boss Irving Lambert being portrayed by Mr. Allstate Insurance himself, Dennis Haysbert. While the role was "in good hands" with Haysbert, there's no replacing original actor Don Jordan. This would be the only time Lambert was not voiced by him.

There was also the SWAT turn, which was a maneuver to get from one side of a doorway to another quickly and quietly. While it's a visually cool move, it served very little purpose (not unlike the split jump), and ended up being dropped in subsequent titles.

Another temporary change was the pistol having a laser attached to it for more accurate fire. There wasn't much use for it, especially when a reticle on the screen pretty much performs the same function. This was switched out in favor of the much more useful Optically Channeled Potentiator, a secondary fire that disrupted lights and electronic devices (cameras, security lasers) for a short time.

Pandora Tomorrow was the first in the series to introduce multiplayer in the form of the popular Spies vs. Mercenaries mode. In it, spies were tasked with obtaining the ND133 (aka "Pox Box") and bringing it back to a secure location. The mercenaries, who are heavily armored and outgun the spies, would protect the Pox Box. It was a critically acclaimed part of the game, but unfortunately didn't quite catch on as well as Ubisoft hoped. Luckily, improvements and additions were made from then on that made multiplayer feel as natural and complete as the single-player campaign.

This leads into what *Splinter Cell* fans (myself included) consider to be the strongest entry in the franchise, *Chaos Theory*. It was at this point that Ubisoft had a strong grasp on what did and didn't work in the past two entries, resulting in the third title being the zenith of the series' stealth-action gameplay, as well as (in my opinion) the genre as a whole. Graphics got a bump up in quality, including fine details such as Fisher getting wet when it rains. Multiplayer was also improved, and a new co-op mode became a fan favorite.

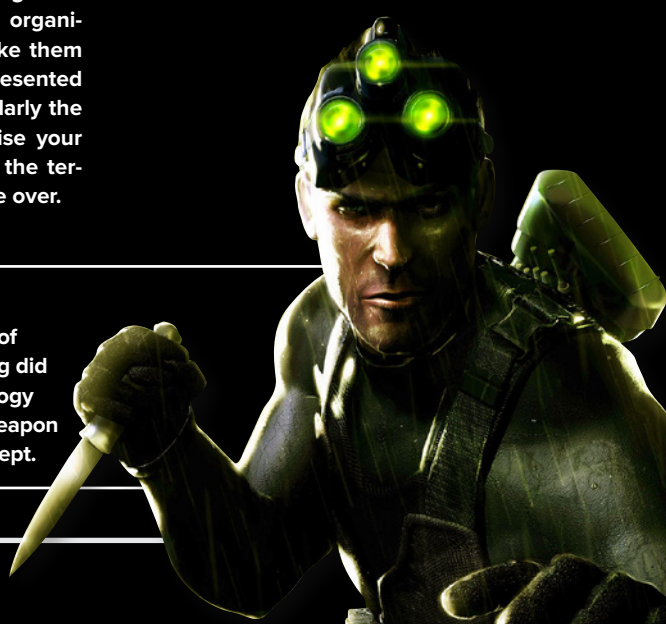
The option of taking enemies out lethally and non-lethally was also a considerable change, giving you the option to exercise your "Fifth Freedom" privilege more easily. The knife, which can help interrogate enemies, has mulitiple uses, namely piercing generator gas tanks and cutting fabric to easily sneak into a tent.

Next up was *Double Agent*, which is where the series started to make Sam Fisher feel more human. Sam comes to believe his daughter was killed in a drunk driving accident, which leads into him agreeing to perform his most dangerous mission yet: Infiltrate a terrorist organization as a double agent and take them down from the inside. This presented some intriguing changes, particularly the choice of objectives that will raise your standing with either the NSA or the terrorists. Get exposed and it's game over.

The shocking end to *Double Agent* lead into the fifth entry, *Splinter Cell: Conviction*, in which Sam has now gone rogue. Free from the constraints of the NSA and Third Echelon, Fisher goes on a personal mission to find out the truth behind his daughter's death. Gameplay put more of an emphasis on action, with Sam becoming more violent and given the added ability to mark and execute multiple targets at once. While this was a fun new mechanic, hardcore *Splinter Cell* fans felt like the series was getting away from its original stealth roots.

Splinter Cell: Blacklist attempted to make both stealth and action fans happy by introducing different play styles: Assault, Ghost, and Panther. Fans were happy to see Spies vs. Mercenaries make a return, but the switch from Michael Ironside's iconic performance to the more youthful Eric Johnson (for purposes of motion capture) left some with a sour taste, especially because of the story's continuation from *Conviction*.

What's in store for Sam Fisher next? My hope is that if Ubisoft continues to ignore original performer Michael Ironside, it'll just reboot the series. A return to the more hardcore stealth roots would also be appreciated, although unlikely because of the wider mass appeal of faster-paced action titles. There's a strong parallel between how *Splinter Cell*'s evolved and the way survival horror games have. Hopefully, if *Splinter Cell* does make it to current-gen consoles, it won't make the mistake of ignoring the true fans who made it so popular to begin with.



SEEING THE FUTURE?

Going back to Tom Clancy's original complaint, just two years after the release of *Splinter Cell* goggles that could switch between thermal and intensified imaging did come into existence. Made by American global aerospace and defense technology company Northrop Grumman, the device was called the Fused Multispectral Weapon Sight. Who knows? Perhaps the fictional Third Echelon played a part in its concept.

WE EXPLORE THE SHADOWY BEGINNINGS OF

STEALTH GAMES

BY DAVID L. CRADDOCK

UNSUNG HEROES

There's an adage that goes, "History is written by the victors." Many believe it was coined by Winston Churchill, but historians who attempted to trace the quote to its origin found that the trail went cold, muddied by the passage of time.

No matter who said it, the old saw rings true for videogames. Fighting, RPGs, puzzle, adventure — pick any genre, and you can trace it back to a popular title that set the blueprint for all that followed. Fighting-game designers pledge allegiance to *Street Fighter II*. Thrillseekers wax nostalgic about the first time they encountered the zombified dogs that burst through the windows in *Resident Evil*'s Spencer Estate. To many, *Super Mario Bros.* is the alpha and omega of platformers.

Some popular examples are indeed the progenitors of their long and illustrious lines. In other instances, unsung heroes deserve credit. Capcom would prefer to forget the original *Street Fighter*'s stiff controls and choppy animations. *Resident Evil* served up a feast of gore and horror, but *Sweet Home*, a NES horror game published by Capcom exclusively in Japan, set the table. Nintendo did create the platform genre, but with *Donkey Kong*, the first game that let you hop over gaps and obstacles, not *Super Mario Bros.*

Solid Snake is considered the forerunner of the stealth genre. He first appeared in *Metal Gear*, a top-down game founded on scarce ammunition, disguises that let you slip by guards unnoticed, and a cardboard box, the ultimate camouflage.

Peer deeper into the shadows of the stealth genre's lineage, however, and you'll notice other figures cloaked in darkness. You've probably forgotten all about them. Maybe you never knew they were there.

That's fine. That's just the way they like it.

DOUBLE-OS AND NAZI CASTLES

Years before Sega went head to head against Nintendo in the 16-bit console wars, it was a coin-op manufacturer known as Service Games (SErvice GAmes). In 1981, Sega released *005*, the world's first stealth game according to *The Guinness Book of World Records*. Displayed from a top-down view, *005* tasked you with retrieving a briefcase containing classified documents while evading guards that patrolled rooms littered with bulwarks like crates. When they halted, guards shone the beams of their flashlights in a different direction, giving you a few precious seconds to dart out from behind your position and dash to a new hiding spot.

Sega's *005* was perhaps too skilled at hiding. It flew under the radar of most critics and players, and faded into obscurity. *Castle Wolfenstein*, published in 1981 for the Apple II, made a bigger splash. Programmed by Muse Software coder Silas Warner, *Castle Wolfenstein* cast you in the role of a soldier charged with navigating the warrens of a fortress and assassinating the Führer.

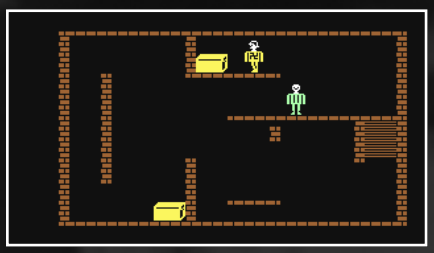
Castle Wolfenstein armed you with a gun and a few rounds of ammo at the start of each game, but skirting detection was the wiser course of action. You could wait for guards to pass then slip around them, or hold them up at gunpoint and shake them down for supplies. Donning an enemy uniform fooled low-level sentries into thinking you were one of them, but the high-ranking SS Stormtroopers saw through your deceit and opened fire.

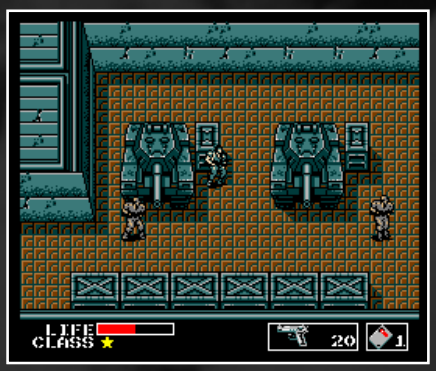
Castle Wolfenstein's gameplay depth and technical acumen made Warner a superstar in the hacker community. Corpses could be used to block off passageways. Enemies came running at the sound of gunshots or grenades. Locked treasure chests held ammo, keys, or bulletproof vests, but took time to pick, leaving you vulnerable to detection. Grenades destroyed architecture upon detonation. Guzzling alcohol gave you a buzz and unsettled your aim.

Arguably the most impressive feature of *Castle Wolfenstein* was Warner's sound engine. For the most part the game stayed quiet, letting you immerse yourself in ducking guards and charting your course to the nearest point of egress. One hasty move and guards bore down on you with cries of "Halt!" or "Kommen sie!" (German for "Come, you!") that crackled from the Apple II's speakers, shocking players accustomed to bleeps and bloops that only nominally qualified as sound effects.

Critics and players marveled at *Castle Wolfenstein*'s tense atmosphere and technological underpinnings. In 1984 Warner outdid himself with the release of *Beyond Castle Wolfenstein*. Bodies could be stashed inside rooms and alcoves to avoid alerting guards to your presence, or piled up in doorways and hallway junctions to fashion roadblocks. The pass system, another novelty, required you to show passes permitting you to wander around your current area to guards who caught you, or bribe them to stay quiet. If you lacked money or the appropriate paperwork, the dagger, which replaced grenades, let you shut them up permanently without raising a fuss.

While both *Castle Wolfenstein* games incorporated stealth, sneaking was merely an option. Ammo was scarce, but stock-





piling it let you turn the bottom half of the game into a shooting spree. In 1987, *Metal Gear* and its protagonist, rugged spy Solid Snake, slithered onto the scene and turned heads by promoting clandestine tactics over frenetic action.

However, Hideo Kojima, the young designer at Japanese studio Konami responsible for *Metal Gear*'s design, had not set out with the intention of establishing a twist on action games.

TACTICAL ESPIONAGE ACTION

In its earliest stages, *Metal Gear* had as much to do with creeping around as *Pong*. Kojima had wanted to create a military shooter heavy on bullets and explosions. When the MSX2's hardware restricted the number of bullets able to be displayed onscreen, Kojima halted development. A shooter game, he reasoned, would sink like a stone if it curtailed onscreen action.

Kojima went back to the drawing board in search of a game design that could play to the strength of the MSX2 rather than fight against it. He found inspiration from two sources. The first was *The Great Escape*, a nonfiction book written by Paul Brickhill that told of the mass escape of prisoners from a German P.O.W. camp in 1944. Brickhill was one of the prisoners involved and spared no expense detailing how he and fellow captives fashioned crude tools and weapons by hand, purloined German uniforms and civilian clothing to blend in, and carried out surveillance against their captors in their desperate bid for freedom.

Kojima's second motivator, and his primary wellspring of influence for *Metal Gear* according to articles he wrote for *Official PlayStation 2 Magazine*, was the *James Bond* series of films. He was riveted by the mores that defined 007's adventures: traveling to exotic locales, undertaking missions that would determine the fate of the world, superspies whose double- and triple-crosses left his head spinning, and performing espionage rather than engaging in wild shootouts.

Inspired, Kojima revamped *Metal Gear* as a game predicated on stealth and secrecy. Unsurprisingly, Solid Snake, his protagonist, borrowed many traits from Agent 007. Snake, like Ian Fleming's prototypical spy, would travel the globe, infiltrate enemy bases, thwart terrorist schemes, and do his best to charm the pants off every woman who crossed his path.

Kojima hewed closer to *The Great Escape* than he did Bond in one significant way. Bond never left home without his trademark Beretta Model 1934 or 1935, but Snake began each mission empty-handed. All weapons and equipment were OSP (on-site procurement). Starting from scratch became a core tenet of the series. It also communicated a clear message: *Metal Gear* was no action game.

Snake's mission was to thread his way around the enemy squads patrolling the South African jungle, infiltrate a fortress called Outer Heaven, liberate a captive ally, and uncover plans for a nuclear weapon codenamed Metal Gear. With few weapons at hand, you had to duck behind vehicles, crates, and other obstructions, waiting for guards to pass before racing to the next one — a feat easier said than done.

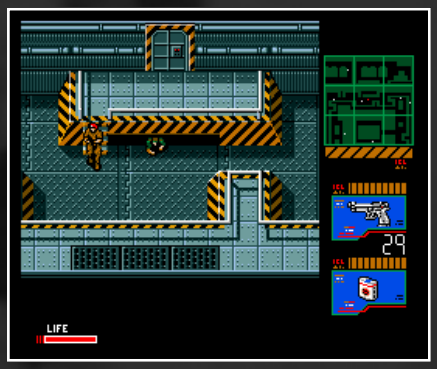
Guards had direct lines of sight, and rarely worked alone. Upon spotting Snake, one or two exclamation mark popped up over a guard's head. One exclamation mark summoned all other guards on the screen, while two brought reinforcements swarming in from adjacent screens. Sentries were only one obstacle. Cameras and infrared sensors tripped alarms and brought the full weight of Outer Heaven's armed forces down on Snake.

With every screen, *Metal Gear* demonstrated a breadth of gameplay unmatched by its precursors. Mercenary pals skulking around Outer Heaven could be contacted by dialing their frequency on your codec, and they divulged contextual tips dependent upon which room you were in. Saving hostages boosted your maximum health and let you carry more ammo. But, on the flip side, you lost enhancements if a hostage wound up dead.

Kojima treated weapons as rewards: The more thorough you were in your exploration, the better weapons you would find stashed around Outer Heaven. Scrimping and saving ammo for a Beretta let you pick off enemies sparingly. You could plant landmines to foil enemies on patrol, guide remote-control missiles into hostile vehicles, or explode hollow walls to reveal secret passages.

Metal Gear offered an alternative for players interested in deviating from the glut of run-n-gun action games clogging arcades and home consoles, but the sequel, *Metal Gear 2: Solid Snake*, went even further. Kojima added 3D height to the 2D environments, so enemies above or below Snake couldn't see him. To keep Snake at a disadvantage, guards received a 45-degree vision cone, patrolled across multiple screens, and distinguished between different types of sounds. It was safer, for instance, to walk on dirt paths instead of metal grates.

Drawing the attention of guards or cameras triggered a three-phase alarm. The first phase saw enemies give chase. Taking cover behind obstructions was still an option, but not the most prudent one. Your best bet was to shimmy into vents or crawl underneath vehicles or shelves, maneuvers new to the series. When they lost sight of Snake, enemies progressed to phase two: Establish a perimeter and



toss the area. In phase three, things slowly settled down. Enemies who had rushed in from offscreen returned to their posts, and enemies who belonged to your current screen resumed their patrols.

As impressive as the enhancements to *MG2*'s gameplay were, Kojima made even greater strides in the game's narrative. Set in the 1990s, the story began with an oil crisis that kicked off a tale of energy conservation, romance, and plot twists of the sort for which secret agents like Solid Snake and 007 are known. At the conclusion, Snake meets briefly with his commander before heading to parts unknown to recuperate from his adventure.

BANNER YEAR

In the fall of 1998, Solid Snake emerged to lead players on more espionage thrills in *Metal Gear Solid*, his first 3D outing. But *MGS* was not the first 3D stealth game.

Tenchu: Stealth Assassins sidled onto the scene in August, two months ahead of Hideo Kojima's masterpiece, becoming the first 3D stealth game on the market. Set in feudal Japan, *Tenchu* handed you control of ninjas who scaled buildings using grappling hooks, dashed across rooftops, and buried katana blades in the backs of targets under the cover of night.

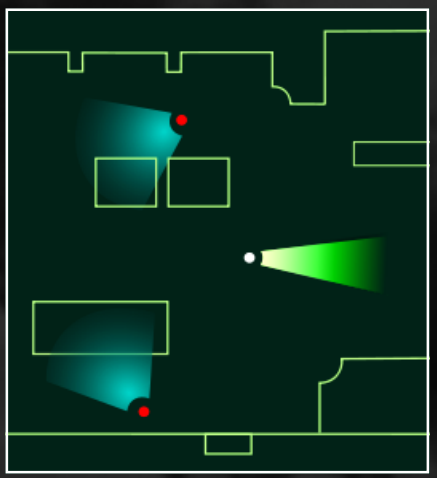
The dark and gritty atmosphere that helped *Tenchu* garner a cult following came about out of pragmatism more than creativity. Due to technical limitations, the PlayStation could only draw so many polygons on the screen at once. As you moved forward, buildings, trees, and other scenery blinked into existence on the horizon, a glaringly obvious occurrence in games like *Moto Racer*, which constantly moved players forward. Worried that pop-

in would break players' suspension of disbelief, developer Acquire hid the undesirable effect by blanketing the game in darkness.

Although *Tenchu* never captured mainstream success, it earned high marks and appealed to players looking for a challenging, moody game that put stealth ahead of brute force, and traded bullets for blades.

Weeks later, *Metal Gear Solid* stirred the gaming world into a frenzy. Many of the genre innovations credited to *MGS* — such as the three-phase evasion sequence, a radar that displayed your position as well as the positions and vision fields of guards and cameras, and the ability to crouch behind and crawl under objects, among others — were recycled from *Metal Gear 2* and repackaged in a 3D world that felt alive and taut with danger.

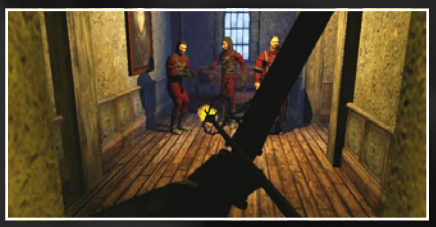
Kojima and his team pushed the PlayStation to its limits in their quest to build as realistic a world as possible. Guards could track your footprints through the snow outside the arctic base where the



game was set. A SWAT team from Huntington Beach, California, gave the developers a crash course in the operation of weapons, explosives, and military vehicles. Artists painstakingly crafted the tiniest details, going so far as to design desks individually.

Harnessing the power of the PlayStation, Kojima built on *Metal Gear 2*'s storyline by directing a cinematic tour de force heavier on conversation and cutscenes than it was on tactical espionage action. More than one reviewer remarked that *MGS* felt more like a movie than a game — not surprising considering that Kojima had aspired to make movies long before he began making games.

Watershed moments in stealth games were not limited to home consoles in 1998. That November Looking Glass Studios released *Thief: The Dark Project* for PC. Set in a medieval city, *Thief* was played from first-person, cementing it as the first "first-person sneaker," a term coined by the developer and arguably a more immersive viewpoint than the third-person perspectives used by every other stealth game to date.



Sound played a crucial role in *Thief*. Each surface was assigned a variable level of noise; dirt was soft, carpet softer still, but stepping on ceramic tiles was tantamount to setting off fireworks. However, you could turn the tables and use sound to your advantage. Listening to footsteps informed you of the surface enemies were walking on and how far away they were from your hiding spot.

Other aspects of the environment could be used by or against you. Advanced artificial intelligence applied to NPCs fluctuated between varying levels of suspicion; visual and aural clues such as seeing you dart around a corner, hearing the muffled cry of an associate, spotting an open door that was closed a few minutes ago, or —

most telling of all — bloodstains from your handiwork put them on high alert. Some shadowy spots were deeper and darker than others, and a small jewel indicated how well-hidden you were.

Although *Thief* never reached the heights of *MGS*, its groundbreaking use of audio design was way ahead of any other game in its era, and many since.

FADEOUT

Innovation in stealth games has flagged since the 2000s. Ubisoft Montreal's *Splinter Cell* emphasized dynamic lighting and delivered realistic weapons, maneuvers, and storylines rife with themes of global terrorism. In 2007, Ubisoft Montreal pushed the genre forward yet again with *Assassin's Creed*, the seminal installment in a long-running series that transports you to historical settings and asks you to blend in with crowds before dispatching targets in broad daylight.

IO Interactive's *Hitman* series started out focused on stealth but eventually gave

you the freedom to choose whether to sneak around and arrange accidents for the victims on your hit list, or go in with guns blazing.

Today, most big-budget publishers prefer to pick and choose which facets of the stealth genre to use and discard the rest. Action games from *Call of Duty* to *Tomb Raider* (2013) feature stealth elements, but they are side attractions, respites from hours spent peering down iron sights and racking up body counts numbered in the hundreds. Even new entries of *Metal Gear Solid* and *Splinter Cell* rely on bigger and bigger guns in an era when rising development costs demand that publishers cast a wide net to pull in a bigger audience.

Stealth games are not prolific — but then, they never have been. They fly under the radar, content to let blockbusters hog the spotlight and wait for those who enjoy them to seek them out. 2012's *Mark of the Ninja* took stealth back to its 2D roots and dared you to complete missions without killing anyone, the genre's ultimate challenge. *Alien: Isolation*, a horror-stealth game that challenged you to survive against a single xenomorph on a decimated space station, was one of the biggest surprises of 2014. Not only because it was well-made — a rarity in the space of *Alien*-licensed games — but because it was a big-budget, stealth-driven game in an age when stealth games don't post numbers big enough to catch the attention of most publishers.

Gamers interested in bombastic action have droves of titles to choose from. For stealth fans, the shadows beckon, and they will always feel like home.

WELCOME TO THE MADHOUSE!!!

BUILDING THE PADDED WALLS OF BATMAN: ARKHAM ASYLUM

by David L. Craddock

A SUPERSTITIOUS AND COWARDLY LOT

From Superman and Iron Man to Captain America and the Flash, superheroes have been prime candidates for beat-em-up games. It makes sense: Most superheroes boast super strength, fighting prowess, or both, and those abilities translate well into exciting, accessible action games.

Unfortunately, the marketability of punches and laser beams fails to do justice to the complexity of superheroes. Batman didn't earn the moniker of "world's greatest detective" by bludgeoning Penguin and the Joker with magnifying glasses and jabbing them with pipe stems. He can throw down with the best of his costumed cohorts, but he is also cunning, furtive, and clever enough to solve conundrums fashioned by supergenius villains.

More interestingly, Batman is still flesh and blood. To thwart crimes, he must rely on his mind and the gadgets in his utility belt. To survive, he must be cautious, stalking prey from the shadows and whittling away at their numbers until only two or three remain, half-mad from terror and desperate to escape the predator picking off their friends.

And that's the rub. Outside of *Metal Gear Solid*, few games grounded in slow, methodical gameplay put up numbers that make them worthwhile investments for triple-A publishers. Fortunately, Eidos Interactive and Rocksteady Studios dared to challenge the norm.

RELATIVE UNKNOWNS

You'd be forgiven for wondering how such a small studio ever landed the opportunity to redefine Batman in videogames. Founded in 2004 by Jamie Walker and Sefton Hill, Rocksteady is squirreled away in Highgate, London, amid bucolic meadows, nature reserves, and pubs. Two years later, Rocksteady released its first game, a tactical first-person shooter called *Urban Chaos: Riot Response*. Published by Eidos for PS2 and Xbox, *Urban Chaos* let you choose between gunning enemies down or showing restraint and placing them under arrest. Your riot shield absorbed enemy fire, but you could not shoot while raising your shield, forcing you to approach conflicts tactically.

Shortly before their freshman effort went to market, the team at Rocksteady began building experimental prototypes using Unreal Engine 3. A few months later, in the spring of 2007, Eidos inked a deal with Warner Bros. Interactive to develop a game starring Batman. During a check-in at Rocksteady, Eidos executives were impressed by Rocksteady's prototypes and asked the team what they would do with a game featuring the caped crusader.

Walker and Hill considered their options carefully. Unreal Engine 3 was powerful, but their team wasn't experienced enough in the Unreal tech to build a massive city environment. They came up with an attractive alternative: What if, instead of patrolling the mean streets of Gotham, the Batman was confined in a smaller, more intimate environment?

They scoured pop culture for influences and hit on two major touchstones. The first was *Arkham Asylum: A Serious House on Serious Earth*, a dark and gritty graphic novel penned by Grant Morrison that locks Batman in the madhouse with Killer Croc, Joker, and other notorious psychopaths. The second was Irrational Games' *BioShock*, a first-person shooter featuring tense, brooding atmosphere and a compelling storyline — two fundamental aspects of the *Batman* mythos, yet conspicuously absent in most *Batman* games.

Walker and Hill turned their artists loose on sketching concept art for their take on Arkham Asylum. Roaming London, they gleaned inspiration from the Victorian construction of St. Michael's Church and the gothic tombs of Highgate Cemetery.

Inspired, Rocksteady hit on Arkham Asylum as the perfect stage on which their drama would unfold. They envisioned it as a handful of Victorian edifices set on a rural island connected to Gotham City via a bridge. The idea was that you would be able to see Gotham's glittering skyline off in the distance, but would be unable to reach it — left with no choice but to pacify the evildoers on Arkham Island or die trying. *Batman: Arkham Asylum* seemed a fitting title.

When it came to the particulars of that story, Rocksteady was uncertain. Since any plot they came up with would unfold in the madhouse that contained Batman's rogues' gallery, it seemed a given that the Joker would pay a central role. For guidance, they turned to Paul Dini.

■ *Arkham Asylum*'s gothic settings were influenced by architecture in and around Highgate, London, where Rocksteady Studios is based.

THE NEW WARDEN

Dini doesn't mind if you call him a *Batman* geek. He's quite comfortable in his skin. "I knew everything — about the comics, about the '60s show, about Batman's guest appearances on Superman's old radio show. If it came from the Batcave, I knew about it."

Setting his sights on writing, Dini honed his craft and eventually broke into the entertainment business penning episodes of *He-Man and the Masters of the Universe*. In 1989 he took a job at Warner Bros. Animation to write on *Tiny Toon Adventures*. A couple of years later he caught wind of the nascent *Batman: The Animated Series* cartoon and begged his bosses to let him work on the show. "Happily, they did," he said of his promotion to lead writer and producer.

Premiering in September 1992, *Batman: TAS* went on to become a smash hit among dedicated Batfans looking for a regular fix of the character's bleak violent roots. The series tackled adult themes, was one of the first cartoons to depict physical violence, and never dumbed down the writing to draw in younger viewers.

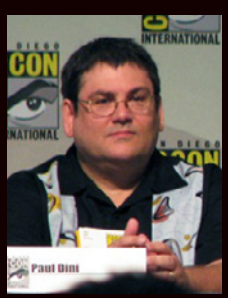
Late in 2007, executives from DC approached Dini about taking the helm as lead narrative writer on *Arkham Asylum*. "I knew while I was looking at the preliminary artwork at our first meeting that Rocksteady had an incredible vision for *Batman* and the Arkham world. It was dark, it was disturbing, it was — to my Yankee eyes — very British. And I thought those were all wonderful elements from which to craft a game."

Even more appealing to Dini, *Arkham Asylum* was to be an original *Batman* game rather than one handcuffed by the character's cartoon, movie, or comic-book lore. He and Rocksteady could add a pinch of this and a dash of that from across the Bat's mythos, cooking up a story uniquely their own.

Arkham Asylum soon turned into a WB Animation reunion for Dini. Although Rocksteady and the coalition of companies publishing *Arkham Asylum* did not want to tie the game to any one mythos, it did make sense to hire voice actors responsible for arguably the most iconic takes on the characters: the cast of *Batman: TAS*. Among other returning talents, Kevin Conroy reprised his gruff and grating Batman, Mark Hamill's gleeful and maniacal Joker laugh rang through the studio, and Arleen Sorkin reassumed the persona of Harley Quinn, the Joker's murderously off-kilter henchwoman.

Dini collaborated with Rocksteady writer Paul Crocker to assemble *Arkham Asylum*'s narrative. At the outset, a short cinematic would follow Batman as he dragged Joker back to the asylum from which he had recently escaped. Again. Once inside Arkham, you are given control.

From your first step in Batman's steel-toed boots, Rocksteady's objective became clear. They did not want you to merely play a *Batman* game. They wanted you to be the Batman. Tilt the analog stick for-



■ Acclaimed *Batman: The Animated Series* scribe Paul Dini wrote the narrative for *Arkham Asylum* and its critically acclaimed sequel, *Arkham City*.

■ To the delight of fans, beloved cast members from *Batman: The Animated Series* returned to voice their characters. Mark Hamill once again played the Joker.

■ "I have your scent, Batman."

ward and the dark knight strides down a long, crumbling corridor. His cape flutters behind you, and his boots bite into the cracked concrete floor. Spin the camera around and you'll get an eyeful of the character's stony mug, unruffled by the jeers of the prison inmates leaning through cell bars all around you.

Just ahead, the throng of police officers and Arkham guards escorting the Joker — strapped to a gurney that rolls along in front of you — board an elevator. The lights flicker, and you hear a fading hum as the power cuts out. The Joker's deranged laugh cuts through the blackness and panicked cries of the guards. A second later, the power snaps back on. Guards scramble and shout, trying to restore order and find their courage. Batman, of course, has the situation well in hand.

"The whole first scene with Batman dragging the Joker into Arkham was a lot of fun. It seemed very natural to me that when the lights go out, Batman instinctively grabs Joker by the throat," Dini recalled.

Minutes later, the Joker puts his master plan into action. He overpowers his guards, regroups with Harley Quinn, and takes control of the asylum. As if that weren't enough, Quinn throws a switch that opens every cell in the place. Your objective becomes crystal clear: Round up the inmates with extreme prejudice before they can get off the island and plunder Gotham.

"Arkham Asylum was basically 'Batman in a box,'" Dini says, speaking to the story he and Crocker mapped out. "It's a big box, but he's stuck there in the asylum and on the island, and he can't leave until the job is done."

"AND AT THE END OF FEAR: OBLIVION"

Haunted houses play a pivotal role in haunted-house stories. Every room, every great parlor, every passageway must exude presence to drag you deeper into the atmosphere and story until the creepy grounds feel as familiar to you as your own home.

With *Arkham Asylum*, Rocksteady crafted a memorable house of horrors through finely tuned exploration and a penchant for tantalization. Arkham Island collects a spread of rolling lawns, cliffs wet from waves crashing in from Gotham River, rundown sewer systems, and five monolithic buildings.

By confining its game to a limited area, Rocksteady was able to imbue the island's sprawling grounds and warren of cells and halls with a distinct atmosphere and personality. The medical building is large and sterile, while the penitentiary's halls are narrow and lined with cells. But the real joy comes from stumbling across the rooms inhabited by supervillains. Mr. Freeze's cryo chamber is lined with ice, Quinn built a shrine to her beloved "Mistah Jay," and Catwoman's goggles are on display in an administration wing. Even obscure villains like Calendar Man get their due. For hardcore fans, exploring Arkham Asylum is like embarking on a self-guided tour of *Batman* lore.

Dini and Rocksteady's developers showed off their exhaustive knowledge of the dark knight by handcrafting encounters with legendary foes. Killer Crock stalks you through abandoned sewer tunnels and can kill you in a single pounce. Riddler planted challenges throughout the asylum such as riddles that require you to use your cowl's scanner to take a snapshot of a particular item hidden in a room or scene. As you solve his riddles, the Riddler goes from cocky to increasingly incensed, going so far as to accuse you of looking up answers on the Internet.

■ Scarecrow's nightmarish character design and visions stole the show.

Arguably the most popular encounters, however, were the nightmares triggered by Scarecrow's fear toxin. Nightmarish visions — such as the corpses of Bruce Wayne's parents whispering that he had failed them, and of your console appearing to freeze before flipping the script and replaying the game's intro with Batman as the Joker's captive — led into stealth sequences where you had to sneak past a giant-sized Scarecrow without being seen.

Scarecrow's nightmares, and Arkham Asylum as a whole, were grim and unsettling — exactly what Dini and Rocksteady wanted to achieve. "The consensus was to make the game, and thereby the world, more dangerous, and more adult." Rocksteady's more mature story and themes extended to characters. Joker wore the Glasgow smile worn by Heath Ledger in 2008's *The Dark Knight* film, Scarecrow touted syringes for fingers, and Poison Ivy and Harley Quinn were heavily sexualized.

"As we have to keep the game moving, there wasn't much of a chance to explore the more adult Harley's personality, outside of brief scenes with Ivy and in some of the recorded sessions with the Joker," Dini says. (Harley got the spotlight in *Harley Quinn's Revenge*, a DLC pack for 2011's *Batman: Arkham City*.)

BE THE BATMAN

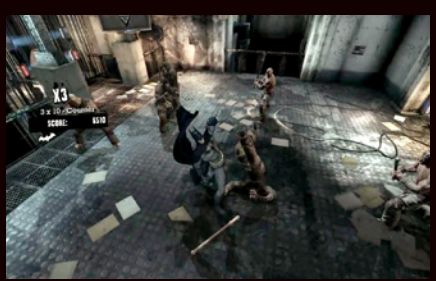
Progress in *Arkham Asylum* unfolds according to a gameplay model shaped by exploration-driven titles such as *Super Metroid* and *Castlevania: Symphony of the Night*: Find a new item and use it to access new areas, or circle back to break into previously inaccessible areas that were visible yet frustratingly out of reach.

Batman's gadget implements range from familiar to brand new. The Bat-claw lets you pull down weak walls and rip ventilation covers high up on walls. A hacking tool disables electrical gates, while explosive gel rips through certain floors and walls. Batman's staple Batarang comes in several flavors, such as a boomerang that emits sonic waves able to distract enemies.

Although progress is ultimately linear, Rocksteady left the pace of that progress in your hands. If you want to push ahead and see what happens in the story, you can. Or you can take the scenic route, solving every riddle and exploring every nook and cranny. "You walk a fine line writing a game like *Arkham*. On the one hand, you want to make it true to Batman's world, and make it an engaging experience, but you always have to keep in mind: It's a game first, and a movie not at all. Even the most die-hard *Batman* fan is going to lose interest if the game elements suffer at the expense of adding more story."

Rocksteady's player-first manifesto extended to *Arkham Asylum*'s three primary game systems: Freeflow combat, Predator stealth, and Detective Vision. Freeflow combat consists of strikes, cape whips, and counters. Each action is mapped to a specific button. Press strike repeatedly to perform a combo. Press counter, and Batman will grab fists and weapons in mid-swing, shooting the assailant an irritated look before casually backhanding them and turning back to more pressing matters.

String those buttons together, and you become the conductor of a symphony of violence. Mash the strike button to rearrange the nearest thug's face. Tap counter to swat aside the lead pipe arcing toward your head, then tilt the analog stick toward the goon unlocking the gun box bolted to the far wall and press strike to vault over and put them down. "Freeflow" combat lives up to its name: Moves flow together seamlessly, making action a joy. Leveling up unlocks new moves such as throws, the ability to add Batarangs and other gear to the mix, and instant takedowns, brutal finishers that leave thugs whimpering on the floor and cradling broken limbs.



■ Easy to pick up yet difficult to master, the Freeflow combat system let you chain together moves effortlessly.

Walk into a room crawling with armed thugs and Batman goes into Predator mode, challenging you to dispatch enemies without attracting attention. Crouch-walking silences your footsteps, letting you sneak up behind an enemy to choke them out. If you want to get fancy, you can rappel up to gargoyle statues and perform glide kicks, hang from ledges and pull enemies over, hide in floor grates and spring out at opportune moments, or paint walls in explosives and detonate them when enemies wander by.

Batman has the advantage in Predator mode, but he's still just a man. Rocksteady implemented an AI capable of responding to your actions. When thugs become aware of you, they buddy up, walk back to back, and become trigger happy. Rocksteady's designers force you to adapt to new crucibles as the game progresses. Gargoyles are lined with explosives, so you won't be able to hide in the shadows when the going gets tough; and some thugs wear shock collars that trigger alarms when you render their owners unconscious.

Detective Vision is your great equalizer. Enable it, and your vision changes to an X-ray-like filter that highlights important elements such as destructible walls, enemies carrying guns, and clues to problems you must solve to advance the story. "That was fun because the special functions of the cowl allowed Batman to get very 'Sherlock Holmes' with his analysis, examining blood, chemicals, and so on," Dini recalls.

NEW BREED

Little touches, like the way Batman stands motionless during combat, waiting for Joker's cronies to strike first, and the seamless animations as you flow from strike to counter to Batarang and back again, speak to Rocksteady's commitment to capturing the character's deadly grace.

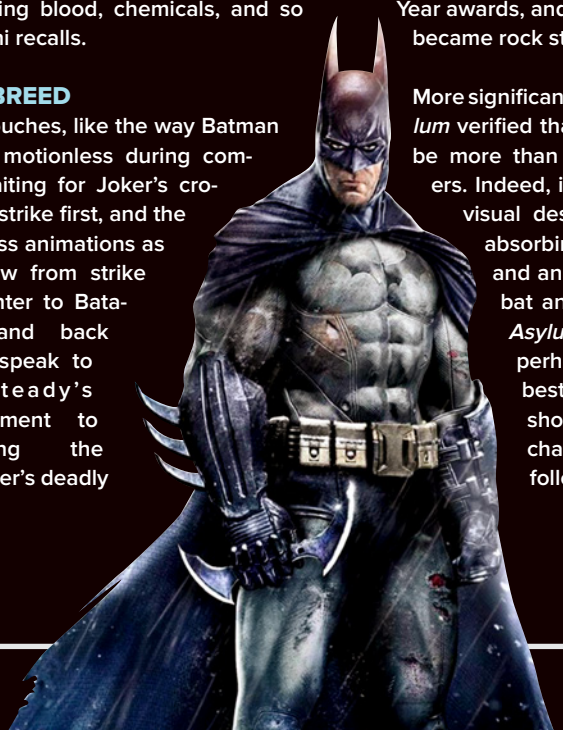
■ Detective Vision helps you follow clues and prioritize threats. Thugs carrying firearms are red, while less dangerous enemies appear blue.

■ In Predator mode, you must pick off enemies one by one to even the odds of survival.

More than ever before, *Arkham Asylum* let you become the Batman and inhabit his dangerous world.

Yet few fans and critics expected *Batman: Arkham Asylum* to amount to more than yet another licensed superhero beat-em-up when it launched on Xbox 360, PlayStation 3, and PC in October 2009. To say they were pleasantly surprised would be a gross understatement. The game raked in high scores and multiple Game of the Year awards, and the crew at Rocksteady became rock stars virtually overnight.

More significantly, *Batman: Arkham Asylum* verified that superhero games can be more than mindless button mashers. Indeed, its confluence of striking visual design, gripping narrative, absorbing exploration elements, and an addictive blend of combat and stealth make *Arkham Asylum* more than a great superhero game. It is one of the best games ever made, and should be a blueprint for all character-driven games that follow.



PROVING GROUNDS THE GOLD BOX GAMES

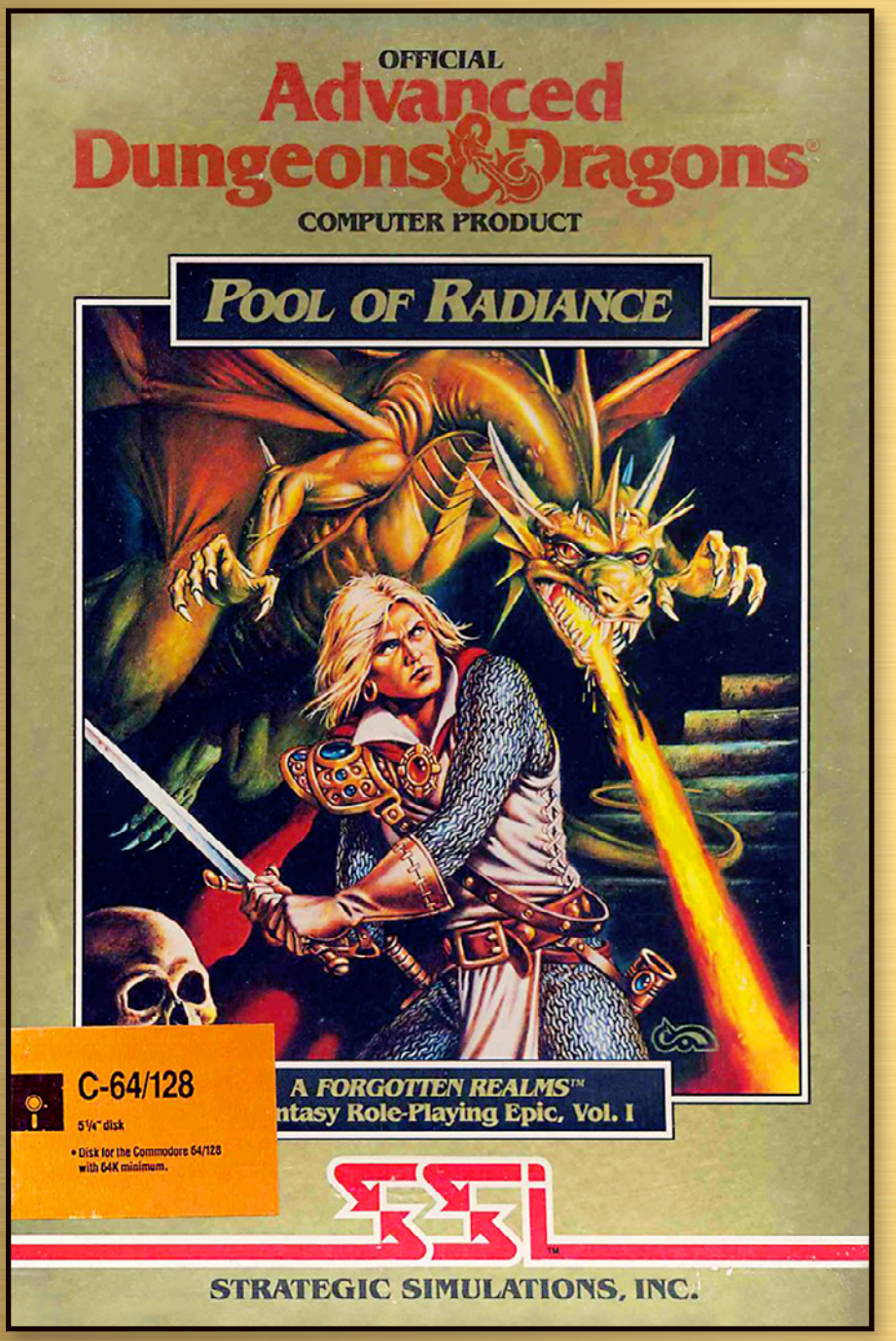
BY MATT BARTON

WE DIVE INTO THIS CLASSIC D&D ADVENTURE!

Welcome back, brave adventurers! Last month, we took you into the deadly dungeon of Sir-Tech's *Wizardry: Proving Grounds of the Mad Overlord*, a 1981 title that introduced us to so many of the innovations we take for granted in modern computer role-playing games (CRPGs). Today we move on to one of my personal favorite CRPGs of all time, SSI's *Pool of Radiance*, a 1988 game that built upon the foundation established by *Wizardry*.

Unless you count the *AD&D* cartridges for the Intellivision console, *Pool of Radiance* was the first officially licensed *AD&D* CRPG. That meant that SSI's design team could leverage TSR's extensive Forgotten Realms campaign setting, with all its lore, history, bestiary, and geography, as well as its well-honed rules for combat, magic, and leveling. However, TSR granted SSI its own region of the Forgotten Realms to develop just for the game, so they wouldn't have to worry about breaking continuity with the tabletop game. It was a win-win situation for both companies.

Being handed the keys to the Forgotten Realms was a big responsibility, but SSI's team was the right choice. They'd already proven themselves with definitive war games as well as CRPGs *Wizard's Crown* (1986) and *The Eternal Dagger* (1987), which featured an awesomely complex tactical combat system. Now, with an expanded team (35, when many games were still being made by 3–5!) led by



Chuck Kroegel, a year-long development cycle, and great assets to work with, SSI was set to create the gold standard of CRPGs. The result was *Pool of Radiance*, the first in a long line of "Gold Box" games that more than did justice to the revered *AD&D* license.

If you've never played *Pool of Radiance* or any Gold Box game before, don't worry — they aren't nearly as hard to get into as many CRPGs from this era. If you're a fan of the Commodore 64, you might want to play that version since it's the original — but be prepared for some major disk swapping! If I were you, though, I'd try the Amiga, Atari ST, or DOS versions, which have nicer graphics and interfaces. In any case, be sure to get PDFs of the manual, the journal (a numbered set of log entries the game refers you to from time to time), and the code wheel (needed to get past the copy protection at the start of the game, but also occasionally to translate in-game runes).

Like *Wizardry* and Interplay's *The Bard's Tale*, the exploration mode of *Pool of Radiance* is rendered in first-person perspective. Once you enter combat, however, the perspective switches to a tactical top-down view adapted from *Wizard's Crown*. Once in this mode, you'll take turns swiping at beasties with your melee weapons, firing at them with arrows, or casting spells. Oftentimes you'll find the fate of your entire party resting on a single lucky strike, but it's really all about your skill as a tactician. Some battles will easily take an hour or more — and if you've played the game, I bet you know which ones I'm talking about. Damn those skeletons!

After being treated to composer Dave Warhol's Wagnerian title music, you'll need to create your own party of adventurers. Even if you're already familiar with *AD&D* rules, you'll want to spend some time reading the helpful manuals that shipped with the game. You can also cheat by cranking your characters' stats up to the maximum, but you'll have more fun if you just roll a few times and settle for reasonable scores. You can also have a great time choosing a portrait for your character; there are many heads and bodies that you can mix and match to your liking.

The party arrives at a town called Phlan, which was once great, but now lies mostly in ruins. Your party is part of an effort to reclaim the town and surrounding frontier for resettlement, and rumors abound of fabulous treasures and ferocious monsters. It'll take you weeks, if not months, to see it all — and that's assuming you don't get skewered by the hordes of skeletons at Sokal Keep or crushed by trolls and ogres in the city's slums. You'll need every ounce of strategy you can muster to survive these battles, and just wait until you see the game's end boss, the vile Tyranthraxus!

If you manage to make it through *Pool of Radiance*, the fun doesn't have to stop there. In fact, there are three sequels that will let you migrate your characters: *Curse of the Azure Bonds*, *Secret of the Silver Blades*, and *Pools of Darkness* (only available for DOS). SSI also developed and published other games using the same engine, including some based on TSR's *Dragonlance* series and *Buck Rogers*. There are also two additional Forgotten Realms games developed by Stormfront Studios, *Gateway to the Savage Frontier* and *Treasures of the Savage Frontier*. In 1993, SSI published MicroMagic's *Forgotten Realms: Unlimited Adventures*, which lets you create your own Gold Box–style games for DOS or Mac.

Sadly, when members of the original SSI crew launched a Kickstarter called *Seven Dragon Saga*, a spiritual successor to the gold box games, it failed to attract much interest and was canceled. They've promised to try again with a new campaign, but until then, there's always the classics!

ZAP! BOOM! POW!

BY MARTIN GOLDBERG

For America's youth of the '50s through '70s, television and comic books were amongst the primary outlets that fueled adolescent fantasies. Providing a compelling visual universe that was comprised of their favorite superheroes, old west cowboys, and sci-fi fantasies, many a child grew up reading their cheap pulp comics and drifting toward the television for Saturday morning cartoons.

That began to change during the 1970s, with the introduction of videogames into the household. Fans no longer had to be content with staring at a static fantasy world on a page, or wish they could actually be in that animated, fantastical world on the glowing television screen. Now they were able to directly interact with the subjects of their imagination, even if the crude videogame images were a far cry from the detail of other mediums. It was during this era that comic heroes first made the logical leap to videogames, forever tying the two together. And it was Warner Communications and its two subsidiaries, DC Comics and Atari Inc., that led the exciting move, creating a lasting partnership between DC Comics and gaming that lasts to this day.

DC COMICS AND WARNER

The history of DC Comics itself goes back to 1935 and a person by the name of Major Malcolm Wheeler-Nicholson, who's considered the founder of "the comic book." It's only fitting that the company which played a major role in comic-based videogames started with someone who by all accounts was equally as colorful. A journalist who joined the U.S. Calvary just before World War I, his unit had served John J. Pershing's command in 1916 hunting Mexican revolutionary Pancho Villa. He continued serving under Pershing the following year by fighting Muslim Moros in the Philippines and then serving alongside a Cossack troop in Siberia.

After further far-flung service, his career came to an end after writing a letter to the *New York Times* publicly criticizing Army command. Followed by accusations against senior officers, and countercharges by those officers, the Major was ultimately court-martialed for violating an article of war with his open letter...but not before what some consider an Army-sanctioned attempt to assassinate him. All the afore-

mentioned happened by his early 30s, so it's not hard to imagine the Major creating a medium that would became synonymous with adventure.

That's exactly what he did. After a period of writing novels and short stories for pulp magazines, the Major started National Allied Publications in the fall of 1934. His introduction of comic books to children everywhere began with the release of *New Fun: The Big Comic Magazine #1* in February 1935 and *New Comics #1* in December 1935, the later of which eventually evolved into Action Comics and would introduce the world to the iconic Superman in 1938. It was the comic line he introduced in December 1936 however, *Detective Comics*, that would one day lead to the publishing company's iconic name.

Unfortunately, due to financial problems, in order to get *Detective Comics* off the ground, the Major had to take on publishing magnate Harry Donenfeld as a partner. Forming Detective Comics, Inc., the partnership lasted just a year before the Major was forced out. Detective Comics, Inc. swallowed up National Allied Publications whole in bankruptcy. The combined companies were now National Publications, but due to the popularity of Superman, it had been branding itself as Superman-DC comics since 1940, which was usually shortened to DC Comics. (The company didn't officially adopt the name DC Comics until 1977.) National Publications also merged with All-American Publications, adding characters like Wonder Woman and the Flash to its stable of popular comic action characters.

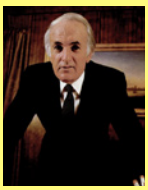
In 1967 National Publications was purchased by a rapidly growing Kinney National Services, inc., which started only a year before following a merger with a New Jersey cleaning and parking company. 1967 was the young and enigmatic Steve Kinney's big year of buying up entertainment companies, and National Publications was joined by film equipment company Panavision and film studio Warner Bros. - Seven Arts. Due to a scandal surrounding operations in its parking division in 1971 (insert your favorite *Sopranos* reference here), everything non-entertainment was spun off as National Kinney Corporation and the remaining entertainment conglomerate was named Warner Communications in 1972.

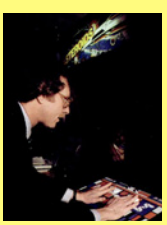
Under the continued strength of its entertainment divisions and a revitalized Warner Bros. putting out a string of hit movies, Ross continued his buying spree through much of the early 1970s.

ENTER ATARI

In 1976, videogames were still considered a fad by many, and the increasingly crowded home market seemed to be eroding. At the top of this emerging entertainment form was Atari Inc. Still recovering from financial woes in 1975, Atari had been looking for investors to help solve its problems. While Atari's efforts to find investment bolstered its bottom line, it became apparent by the end of that year that it simply wasn't enough. The company's financial problems were soon compounded as it looked to bring its next-generation console to consumers in early 1976. Atari was earning, make no mistake about that, but its internal operational costs were leaving it strapped for cash. It was time to consider selling Atari to someone with deep pockets that could give the company the financial support it needed to reach the next level.

Cofounder Nolan Bushnell turned to Gordon Crawford of California Capital Investments — one of the investors the company had brought in for its previous solution. At the same time, Atari 2600 codesigners Jay Miner and Joe Decuir were starting work on the console's graphic chip. Bushnell asked Crawford to assist in locating potential buyers who would have an interest in purchasing Atari. What Bushnell didn't know was that Crawford owned a 10% stake of a large entertainment company through a previous investment his firm had made. That company was Steve Ross' Warner Communications and the timing, they soon discovered, couldn't have been better.





Back in Warner Communications' offices in New York, mild-mannered Emanuel "Manny" Gerard had been looking to expand the company into new areas. Gerard had initially started his career as an entertainment research analyst on Wall

Street before joining Warner Communications in 1974 as its executive vice president. Warner's bread and butter, the entertainment sector and specifically the record industry, were in a major downturn. Gordon Crawford thought that bringing high-tech entertainment together with a growing media powerhouse like Warner could be a perfect match. He rang up Manny. "I've got a line on a hot company out west looking to be bought in order to finance its already-skyrocketing growth. It's called Atari Inc."

Wanting to know more about the possible investment, Gerard began to investigate Atari and its products to explore a potential fit. What Gerard sees is contrary to the fad many other analysts are seeing. He saw Atari as smack dab in the middle of explosive new growth in "entertainment through technology" — a company that had its name out in all of the various arcades and entertainment centers across the country, and was then in the process of invading the home with several products for use with home television sets. It turned out to be exactly the new blood that Gerard had been looking to bring into Warner's entertainment division.

Interestingly, while Gerard was doing his research on Atari, Steve Ross (CEO of Warner Communications) and his son Mark had just gotten off Space Mountain at Disneyland when they wandered into an arcade adjacent to the ride. Recently added by Disney to deliver high-tech entertainment machines within its Tomorrowland area, Steve and his son Mark played several rounds on the Atari/Kee *Tank* arcade game. When Gerard came to Ross and presented the idea that Warner Communications should consider negotiating to purchase Atari, Ross immediately asked him, "Are they the ones who make the *Tank* game?" With that, Warner's intent was sealed.

One would think that the merging of comics and videogames was a given at that point, but just like a confrontation between two comic characters, Steve Ross and Nolan Bushnell met on the battlefield of egos. Their propensity to play poker against one another made sure the negotiations between Atari and Warner were long and tenuous. For example, at one point during negotiations National Semiconductor approached Atari about buying out its consumer operations, from which Atari had already poached a lot of staff. It was a quick conversation and the answer was "no." But when Warner found out there had been a meeting between the two, Bushnell let Ross and Gerard think it had been about National purchasing Atari.

Ross, not being a man to lose an opportunity or give up a fight for something he wanted, did what he had to do to counter: He played to Bushnell's ego. When Bushnell and investor Don Valentine planned to fly to New York for a negotiating meeting, Ross arranged to not only have the Warner corporate jet pick them up, but to have the flight make a quick stop to pick up actor Clint Eastwood (who was on the way to a shoot his upcoming movie *The Enforcer*). To further sweeten Warner's appearance in the negotiations, Ross arranged that the pair from Atari would also be put up in the ultra lavish Waldorf Towers while in New York. With those carrots dangled in the form of luxury perks, Warner Communications all but fully ensured it would be the only company at the table negotiating to buy Atari. The purchase completed in June 1976, and by October (most likely because of the success of the purchase) Gerard became Warner's chief operating officer.

UP IN THE SKY, IT'S A BIRD, IT'S A PLANE...

While Gerard and Warner Communications were busy tweaking Atari's infrastructure to bring it further out of "startup mode" and make it into more of a rising superstar corporation, Warner Bros. Pictures was working on a project to bring DC Comics standard *Superman* to the big screen. Principle shooting began in March 1977, and while Christopher Reeve was starting his tenure as the iconic character, Gerard and company were looking for unique ways to cross-promote the film. One of the ideas was to leverage their new subsidiary Atari to make *Superman*-themed games, a move that while obvious now was revolutionary at the time. This decision would have a long-lasting impact on the entertainment industry.

The parties finished licensing by the end of the year and in 1978 Atari began developing its first game with a licensed property. The thing was, it wasn't a videogame — it was a pinball game. The project started when Atari Coin Department exec Gene Lipkin ventured over to Atari's Pinball Engineering group and met with future pinball designer legend Steve Ritchie, telling Ritchie that he decided to make the assignment of the next project into a contest between Steve's team and fellow designer Gary Slater's. Whomever designed the best-playing and -sounding game would have their game become *Superman*.

Of course Ritchie's design won and the game was released in March 1979. It's interesting to note that Superman's sound hardware was initially developed by future Atari 2600 programmer extraordinaire Rob Fulop (*Night Driver*, *Space Invaders*, *Missile Command*, *Demon Attack*), but was completed by Eugene Jarvis (*Defender*,

Robotron 2084). As a result, Atari's *Superman* pinball, then and now, is considered by many to be Atari's best pinball machine for its quality gameplay and superior sound effects.

During the pinball game's development, work also began on a *Superman* game for the 2600, which would be the world's first comic-book videogame. The thing is, it also almost didn't happen. 1978 was a year of rising tensions between Atari's employees and their new owners Warner Communications, as Warner continued to implement its "adult supervision" (which ultimately lead Bushnell and some of the old-guard management to leave by the end of the year). The game programmers specifically felt that they were being treated as technical engineers instead of the creative sorts they considered themselves to be. Ironically, as recently as three years earlier, all the game developers actually *were* engineers. Regardless, when Warner Communications tried to push its pet project movie tie-in, the response was less than enthusiastic and it sat untouched for a time.

One less-than-enthusiastic developer was Warren Robinett. Starting in June '78 he had been working on a game that he kept secret from Atari management because his bosses had told him not to pursue the project, thinking the text adventure that inspired his nascent game couldn't really be ported to the 2600. Keen to prove them wrong, he developed a proof of concept that had multiple screens for an "expansive" environment, a small square cursor that the player could move around to pick up little colored shapes, and a dragon that would chase the cursor.

Turning it into management to show them his idea could be done, he went on vacation. Expecting to have permission to move ahead when he got back, instead they wanted him to turn it into a Superman-themed game. Robinett deftly dodged the requests like a superhero himself until another programmer saved the day by accepting the project. This allowed Robinett to get permission shortly thereafter to pursue his passion for that square pixel and the dragon, better known to gamers everywhere as the classic title *Adventure*.

John Dunn was the programmer to take on the historic task of turning *Superman* into pixels, and it was most likely driven by Dunn's desire to do videogames with a positive message. Dunn knew he wanted to separate the look of his game from the common content that Atari was putting out in the console's early days. Single-screen games with very basic shapes and spartan backgrounds like *Combat* or the newly released *Outlaw* were the standard during this primitive time. Dunn wanted his game to really represent the *Superman* comics and to look far more colorful.

The problem was that Atari's games were all 2K of memory due to expense, and he'd need 4K to divide between the graphics and game play. So he drew a line in the silicon sand and said that the only way he'd take the project was if he could have his 4K. Wanting a tight deadline to try to get the game to coincide with the movie's holiday release, management capitulated and *Superman* became the first game to be slated for 4K.

Dunn knew that in addition to the comic-book-like graphics, his game would have to involve a more expansive environment than a single screen would provide. That's where Warren Robinett came to the rescue. While he didn't want to develop his proof of concept code into *Superman*, he wasn't averse to letting someone else do it. And so it was that Robinett's proof of concept was used as a framework for Dunn to develop *Superman* off of.

When *Superman* was completed, John Dunn had not only succeeded at his vision for the game, but also at successfully proving that mixing comics and games was as fun as people had hoped. The storyline was

simple enough by comic-book standards — you play as Superman and his alter ego Clark Kent as Lex Luthor blows up the Metropolis Memorial Bridge. Rushing back to a phone booth to change into Superman, you battle and capture Lex Luthor and his henchmen while trying to find pieces to reconstruct the bridge. If you're taken out by kryptonite, only a touch from Lois Lane can revive you. Add to that a mysterious helicopter that randomly acts as both a foe stealing parts and ally whisking kryptonite away, and you have the colorful world of *Superman* come to life as a videogame, block by city block.

When it debuted later in the year, it was in stark contrast to Atari's other offerings. Branded as part of Atari's "Special Edition" line used to herald its new 4K games, *Superman* fans everywhere now had the chance to play as one of the most popular comic characters of all time. And it proved just as popular for Atari, still being sold and marketed as a top title two years later alongside the newly introduced home versions of *Asteroids* and *Missile Command*. At one point during its sales, the trio of Warner/DC/Atari even pioneered pack-ins by including in a free *Superman* wallet for lucky purchasers.

The team-up of comics and videogames pioneered under Warner Communications only grew in the years to come, as did videogame superhero movie tie-ins. Superman was joined by other characters from the DC universe such as Batman and DC Comics itself was soon joined by rival Marvel Comics. Over the next two decades the genre proved popular, though it was the renaissance of superhero movies in the 2000s that drove superhero videogames into a new golden age that has led to popular modern titles like the *Batman: Arkham* series. And this all began because a group of real-life characters decided to team up nearly 40 years ago.

Artwork by Simon Delart | www.s2lart.com | @s2lart

A HISTORY OF METAL GEAR

BY JEREMY PARISH

Take a comprehensive tour through the history of war, one nanomachine at a time.

This summer, Konami's *Metal Gear* series celebrates both its 28th anniversary and its eighth proper installment. The saga of Solid Snake and Big Boss just might be gaming's longest-running continuous narrative — fancy timeline or no, *The Legend of Zelda* hardly warrants consideration! — and certainly it's one of the medium's most richly developed. As the series moves toward its next major chapter, let's look back at nearly three decades of stealth action, radio conversations, and walking nuclear warhead launchers.

OUTER HEAVEN'S GATE: METAL GEAR (1987, MSX2 | 1988, NES)

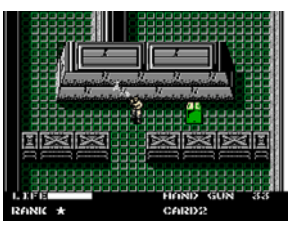
Metal Gear was born in Japan, but from the very beginning it seemed peculiarly suited for American tastes — an uncommon occurrence among Japanese-developed NES games of the '80s. Light on unfamiliar manga and anime conventions, heavy on military aesthetics, *Metal Gear* was a shoe-in for U.S. localization despite its text-heavy nature.

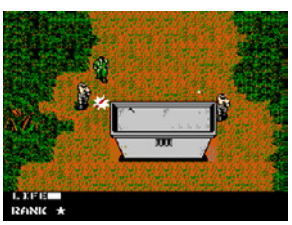
In hindsight, its western appeal should come as little surprise. Even in the mid-'80s, director Hideo Kojima was a rabid Hollywood film fanatic, and these served as the inspiration for *Metal Gear*...all the way down to the cover art, which infamously depicted protagonist Solid Snake as a tracing of Michael Biehn in *The Terminator*. That sort of brazen borrowing was fairly common at the time, but *Metal Gear*'s cinematic inspirations ran much deeper than the shallow "hey, it's that thing from that one movie" that defined Hollywood riffs in Japanese games of the '80s.

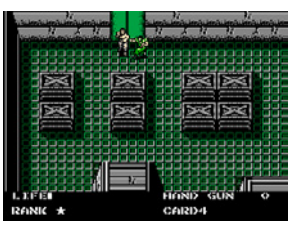
In a way, *Metal Gear* felt like a *Legend of Zelda* clone with small-arms fire. Much like Link, the protagonist of Nintendo's influential action-RPG, Snake moved about from screen to screen via a top-down perspective, gathering clues from non-player characters while tracking down keys to forage ever further into the enemy's lair. Snake amassed an enormous inventory of weapons and tools to further his cause. He even had to contend with an endlessly looping maze of screens, à la *Zelda*'s Lost Woods.

In truth, though, Kojima arrived at an action-RPG style not by building from games like *Zelda* and *Ys* but rather by starting with a military action game and steadily paring away the arcade-like mechanics. When he was assigned the task of designing an army shooter, he complied...though the spirit of his creation stood in stark contrast to something like *Commando* or *Ikari Warriors*. "The MSX had many technical limitations, and I didn't want to make war games," he told the PlayStation blog in 2012. "So I decided to create something similar to *The Great Escape* — something involving an escape — and in the end I made an espionage game."

The technical limitations of the MSX platform, of course, played a major role in determining the nature of *Metal Gear*. While smooth multidirectional scrolling and the ability to handle lots of moving sprites eventually made their way to latter-day NES games, the MSX lagged behind. As







such, Kojima chose to play down the intensity of *Metal Gear*'s action, pitting the player against fewer foes.

So while *Metal Gear* appeared at first glance to belong to the same family of game design as something along the lines of SNK's top-down military shooters (*Guerrilla War*, *Iron Tank*), in action it played much differently. The goal of *Metal Gear* wasn't to wipe out all enemies who stood in Snake's way but rather to avoid contact with the opposition as much as possible. While some conflicts proved unavoidable, the majority of those played out as specific encounters designed around a particular design puzzle: Using mines to destroy the massive tank blocking a key route, or taking out "Coward Duck" without accidentally killing any of the hostages he used as human shields. Otherwise, sneaking was the order of the day.

To that end, *Metal Gear* featured quite complex A.I. design for its era. Enemies possessed directional and situational awareness, meaning they could patrol within arm's reach of Snake without realizing his presence so long as he stayed out of their direct line of sight. This allowed you to slip silently through the base, avoiding roaming guards while dealing with traps like pitfalls, gassed rooms, and electrified floors. But careless play — being spotted by a guard or camera or firing a weapon within earshot of an enemy without use of a silencer — would send Outer Heaven's personnel into alert mode, triggering wave after wave of soldiers to take down Snake. While alert guards appeared in fewer numbers than you'd have seen in other top-down shooters of the era, they moved faster than Snake, and their gunfire was deadly accurate. Survival in a combat situation demanded cunning and resources, creating ample incentive to avoid triggering alerts whenever possible.

All of this made for a decidedly complex console action game experience for 1987, so Kojima built in a handy help system through Snake's radio transceiver. Snake's mission commander, Big Boss, would call to offer tips at key points in the game, as would other contacts Snake met along the way. You could also call your contacts for advice, though this proved something of a crapshoot; some allies would fail to respond and even disappeared altogether as the story progressed.

That, too, was a novel trick up *Metal Gear*'s sleeve: The game actually told a story. Granted, it wasn't exactly the most involved plot; your mission to rescue a captured comrade from an enemy fortress revealed a secret weapon and the fact that Big Boss was behind it all. But the way it unfolded within the events of the game itself, through dialogue and radio transmissions, put *Metal Gear* well ahead of competing action games. The series has evolved considerably since 1987, but many of the basics that defined the original game — everything from radio chatter to the inevitable sequence in which the protagonist is captured and stripped of his gear — has its origins in Kojima's stealthy attempt to make a smarter action game.

[Note: For the lowdown on *Metal Gear 2: Solid Snake* check out Jeremy's Retro Rarities column on page 72.]

OF RAILGUNS AND RANTINGS: METAL GEAR SOLID (1998, PLAYSTATION)

The advent of 3D gaming — that is, gameplay in a polygonal third dimension, not games on 3D screens — sparked a renaissance for old game franchises. In hopes of striking gold once again, publishers dusted off once-landmark series that had long been absent after fizzling out in the 16-bit era. Everyone from *Pac-Man* to *Pitfall Harry* to *Bubsy the Bobcat* enjoyed a new day in the sun, rendered in chunky high-fidelity triangles and struggling to produce a compelling hook for their revamped old-school action.

MSX TO NES

While most Americans became familiar with the original *Metal Gear* through its NES incarnation, the series actually began life on the MSX platform, less a system than a standard for console-computer hybrids. The MSX made very little headway in the U.S., and the original rendition of *Metal Gear* never made its way to the west. Instead it was ported to the NES...though unfortunately the quality of that adaptation proved to be rather lacking. Entire portions of the game were scrambled and rearranged, though radio conversations weren't properly adapted to the new layout of Outer Heaven, making for confusing and even broken hints. Most egregiously, the final boss which lent the game its title — the nuclear-capable mecha Metal Gear — was replaced by a defenseless supercomputer. While the NES version holds considerable nostalgia for many American gamers, Kojima reputedly detests it.

THE TWIN SNAKES: SNAKE'S REVENGE VS. MG2 (1990, NES | 1990, MSX2)

Following the international success of *Metal Gear* on NES, Konami decided to follow it up with a NES-exclusive sequel: *Snake's Revenge*. Series designer Kojima, however, wasn't included on the team. That probably explains why it feels so odd, with a highly linear design and stealth portions broken up by bizarre side-scrolling action sequences.

Meanwhile, once Kojima learned of the existence of *Snake's Revenge*, he set the wheels in motion to get a proper sequel produced. The result, *Metal Gear 2: Solid Snake*, was not only a fitting follow-up to *Metal Gear*, it represents the acme of 8-bit game design. It also propelled the franchise's story forward while further cementing its Hollywood roots (most glaringly in its character portraits, which cheerfully swiped the likenesses of popular actors like Richard Crenna and Sean Connery), setting the stage for another 25 years' worth of games.

Still, despite *Snake's Revenge* immediately being relegated to apocryphal status, it nevertheless pointed the way toward at least one key element of the franchise's future developments: It was the first game to resurrect Big Boss as an embittered cyborg.

But no protagonist's return came as big a surprise as Solid Snake's — and, arguably, none worked out nearly so well. After eight years in retirement, Snake returned to action on PlayStation, and his adventure set a new standard for both game design and presentation. *Metal Gear Solid* (so named to emphasis its 3D visuals — that's "solid" as both "Solid Snake" and "geometric solid") had such an impact on gamers that for many it marks the true beginning of the *Metal Gear* series, with the 8-bit chapters serving as mere warm-up.

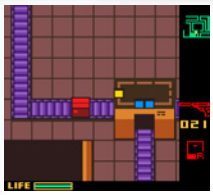
Of course, ignoring *Metal Gear* and *Metal Gear 2* undermines many of the narrative and design themes of *MGS*. The game's story draws heavily on its predecessors, revolving around Snake's past with the now-evil FOXHOUND special ops organization and his prickly relationship with former commander Big Boss and seemingly deceased comrade Gray Fox — not to mention the impact of the realization that the Metal Gear project is anything but dead. "It can't be!' Snake grits upon learning of the arms delivery system's role in the hostage crisis playing out at Shadow Moses Island. For players who had followed his adventures from the start, news of this revived threat hit just as hard.

Still, in many ways, *MGS* does stand as a fresh starting point for the series' narrative. It rewrites history, revising the final showdown between Snake and Big Boss in Zanzibarland at the end of *Metal Gear 2* to include a Darth Vader–esque revelation that Snake was his foe's son. This in turn led to the importance of cloning and nanotechnology that continues to define the series, as well as giving Big Boss a far more integral role in the story. In fact, *MGS* helped define him as the true central character of the *Metal Gear* saga rather than Snake, with his former comrade Revolver Ocelot serving as the series' long-term antagonist and Snake's fellow Big Boss clone Liquid Snake as the more fleeting threat.

MGS built its combat scenarios and play mechanics on the foundation of *Metal Gear 2*. Despite some limited opportunities to switch into a first-person view, *MGS* really played out like a 2D game with occasional nods to the vertical environments made possible by polygons. It wouldn't be until 2005's revised version of *Metal Gear Solid 3*, Subsistence, that the series would truly enter the third dimension — a fact made painfully evident in *The Twin Snakes*, the GameCube remake of *MGS*, where the first-person aim mode essentially broke the game.

Excellent as its well-tried play mechanics felt, *MGS* made ripples for its stunning presentation. Its virtuosic visual style truly broke new ground, creating the impression of seamless transitions between action and cutscenes, which were plentiful and stylishly directed. It also set the standard for modern visual design in games, with a subdued, almost monochromatic color palette that helped unify the graphics.

The game's unique blend of realism and abstraction hinted at an animator's intuition for knowing when to lean on style and allow the viewer's eye to fill in the details: Faces, mechanisms, and many animations all seem remarkably loose in hindsight. At the same time, the world burst with unprecedented atmospheric details: falling snow, warm breath fogging in the Alaskan air, an office complex swirling into chaos as monitors shattered and papers went flying amidst a duel between Snake and a cybernetic ninja. As a result, *MGS* still holds up pretty well today despite its blocky, simple character models. It put the series on the radar as a blockbuster and made Kojima a rockstar, and all but guaranteed the next *Metal Gear* would be a big deal.



GHOST BABEL, IN COLOR: METAL GEAR SOLID (2000, GAME BOY COLOR)

Well, actually, the next *Metal Gear* barely made a blip on gaming's radar. The somewhat confusingly titled *Metal Gear Solid* for Game Boy Color was in fact a completely different game from the smash-PS1 title. In the west, Konami removed its Japanese subtitle (*Ghost Babel*, as in G.B., as in Game Boy — yeah, Kojima invented the gimmick of naming DS games with a "D.S." subtitle before the DS even existed), leaving many with the impression that this was simply a compromised port of the PlayStation hit.

In fact, it was anything but. Rather, this *Metal Gear Solid* played out like a parallel-universe version of *MGS*: Snake is called out of his arctic retirement by Colonel Campbell, meets Mei Ling for the first time, saves an awkward computer genius, falls in love with a no-nonsense lady soldier, and fights a team of supernatural commandos seeking to revive the concept of Outer Heaven with a hijacked Metal Gear. But despite the big-picture similarities, *Ghost Babel* differed radically in the fine details. His nemeses were former underlings of Campbell, the action takes place in Africa rather than Alaska, and there's no discussion of Snake's relationship to Big Boss, and no Liquid Snake at all.

Despite the downscaled format, *MGS* played faithfully to the PlayStation game — shockingly so, for those who had never experienced *Metal Gear 2*. Despite a few questionable design choices (such as an entire area that consisted of a color-based conveyer-belt puzzle to drive home the fact that, yes, this was a Game Boy Color title), the first portable *MGS* was a masterpiece of a game. And in the end, its apocryphal nature proved to be not so oblique after all. It's hinted heavily that *Ghost Babel* represented Raiden's VR indoctrination prior to his mission at the Big Shell. Speaking of which...

BISHOUNEN BATTLE: METAL GEAR SOLID 2 (2001, PLAYSTATION 2)

"Who's Raiden?" you might wonder, if you've never played *Metal Gear Solid 2*. Those who have, of course, know him as the silver-haired protagonist who ended up replacing long-time *Metal Gear* mainstay Snake for most of the game's duration. Like *MGS2* itself, Raiden tends to be highly polarizing; some regard him as a brilliant character, while others consider him a waste of space.

One thing's for certain: *MGS2* is one of the most audacious sequels ever made. After the success of *Metal Gear Solid*, Hideo Kojima could have made any game he wanted. What he created was a high-concept commentary on the nature of videogames and the future of information control in the digital age. It was a profound, forward-thinking work on many levels; its thesis statements on mimetic mutation and government-level cultural gatekeeping through information flow feel far more ripped-from-the-headlines in 2015 than they did in 2001. Even the game's prerelease media campaign made a statement: Through careful editing, Kojima led players to believe Snake would be the star of the show, only to replace him early on with the aforementioned Raiden, a novice-level replacement for Snake with a whiny attitude and an overly solicitous girlfriend.

What makes *MGS2* especially startling is that it left players feeling like they hadn't really played the "true" game. Players never regained control over Snake after the initial Tanker chapter, seeing him only from an outsider's perspective; yet Snake had the more interesting adventure by far, as we glean through snippets of conversation. Raiden is left in the dark for most of the game, forced by mysterious powers to fight his way through a live attempt to recreate Snake's mission at Shadow Moses Island. In other words, the nagging sensation of "been there, done that" pricking at the back of your mind throughout the entirety of *MGS2* was deliberate.

Bold as it was, *MGS2* wasn't without its failings. It demanded much of players, and could be hard to love. The outlandish creative control afforded to Kojima for this sequel allowed him to tackle it with

ENDLESS RECURSION

One of *Metal Gear*'s recurring themes over the years has been its tendency to iterate on itself, sometimes to the point of self-parody...though admittedly the series' ability to flip instantly between somber melodrama and scenery-chewing slapstick makes it difficult to gauge exactly what's meant to be read as parodic.

***Metal Gear*'s fondness for recycling first manifested in *Metal Gear Solid*, which at times felt like a note-for-note reprise of *Metal Gear 2*. Given the obscurity and age of the MSX2 sequel — not to mention the eight years that separated them — that could be more than forgiven. But things started to feel a little suspicious when *Metal Gear Solid 2* was revealed as a deliberate simulation of its own predecessor. A clever narrative and metatextual twist, yes, but it also meant that *MGS2* was the second sequel to pattern itself directly after *Metal Gear 2*. Was Kojima making a point, or was he just spinning his wheels? Had he become creatively tapped out?**

Happily, *Metal Gear Solid 3* went in its own direction, as have most sequels since. Only *Metal Gear Solid 4* retraced familiar paths, with bosses that played out as mash-ups of foes from older games and an entire act dedicated to revisiting Shadow Moses Island. But you can never really take the self-referentialism out of *Metal Gear*; even the games that blaze their own path are crammed with nods to and riffs on the earlier entries in the series. Honestly, that's probably as much a part of *Metal Gear* as the eponymous mech itself.

big themes and high concepts, but that same freedom meant that no one kept the director's worst tendencies in check. Aimless conversations about trivial plot points and the woes of minor characters rambled on tiresomely; the much-vaunted enemy A.I. and combat physics felt incidental in a game focused around stealth; and the climactic face-off that brought the entire cast together felt incoherent and contradictory. While brilliant, *MGS2*'s flaws made the entire package difficult for many to swallow, and even the most gorgeous graphics (and protagonist!) yet seen in a videogame couldn't turn things around.

THE OTHER SNAKE: METAL GEAR SOLID 3 (2004, PLAYSTATION 2)

The sour aftertaste many fans took away from *MGS2* meant its follow-up went comparatively ignored a few years later — quite the tragedy, given that *Metal Gear Solid 3* arguably remains the finest game in the series to date.

MGS3 also represented a significant departure from previous games in the series. Rather than advancing the plotline laid down in its predecessors, it leapt back in time 50 years to the 1960s, detailing a pivotal moment in the life of a young Big Boss. The story of *MGS3* centers around a conflict with Big Boss' own mentor and mother figure, legendary WWII hero The Boss, a journey whose ultimate outcome tipped the first domino of his fall into villainy. Despite taking place 30 years before Solid Snake's original adventure, *MGS3* features many series mainstays and connections to other games: a cocky young Ocelot, primitive analogue renditions of Snake's tool set, and even a precursor to Metal Gear itself.

The move away from high-tech complexes and computerized systems liberated both the visual and game design of *MGS3*, which adopted a more "natural" feel. Despite looking and sounding like his cloned son Snake, Big Boss was a more emotive and fallible soldier. At the same time, he commanded a wider array of combat skills; close-quarters combat played a significant role in *MGS3*'s narrative while also greatly expanding the nature of the

game's combat. Big Boss fought his way through a wider variety of environments, conquering jungles, concrete bases, and harsh mountainsides, resulting in more interesting opportunities for stealth and action alike. All of these factors gelled perfectly, resulting in the series' most intense final conflict — not to mention its most heart-wrenching finale.

Equally important to *MGS3*'s success were its phenomenal bosses. Much like the rest of the game, The Boss' Cobra Unit felt not like warmed-over retreads of previous games' boss encounters but rather distinct and well-defined warriors who tested your command over the game's arsenal of tools. Sure, you could just shoot down The Fear,

SIDE EXCURSIONS: METAL GEAR AC!D, PORTABLE OPS, AND METAL GEAR RISING: REVENGEANCE

While the line between canon and non-canon can be blurry in *Metal Gear*, drawing a line between essential and inessential stories is even trickier. Of all the potentially apocryphal *Metal Gear* tales to appear over the years, though, the most easily brushed aside is *Metal Gear Ac!d* and its sequel for PlayStation Portable. A fascinating tactical stealth card game of sorts, *Ac!d* definitely took the series in new directions. Even more unusual is its plotline, which features the usual baroque twists...and also the revelation that its protagonist, Solid Snake, isn't actually Solid Snake at all. Much to his surprise.

Straddling the line was the third PSP *Metal Gear*, *Portable Ops*. Though similar in many ways to the later *Peace Walker*, *Portable Ops* felt far rougher, with awkward controls and a storyline that basically amounted to treading water. Its only real acknowledgement in any other game is a brusque dismissal in *Peace Walker*, as Kaz Miller glibly mentions how glad he is to "put that nonsense in San Hieronymo" behind him.

Much less spurious, however, was Platinum's *Metal Gear Rising: Revengeance*, which followed Raiden's adventures in the post-Snake, post-Patriots era. Positing a future so lousy with cybernetic science that a normal human like Snake could never hope to survive on the battlefield, *Revengeance* didn't do much to advance the overall *Metal Gear* storyline...probably because, without Snake, Big Boss, and the Patriots' plot to hold everything together, it's not entirely clear what the *Metal Gear* storyline even is. While a brilliant action title in its own right — and definitely not a stealth game — *Revengeance* sits in the "wait and see" category until a sequel comes along to offer a better sense of where its story is headed.

but it was so much more satisfying to use spoiled food that had sat in your inventory too long to poison him. Yeah, you could theoretically take out The End by brute force, but it was way more rewarding to play out the battle as a tense, protracted sniper duel. For every thing *MGS3* did poorly (like the toilsome "survival viewer" that forced you to dress wounds in a separate menu), it did half a dozen things brilliantly. And perhaps most importantly, it created some retroactive context to allow the next game to pull the plot line out of the corner *MGS2*'s ending had painted it into.

MARCH OF THE NANOMACHINES: METAL GEAR SOLID 4 (2008, PLAYSTATION 4)

"Who are the Patriots?" "The La-li-lu-le-lo!"

The most puzzling exchanges in *Metal Gear Solid 2* and *Metal Gear Solid 3* involved a shadowy organization called the Patriots, which certain characters even more strangely referred to through a babbling recitation of a line of the Japanese syllabary. This, along with many other *Metal Gear* mysteries and conundrums, was explained at last in *Metal Gear Solid 4*, the final chapter of Snake's saga. And as with so many questions that found their resolution in this adventure, the answer ultimately amounted to "nanomachines."

If *MGS3* was a freewheeling journey through the blank slate afforded by a trip into the past, *MGS4* was a forward march through narrow confines restricted by several games' worth of convoluted continuity. It wrapped up the *Metal Gear* story — Snake's journey, Big Boss, the Patriots, and more — but the route it took to reach that conclusion offered players much less freedom to improvise than *MGS3* had. And it leaned heavily on two narrative contrivances to put a bow on the saga: nanomachines, whose all-encompassing capabilities eventually came across as "a wizard did it" for the HD generation, and retcons, which took a nuke-and-pave approach to continuity.

Despite playing fast and loose with key plot points that fans had earnestly grappled with for years, *MGS4* nevertheless wasn't shy about folding the full span of *Metal Gear* history into itself. Key characters like Meryl and Rose returned; the Beauty and the Beast Corps combined elements of nearly every boss from the series' history; and Snake dropped snarky little in-jokes left and right.

Unfortunately, much as with *MGS2*, *MGS4* often ran afoul of its own excesses. The insane Metal Gear vs. Metal Gear battle toward the end of the game was as fantastic as the submarine featuring the faces of Big Boss and his clones carved into its side (Mt. Rushmore style) was ludicrous. The involved post-battle exposition explaining each boss' backstory was surely meant to evoke the solemn confessions of *MGS*' dying bosses but merely felt contrived and overblown — especially when being relayed by a wacky omniscient narrator who made a pet of a diaper-clad monkey.

For all its frustrations, *MGS4* nevertheless did what it set out to do: Bring the *Metal*

POINT REVISIONS

As if to prove the axiom that a game is never truly finished, only shipped, nearly every numbered entry of the *Metal Gear* series has been reissued in an improved version, beginning with *Metal Gear Solid*. The *MGS* team made significant tweaks to the game in localizing it for the west, and those were brought back to Japan in the form of *Metal Gear Solid: Integral*. But fans weren't asked to double-dip with no real benefit, as *Integral* included hundreds of virtual-reality training missions, archival materials, and even a tiny teaser of *Metal Gear Solid 2*. The additions were meaty enough, in fact, that Konami managed to extract them to become a standalone release in the U.S.: *Metal Gear Solid: VR Missions*.

The sequel followed suit, *Metal Gear Solid 2: Substance* boasting a number of new features. Most enticing were the "Snake Tales," small episodes that followed the progress of "Plisskin" through the Big Shell... though many fans were disappointed to learn that Snake Tales were meant as not-entirely-serious vignettes rather than an alternate story scenario. More fascinating was Konami's attempt to cash in on the *Tony Hawk Pro Skater* fad of the era by allowing Snake to ollie his way across the Big Shell — not a canonical sequence of events, one assumes.

The most recent, and arguably most important, appended *Metal Gear* release came in the form of *Metal Gear Solid 3: Subsistence*. While notable for dredging up the past by including the original MSX *Metal Gear* and *Metal Gear 2* in English for the first time ever, *Subsistence* had much more impact on the franchise by bringing it into the future. After several years and urgent demands by the public, *Subsistence* retooled the in-game camera to break from the fixed, 2D-game-in-3D format of the prior *MGS* games in favor of a more dynamic modern camera that paved the way for the third-person over-the-shoulder camera seen in *Metal Gear Solid 4* and *Ground Zeroes*.

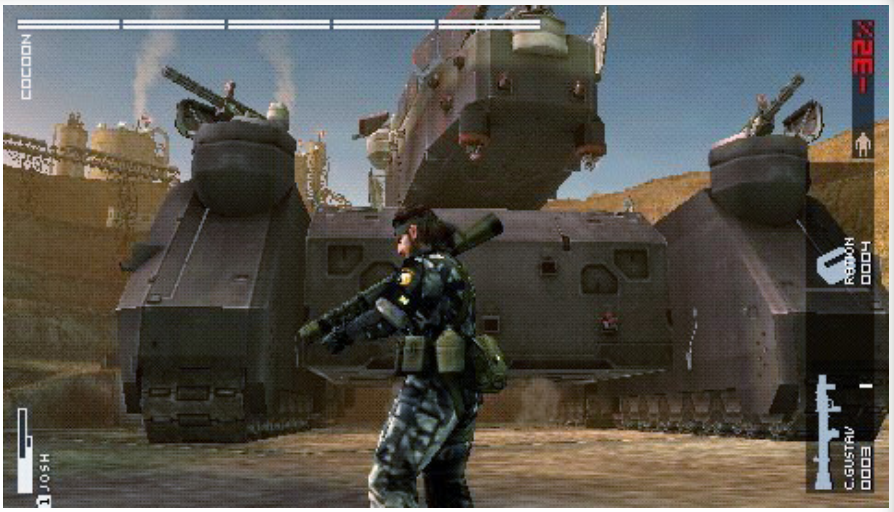
Gear series to a close. It used shortcuts and cheats to get there, but in the end, as a wounded and worn-out Snake confronted his dying "father" at The Boss' grave before retiring to live out his last days in peace... it worked.

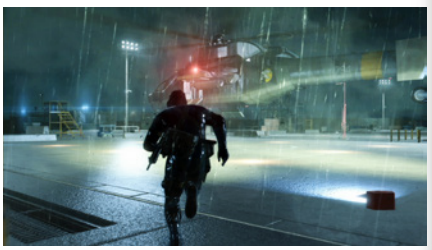
AD-HOC HEROES: METAL GEAR SOLID: PEACE WALKER (2010, PSP)

The end of Snake's saga and the overarching *Metal Gear* continuity didn't mean the end of the series, though. With 30 years in the timeline between *MGS3* and the original *Metal Gear*, there was plenty of room for further prequels and the exploration of Big Boss' turn toward the dark side.

Metal Gear Solid: Peace Walker may have been a portable game, but unlike its PSP predecessor *Portable Ops*, it felt in every way like a legitimate *Metal Gear* game. And it felt like something more, too. It built heavily on the new shooting mechanics pioneered by *MGS4* while looking outside the franchise for inspiration more overtly than any other *Metal Gear* game. Kojima landed on *Monster Hunter*, which at the time was the hottest game in Japan, almost singlehandedly making the PSP a smash success overseas.

Strange as the concept of a *Monster Hunter/Metal Gear* hybrid may sound, it works. At heart, *Peace Walker* played every bit like a *Metal Gear* game, with ample stealth and strong rewards for taking the stealthy, nonlethal approach to combat. But it also allowed for cooperative play, which proved to be nearly a necessity for the massive boss battles. *Peace Walker*'s story played out in bite-sized missions, with progress (and captured foes in particular) feeding into Big Boss' Outer Heaven precursor, the offshore fortress Mother Base. More than a minigame, the base-building mechanic became an end in itself.





As usual for *Metal Gear*, *Peace Walker* included some bizarre design choices. The strangest? The story's true ending could only be accessed by completing a number of unintuitive post-game tasks. Despite these quirks, *Peace Walker* made a welcome contrast to the highly linear and largely passive *MGS4*. In fact, *Peace Walker* barely had any story to speak of, presenting its tale through quick animated cutscenes and largely foregoing compulsory radio exposition in favor of optional cassette-based mission briefing recordings. Don't be fooled by its small-screen format; *Peace Walker* is a key entry in the *Metal Gear* timeline, and more than any other game in the series helped set the tone of both narrative and play style for the upcoming *The Phantom Pain*.

PAZ AMERICANA: METAL GEAR SOLID V: GROUND ZEROES (PS4/PS3/XBOX ONE/XBOX 360, 2014)

Last year's *Ground Zeroes* was presented as a prologue to *The Phantom Pain*, but it might be more accurate to say it's the epilogue to *Peace Walker*. While it runs on a sleek new engine and hints at open-world play to come in the next *Metal Gear* chapter, its story revolves entirely around characters and situations introduced in *Peace Walker*.

A brief sampling of the new play mechanics in store for *The Phantom Pain*, *Ground Zeroes* sends an aging Big Boss into a military base to rescue his *Peace Walker* allies, Paz and Chico. The ultimate outcome of this mission sets the stage for *The Phantom Pain*, going about its task somewhat controversially thanks to the story's terrible treatment of Paz.

Touchy as some of *Ground Zeroes*' narrative choices may be, there's no doubt that it plays better than any previous *Metal Gear*; thanks to some smart refinements and interface tweaks, sneaking about feels more fluid and intuitive than ever. Despite the game's move to an open-world design approach, the act of laying low and out of sight doesn't feel compromised. Furthermore, the chaos that ensues if you allow Big Boss to be discovered feels more dynamic and interestingly unpredictable than ever before.

It's a long way from that top-down MSX game all those years ago, but it still feels unquestionably like *Metal Gear* — and that's a feeling that many a fan has come to know and love.

ORIGIN STORIES

THE INFLUENCE OF KARATEKA

BY JEREMY PARISH

Videogames were remarkably peaceful up until the mid-1980s. Sure, Pac-Man was eating monsters, Donkey Kong was tossing barrels, and there were all those Invaders and Galaxians to blow up. But it wasn't until 1984 that games made violence personal with the introduction of fighting. Raw fisticuffs. Martial arts. Punchin' dudes!

In 1984, though, Big Brother saw fit to bring us not one but two seminal games about communicating through fisticuffs: Data East's *Karate Champ* and Jordan Mechner's *Karateka*. Fighting-game retrospectives typically dwell on the importance of the former considering *Karate Champ* codified the idea of competitive fighting as a one-on-one, tournament-style, match-based brawl. After all, that's the same format that key fighters of the '90s (*Street Fighter II*, *Mortal Kombat*, etc.) would go on to use. *Karateka*, on the other hand, tends to be glossed over as "that game Jordan Mechner did before *Prince of Persia*."

This is true, of course; *Karateka* does feel in many ways like a rough draft for the classic game that would help revolutionize platform-action games. That in itself makes *Karateka* kind of a big deal; *Prince of Persia* has been a tremendous influence on everything from *Tomb Raider* to *Assassin's Creed* to *Uncharted* (and then *Tomb Raider* again, via the reboot), which means the seeds for those games were first planted way back in 1984. Of course, most of what modern games derived from *Prince of Persia* had to do with the platforming and environmental navigation, not the combat — and fighting was all that *Karateka* really had to offer in terms of play mechanics. It was that game's raison d'être, in fact, meaning at best *Karateka* is an influence on *Uncharted* the same way that a horse and buggy helped shape the design of the Tesla Model S.

Karateka's more obvious inspirations manifested themselves through the belt-scroller games of the '80s, and related works. Irem's *Kung-Fu Master* and its descendants — *Bad Dudes Vs. Dragon Ninja*, *Vigilante*, etc. — feel very much like faster-paced versions of *Karateka*. Like that earlier work, their play revolved around moving straight ahead toward a goal (usually rescuing a kidnapped damsel, though *Bad Dudes* innovated by sending you after a kidnapped Ronald Reagan) while punching and kicking anyone foolish enough to stand in your way. The likes of *Kung-Fu Master* gave way to *Renegade*, *Double Dragon*, *Final Fight*, and their countless imitators: all more advanced creations than *Karateka*, but nevertheless owing a direct debt to its premise of walking to the right and fighting foes.

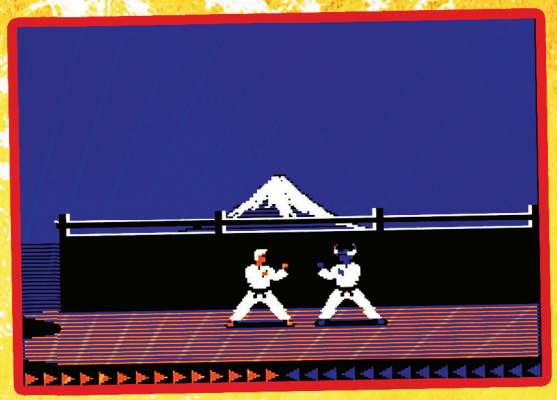
Still, while it's easy to draw a line connecting *Karateka* to belt-scrollers, Mechner's first project exerted subtle influence over the fighting games that eventually replaced the likes of *Double Dragon* as well. Sure, *Street Fighter* used the same face-to-face style as *Karate Champ*, whereas *Karateka* had a definite sense of continuity which saw you advancing from one battle to the next, changing stances when entering and exiting combat. But the staging and sense of drama that made *Karateka* so remarkable — like a tiny, primitive, interactive adaptation of *Enter the Dragon* — has more in common with *Street Fighter*'s flashy presentation than the humble tournament style of *Karate Champ*.

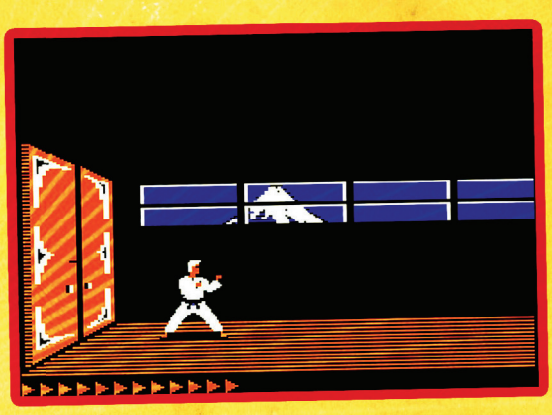
Karateka also demonstrated the importance of animation for this style of combat. *Karate Champ* matches tended to boil down to luck by predicting the opponent's next move almost blindly. *Karateka*, on the other hand, used its character animation as a key selling point. Its fluid, elaborate combat animations didn't simply make the game look more convincingly lifelike, though; these features also created "tells" for enemy combatants that gave you a better sense of their intended actions. Of course, the hapless hero of the game worked within the same limitations as his foes — by the time you could read an enemy's movements, it was probably too late to react — but nevertheless you can see the love and attention Mechner invested into *Karateka*'s animations echoed in the detailed movements of *Street Fighter II*'s characters.

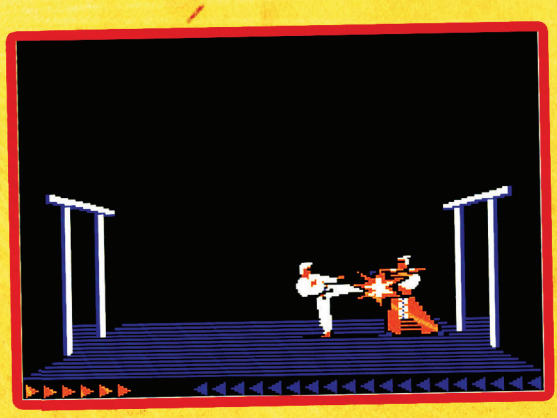
But perhaps the most direct descendent of *Karateka* is Messhof's *Nidhogg*, 2013's dramatic two-player fencing game (a review of which can be found in this edition of *RETRO*). With its lively stick figures, emphasis on combat postures, and tug-of-war progression, *Nidhogg* plays like nothing so much as a fluid modern take on *Karateka* — one that benefits greatly from the strategic possibilities introduced by the shift from bare-fisted combat to fencing sabers.

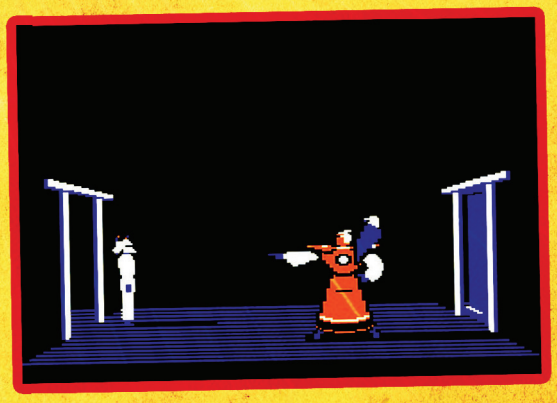
Of course, as many players discovered when they finally reached the end of the game, *Karateka* was quite progressive for its time. If the hero forgot to leave his combat stance and revert to a neutral posture upon defeating the villain and reaching the princess, that distressed damsel would prove to be less helpless than advertised, straight-up murdering her would-be rescuer in a single shot. You're not going to find *that* in *Pac-Man*.

Jeremy Parish works as senior editor at USgamer.net, *co-host of the* Retronauts *podcast, and grim overlord of gaming blog* 2-Dimensions.com. *He is also believed to moonlight as a masked vigilante.*

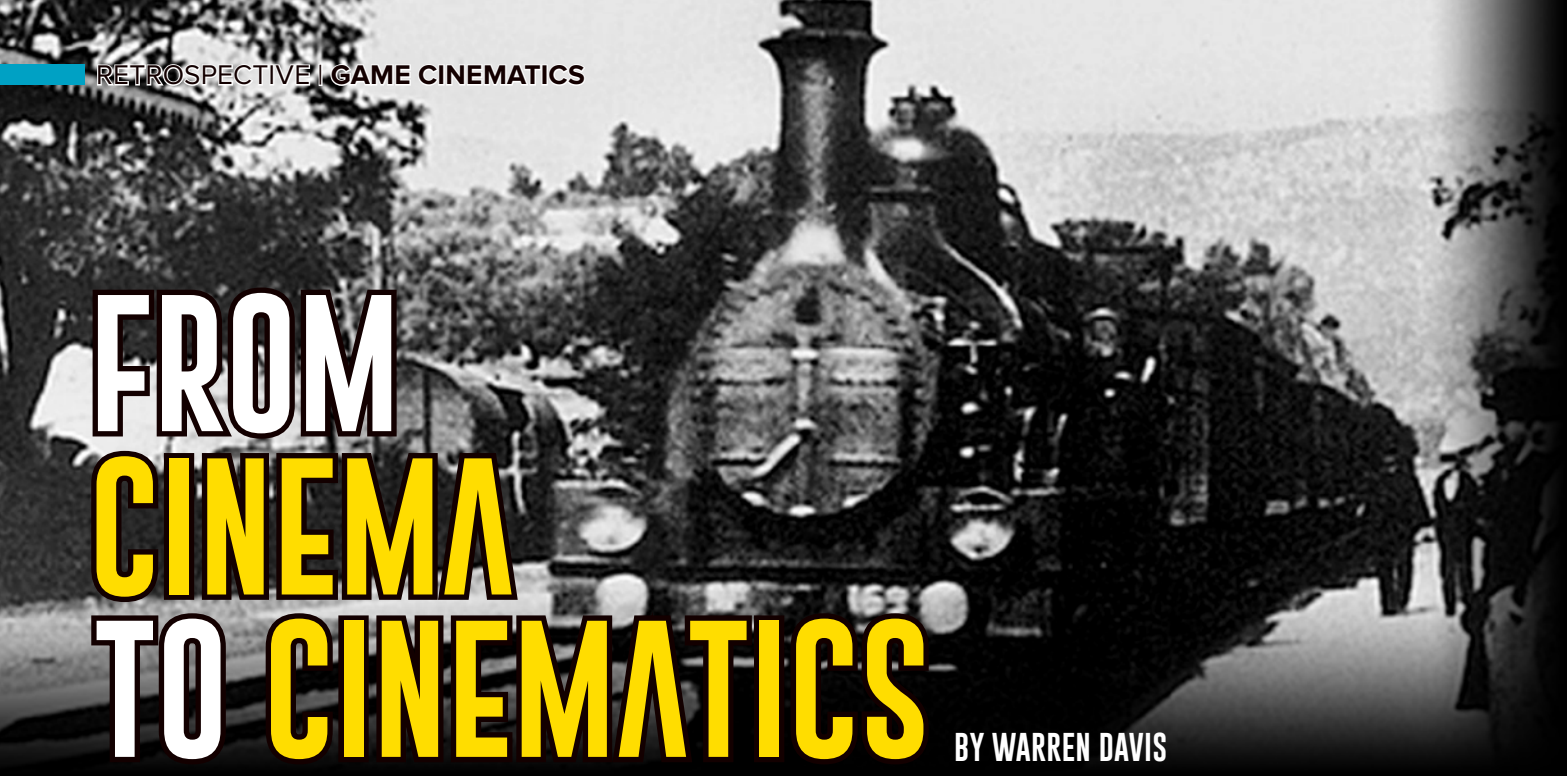








Above: *Karateka*'s cinematic approach and emphasis on technique would inspire countless games of both the fighting and non-fighting variety.



FROM CINEMA TO CINEMATICS

BY WARREN DAVIS

WITH METAL GEAR IN MIND, WE EXPLORE THE BIRTHS OF TWO INDUSTRIES.

One of the hallmarks of the *Metal Gear* franchise has been its reliance on rather long and sometime overly expository cutscenes. One might be forgiven for snarkily suggesting that the makers of these games see themselves as film directors rather than game designers. As *RETRO Videogame Magazine* is honoring all things *Metal Gear* this issue, it seems reasonable to take a look at the origins of both the film and videogame industries, which have quite a lot in common.

■ This Zoetrope dates back to 1833 and was one of the first devices to create moving images.

Some years ago, I saw a play that was about the early days of the movie industry. I had never thought about it before, as movies had been a part of my life from birth, but this play made me realize that there had to be a start to movies as both an art form and a business. Sure, I've seen some silent films (among them George Méliès' *A Trip to the Moon*). But I really had no understanding of the struggles and breakthroughs that occurred in creating this form of entertainment that is still popular today. And unless you're a historian, you probably have no awareness of those pioneers who developed the technology in those early days.

If you've seen the movie *Hugo*, you might remember the story about one of the first films to be shown to an audience. It was a train pulling into a station. As the train got close, people gasped and ducked — they'd never seen anything like it. It seemed so real.

Of course, that story seems so quaint nowadays. It's hard to believe people could be taken in that way. But I remember seeing *Superman: The Movie* in 1978 at the Chinese Theatre in Hollywood. During the opening credits, when the actors' names shoot out of the screen (in an early example of a 3D CGI effect) people gasped and ducked. Even though it wasn't actually in 3D, it seemed like it was. We'd never seen anything like it before. 80 years after the train pulled into the station, movies still had the ability to surprise us.

I was lucky enough to be involved with the start of a different entertainment technology — videogames. And though I never thought about it until I saw that play, I imagine that the start of the movie industry was not unlike the start of videogames. It began with the technology itself, which was years in the making. With movies, there first came the invention of photography, which began around 1800 and evolved over the next few decades. Independently, the concept of moving pictures was realized in devices such as the zoetrope, which was introduced in 1833. The flipbook was patented in 1868, combining photography and motion for the first time. The next 25 years saw many advancements in moving picture technology to the point where movies, crude but not unlike what we know as movies today, were first shown to an audience in 1895.

For videogames, technologies were also long in the making. The cathode ray tube, used in televisions as well as videogames, dates back to the 1890s. It, too, underwent much evolution. Then of course there's the microprocessor, which was the heart of almost every videogame system. The

microprocessor's history goes back to the invention of semiconductor devices which in turn led to the transistor in 1947. All of these technologies developed independently until someone thought of putting them together in a new and exciting way.

I experienced an example of that in high school during a field trip to Brooklyn College. We were shown an oscilloscope that had been programmed to play a game very similar to *Asteroids*, only the ship you were controlling looked just like the Enterprise from *Star Trek*. This was in a lab, not an arcade, years before *Asteroids* ever existed, and it needed a large closet-sized computer for processing power.

Just as movies brought together long-evolving technologies into a new form of entertainment, which had value to a paying audience and could be monetized, the exact same thing could be said about videogames.

So here you are in 1896 having paid admission to watch this newfangled thing called movies, or there you are in 1971 playing one of the earliest coin-op videogames. Not much different. Both technologies are still crude. The following years are largely comprised of innovation and change. Once the basic technologies are in place, they are explored as art forms. In film, the novelty of just seeing moving pictures gives way to a need to tell a story. The language of film emerges — close ups, dolly shots, over-the-shoulders, pans, zooms, etc. Framing is experimented with. People like George Méliès use tricks of the technology to create fantastical scenes unimaginable in real life. In videogames, a language of videogame playing evolves. Joysticks, trackballs, and buttons become standard. A structure of levels of increasing difficulty is widely adopted. Some attempts are made to integrate story into videogames.

And in both film and videogames, genres begin to appear...Films begin to fall into categories: love stories, comedies, action-adventure, fantasies, sci-fi. For videogames, there are driving games, flying games, maze games, sports games, space games, shooting games. Films are made based on popular novels of the time. Videogames are made based on popular films or TV shows.

And the technologies improve...In the movies, pictures become clearer. Sound is added. Then color. Then 3D, a novelty when first introduced in the 1950s — it doesn't last, but comes back later. In games, blocky pixels give way to sprites. Color is added. Then photo-realistic colors. Pseudo-3D looking games. LaserDisc games display actual movies, also a novelty that doesn't last, but the idea of making games look like movies does come back later.

And of course the business models change. When movies become enough of a money-maker, the independent artists (and by "artists" I mean filmmakers) fall by the wayside. The studio system becomes established and predominant. The artists are no longer in charge; the money men are. The blockbuster is invented. Budgets become enormous. As videogames grow into a dominant force, big companies emerge and smaller studios are absorbed into those big companies. Innovation falls by the wayside as people try to make those AAA blockbuster titles. Budgets become enormous, and the artists (meaning videogame creators) are no longer in charge; the money men are.

Both movies and videogames also faced competition with technology that brought the same entertainment value directly into people's homes. For movies, the threat came from television. Movies had to step up their game to keep people coming into the theaters. For videogames, the rise of the arcades echoed the rise of the movie palace, and as home games became available, videogames had to keep ahead of home systems, both in graphics and gameplay, if they wanted to keep people dropping quarters into slots.

Of course there are differences as well. Movies, for example, enjoyed a few decades before television became a threat, whereas home videogame systems emerged right on the tail of coin-op games. Throughout the 1980s, arcade games definitely had the advantage. Then PCs and home consoles began to catch up in the 1990s. But though their numbers are much smaller than in their heyday, arcades still exist and people still go to get the social experience of playing games in the proximity of other people. People also still go to the movies when for many, it's just as easy to watch something on a big flat-screen TV.

Videogames are still relatively new, but if we look at the movie industry for comparison, what might be next? Well, the collapse of the studio system in the 1970s along with the development of cheap digital technology which allows anyone to make a decent-quality film has given rise to a thriving independent film market. Films with relatively low budgets can break through (albeit with some difficulty) into the mainstream. I don't know if we're going to see a collapse of large game publishers, but the last decade has definitely seen the emergence of a viable independent game market. Tools are getting better and better at allowing small independent teams to create innovative games without large budgets and we are starting to see some of those games break through to a wider audience.

And if history is any indicator, I'm guessing that a hundred years from now many of the pioneers of videogames, myself included, will be known only to historians. Have you ever walked down the Hollywood Walk of Fame and looked at the names? Many are recognizable, but just as many are not. Those names represent people who were once famous, but for some reason their contributions just haven't withstood the test of time, while others have. The same will undoubtedly happen with videogames. Which will survive? Only time will tell. I just hope that 80 years from now, thanks to innovators and pioneers not yet born, videogames will still have the ability to surprise us.

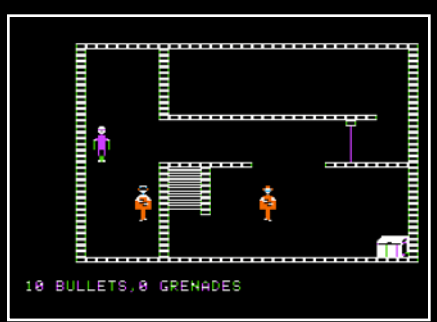
***WARREN DAVIS** began his interactive entertainment career at Gottlieb Amusement Games before moving on to Williams/Bally/Midway. His titles include* **Q*bert**, **Us. Vs. Them**, **Joust 3**, **Terminator 2**, *and* **Revolution X**. *While at Williams, he pioneered the use of video digitization in games such as* **Narc**, **NBA Jam**, *and* **Mortal Kombat**. *Following a stint with Disney, he worked for ILM helping to develop revisualization software for movies.*

PROVING GROUNDS
CASTLE WOLFENSTEIN

BY MATT BARTON

EXPLORE A STEALTH CLASSIC THAT REMAINS BOTH CHALLENGING AND REWARDING.

Welcome back, brave adventurers. This month's Proving Grounds is set in a medieval castle, but it's no fantasy game! Instead we're headed to Germany smack in the middle of World War II, and the castle in question has been commandeered by the Nazis to hold dangerous Allied prisoners like you for brutal interrogation. They've already killed your cellmate, but not before he could steal a fully loaded Mauser M-98 pistol, which is your ticket out of this hellhole. The venue? Silas Warner's groundbreaking 1981 stealth game, *Castle Wolfenstein*.



Apple II screenshot

Forget about blasting your way out commando style. If you want to survive, you'll have to steal a Nazi uniform and sneak around guards and SS Stormtroopers, trying your best to stay out of sight. The task is formidable — *Castle Wolfenstein* has 60 rooms and five levels you'll have to get through to escape. However, your mission isn't just to save your own hide — you'll also need to find the Nazis' war plans hidden somewhere in the castle before making a break for it.

The game plays out in a top-down perspective, but you and the guards appear in side view, similar to the classic arcade game *Berzerk* (1980) by Alan McNeil, from which this game seems to draw some inspiration. As in that game, you'll want to avoid running into the walls, but here they'll only stun you rather than killing you outright. Unfortunately, with all the guards swarming the castle, a few seconds is all it'll take to blow your cover.

The locations of items and guards are shuffled at the start of each session, but the layout of the castle is always the same, so break out the graph paper. Mapping out the castle will go a long way toward completing the mission.

The plans are hidden in one of the many chests you'll encounter throughout the castle, but you don't know which one. Some chests have useful stuff, like ammo or grenades, but you might also find flavor items such as bratwurst, schnapps (which will get you drunk), or the diary of Hitler's girlfriend, Eva Braun. Naturally, the chests are locked, so you'll have to either pick the locks (which can take several minutes in real time) or shoot them open with your gun, alerting all guards in the vicinity — and possibly blowing you to smithereens if the chest in question is storing explosives. For whatever reason, you can only carry 10 bullets at a time — I guess Nazi uniforms have very small pockets. No wonder they lost the war.

The guards roaming the corridors come in two flavors, the simple-minded basic guards and stormtroopers, who are equipped with bulletproof vests. The basic guards won't chase you into other rooms, are fooled by uniforms, and some are cowardly enough to surrender if you draw on them, allowing you to take their equipment without having to shoot them.

The stormtroopers are much nastier — they'll see through your disguise and chase you all over the castle. The only way to take them out is with a grenade. You can also try to block them by killing another guard in their path. I'm not sure why this works; maybe they're afraid of getting blood on their jackboots.

The guards will also shout at you in German — "Halt!," "Kommon sie!" (come here, you!), or, my favorite, "Schweinhund!" (pig dog; it's a very naughty word in German). The digitized voices were incredible for the time. Critics were wowed by this tech, which was called "The Voice." If nothing else, they'll definitely give you a jolt the first time you hear a guard shout. Keep the manual handy for translating the German; you wouldn't want to mistake "I surrender!" for "Fire!"

What really makes the game a beast, though, are the controls, especially if you're a badass playing entirely with the keyboard. This setup has nine keys for moving and another for stopping (once you start moving, your character will keep going until you hit this key). This is tricky enough, but there are also nine other keys for aiming! It's a sure test of your ambidexterity, but also your ability to stay calm under pressure — get flustered, and you might go careening into a wall or firing your gun by accident. You also need to remember that T throws grenades, U uses the contents of a chest, Return lists your inventory, and the space bar lets you search guards and unlock doors and chests. I hope you're a touch typist — the guards won't stand idly by as you hunt and peck.

If this sounds too tough, don't worry — you can also play with a joystick or paddles. Paddles are an interesting option; they have dials for directing your movement and aim. It's probably not the most efficient way to play the game, but, hey, you'll earn a lot of respect from Apple II fans!

If you do manage to escape the castle, you may be promoted by the Allied High Command, depending on whether you managed to retrieve the plans or not. You start off as a lowly private, but if you're able and willing to get through the castle again (each time at a harder difficulty level), you can work your way up the ranks: Corporal, Sergeant, Lieutenant, Captain, Colonel, General, and the ultimate, Field Marshal. Needless to say, few have what it takes to earn such an impressive achievement, but that's why I call this column Proving Grounds. Indeed, the game was so tough that a company named Moxie sold a program called TGUE (The Great Escape Utility) that "fixed" *Castle Wolfenstein*, letting you add items, start anywhere, and open chests instantly. Needless to say, anyone who'd even consider using this program is not Proving Grounds material!

Warner did a sequel in 1984 called *Beyond Castle Wolfenstein*, which followed the same formula, but this time had you finding and detonating a bomb to assassinate Hitler. It updated the gameplay in several ways, but the most significant was letting you drag dead bodies around to hide them or block passages. You could also silently kill enemies with a knife.

While the game itself is memorable, so was its creator. If you think all programmers as shriveled weaklings, think again — *Wolfenstein*'s creator was nearly seven feet tall and weighed over 300 pounds. He was a 32-year-old genius who programmed in his underwear. He was one of the first employees at MUSE Software, a Baltimore-based company, where he was well known for his eccentric personality and love of pranks. One of his favorite gags was leaving Tupperware containers filled with mystery foods on his filing cabinet for months at a time.

■ Commodore 64 screenshot

By all accounts he was a friendly and jovial giant, and his amazing skills inspired many other people to pursue careers in the games industry. Sadly, Warner passed away in 2004, a 54-year-old victim of kidney disease and diabetes. One of his closest fans was future id Software founder John Romero, who was obsessed with the game. Romero and John Carmack used *Castle Wolfenstein* as the basis for their groundbreaking first-person shooter *Wolfenstein 3D*. The two had originally intended to make a stealth game closer in spirit to the original, but eventually abandoned this idea in favor of a more straightforward action game.

Later, third-party games bearing the *Wolfenstein* name took more inspiration from Romero and Carmack's game than Warner's. Activision's *Return to Castle Wolfenstein* (2001) and last year's *Wolfenstein: The New Order* (2014), bear little resemblance to the Apple II classic. It's up to other franchises to take on Warner's stealthy legacy, most notably *Metal Gear* and *Thief*. I'm not sure if *Metal Gear*'s Hideo Kojima ever played *Castle Wolfenstein*, but Ken Levine of *Thief* said it's one of his old-school favorites — I'd love to know whether he ever made Field Marshal!

If you want to try the game yourself, there are plenty of good options. For starters you can go to Virtual Apple II (virtualapple.org) and play it right in your browser (disk ROMs are available for download). You can also visit archive.org, which has the MS-DOS version set up for emulation in your browser. There are ports available for Commodore 64 and Atari 8-bit, too. It'll be trickier to find a way to play with paddles or vintage "hand controllers," especially if you don't have an old Apple II lying around (the other versions are limited to joystick or keyboards). Still, if you're willing to go for it, you can find everything you need on eBay for under $300.

***MATT BARTON** is the producer of* Matt Chat*, a weekly YouTube show with classic game designers. By day, he's a professor at St. Cloud State University in Minnesota. Follow him on Twitter @mattbarton*

JEDI GENERATIONS

VIDEOGAMES FROM THAT GALAXY FAR, FAR AWAY

BY GRAEME MASON

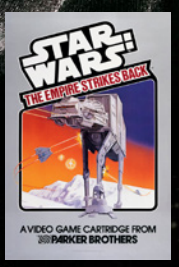
FROM 8-BIT TO LEGO BITS, RETRO LOOKS BACK ON THE BEST (AND WORST) STAR WARS GAMES.

Considering the instant, immense popularity of *Star Wars* upon its cinematic release in 1977, it's surprising to note there were no official home videogame adaptations until the early '80s. The film's slick setpieces were ideally suited to pixelated adaptations, so why no notable games until 1982? Maybe it was licensing, with George Lucas wanting to hold on to the rights until his grand plan for the LucasArts games division came to fruition. Or perhaps developers felt limited by the power of the computers and consoles of the time.

More likely a confluence of factors — such as the fact that licensing movies and TV shows wasn't as popular as it is today, with most publishers concentrating on original material or rip-offs of existing games — led to the "Darth" of *Star Wars* videogames in the years following the blockbuster first film.

1980s

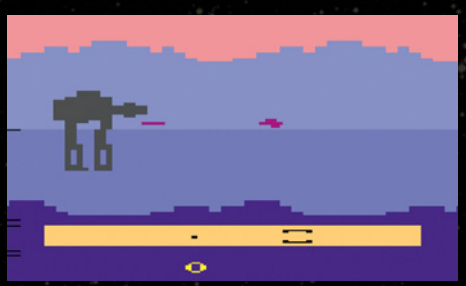
Aside from one unofficial version of *Star Wars* on the Apple II in 1978, the licence remained dormant until 1982 when the Atari 2600 and Mattel Intellivision hosted interactive adaptations of *The Empire Strikes Back*. It was a simplistic game, even by the standards of 1982. Based entirely on Hoth, you piloted a snowspeeder in a *Defender*-style scrolling landscape. Spread throughout were constantly respawning streams of AT-ATs, which when shot enough times would flash briefly and disappear. That was it — no tow cables, no other levels. While the game was playable, the lack of variation counted against it.



The Atari 2600 also got *Jedi Arena* a year later, a game that capitalized on the popularity of the lightsaber battles of *Return of the Jedi*. *Jedi Arena* made for an interesting but strange game. Placing two Jedi within the same room, each armed with a deadly lightsaber, sounded like a good idea, but positioning them so they can't attack each other and then throwing in the annoying remote training droid from *Star Wars* sucked the fun from the premise.

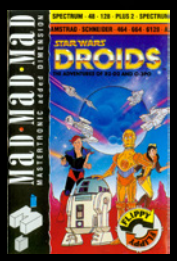
Also released in 1983 on assorted consoles was *Return of the Jedi: Death Star Battle*. As the name suggests, this game focused on the movie's climactic attack on the second Death Star. Controlling a miniaturized Millennium Falcon, you had to fend off enemy spacecraft in a cramped subsection of the screen, while waiting for a gap in the Death Star's shield. The second screen contained the space station itself, and at the center was its vulnerable soft spot. But rather than making for the core, you had to chip away at the exterior, one block at a time, while avoiding deadly laser beams. Like *The Empire Strikes Back*, *Death Star Battle* was a repetitive game and a little too easy to complete.

In 1988, the Sinclair ZX Spectrum and Amstrad CPC got a lamentable effort called *Star Wars Droids*, based on the cartoon



Lead Art by Daniel Kayser

of the same name. No other original *Star Wars* games were forthcoming, save a cutesy Japanese-only Famicom platformer based loosely on *A New Hope* and infamous for its scorpion-like Darth Vader. The potential of the series was to stay relatively untapped until the following decade.



1990s

In the early '90s, Lucasfilm finally began to take a firm interest in the incredible property it owned. JVC and U.S. Gold published *Star Wars*, a side-scrolling platformer with Luke Skywalker, on the NES in 1991. Early levels, set within the dunes and caves of Tatooine, were frustrating thanks to platforms that required pixel-perfect jumping and tedious non-canon enemies such as slugs and giant bugs. While the NES version improved in later levels, the Master System version boasted slightly easier gameplay and brighter graphics, while the Game Gear port excised some of the original's trickier sections in a sort of best-of compilation of the better levels.

Upgrading its console development via fresh talent, LucasArts helped create the SNES' *Super Star Wars*, which took the template laid down by its NES predecessor and enhanced virtually every aspect. From the opening scene on Tatooine to a magnificent Mode-7 landspeeder level, *Super Star Wars* was a graphical tour-de-force, although tougher than a rancor's hide. The concluding Death Star assault and trench run remain a wonder to behold, and it's incredible what Kalani Streicher and the rest of his team extracted from the Super Nintendo.

Despite *Super Star Wars*' success, LucasArts did not forget its PC roots. As the home of flight simulations, the PC was an obvious choice for a space-based *Star Wars* game. In 1993 *X-Wing* took off. Allowing you to jump into the cockpit of the eponymous spaceship as well as Y-Wings and A-Wings, this first in this series of space combat simulations contained an unprecedented level of depth. After a handful of training runs, there were three whole campaigns to explore, each one holding a variety of different objectives. Unlike *Star Wars* and *Super Star Wars*, *X-Wing* did not follow the plot of any of the movies. It did, however, culminate in the famous attack on the Death Star.

Given the outstanding triumph of *Star Wars* games in the early '90s, sequels were inevitable. *Super Empire Strikes Back* and *Super Return of the Jedi* both appeared on the SNES, while the NES also got a version of the former that proved even more brutal than its forebear. Fortunately, the SNES iteration of Episode V included a password system.

Slowly, cartridge- and floppy-disk platforms were being phased out as the almighty CD-ROM began to take over. LucasArts took advantage of the CD media's extra space and included full-motion video in *Rebel Assault*, a maligned combination of digitized graphics and on-rails shooting, accentuated by the presence of John Williams' amazing *Star Wars* score — a first for games based on Lucas' famous galaxy. *Rebel Assault* was undoubtedly flawed; its first level, which saw you pilot a skyhopper around the narrow canyons of Tatooine, was interminable. However, levels such as Star Destroyer Assault, which saw Rookie One jump into an X-Wing and attack an Imperial Star Destroyer head-on, provided a jaw-dropping experience thanks to semi-realistic graphics and iconic music, which dragged the gameplay a step closer to the movies themselves.

In 1994, *X-Wing* received a sequel, *TIE Fighter*, which gave fans the chance to play as the notorious Empire for the first time. *TIE Fighter* was a huge improvement upon *X-Wing*, updating the graphics engine and offering a more solid set of missions. Plus, it was pretty cool to finally dress in black and take out those Rebel scum.

Now we get to a rather popular game on PC and PlayStation.

In 1993, the first-person-shooter *Doom* took the world by storm. Although not the first in this now-ubiquitous genre, *Doom* was the biggest and best at the time. Naturally, a *Star Wars* FPS followed. LucasArts developed its own engine, implementing new features such as vertical aiming and 3D models. Unlike many of its peers, *Dark Forces* contained a coherent plot that drove its gameplay. As a result it was strictly single-player, but lacked nothing for it.

Yet while *Dark Forces* was a genuine hit, the series took off with 1997's *Jedi Knight: Dark Forces II*. Playing the roguish Kyle Katarn once more, you could now finally wield a lightsaber and Force powers. Those additions, as well as the original score, made *Jedi Knight* a huge improvement on *Dark Forces*.

In 1997 the original trilogy special editions hit theaters, keeping the flow of related videogames steady. Whereas the *Dark Forces* series focused on single-player, LucasArts' space simulation games began to shift toward multiplayer,

GIVEN THE OUTSTANDING TRIUMPH OF STAR WARS GAMES IN THE EARLY '90S, SEQUELS WERE INEVITABLE.

most notably with the third installment, *X-Wing vs. TIE Fighter*. Now playable over LAN and dial-up, the game allowed teams of Rebels and Imperials to take each other on in deep space. *Balance of Power*, an add-on pack, introduced single-player missions, but the follow-up *X-Wing Alliance* was disappointing in that you could only play as the Rebels, and was released with several annoying bugs. However, it did contain an extensive single-player campaign, thus answering much of the criticism of *X-Wing vs. TIE Fighter*.

Nintendo kept its close association with the franchise thanks to the Nintendo 64 and two further important games. First, 1996 saw the N64 launch title *Shadows of the Empire*, a multilevel extravaganza. Set sometime between *Episode IV* and *V*, *Shadows* was not a bad game, but the gameplay failed to match its engaging plot. Far more impressive was the first installment in the *Rogue Squadron* series. Once more set after *A New Hope* and created by developer Factor 5, *Rogue Squadron* pitted Luke Skywalker as a member of the titular team, carrying out various missions against the Empire. *Rogue Squadron* didn't offer any massive leap forward in terms of gameplay, but was so fun that no one cared, and it became a big seller for the Nintendo console.

Sometimes games start off as bad ideas, but end up working out. Sometimes they are great ideas, and don't work out; other times they are bad ideas that just get worse. *Masters of Teräs Käsi*, released for PlayStation in 1998, was an example of the latter. A one-on-one fighter set in the blaster-orientated world of *Star Wars* was never likely to entice many fans, and its gameplay was repetitive and the range of moves (so critical to this genre) limited.

Before we depart the '90s, there's the small matter of the prequels. *Episode I: The Phantom Menace*, was released in 1999 to mixed reviews and ringing box office tills. If the aim of George Lucas was to introduce a new, younger audience to the franchise while disillusioning the vast majority of existing fans, then he certainly

succeeded. Given that one of the movie's standout scenes was the energetic pod race, a game based solely around that also appeared. Though *Episode I: Racer* was hardly a classic, its multiplayer was particularly entertaining, although only the PC version could support more than two players — disappointing considering the N64 and Dreamcast's four controller ports.

2000s

The prequel love continued into the 2000s with *Jedi Power Battles* (PlayStation, Dreamcast, and Game Boy Advance), which managed to at least improve upon *The Phantom Menace* film. Taking control of one of four Jedi from the movie, players enjoyed rousing lightsaber action, although the graphics weren't the best and level design was repetitive. On PC, *Star Wars Force Commander* tantalized fans of the real-time strategy genre, but ended up disappointing all but the hardcore. Three years in the making, the game was technically impressive, but remained a frustrating experience for many due to cumbersome controls and spotty gameplay

For the next movie, *Attack of the Clones*, only the Game Boy Advance received an official game version: the GameCube, Xbox, and PlayStation games were all dubbed *The Clone Wars*. Nomenclature aside, *Clone Wars*/*Attack of the Clones* proved to be one of the better adaptations of the prequel movies. Set after the second movie concludes, it's nothing other than good blasting fun set over a series of clone campaigns.

The early part of the decade had already seen *The Battle for Naboo* on Nintendo 64 based around conflicts from *The Phantom Menace*, and the vehicular combat title *Star Wars Demolition* on PlayStation and Dreamcast gave players the chance to jump into the cockpits of many famous vehicles. In a similar if vastly superior vein was *Rogue Squadron II: Rogue Leader*, which debuted on Nintendo GameCube. Once more from LucasArts and Factor 5, this and follow-up *Rebel Strike* really showed what the console was capable of, looking like a totally authentic recreation of many of the original trilogy's iconic scenes. Both were also a joy to play, and rank among the finest *Star Wars* console efforts.

With LucasArts almost giving up on games based around the prequel trilogy (*Episode III* got a rather half-hearted run-around-and-slash game of the same name that was pretty, but boring), the milking of the original trilogy and new stories from the franchise began to dominate its release schedules. PC gamers receive *Galactic Battlegrounds*, an *Age of Empires* clone which, as the name suggested, recreated many of the series' famous battlefields. A logical step from this was *Battlefront*, a first-person shooter that placed you on the field of battle as a foot soldier in either the Rebel or Imperial army. Encompassing all five films that had been released by 2004, *Battlefront* was essentially an online shooter, one that gathered a large fanbase and modding community. Its gameplay was simplistic, and drew criticism at the time, but it was splendid fun to play despite the absence of space-based scenarios.

Battlefront II was even better, including scenes from *Episode III* and the chance to play as the famous heroes and villains from the films. Meanwhile, 2002 had already seen arguably the best of the *Jedi Knight* games in *Jedi Outcast*. Featuring massively improved Force powers and the continuing story of Kyle Katarn, *Jedi Outcast* was an exceptional game that spawned a follow-up in *Jedi Academy* (2003), which starred Padawan Jaden Korr and focused even more on Jedi powers and lightsaber skills. The same year also gave us new material in *Knights of the Old Republic*, an RPG set thousands of years prior to the original *Star Wars* movies. Developed by BioWare, *KotOR* and its sequel may seem clunky today, but the depth of play and atmosphere generated by the evocative story make these games classics well worth tracking down.

Today, the steady stream of *Star Wars*–related gaming continues with *Star Wars: Battlefront* recently receiving its third update and the *LEGO Star Wars* games ranking among the best-selling videogames of all time. Despite the odd clunker, *Star Wars* games, in the right hands, will always hold the potential to create thrilling experiences across a wide range of genres, all to the tune of ringing cash registers.

SOMETIMES GAMES START OFF AS BAD IDEAS, BUT END UP WORKING OUT.

POINT & SHOOT

MAZES, DEMONS, AND THE DAWN OF FIRST-PERSON SHOOTERS

by David L. Craddock

Lead Art by Daniel Keyser

PATERNITY TEST

In a press release dated January 1, 1993, the founders of id Software declared that their next game would be the "number one cause of decreased productivity around the world." They made good on their claim.

Hours after launching that December, *Doom* became the bane of professional institutions. Data packets blasting back and forth between staff playing deathmatch plugged up Intel's network. Overseers at Texas A&M wiped the game from the master server to prevent students from spawning it on lab computers. Admins at Carnegie Mellon posted a notice warning (begging) students not to play the game online, and that failure to obey would result in their PCs being severed from the university network.

Not all corporations despised *Doom*. Microsoft's Alex St. John, cocreator of the DirectX suite of game plugins, likened the game to a "religious phenomenon" when he and other developers at the House That Windows Built fell head over cloven feet for its addictive gameplay and technical pedigree.

Critics and gamers showered *Doom* with praise, proclaiming it the granddaddy of the nascent first-person shooter genre. However, it was not the progenitor of its kind. 20 years before the arrival of id's productivity killer, three high-school kids got there first.

RATS IN A *MAZE WAR*

Steve Colley, Howard Palmer, and Greg Thompson met by chance. Each was a senior in high school who had been accepted into a work-study program in the computer graphics lab at the NASA Ames research facility in Silicon Valley. They worked on Imlac PDS-1 workstations that consisted of an internal processor and memory, a rectangular CRT monitor able to render line-based graphics, and a keyboard and light pen.

Growing bored with the daily grind, Colley, Palmer, and Thompson conspired to push the boundaries of the PDS-1. They conjured up a three-dimensional labyrinth that could be navigated from a first-person view — giving you the sensation that you were *inside* the maze, seeing it through your own eyes. Fittingly, they called their game *Maze*.

At its inception, *Maze* was simple yet technically stunning. The eponymous tangle of corridors was drawn with green lines assembled into cubes; the sides of each cube served as walls, with the space between cubes serving as hallways. They assembled those cubes into a 16-by-32 warren in which one player could meander around in search of the exit. Turns were limited to right angles, the simplest angles for the PDS-1 to calculate.

Maze War running on an Imlac PDS-1.

Maze coalesced swiftly, but the boys tired of drifting alone through a single maze whose location never changed. They had an epiphany: Why not let someone sitting at a second Imlac terminal join and compete to see who could escape the fastest? Inspired, they wrote the instructions necessary to let two Imlac machines communicate via serial cable. You could enter a name up to eight characters in length, which floated above your avatar — an eyeball that changed in appearance based on orientation. An eyeball staring right at your screen meant that player was facing you. If the eyeball was blank, the player was facing away.

What happened next seems almost preordained. One of the boys suggested they give players the ability to shoot one another, turning *Maze* into a contest. Points were earned for shooting other eyeballs, and lost for being shot. Colley came up with the idea for a peek function: By holding down a key, you could ease around a wall to scope out the next corridor; as a trade-off, you couldn't shoot while peeking. Other strategies, such as lying in ambush — a tactic that would become known as "camping" decades later — derived from there.

In the fall of '73, Colley, Palmer, and Thompson graduated high school and went their separate ways. Auspiciously, Thompson packed up the punch cards that contained the instructions for *Maze*. When Thompson arrived at MIT in February 1974 he entered the computer science department and met Dave Lebling, who would go on to cocreate *Zork*.

Thompson showed his new friend *Maze*, and Lebling saw untapped potential. "He had brought a prototype version of it from Ames and was working at our lab," recalls Lebling. "He said, 'I hear you're into Imlacs.' I said, 'Why, yes,' and he just dumped a bunch of paper cards which contained *Maze* and a bunch of other things. I said, 'I can get that working.'"

Thompson mentioned that one thing he and his friends hadn't been able to do was increase the player count; serial connections accommodated only two terminals. Lebling pitched a solution: The computer science lab was connected to a PDP-10 mainframe, which could function as a server capable of hosting players who dialed in from Imlac terminals. Lebling wrote the bulk of the code used by the PDP-10 while Thompson updated *Maze*'s code. They collaborated on enhancements to the game's design, such as a miniature-sized map in one corner of the screen that showed an

GET A HAIRCUT AND GET OFF MY NETWORK!

Maze War was a notorious productivity bandit in its day. According to its creators, frequent competitions between students at MIT and Stanford were responsible for clogging the flow of data over ARPANET, the forebear of the Internet.

■ The id Software gang early in the company's history. From left to right: John Carmack, Kevin Cloud, Adrian Carmack (back), John Romero, Tom Hall, and Jay Wilbur.

overhead view of the maze, an arrow depicting your position and bearings, and a level editor — perfect for when you tired of the default maze.

Thanks to shiny new client-server code rolled out in 1974, up to eight players from around the world could join a single session of the game, which the creators renamed *Maze War*. "You could run around in these mazes and kill each other," Lebling says. "It was really awesome. You could also play it with these AI robots if there weren't enough people around, but they were more artificially stupid than artificially intelligent. They would adjust their play to be at about the same quality of yours, which was nice if you were having either too easy or too hard of a time."

PLEASURE PRINCIPLE

The story of id Software's influence on shooters began not with demonic invaders, rocket jumps, or Nazi dogs, but with a single, spinning cube.

"We finished making *Commander Keen* on December 4th of 1990, and we took Christmas vacations, and when we got back, we were still working at *Softdisk* [magazine] at that time," says John Romero. Romero worked with his friends Tom Hall, Adrian Carmack, and John Carmack (no relation) at the Shreveport, Louisiana-based magazine. Their job was to create PC games for subscribers of the bimonthly Gamer's Edge disk packaged with *Softdisk*. After returning from Christmas break, "John [Carmack] wrote some code to make a spinning cube appear on the screen," Romero recalls. "That was his first 3D [program]. That was like, okay, he's excited about this 3D thing; maybe that will turn into something later." They put the cube aside and went back to brainstorming game ideas for the magazine.

But Romero and the others had a secret. Flying under *Softdisk*'s radar, they had published the *Super Mario*–inspired platformer *Commander Keen* through Scott Miller, the founder of Apogee Software and the innovator of shareware distribution: Give the first chunk away for free to whet players' appetites, then charge for the full product.

When *Keen* went gangbusters in January 1991, the fledgling team informed their boss at *Softdisk* that they were leaving to start their own company, called id Software. Their boss countered by reminding them that they still had contractual obligations to fulfill. Once they were square, they could split or stay.

John Carmack expanded on his spinning cube by writing a three-dimensional game called *Hovertank 3D*, but the two-month deadline cramped his style. "That was his first real 3D code, and it was the only time he felt real stress while making a game because it was hard to do. It was just grinding constantly, trying to get 3D working, getting rid of problems like the fish-eye lens — it was his first really, really hard [project]. He wrote all that code," Romero says.

Hovertank left an indelible mark on id's history, and on the legacy of FPS games. Piloting a hovering tank, you cruised around 3D levels shooting demonic-looking monsters. Each surface was painted in a single color, leaving levels as visually simplistic as 1987's Atari ST *MIDI Maze*. Nevertheless, *Hovertank*'s smooth movement turned heads. Previous 3D games boasted larger and more detailed environments, but moved sluggishly. In contrast, Carmack's engine breezed along.

October rolled around, and the id guys needed another game idea to polish off their *Softdisk* contract. Romero and Carmack, who had formed a symbiotic relationship based on Romero's sharp eye for design and Carmack's blisteringly fast code, knew just what to make. A year earlier, Romero had struck up a rapport with Paul Neurath, cofounder of Blue Sky Productions (later renamed Looking Glass Studios). "I talked to Paul on the phone, and he said, 'We're making a game. I can't tell you what it is, but it uses a technique called texture mapping that takes a graphic and maps it onto a polygon,'" says Romero. "I was like, oh, wow, that's interesting. John Carmack said he could do it, but it wasn't until a year later that we could make a game that could use that concept."

Although Blue Sky had a head start, Carmack's prowess beat them to the punch. Shipping to Gamer's Edge subscribers in November 1991, four months ahead of *Ultima Underworld*, *Catacomb 3-D* was a dark fantasy action game that cast you as a wizard. id's team applied texture mapping to fashion environments like brick walls and terrain covered in slime — a huge leap forward from *Hovertank*'s single-color surfaces. And while few FPS fans mention the game in the same breath as id's other shooters, *Catacomb*

3-D marked the first time you could see your virtual avatar's hand and weapon in a 3D environment, adding to the immersion of inhabiting a virtual world.

"It was in EGA [graphics mode], which was actually the painful part of it because EGA is a total pain to write for," Romero laments. Then he brightens. "We finished it in November of '91, and in January we started working on *Wolfenstein 3D*."

■ *Hovertank 3D* (left) move at a rapid clip, but featured single-colored surfaces. Conversely, *Ultima Underworld* (right) painted details on surfaces.

NAZIS AND HELLSPAWN

Surprisingly, the id crew didn't immediately choose to develop another fast-paced shooter. Their initial idea was to remake *Castle Wolfenstein*, a stealth game written by Silas Warner for the Apple II. In id's reimagining, you would sneak around assassinating Nazis, hide bodies to avoid attracting attention, and steal keys to progress.

"We put [the stealth mechanics] in and then took them out because it wasn't true to the essence of the game: run and gun, basically," Romero says. They cranked up the speed and littered levels with ammo, bowls of gruel, and medical kits to restore life, and massive firearms like the chaingun, which burned through bullets but shredded all but the biggest baddies in seconds.

Early on, Carmack wrote the engine around EGA graphics, which could display 16 colors on the screen. Scott Miller, who had his finger on the pulse of industry trends and would be publishing the game under the Apogee banner, convinced them to switch over to VGA graphics, which supported 256 colors. Adrian Carmack embraced the advancement, drawing Nazi soldiers and guard dogs that patrolled dungeons and died in a shower of gore. The artists put their texture-mapping skills to good use, painting swastika banners on tiles, pens that held the corpses of P.O.W.s, walls hewn from rock, wood, and brick, and cell bars complete with skeletons peering out from the other side.

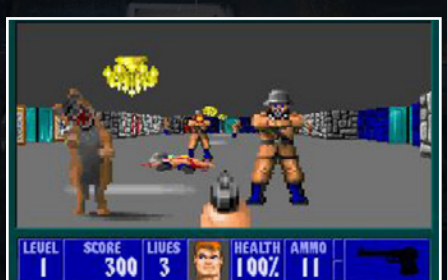
Romero continued to sharpen his level-design skills. *Wolfenstein 3D*'s engine allowed for straight corridors and right-angled turns, but the levels were much larger than those of *Hovertank* and *Catacomb 3-D*. Later, Romero and Tom Hall exhorted id's ace programmer to add secret chambers that you could find by pushing on false walls. Sound cards were hot-ticket items at the time, so the id guys laughed themselves silly recording gunshots, groans of pains, and German cries like "*Achtung*!" (Attention!) and "*Mein leben*!" (My life!).

Wolfenstein 3D blasted onto gamers' hard drives in May 1992. Gamers and critics embraced the game's pedal-to-the-metal action and hyper-realistic violence. The game netted id's designers their biggest windfall yet: a royalty check for $200,000, exponentially larger than *Keen*'s inaugural check.

Confident in their bank account and design sensibilities, id Software parted amicably with Apogee and set out to publish its next game, *Doom*, as an independent studio. Once again, Carmack and Romero played the yin to the other's yang. Carmack stretched texture mapping even further by adding distance-based diminishing lighting. *Wolfenstein 3D*'s grisly dungeons had been flooded with light, but *Doom* maps could have variable degrees of lighting, including pitch-black corridors where lights flashed on and off, forcing you to inch your way forward.

However, some of the guys found early *Doom* levels lacking. "When we started *Doom*, we were just replicating [*Wolfenstein*'s] design aesthetic, and it was just boring and garbage for probably five months," Romero says. Determined to nip the problem in the bud, he harnessed the power of Carmack's new engine to create a devilish chamber: an elevator that dropped you into a room cloaked in dark-

■ *Catacomb 3-D*'s floating hand.



■ *Wolfenstein 3D*'s level of gore was shocking at the time.

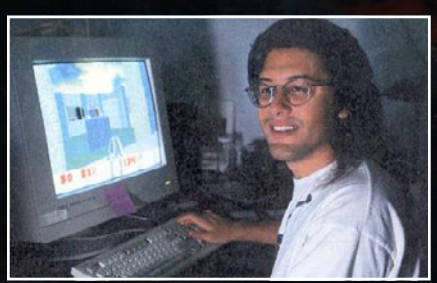
After playing *Doom*, *Wolfenstein 3D* seemed tame.

Deathmatch clogged networks for years

ness and holding a throng of monsters. Above, monsters patrolled ledges high up on either wall, sniping at you from afar.

"I brought the artists and Tom [Hall] into the room and said, 'This is what we should be doing with our levels.' And they said, 'Holy sh*t. That's exactly it. Right there.' Basically everything in shooters made during the '90s sprang from that day."

In just a few minutes, Romero had demonstrated the most impressive aspects of *Doom*'s engine. Every corridor in *Wolfenstein 3D* ran at straight angles, and walls were all the same height. In *Doom*, floors could split into segmented pieces; bridges could rise and connect adjacent platforms at different heights; and stairs flowed between platforms — a far cry from *Wolfenstein*'s flat, single-floor levels. Carmack also beefed up texture mapping. In older games, ceilings and doors had been limited to single colors, but *Doom*'s architecture was splattered with slime, blood, and twitching corpses.



John Romero, one of the chief architects of *Doom*.

Working with clay and latex, Adrian Carmack modeled terrifying monsters like the Spider Mastermind, a brain couched in a robotic shell and outfitted with a machine gun; and the Imp, a leathery-skinned demon that hocked fireballs and raked your flesh with its claws. New weapons like the rocket launcher and BFG9000 (short for Big...Freakin' Gun) obliterated and melted enemies into bloody chunks.

Doom's most vaunted feature was network multiplayer. One fateful afternoon, Carmack finished a segment of code and booted a *Doom* prototype on two computers in his office. On one PC, he pressed an arrow key to move his marine avatar forward, then looked over his shoulder to see his marine shuffle into view on the second screen, which showed the opponent's point of view. Romero freaked out and immediately orchestrated the first of many interoffice deathmatch sessions.

id opened *Doom*'s portal to hell a few weeks before Christmas in 1993, and the gamers of the world shared in Romero's exuberance — much to the dismay of teachers and lab admins. To this day, he savors every opportunity to eviscerate the world's best *Doom* players one frag at a time. "I made *Doom*; *Doom* is me. It was made for me. It was all about friction, acceleration, and speed. I tweaked all those values until it felt perfect to me. So when I play the game, it's exactly what I want to be playing. To me, it's optimal."

Rise of the Triad focused on over-the-top action and zany weapons.

GODS, DOGS, AND BUBBLEGUM

After id Software struck out on its own, Scott Miller staffed up Apogee to work on the company's first internally developed game, *Rise of the Triad*. Tom Hall, who left id during *Doom*'s development, lead the effort.

"*Rise of the Triad* was originally intended to be a new sequel to *Wolfenstein 3D*, but never a true competitor to *Doom*. However, it did some things pretty well, such as deathmatch taunts, looking up and down with a mouse, and some really radical weapon designs," Miller explains, speaking to weapons like drunk missiles; God Mode, a state of invulnerability that gives you the power to throw instant-kill fireballs; and Dog Mode, which turns you into a dog able to squeeze through crawlspaces.

In 1996, Apogee — rebranded as 3D Realms — broke off from the growing pack of *Doom* clones with *Duke Nukem 3D*. The Duke character was a muscular, irreverent action hero who had starred in two cartoonish platformers similar in design to *Commander Keen*. To bring Duke into the third dimension, 3D Realms fashioned a provocative world. Lead and rockets flew across pool halls, pornography shops, city streets, and strip clubs, where dancers flashed their breasts in exchange for Duke's cash. Duke's standout feature was his personality. Where id's nameless protagonists elicited grunts and gasps of pain, Duke cracked one-liners and regularly compared the visages of alien foes to their posteriors.

"id was taking a serious approach to their games, so to differentiate ourselves we took a less serious approach," Miller says. "That manifested as hu-

■ Scott Miller (left) and Richard "Levelord" Gray (right).

■ *Duke Nuke 3D*'s realistic environments and multifaceted weapons made the game stand out...

mor, the pop-culture references, and by making Duke a stronger personality by having him talk during the game."

But *Duke Nukem 3D* was more than witty sound bites and strippers willing to bare all. Unlike in *Doom*, you could aim up and down, and jump and crouch. Inimitable weapons like the shrink ray, which shrunk enemies so Duke could stomp on them, and the pipe bomb became some of the genre's most iconic tools of destruction.

According to Miller, "It was our goal to be different than *Doom*, so we purposely designed weapons that weren't *Doom*-like. We didn't want to make any all-powerful weapons like the BFG. The pipe bomb is a good example of a weapon with tactical implications, in that it's powerful but only goes a short distance. But, you can trigger it from far away, which leads to interesting ways to use it."

A philosophy of semi-realistic level design meshed with destructible environments set the game apart even further. "Back then, destructible walls and such were not common," explains Richard "Levelord" Gray, one of *Duke3D*'s chief level designers. "So often, adding these were the focus of an area, and that area was built around the player breaking the barrier. Other times, these breakable barriers were used for secrets or shortcuts."

Further separating their game from *Doom*'s focus on labyrinthine interior levels, *Duke*'s designers constructed sprawling environments such as The Abyss, a Grand Canyon–like setting. "Even though some of the levels seemed big, they really weren't. The player had to follow the critical path eventually. We playtested *Duke* every night. One of the main focuses was to not make the player frustrated," says Gray.

■ ...as did Duke's irreverence and preening. "Damn, I'm lookin' good!"

BOTS, QUAKES, AND CONSOLES

id Software's manic gamers didn't sweat *Duke 3D* when it launched early in '96. They were hard at work on *Quake*, the spiritual successor to *Doom*. However, *Quake* went through several iterations before id decided to create a 3D carbon copy of its previous shooters. While id's founders were still at *Softdisk*, they aspired to create a top-down RPG called *Quake: The Fight for Justice*, but scrapped the design after two weeks, citing insufficient technology. After shipping *Doom*, the idea of a more exploration-heavy game light on combat resurfaced. *Quake* would be a 3D adventure in which players fought with a magical hammer and the assistance of a sentient companion cube.

■ *GoldenEye 007* (left) and *Halo: Combat Evolved* popularized FPS games on consoles.

"One thing we thought of for multiplayer was you were going to be standing on top of a cliff, and someone could come up behind you and hit you on the back of your head with a hammer, and you would tumble forward," Romero says. "You'd be looking at the ground, then the sky, like you're tumbling down a hill. I don't think I'd seen that in a shooter, and it would have been a really different point of view."

Ultimately the staff was exhausted after *Doom* and *Doom II*, and decided that *Quake* would follow in *Doom*'s footsteps. The protagonist of *Quake* was a hard-boiled (and characteristically mute) soldier assaulting a bleak world assembled from gothic castles and futuristic military compounds, and armed with shotguns, rocket launchers, and a few new armaments like the nail gun — a machine gun that spat spikes — and a lightning cannon.

Quake's claim to fame was its 3D engine, another product of Carmack's genius. *Doom*, *Duke Nukem 3D*, and other first-person shooters could be more aptly described as 2.5D — they projected 2D images (sprites) to give the illusion of a third dimension, but unfolded on a 2D plane. *Quake* utilized polygonal instead of sprite-based characters, rendered out true 3D environments, and let you aim and move in any direction.

Arguably its biggest innovation was being able to type in an IP address and join online deathmatch bouts straight from the menu, pitting you against opponents from around the world and giving rise to large-scale LAN parties like id's annual QuakeCon gathering. (Soon, the third-party QuakeSpy tool simplified this process by scanning for and listing in-progress multiplayer games. From there, you were just a few clicks away from dropping into an arena.)

In 1997, publisher Rare released *GoldenEye 007* for the Nintendo 64. *GoldenEye* focused on realistic movement and shooting, facilitated through *Sophie's Choice*–type scenarios like choosing between running and gunning or holding still and aiming precisely. Most notably, the game offered four-player local multiplayer, a first for console shooters. In 2001, Bungie's *Halo* finished what Rare started by providing a four-player campaign and LAN options that transformed college dormitories into staging grounds for week-long contests.

However, the vast majority of innovation in FPS design occurred on the PC. In 1998, Epic Games' *Unreal* packaged a lengthy single-player campaign and a robust set of multiplayer modes. You could frag friends online, or enter arenas against computer-controlled bots, giving you plenty of opportunity for practice before putting your modem to work. A year later, Epic followed with the multiplayer-focused *Unreal Tournament* on a disc bursting with weapons, maps, modes like Capture the Flag, and modifications like Instagib (one hit, one kill) and low gravity.

In between *Unreal* and *UT*, a startup called Valve Software rewrote *Doom*'s formula — kill enemies, find keycard, unlock door, rinse and repeat — with its debut game, *Half-Life*. Nonlinear level design, fiendishly clever AI, and a narrative told through real-time cutscenes that kept you in control of your character paved the way for story- and exploration-driven FPS games like 2007's *BioShock*.

CUT FROM THE SAME CLOTH

Shooter trends evolved at a rapid clip in the late '90s and early 2000s. *Counter-Strike*, originally developed as a free mod for *Half-Life*, introduced realistic weapons and damage, offering a tactical alternative to the drove of twitchy, arena-based shooters molded after *Quake III* and *Unreal*. That same year, games like *Medal of Honor* and *Hidden & Dangerous* ushered in World War II–themed shooters. Drawing from historical settings and weapons, these games featured campaigns that set players on a linear path through tightly controlled missions and setpieces. The genre peaked in 2003 when Infinity Ward released *Call of Duty*, yet another WW2 shooter, but one that boasted high production values and found solid footing on the PS2 and Xbox.

Illustration by Thor Thorvaldson

The rise of realistic and war-themed shooters came with a price. As games like *Call of Duty* climbed the sales charts, they knocked the more fantastical *Doom* clones from their perch. Publishers followed the money, and production of sci-fi/fantasy and arena-style shooters slowed from a flood to drips and drabs. *Call of Duty 2* sold 200,000 copies on Xbox 360 during the console's first week of availability alone, making it the system's most popular launch game.

Unreal Tournament, once a standard bearer for the popularity of sci-fi arena shooters, inadvertently signaled the end of the genre's time on top. Released in November 2007, *UT3* received generally positive reviews, but saw very little online enthusiasm from players, with largely empty servers. That same month, Infinity Ward scrapped the tried-and-tired WW2 theme and introduced contemporary settings and themes in *Call of Duty 4: Modern Warfare*, highlighting incredibly visceral firefights and a multiplayer mode where you unlocked new guns by earning experience points across game sessions.

While critics lauded *CoD4*'s impressive production values and tight gameplay, its runaway success led to a string of annual sequels that offered little in terms of new ideas from year to year. And it drew a clear line in the sand: Developers either baked their shooters in *CoD4*'s lucrative mold, or failed. This aversion to risk, motivated by the potential for huge profits, frustrated classic FPS fans who yearned for the faster, more three-dimensional action and deep variety of settings, themes, and weapons seen in many shooters of the '90s and early 2000s.

Admittedly, *Doom* spawned just as many shameless clones, if not more. It was *Half-Life* that bucked the trend of corridor shooters — something John Romero believes we'll see again. "Experimentation is still going to happen, but in smaller-budget FPS games. I think with people making more of those, with different themes and ideas, something is going to click the way that *Half-Life* clicked."

Bold ideas need water and sunlight, which take the form of editing tools and ambitious gamers eager to create the next big thing. But *CoD4*'s dominance has turned blockbuster FPS games into walled gardens. Giving you level editors would work against the goals of publishers like Activision, which want you to pony up $60 every year for another *CoD* rather than support older games that no longer earn it money.

Scott Miller prefers to look on the bright side, pointing to the advent of user-

■ While *Half-Life* broke the *Doom* mold, *Unreal Tournament* (below) offered a deathmatch-centered experience.

Call of Duty 4: Modern Warfare simultaneously innovated and stifled FPS games.

content-driven games like *LittleBigPlanet* and *Super Mario Maker* as indicative of where big-budget shooters might be headed. Indeed, Miller believes the term FPS should be retired to pave the way for new, intermingled categories of action games.

"*Halo*, *Gears of War*, *Borderlands*, *Warframe*, *Titanfall* — these all represent a maturing evolution of the 3D shooter category. Even *GTA*, *Dishonored*, and others belong in the category. The lines have been seriously smeared. Let's just make good 3D games inside compelling, interactive worlds, and let the term FPS fade away."

Without *Doom*'s free source code, we wouldn't have inventive mods like *Brutal Doom*.

TRENDSETTERS

Many critics consider *Doom* the most important FPS ever, but as *Maze War* and the following titles illustrate, it didn't invent the wheel.

- *MIDI Maze* (Atari ST, 1987): First network-enabled FPS. Supported up to 16 players.
- *System Shock* (DOS, 1994): True 3D engine that stressed exploration and puzzles.
- *Heretic* (DOS, 1994): Ability to aim up and down.
- *Marathon* (Mac, 1994): Alternate fire modes for weapons.
- *Dark Forces* (DOS, 1995): Ability to crouch.
- *Team Fortress* (DOS, 1996): Mod for *Quake* that introduced class-based play.
- *Tom Clancy's Rainbow 6* (Win, 1998): Squad-based, tactical shooting.
- *Counter-Strike* (Win, 1999): Mod for *Half-Life* that emphasized realistic combat and tactics.
- *Deus Ex* (Win, 2000): Copious helpings of RPG mechanics.
- *Metroid Prime* (GameCube, 2002): Blend of action, puzzle-solving, and adventure elements.
- *Call of Duty 4: Modern Warfare* (PC and Consoles, 2007): XP-based progression system in multiplayer.

SERIES INFO:

Publisher:
Konami
Developer:
Konami
Platforms:
PlayStation
Release:
12.17.98 JP
09.29.99 U.S.
Players:
Single-player
ESRB Rating:
T

KONAMI'S CLASSIC RPG DEFIED THE TRENDS OF ITS ERA TO KEEP THE MEMORY OF 16-BIT RPGS ALIVE.

by **Kat Bailey**

Suikoden II is one of the few videogames that might legitimately be considered to be based on a true story. Its roots can be traced back to one of the great classics of Chinese literature, *Outlaws of the Marsh*, which was based on the historical exploits of an outlaw named Song Jiang and his bandit army in ancient China, immortalizing them as the 108 Stars of Destiny.

Perhaps that's why *Suikoden II* feels so fresh and lively after more than 15 years. Originally hitting America in September 1999, *Suikoden II* stands in stark contrast to its contemporary *Final Fantasy VIII*, which arrived just a couple weeks before it. Both had their merits, but where *Final Fantasy VIII* leaned heavily on its technology, *Suikoden II* told its complicated story using sprites that wouldn't look out of place on the Super Nintendo.

In retrospect, *Suikoden II*'s decision was the correct one, as its attractive, well-animated art has aged gracefully over the years. In that respect, *Suikoden II* is not that different from 16-bit stalwarts like *Final Fantasy VI* and *Chrono Trigger*, despite the fact that it was released almost half a decade later. Of course, *Suikoden II*'s timelessness is a double-edged sword. Its graphics were positively quaint when compared to then-state-of-the-art steamrollers like *Final Fantasy VIII*; and with its relatively limited print run, it was quickly relegated to the status of cult favorite. It wasn't long before it became a highly sought-after collector's item.

Suikoden II's desirability did much for its reputation in the ensuing years. It was the RPG fan's proverbial white whale, and owning it was a badge of honor. It was further bolstered by the varying quality of its sequels, which were variously criticized for their slow pace and limited exploration, lending *Suikoden II* a halo effect that persisted through the 2000s.

Its reputation is generally well deserved. Despite its status as a sequel, director Yoshitaka Murayama conceived of it as the original story in the series, and it shows in the more polished storytelling and superior characterization. From the very beginning, it sets about establishing the close relationship between the main character, his loyal friend Jowy, and his...energetic...sister Nanami. Together with Pilika, a little girl traumatized by the horrors of war, the group forms a strong emotional core that constitutes its greatest strength.

As the hero, Jowy, and Nanami flee from one village to the next, closely followed by the Highland Army and its murderous leader Luca Blight, a steadily growing posse of heroes joins them — the 108 Stars of Destiny who form the core of what becomes a new liberation army. As in the original *Suikoden*, the hero and his followers eventually find a headquarters to call their own, using it as a base of operations for recruiting new warriors to the cause and waging war on Blight, whose sheer sadism puts even Kefka to shame. In particular, the scene in which he forces a woman to crawl around and pretend to be a pig before mercilessly slaying her is genuinely harrowing.

It's larger-than-life characters like Blight who sustain *Suikoden II*'s story, additionally deflecting attention away from the only serviceable turn-based combat, which is speedy but lacking in really meaty customization. On top of the heroes, there are fan favorites like Flik and Viktor, who share a joking camaraderie that belies their long experience with war, as well as optional characters like Zamza and Shiro. All of them offer an interesting contribution to the group, whether it's as a circus performer, a wolf, or an evil genius. Ultimately, recruiting all 108 Stars of Destiny is half the fun when playing *Suikoden II*, and every fan has a personal favorite or two (or 20).

When it comes to assessing *Suikoden II*'s legacy, its rather dark coming-of-age story tends to be remembered first and foremost, as does its lively cast. It has many good ideas, but in an era defined in large part by the torrid pace of innovation, *Suikoden II* distinguished itself by eschewing style in favor of simply telling a really good story. Nearly a thousand years later, Song Jiang's legacy lives on via the PlayStation.

[**EDITOR'S NOTE:** Special thanks to John Olson for backing our Year Two campaign on Kickstarter! This retrospective has been included in the mag at his request!]

COMBAT EVOLVING

BY JEREMY PARISH

THE STORY OF HOW AN XBOX SHOOTER BECAME A CORNERSTONE OF MICROSOFT'S BUSINESS

Lead Art by Daniel Kayser

COMBAT TRULY WAS EVOLVING, RIGHT BEFORE OUR EYES, AND HALO IN MANY WAYS SERVED AS THE CATALYST.

When the Xbox debuted in 2001, it launched alongside Nintendo's promising GameCube and PlayStation 2's one-two punch of *Metal Gear Solid 2* and *Grand Theft Auto III*. Yet the untested platform fared quite well for itself, launching strong right out of the gate. By and large, the credit for its success hangs on its day-one centerpiece, Bungie's *Halo: Combat Evolved*.

The Xbox business has changed considerably over the years — remember when Microsoft tried to sell the Xbox One by downplaying the fact that it plays videogames? — and so, too, has *Halo*. The close relationship between Xbox and *Halo*: *Combat Evolved* began in 2001, but as *Halo* slowly grows and advances over the years, it's clear that evolution is a long-term process.

HERE COME THE FLOOD

In hindsight, playing the original *Halo: Combat Evolved* gives you that strange, alien sensation you find in the first entry of a long-running series. There's little question that this game belongs to the same family as the recent *Halo 5: Guardians*; all the familiar elements show up here, from the "golden triangle" of combat to the Covenant to the wild and varied multiplayer. And yet, *Combat Evolved* approaches all of these things in a raw, primal fashion. It feels like a bridge between the shooters of the '90s and the FPS as it would take form in the new millennium. Combat truly *was* evolving, right before our eyes, and *Halo* in many ways served as the catalyst.

Compared to its sequels, *Combat Evolved* feels like more of a sandbox, especially in its campaign. While the series continues to offer plenty of latitude for goofing around in its multiplayer sections even today, the arenas and battlefields where the original game's story takes place can be quite jarring in their lack of structure. Once you land on the Halo structure itself, wide-open vistas present themselves — huge, open fields in which you can experiment with the rules and tools of the game.

The openness likely results from the game's original design; Bungie planned it as more of a strategic multiplayer action game, similar to *Tribes*. It reshaped the game into the FPS we know and love today over the course of a couple of years, but many atypical shooter elements — big battlefields and a huge variety of vehicles — remained. The idea of seamlessly jumping into a jeep or hijacking an enemy tank hadn't appeared in too many games to that point (*Grand Theft Auto III* was only just beginning to shake the world to its core over on PlayStation 2), and the freedom that *Halo* offered felt truly marvelous. How many other single-player shooters allowed you to step outside a building of dangerous, narrow corridors, leap into a tiny airship, and go about blasting enemy ground forces from 100 meters in the air?

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SOME CHANGES WENT OVER BETTER THAN OTHERS.

Combat Evolved wasn't without its frustrations. For as much as Bungie got right, the tight deadline under which it had to rework the game to fit Xbox showed. Some stages came across as repetitive, copy-and-paste busywork (see: "The Library"), and much of the second half saw you literally retracing your footsteps through the first half. And while she seemed unique at the time, the Chief's onboard artificial intelligence Cortana firmly established the now-tired concept of a constant voice in your ear urging you to complete the next task.

When the game worked, however, it sang. The canny enemy AI put the vaunted tactics of *Half-Life*'s soldiers to shame, as Covenant squadrons would follow the lead of, rally around, and panic at the defeat of the devious Elite warriors. Design-wise, Elites were the star of the show: bigger, badder versions of your own Master Chief, all the way down to their recharging energy shields. Controls felt fluid and precise, firmly establishing the standard for console FPS controls that had been hinted at with games like *Perfect Dark*, and the trio of character skills — guns, grenades, and melee — were each mapped to dedicated buttons, allowing you instant access to all your abilities as the situation dictated.

This came with trade-offs, though. Master Chief could only carry two guns at a time, and dropping a weapon in favor of one you found lying around became a key strategy. Weapons became disposable in nature, especially enemy guns that ran on plasma batteries and couldn't be reloaded. Each weapon had value, be it a deadly sniper rifle, the limited but precise pistol, or even the esoteric Covenant pistols which worked so well for taking down Elite shields.

Somewhat ironically, many players never experienced these moments, as they were downplayed or completely absent from the game's popular multiplayer component. Despite launching well before the debut of Xbox Live and online play as an option for Microsoft fans, *Halo* sold in large part on the strength of its multiplayer. Like *GoldenEye 007* before it, splitscreen competitive play made *Halo* a monster on college campuses. It also gave birth to the console LAN party, as multiple Xboxes could link together to create an ad hoc network, allowing large groups to play together on their own screens.

While *Halo*'s multiplayer offered the same sandbox experience as the campaign — the same weapons, the same freedom to leap into vehicles on a whim — player-versus-player revolved entirely around Master Chief–like Spartans. The cunning Elites and zombie-like Flood were conspicuous in their absence. Not that players seemed to mind; *Combat Evolved*'s freeform competitive modes captured imaginations, inspiring viral videos of improbable physics and even the long-running *Red vs. Blue* machinima series in the pre-YouTube era.

And most importantly, *Halo* meant that Microsoft could point to a killer app when promoting the Xbox against the PlayStation 2 and GameCube. Sure, those other

GEARBOX MAKES AMENDS

***Halo* began life as a Mac and PC shooter, so its sudden change to an Xbox-exclusive release left many fans feeling rather ill-served. PC shooter fans would have to wait nearly two years for the opportunity to experience *Halo* in its proper environment. A PC port by Gearbox — not Bungie, who turned out to have truly gone over to the dark side with the Microsoft acquisition — arrived at the end of Sept. 2003, with a Mac conversion bringing up the caboose a few months later.**

Despite the wait, PC fanatics found themselves generally unimpressed with *Halo*. The console-centric design of the game resulted in a far more limited take on the FPS than they were accustomed to, and in any case the FPS genre had moved forward in the intervening years. Nevertheless, this sour reception didn't reflect the generally excellent quality of the conversion itself. Gearbox upgraded *Halo* while porting it, allowing it to run at a much higher resolution than on Xbox. It also traded out the Xbox version's slapdash cooperative campaign play in favor of online multiplayer. The Windows port became even better six months later with the release of the *Halo: Custom Edition* add-on, which allowed players to create their own mods and maps for the game.

guys had *GTA* and *Mario Kart*, but where else could you launch an ATV into orbit by detonating a pile of grenades under it? Only on Xbox.

ARBITER MACHT FREI

Arriving three years after *Halo: Combat Evolved*, the inevitable sequel was simultaneously a high-water mark for the Xbox hardware, and also a tremendous disappointment.

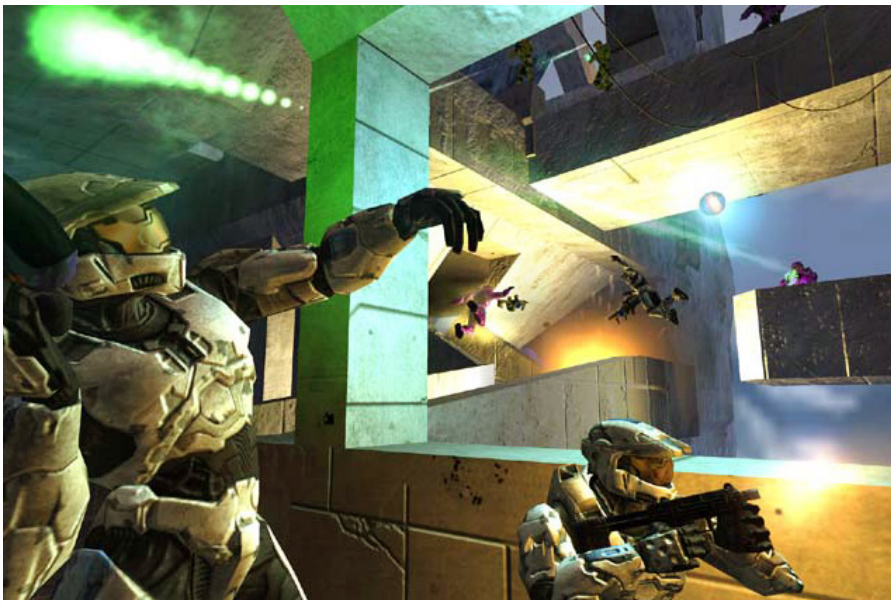
Bungie's second console outing pushed Microsoft's machine to heretofore unimagined limits, producing visuals so advanced they practically fell apart (witness the texture issues that dogged the real-time cutscenes). With high-definition consoles just around the corner, *Halo 2* would be about as detailed and intricate as standard-def game graphics ever got. It didn't just bring prettier graphics, though — it also introduced a host of new mechanics and features.

Some changes went over better than others. Fans seemed pretty positive on the revamped health system, which moved even further away from the old-school health pickup style. Not so much for dual-wielding, though; only a handful of guns could be held in tandem, and swapping to Master Chief's backup weapon (or tossing grenades, or using melee strikes) required casting your second pistol or rifle aside. It felt like a case of style over substance: the opportunity to go all John Woo on bad guys at the expense of *Halo*'s artfully crafted triad of combat techniques.

Even more controversial was the major change that took hold a couple of chapters into the story. *Halo 2* cross-cut its early story sequences between Master Chief's commendation ceremony for his performance at the Halo installation, and an enemy Elite's shaming for allowing Master Chief's victory. The alien was branded and sent into battle as a sacrificial holy warrior called the Arbiter, a turn of events whose importance suddenly became clear when you found yourself in control of that alien avatar.

Much as with *Metal Gear Solid 2*'s Raiden switch, the Arbiter didn't go over well with fans, even though (unlike with Raiden) Master Chief wasn't cast aside altogether. Rather, the story alternated between the two rival heroes, bringing their tales together briefly before sending them in different directions.

For every creative choice that left players scratching their heads with the campaign mode, though, *Halo 2*'s multiplayer benefitted equally. In fact, many regard *Halo 2* as the pinnacle of the series' multiplayer, and not just because it made excellent use of Microsoft's new Live service for online play. The map design, weapon balancing, and game objectives struck a perfect balance for many fans; even the addition of Elites as usable multiplayer skins went over much better than the introduction of an Elite to the story mode. *Halo 2* contin-



ued to be one of the most-played games on Xbox Live until Microsoft turned off the servers in 2010: a six-year run that effectively made it *The Dark Side of the Moon* of videogames.

The excellent multiplayer mode went a long way toward ameliorating frustration with *Halo 2*, but not entirely. Fans complained that the story doesn't so much come to a conclusion as simply end, with a cliffhanger that leaves numerous plot threads dangling. The primary antagonist, Flood collective consciousness Gravemind, pops up at a critical plot juncture with no real explanation of its nature. Gravemind was the first sign of what would become one of Halo's long-term weaknesses, its reliance on "expanded universe" material to provide essential context to in-game events.

In hindsight, however, *Halo 2*'s flaws seem almost miraculously modest; the game could have turned out far worse.

Due to a deeply troubled development process, Bungie ended up throwing out most of its work on the game with just a year to go before the hard release deadline. The stunning E3 demo that featured Master Chief battling Covenant forces in the streets of a futuristic Earth city never materialized in the game, and many of the play features it showed off proved untenable outside of that carefully crafted E3 vertical slice. That it ended up shipping on time was remarkable; that it shipped with such a beloved multiplayer experience in tow downright miraculous.

A NEW GENERATION

Finally: a *Halo* game that didn't have to be scrapped midway through and rushed to launch! *Halo 3* had its share of flaws, but in many senses it was both the most expansive and most polished entry in the series to date. Bungie made refinement a major priority in its first high-definition shooter.

Halo 3 didn't altogether abandon its predecessor's rockier elements, but it certainly downplayed them. For example, dual-wielding still existed, but it wasn't nearly as effective a tactic as mastering the new weapons (including the versatile battle rifle) and support equipment like the Portable Cover. The latter changed the nature of play by adding a new element of tactical depth to combat. While many felt equipment undermined the purity of multiplayer, it greatly enhanced the campaign.

ROADS NOT TAKEN

Mac fans often presented *Marathon* as the platform's answer to *Doom* — thanks to some weird porting shenanigans, the Mac port of *Doom* didn't show up until after *Doom II* did — but in many ways it was more accurate to say *Marathon* was the Apple fan's answer to *System Shock*. Like Looking Glass' cyberpunk shooter, *Marathon* involved rogue artificial intelligences in space and featured copious walls of narrative text to read through. And little wonder: Both games evolved from meaty first-person action role-playing games.

***System Shock*, of course, descended from Origins' *Ultima Underworld*, while *Marathon* derived from Bungie's own take on the first-person RPG, *Pathways into Darkness*. *Pathways* wasn't strictly an RPG; it also owed a great deal to classic adventure games like *Zork* and *Shadowgate*. With a strict real-time clock and plenty of surprises every bit as cruel as *Uninvited*'s poisonous ruby, *Pathways* was a nasty piece of adventure game role-playing masquerading as a first-person shooter.**

Given the almost collegial nature of *System Shock* and *Marathon*'s origins, it's interesting to see the direction each series' descendants took. *Marathon* begat *Halo*, a linear, narrative shooter that sold largely on the strength of its twitchy multiplayer. *System Shock*, on the other hand, led to *BioShock*, a much slower, single-player-only shooter that retained a good many of the older games' RPG systems and mechanical freedom. Of course, Bungie eventually got back into the RPG spirit with *Destiny*, but its RPG elements are less the "chatty talky" kind and more the "grindy MMO" flavor.

Similarly, Bungie walked back the idea of the Arbiter as a playable character. *Halo 3* was the Master Chief's tale first and foremost, with the Arbiter serving strictly as a support character, playable in two- to four-player co-op; Master Chief always served as the avatar for player one.

Halo 3 wrapped up the Flood saga that had spanned the series to that point, though the ending again felt jarringly abrupt, especially once you rescued Cortana from Gravemind's clutches. It also proved to be the most linear entry in the series by far. Bungie invested heavily in playtesting to smooth over the experience, which made for a snappy, thrilling shooter, but one that left little to the imagination. And despite this extensive testing, *Halo 3* nevertheless included "Cortana," easily the most hated level in the franchise outside the first game's "The Library."

On the other hand, multiplayer felt every bit as freeing as the campaign was restrictive. Bungie built up larger arenas to be traversed by "man cannons," and introduced a simple customization tool called Forge which allowed you to shape and share altered maps with friends.

"Refinement" would continue to be the driving theme for Bungie's final *Halo* titles. *Halo 3: ODST* began life as an expansion to *Halo 3*, but eventually grew enough to be released as a standalone game. The most experimental of the *Halo* games, *ODST* shifted the focus from Master Chief's story to that of a team of orbital dropship troopers: augmented humans with greater capabilities than those of typical grunts, but nowhere near as powerful as a Spartan II like Master Chief. The reduced strength and speed of the *ODST*s brought new tension to *Halo*'s well-worn gameplay, adding urgency to what had become rote and predictable encounters.

The boosted difficulty wasn't all that set *ODST* apart : A non-linear detective story bound together the entire game, allowing you to roam freely and investigate in the rain-soaked ruins of a demolished Earth city. Mechanically, *ODST* diverged the least from what had come before; its sandbox and toolset transferred almost directly from *Halo 3*. The biggest change came in the advent of true cooperative play, as for the first time a *Halo* was designed from the ground up to allow multiple people to play together for a pleasantly transformative take on the series.

Halo: Reach, the final Bungie-developed *Halo*, took the opposite tack from *ODST*: It radically updated the sandbox while reverting to heroes with a more traditional strength level. In this case, *Reach* focused on a holding action by a team of Spartan III supersoldiers on the doomed human colony of Reach, the planet whose annihilation set into motion the events of the original *Halo: Combat Evolved*. With the ending a known quantity — everyone on the planet was doomed to die — *Reach* instead became about setting the stage for the main trilogy while introducing new and unexpected play elements.

Armor Abilities replaced *Halo 3*'s dynamic equipment. *Reach* hinted at *Halo*'s shift toward a *Call of Duty*–inspired approach, as Armor Abilities had to be set in advance (like a loadout) and allowed for some very *CoD*-like skills, such as sprinting. *Reach* also introduced space combat. While vehicles had been part and parcel of the franchise since the beginning, they were strictly terrestrial. Not so with *Reach*'s Sabre fighters, which transformed the game briefly into a good old-fashioned space sim — the one drawback being that the Sabres weren't a seamless element of the sandbox but rather played out in a standalone chapter. Small compromises aside, though, the cosmic shooting sequence added to the game's overall sense of grandeur, making *Reach* a stirring sendoff as Bungie departed for the greener pastures of *Destiny*.

PASSING THE TORCH

Halo 4 saw the keys to the franchise handed to 343 Industries, an internal Microsoft studio created specifically to shepherd the *Halo* brand. The changeover, unfortunately, was not without issue. Tasked with the unenviable job of not only matching the quality of Bungie's work but also

ON THE OTHER HAND, MULTIPLAYER FELT EVERY BIT AS FREEING AS THE CAMPAIGN WAS RESTRICTIVE.

keeping the series' mechanics relevant while picking up where *Halo 3*'s story left off, 343i delivered in some areas and disappointed in others.

Perhaps the biggest frustration came in the form of multiplayer, which heavily resembled the overall design of *Call of Duty*. With loadouts, pop-up prompts, and a running experience system, the overhauled competitive play left many fans wondering what had happened to the series. Weapons felt slighter and less distinct, and the moment-to-moment gunplay became tedious with the arrival of a new race of foes.

With the Flood eradicated, the *Halo* series' only hope of moving the narrative forward was to explore new corners of the universe, and *Halo 4* looked into its backstory. The Chief and Cortana began to uncover the origin of the Flood and the not-entirely-friendly races behind them. Unfortunately, in practice, the soldiers of these beings — corrupted humans called Prometheans — weren't nearly as interesting to fight as the Flood. Where the Flood's weak swarms of rotting creatures offered a welcome change of pace from the tactical Covenant forces, threatening to overwhelm you with numbers, Prometheans were quick-moving bullet sponges. They were difficult to kill, but not because they were particularly clever; they just moved in annoying patterns and soaked up gunfire.

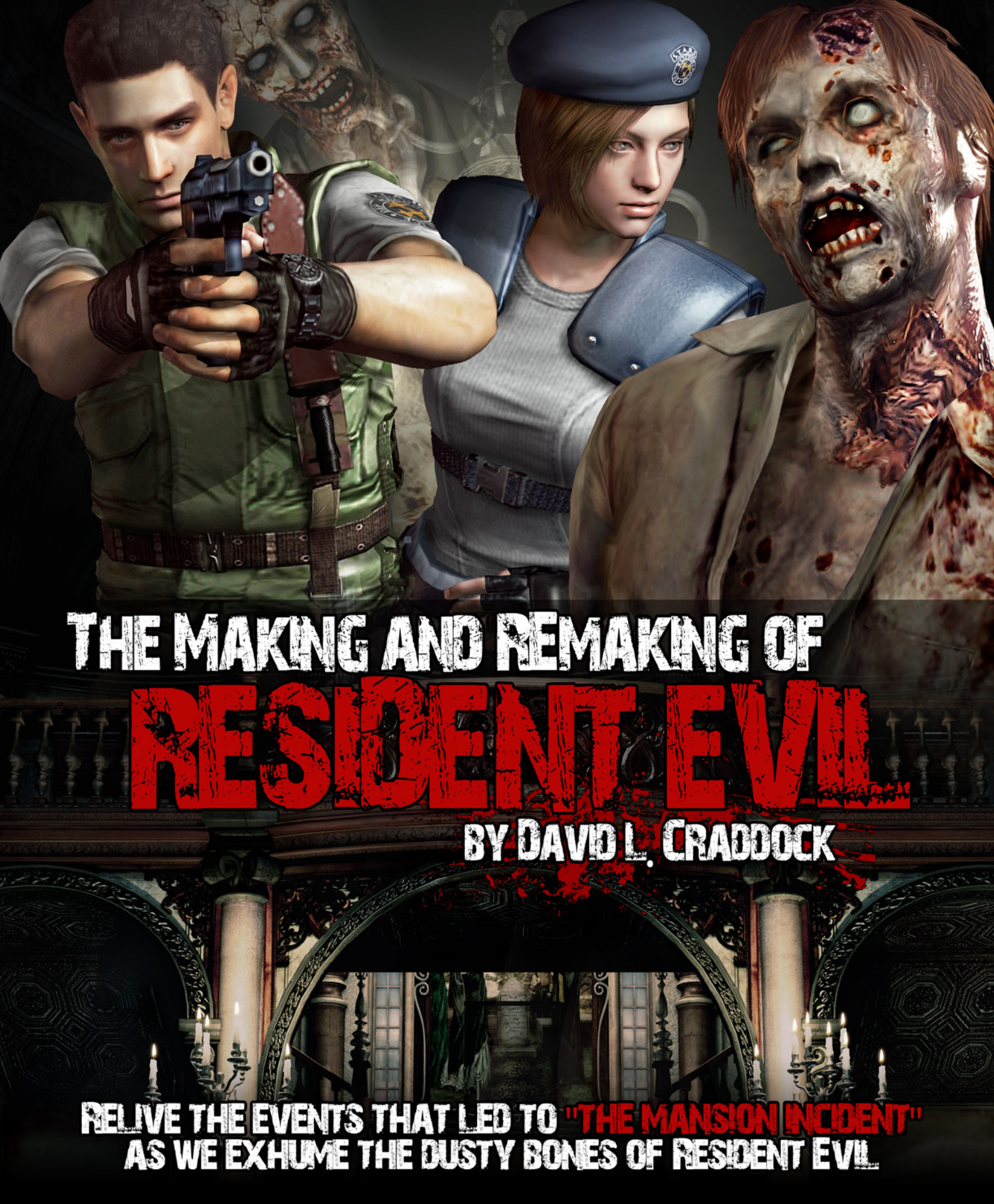
PERHAPS THE BIGGEST FRUSTRATION CAME IN THE FORM OF MULTIPLAYER.

Many fans also found the Spartan Ops mode to be something of a letdown. Intended as an episodic series that would expand the campaign, Spartan Ops ultimately became too repetitive for most players' tastes. Worse, it tied closely to the increasingly arcane plotline, which had long since ceased to be coherent, with fundamental terms and info spread across an increasing number of multimedia projects as a result of Microsoft's determination to make *Halo* into a central, long-running brand.

In fairness, many of the game's failings resulted from 343i following a little too closely in Bungie's footsteps: As with *Halo* and *Halo 2*, *Halo 4* underwent a significant reboot late in its production cycle, and the final product represented a hasty attempt to ship the retooled project. But for all its frustrations, the game looked incredible — it easily stood as the most impressive example of Xbox 360's graphical capabilities until *Tomb Raider* came along.

343i clearly took the mixed reactions *Halo 4* inspired to heart; while *Halo 5*'s story left fans scratching their heads and complaining about its brevity, its moment-to-moment gameplay has won back many skeptics — no small feat, considering the bitter feelings 2014's technically troubled *Master Chief Collection* engendered. The biggest improvement by far: the replacement of Spartan Ops with the massive multiplayer mode Warzone, whose scale and three-sided combat plays almost like a cross between *ODST*'s Firefight mode and Bungie's *Destiny*. While it remains to be seen how *Halo 5* will be regarded in the long term, for now it's convinced fans to give 343i another chance.

While the precise future of the series may be somewhat nebulous outside the upcoming sequel to strategy spin-off *Halo Wars*, there's no question *Halo* does have a future. *Halo 5* was only the second chapter in the promised "Reclaimer Trilogy," and beyond the numbered games, we can also count on a steady flow of side projects and multimedia content. Microsoft accepted *Halo* as its consolation prize when Bungie went solo again, and you can be certain the company wants to wring every last drop of value from it. Who knows? Maybe someday we'll even see the long-gestating *Halo* movie come to fruition.



THE MAKING AND REMAKING OF RESIDENT EVIL

BY DAVID L. CRADDOCK

RELIVE THE EVENTS THAT LED TO "THE MANSION INCIDENT" AS WE EXHUME THE DUSTY BONES OF RESIDENT EVIL

Lead Art by Daniel Kayser

■ ***Resident Evil*** **started as a remake of *Sweet Home* on the NES.**

"SILENCE LAY STEADILY AGAINST THE WOOD AND STONE OF HILL HOUSE..."

The mansion wasn't dying. It was dead. It *was* death.

Tucked far back in the forest, it had been beautiful, but now it was fallen into ruin. Paint and plaster peeled like dead skin. Spider-web cracks marred the walls.

Inside, darkness hung thick and heavy. Grand, dilapidated rooms reeked of mold. Glass lay scattered across stained carpeting and marble tiles. Horrors roamed the halls — crawling, dragging, and pulling themselves along as they groaned into the stillness.

If you were to guess that the mansion was built by one Oswell E. Spencer, you would be mistaken — yet correct at the same time.

■ **Before designing *Sweet Home*, Fujiwara created the enduring *Mega Man* series.**

"AND WHATEVER WALKED THERE..."

Based on his appearance, few would've suspected that Tokuro Fujiwara was a masochist.

Diminutive, slender, and quiet, Fujiwara accepted a position at Capcom designing coin-op action games in 1983. Two years later, he took the reins as producer on *Ghosts 'n Goblins*, a punishingly difficult side-scrolling action game.

By 1988, Fujiwara had risen to the post of general manager of Capcom's Console Games Division. He further cemented his reputation for crafting pleasurable yet painful gameplay by creating *Mega Man*, a notoriously challenging platformer where you defeat bosses and use their weapons against other bosses, rock-paper-scissors style.

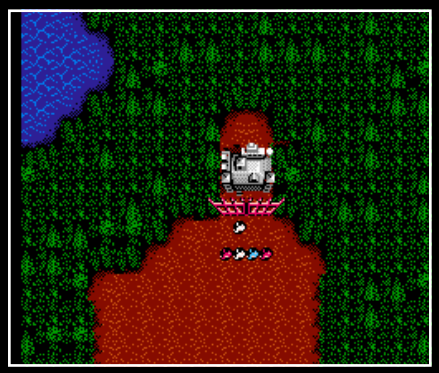
Following the smashing success of *Mega Man 2* in 1989, Fujiwara captained another NES game called *Sweet Home*. He envisioned it as a psychological-horror title: A team of five documentarians enter a haunted mansion to verify or debunk the myth that an eccentric artist had stashed his paintings there before disappearing.

Whether or not they walk out is up to you.

Although psychological horror suffused every square inch of its virtual real estate, *Sweet Home* did not originate the survival-horror genre. It was a role-playing game. Each of your five characters possessed a special item such as a skeleton key to open doors and a lighter that powered a generator, which restored power to previously inaccessible wings of the house.

As you wandered around, random battles against macabre denizens of the house broke out à la *Dragon Quest* and *Final Fantasy*. If one of your party members died, their special item followed them to the grave. Fujiwara was merciless, but not cruel. Finite items lying around the manse performed the same functions as special items: If your nurse

EDITOR'S NOTE: *The following sources were helpful in writing this article: "The Making of Resident Evil" (NowGamer.com), "Shinji Mikami: The Godfather of Horror Games" (TheGuardian.com), and "The History of Resident Evil" (PlayStation Universe).*

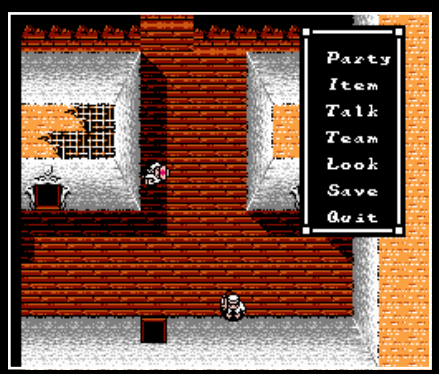


bit the dust, you could scrounge up painkillers to heal.

Managing your party and inventory was essential to victory. Each character could only carry one weapon and two items in addition to his or her special item. When a character died, you lost those inventory slots. You could divide characters into smaller groups of two or three to cover more ground, and if one group got into a jam, the CALL option on the battle menu summoned the other party — provided they were close by. Thinking hard on which items to leave for later, which items to carry, and who should carry them added gravitas to every decision.

Fujiwara's team engineered visual and aural effects that enhanced *Sweet Home*'s stressful gameplay. Black borders ringed your screen as you combed through wooded paths and basement passageways. Echoes and chants broke out around you, complementing the moody soundtrack. Zombies and other terrors were drawn as tortured, angry, or hopeless.

Japanese gamers were suitably excited and scared to comb the corridors of



Sweet Home when Capcom released it in December 1989. Lost diaries filled in the story, and solving puzzles — many of which could only be deciphered after you found a specific item or clue — set you on the path to a chilling final encounter that concluded with not one, not two, but *five* possible endings depending on how many of your party survived.

Despite garnering positive press, *Sweet Home* did not cross the ocean to the U.S. Fujiwara filed it away. Perhaps he would get the opportunity to revisit the game one day.

"WALKED ALONE." — SHIRLEY JACKSON, THE HAUNTING OF HILL HOUSE

Shinji Mikami loved a good scare. As a student in elementary school, he listened raptly as his teacher narrated *Yotsuya Kaidan*, a revenge story about a woman who's poisoned by her husband and returns as a ghost to drive him mad.

His love of scary stories didn't help him when, after joining Capcom in 1990, he was appointed the designer of a quiz game for the Game Boy. Development wrapped in just three months. Impressed, his manager, Tokuro Fujiwara, put him in charge of the Disney-licensed *Aladdin* and *Goof Troop* games for Super NES. When both games released to positive reviews, Fujiwara assigned Mikami to a special project: to reimagine *Sweet Home*.

In late 1994, Mikami sequestered himself away to lay the groundwork for his assignment. Early in his self-imposed exile, he mapped out a story that revolved around ghosts, which had petrified him since hearing *Yotsuya Kaidan* read aloud. Then he changed his mind. Ghosts were inarguably spooky, but were poor enemies for a videogame. You couldn't shoot a ghost. Monsters that resembled and acted like human beings, but bereft of morals or rational thought, held the potential to be truly terrifying.

Over the next several months, Mikami sketched characters, rooms, traps, and puzzles. When he emerged, the concept he brought to Fujiwara bore a resemblance to *Sweet Home*, but was also a

■ ***Yotsuya Kaidan*, a ghost story popular in Japan, influenced much of Mikami's work.**

unique beast. His story would revolve around a pharmaceuticals company that invented biological weapons that transformed humans into mindless, deformed abominations able to win wars in place of human soldiers.

Some trappings from *Sweet Home*, such as the mansion setting, save rooms, multiple endings, careful management of supplies, and journals to flesh out the story, would be transplanted into the new game. Other concepts came from a PC game called *Alone in the Dark*. Published by I•Motion, *Alone in the Dark* displayed polygonal characters against prerendered backgrounds — like photographs you could walk around and interact with. Backgrounds were displayed via a fixed camera, which meant you could only see your character from preset angles. But Mikami liked that. Choosing the viewing angle meant he could set up scares you would never see coming.

Fujiwara approved the design, which would be developed for Sony's new PlayStation console, and asked what the game would be called. Mikami answered swiftly: *Biohazard*.

■ **Choosing Jill or Chris determined your difficulty level.**

■ **"I hope this is not Chris' blood!"**

■ **The lobby of the Spencer estate, a location you'll revisit many times.**

"THEY HAVE ESCAPED INTO THE MANSION..."

***Sweet Home*'s ill-fated filmmakers were defined by their special items. Mikami sought to intertwine characters and gameplay even more tightly in *Biohazard*. *Alone in the Dark* gave you two characters to choose from; Mikami followed suit, sketching out Chris Redfield and Jill Valentine, members of the elite S.T.A.R.S. unit.**

Jill and Chris represented distinct play styles. Chris could take more damage and packed a lighter, but could only carry six additional items. Jill's slimmer frame was more susceptible to punishment, but she carried a lockpick with which she could open most doors, and could hold eight items at once. Both characters would also find different weapons over the course of the game.

Fundamentally, Jill and Chris represented difficulty levels. Jill's larger inventory, the lockpick that made her the "master of unlocking," and bazooka — found early on — suited new players. Chris, who had to lug around rusted keys to unlock doors Jill could pick, and who didn't find the ultra-powerful Magnum handgun until late in the story, appealed to players looking for a challenge.

For inspiration to design his mansion, Mikami looked to the Overlook Hotel, the setting of Stanley Kubrick's Hollywood adaptation of Stephen King's *The Shining*. He appreciated the dichotomy between the Overlook's opulence and the pervading sense that its beauty was only skin deep. That below the surface, something sinister lurked.

Like *Sweet Home*'s doomed abode, *Biohazard*'s Spencer estate was set back in a wooded area. It was enormous — three floors of bedrooms, parlors, and hallways that tied it all together. Areas were divided into segments, with each segment shown from a fixed perspective. Sometimes the camera was set low and at an angle, a method of purposefully disorienting your view. Other shots showed you from above, up close, or behind as you walked further away.

The camera didn't follow. Prerendered backgrounds cannot scroll; you can only see precisely what the director chooses to show you. That inability to position the camera played right into Mikami's hands.

"WHERE THEY THOUGHT IT WAS SAFE."

You could hear them — the zombies, snorting and groaning and lumbering. But you couldn't see them. And that was the point.

***Biohazard*'s use of prerendered backgrounds came with a useful side effect. Because the camera couldn't move, there was no way for you to peek around the corner and spot exactly where zombies stood, but hearing them triggered instinctual reactions. Your pulse quickened. Your heart raced. The zombies might be one screen away, or waiting in an alcove that Mikami deliberately hid from view.**

Obscuring enemy positions was a way to build the zombies up in your imagination — turning them from regular people who had suffered terrible fates to larger-than-life monstrosities. As you solved puzzles and pushed deeper into the mansion and surrounding grounds, cutscenes played that had a soothing effect, albeit perhaps unintentionally. The dialogue was so hackneyed, the acting so cliché, that

■ **Fight or flight: Fight the zombie and grab the shotgun shells, or flee and conserve ammo?**

you could forget for a few moments the anxiety you felt as you inched through candlelit attics and waterlogged laboratories rotten with undead.

Mikami's combination of arranged cameras and monsters became the stuff of legend among gamers. Arguably the most famous instance is a long, quiet corridor flanked by windows — and as you strolled along a zombie dog exploded through the glass and hit the ground running just as loud and exhilarating music shattered the silence.

Due to the PlayStation's low memory, it had to load areas in chunks. Doors demarcated areas and served as loading screens, but Mikami folded that shortcoming into *Biohazard*'s atmosphere. As you opened a door, the screen went black, the door appeared, the knob slowly turned, and the door creaked open as you waited nervously to see what the next room had in store. Perhaps you had sprung a trap guaranteed to smoosh you into a Jill (or Chris) sandwich.

■ **The prerendered backgrounds and set camera angles dictated what you could and couldn't see in each scene.**

■ **Nintendo's Shigeru Miyamoto (left) and Capcom's Shinji Mikami strike a deal.**

Some players and critics found *Biohazard*'s controls harder to wrangle than its decayed terrors. Mikami and his team knew that a traditional control scheme wouldn't work. Pressing left to move left might feel awkward in a room where, say, the camera slanted the view in a confusing way. Immutable controls seemed the perfect fit. Pressing up or down always moved you forward or backward, respectively, while pressing left or right rotated your character regardless of the camera's position. The "tank controls" proved divisive: You either got the hang of them, or you cursed Mikami as you steered your character drunkenly down halls and into the open arms of zombies.

"WE CONTINUED OUR SEARCH FOR THE OTHER MEMBERS..."

More than once, Shinji Mikami believed *Biohazard* might not shamble across the finish line. For many on his team, it was their first game, and only Mikami's third. Consequently, their tools were rudimentary and inefficient — the development equivalents of rubbing sticks to make fire. During the final six-month stretch, everyone pulled double shifts. As the hours grew long, developers cleared their heads by pushing one another through the empty halls in rolling chairs at breakneck speeds.

At one point, executives at Capcom issued a memo ordering the project be disbanded. Only the quiet but firm intervention of Tokuro Fujiwara saved *Biohazard*. He believed in Mikami, and his vote of confidence paid off.

Biohazard was not the first survival-horror game — a term coined specifically for the project — but it instantly became the most popular on its release in March 1996. The game premiered in the States as *Resident Evil* — a title Mikami despised, stating that it makes zero sense. Players and critics around the globe drooled over the realistic graphics and trembled at the brooding, tense atmosphere.

A string of sequels followed in the wake of *Biohazard*'s success, but none were helmed by Mikami. His game's high marks and lucrative revenues earned him a promotion to the role of producer, a position he didn't want. Producers got mired in bureaucracy and busywork. Directors got to make games.

When the opportunity to return to the director's chair arose in 2001, Mikami seized it. Then the general manager of Capcom Production Studio 4, he inked a deal with Nintendo to develop a string of titles exclusively for the upcoming GameCube console. One of those was *Resident Evil 4*. The other was a remake of the original *Resident Evil*, which Mikami would direct.

"AND IT TURNED INTO..."

Released in 2002, *Resident Evil*'s reimagining — referred to as "*REmake*" by fans — started more as a proof of concept. Although the PlayStation version had looked impressive for its time, it aged quickly. Mikami wanted to build a new graphics engine to render visuals that would never go out of style.

Now more experienced, his team crafted photorealistic backgrounds with a twist. Each background was embedded with full-motion video and particle effects to give the illusion of movement: ripples of water in puddles, branches swinging in the wind, and flashes of lightning that lit up areas followed by rumbles and cracks of thunder.

They motion-captured professional actors to portray characters in real-time 3D,

■ **Every room and corridor was remade for the *Biohazard* remake.**

ditching the old live-action cutscenes. Capcom's tech wizards combined the mocap with 3D models for each character which boasted smooth skin and clothing, completely devoid of the jagged polygons from the PlayStation edition. Zombies looked more decayed than ever, featuring soggy-looking flesh, rotten teeth, and missing body parts.

Mikami harnessed *REmake*'s improved graphics technology to create juxtapositions of light and darkness. Looking back, environments in *Biohazard* had been almost laughably bright. Rooms that were previously flooded with light were now gloomy and dimly lit, such as a hallway where moonlight casts pale squares through windows — and clearly shows the silhouettes of undead straining against the glass, desperate to break in.

"...A NIGHTMARE."

By the time they finished the graphics technology, Mikami and team had devised plenty of other ways to make your skin crawl. Every puzzle was remixed to ensure that you wouldn't be able to skate through *REmake* just because you had memorized the original, and a few fresh ones were stirred into the bloody concoction for good measure.

■ **Lisa Trevor and the Crimson Head were new additions to the *REmake*.**

Pulling out blueprints of the Spencer mansion, Mikami constructed new expanses of land that extended naturally from the environment fans already knew and loved, such as an old cabin set deep in the woods around the mansion, and a crypt where a furnace roared and threw shadows around the walls.

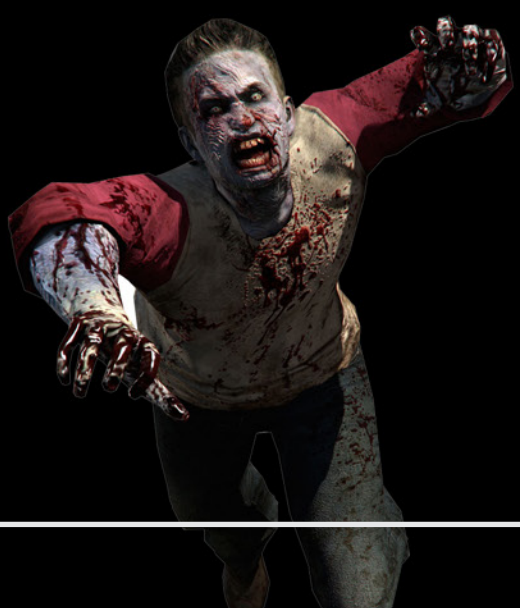
Defense items added another stratum to decision-making scenarios. Daggers, as well as tasers for Jill and grenades for Chris, could be used in place of bullets to stun or even kill zombies, but were in short supply. They came in handy against the Crimson Head, a new type of zombie. Every undead you encountered had the potential to evolve into a Crimson Head. Unless you decapitated a zombie with a lucky shot or one of Chris's grenades — or incinerated it using a lighter and kerosene from the jugs placed strategically around the mansion (another new addition) — the zombie would eventually rise as a Crimson Head, lobster-red and able to run and swipe with its claws. The sound of a Crimson Head's quick yet heavy steps, growing louder as it closed the distance, quickly made it one of the most fearsome monsters in all of survival horror.

Lisa Trevor, another new foe, could not be killed with conventional weapons. Preceded by plodding footsteps and the rattle of her rusted chains, she stalked you through the game, forcing you to wait for an opening and then run screaming before she could follow.

"ENTER THE SURVIVAL HORROR."

Mikami departed Capcom after *Biohazard 4*, but survival horror lives on. In 2015, Capcom published a remaster of the *REmake* showcasing HD graphics and a more intuitive control scheme for new players. True to Mikami's vision, the graphics still hold up. Later that year, an executive from Capcom announced that work had begun on a total remake of *Biohazard 2*, a fan favorite since its release in 1998.

Unfortunately, other entries in the *Biohazard* series strayed from its roots. After *Biohazard 4*'s blend of action and survival raked in millions, *Biohazard 5* and *6* went all-in on action-heavy battles and grandiose cutscenes. Until "*REmake 2*" either lives up to over 15 years of expectations or fails spectacularly, Mikami's *REmake* remains arguably the deepest, scariest, most satisfying survival-horror game ever made.



ARCADE ARCHIVES

BY CHRIS AINSWORTH

THE SECRET HISTORY OF AGENT X

In 1982, deep in the horseshoe-shaped Coin-Op building at Atari, Russel Dawe was busy working on his homage to *Robotron: 2084*. The action-espionage game featured Agent X, a super spy tasked with recovering stolen plans hidden deep within the recesses of the evil Dr. Boom's bomb factory.

As the game neared completion, 20 dedicated *Agent X* cabinets were built for field testing, borrowing the cabinet design of *Crystal Castles*, another game concurrently in development within the Atari lab. At the same time, Universal had started development of *Cloak & Dagger*, a family-friendly film about a boy who finds himself in the middle of a real-life spy thriller after being given a videogame cartridge containing secret plans. The original script called for the use of a *Donkey Kong* cartridge (colloquially referred to as a "tape" throughout the film), but meetings between Atari and Universal quickly led to the realization that the *Agent X* game and the *Cloak & Dagger* film were a perfect match, and a deal was signed.

The game and film's scripts were edited, the *Agent X* cabinet marquees swapped out with new *Cloak & Dagger* art, and Russel, a cabinet, and a box-load of mockup Atari products were sent to the set for filming.

Once development was complete, *Cloak & Dagger* was sold by Atari only as a conversion kit, with some 4500 units shipped. This, combined with lack of other platform releases and the cult status of the film among Atari aficionados, has led to the rare dedicated version being one of the most sought-after arcade cabinets available. A well-kept dedicated *Cloak & Dagger* will easily set one back thousands of dollars, and good luck finding a machine with an original *Agent X* marquee.

THE FOLLOWING MATERIAL IS FOR A-4 SECURITY CLEARANCE PERSONNEL ONLY

Even with the home system's sizable cartridge playing a prominent role in the film (resulting in many a kid dismantling their own cartridges in hopes of revealing secret microchips), the Atari 5200 port of *Cloak & Dagger* was still in development during filming. As a result, all scenes of the game being played were actually from the arcade version, controlled offscreen by Russel Dawe himself.

With the 1984 sale of Atari's consumer division and resulting layoffs, the 5200 port was abandoned and never completed.

20 years later, historian Curt Vendel found a bent diskette amongst a collection of boxes saved from Atari dumpsters, copied the contents, and discovered that he'd managed to retrieve the in-development code, thought lost forever. The prototype build of the game has since been made available online.

In the summer of 1984, *Cloak & Dagger* appeared as a double feature with *The Last Starfighter*, another film wrapped around the story of a boy and his videogame.

The *Last Starfighter* promised moviegoers that they, like the main character of the film, would soon be able to save the galaxy via the titular arcade combat trainer, but while the game was prototyped, production costs and a declining market halted its release.

Fortunately, the spirit of an arcade *Starfighter* managed to live on in 1991's *Starblade*, a notably similar on-rails shooter released by Namco one year after purchasing Atari's arcade assets.

The Last Starfighter met a similar fate on the home console front. With the arcade release on ice, the 8-bit versions of the game — already built on the code of an entirely different project called *Orbiter* — were retooled and released as *Star Raiders II* to evade licensing issues.

An entirely different *Starfighter* game for the Atari 2600 was also developed, and, thanks to the same licensing issues, eventually released as *Solaris*.


INTERVIEW
VINTAGE CAPCOM SCHWAG
RARE PROTOTYPE
GOLD NES *MICRO MACHINES*

Industry Icon: Ed Semrad

by Martin Alessi

A candid conversation with the editor who made *EGM* a household name with gamers in the in the 8- and 16-bit eras

There was a time before the Internet when getting videogame news meant reading a magazine. If you're of a certain age, chances are you read *Electronic Gaming Monthly* (*EGM* for short), which was king of the videogame magazines during the late '80s through the '90s and beyond. Ed Semrad, serving as EIC for 10 of those years, led the team of editors that made the magazine a household name among gamers. 25 years later, we check in with *EGM*'s former boss to chat about what it was like to produce a videogame mag in the old days.

RETRO: How did you get your start in gaming journalism, and what led to you being hired by *EGM*?

Ed Semrad: It's great to be able to talk about the good old days.

My career in games goes back to the early '80s. I always loved to play videogames and actually got to be quite good at it. I was able to win a few national championships (*Starmaster* by Activision for example). Anyway, back then I was living up in Milwaukee, Wisconsin where my college education and job was working as a technical writer. One day I noticed in our local newspaper (*The Milwaukee Journal*) that they ran an article talking about a game. I had that game and the review wasn't really very good. It also was a game that was old and had been out for a few months. I wrote to the editor and said I could do better and also review games in a more timely manner. In addition, I was a trained writer and a good game player. He told me to send him a few reviews and he would get back to me.

Sure enough, the next week I had the job. The column was to be called Video Adventures and would be weekly. The column became popular and nationally well known, not only among game players but more importantly among the game companies. Things were going well as I was getting paid, getting free games from the companies, and also got to attend the Consumer Electronics Show (CES).

This went on for a few years and then in the late '80s I was at the Chicago CES and I met a very interesting gentleman. His name was Steve Harris. We hit it off well and he said he was starting up a new game magazine and would like an experienced and well-known writer to work for him. He was in Chicago and I was 90 miles away in Milwaukee. I agreed to write part time as I still had my full-time writing job. After seeing the first few issues I noticed that one thing that was missing were good game screen photos. All that was available were stock shots from the game companies.

No problem. I also had a background in professional photography, and a strong knowledge of the video recording industry. As we practiced taking screen photos and tapes, we got better and the magazine was doing well.

One thing I learned early on was that *EGM* had to have the game news first. Steve worked his magic with being able to cut the magazine production time down to a couple of weeks (other magazines were dealing with months in lead time) and I worked the Japanese angle.

Remember, there was no Internet back then. Everything was paper. We realized that the games were being made in Japan first and then six months later translated and released in the U.S. With my photography skills I set out to Japan to attend their game trade shows. I would take photos of the pre-production games, fly back to the U.S., have the film processed, and we would run the info in the magazine. We were the first to get the news to our readers. The magazine then really gained in popularity.

Continued on next page...

ED IS THE PROUD OWNER OF ONE OF TWO KNOWN RARE SEGA MASTER SYSTEM PROTOTYPE CONSOLES

Ed Semrad at the Top of the Gaming Editorial Pyramid

"Print magazines were the main way that game players could stay up to date, and the latest news was waiting for us and hidden in Japan, thousands of miles away."

After a few more issues, Steve made me an offer that I couldn't turn down so I packed up and moved to Illinois where I worked as an associate editor and ultimately the editor-in-chief.

RETRO: How long did you work for *EGM*?

ES: I worked at *EGM* until the late '90s. This was the time when *EGM* was sold to Ziff Davis. Previously the goal of *EGM* was to have the news first. Not everybody in the industry was happy with that but that was what made us popular. Corporate Ziff came in with a new policy and the entire tone of the magazine changed. Things weren't as fun as they used to be so I decided to go back to technical writing.

RETRO: Let's talk about games. What was your favorite console? Do you still have it?

ES: I still have all the old systems. I will pull out my old Master System and Genesis and sit down and play *Phantasy Star* or *Sonic the Hedgehog*. And the *Mario* games have always interested me. I love to sit down and try to save the princess.

RETRO: What gaming genre has had the largest with impact on you as a gamer?

ES: I always liked the fantasy RPGs. It involved more thinking and interaction than just having quick reflexes. For me it started with *Phantasy Star* and then on to the *Final Fantasy* series. Puzzle games came next with *Tetris* on top then of course the "quest" games like *Mario* or *Sonic*. I'll still pop in a *Sonic* game to pass an evening.

RETRO: Of all the systemsyou covered during your tenure as an editor, which do you think made the greatest impact on the gaming community?

ES: As I think about it, I would have to give the original NES the system that made the greatest impact on the gaming community or even the world. While it wasn't a monumental step in technology, it was the system that brought back a dying industry. Nintendo put its resources and money behind a system that showed tens of millions of young people that gaming was back, it was fun, and it was entertainment. Yes, many systems followed it, but in the sequence of evolution each new system offered only incremental improvements. It had to be the first one which woke up the gaming public. A case could be made for the creation of disc-based games or the introduction of feasible online gaming [being] monumental. But without a beginning, it wouldn't be where it is now.

RETRO: What is your definition of retro-gaming? Where does the retro age end and the modern-day era of gaming begin, according to Ed Semrad?

ES: To me a retro-game is a cartridge. Once they went to disc, things changed. Nothing wrong with that as that is progress. The games today are more detailed, longer, more interactive, and perhaps more enjoyable. But if there has to be a divide I see it as a cartridge. Another approach could be made by doing it by system.

RETRO: You did a lot of traveling as Japanese gaming was the dominant force in that era. Why did you fly to Japan instead of waiting for the professional PR companies to release information here in the states?

ES: It was always our policy to have the news first. Of course this was a nightmare for the game companies. They liked to have control of what was said and when. If we would have done that we would have become just another GamePro. Steve would always make sure we had the latest technology, and by going to Japan, England, or wherever, we could get the news on our terms. The other magazines didn't like what we would do either, as they would try to get exclusives but we would just go to the foreign trade shows and get the same information. It was tough being gone for weeks at a time but it paid for itself in the end.

RETRO: As EIC you had to hear game companies' complaints and threats of pulling advertising. Why do it, then?

ES: Because of our international ties the U.S. game companies weren't very happy. We were taking their power away. Many threatened to pull their ads, and some actually did. While we didn't get some ads we were also a large force in the industry. Our readership was large and growing at a rapid rate. In time, the companies came back to advertise with us and the cycle would continue. The same would happen if our review crew would give a game a low score. But we told it as it really was rather than always sugarcoating reviews as seen in our competitor's mag. Readers liked our honest approach and again, circulation grew.

[Ed and Howard Phillips, Nintendo's "Gamemaster"]

RETRO: Where do you stand on the videogames and violence debate? You were part of the industry in a much different time. Do violent games lead to violent behavior in your opinion?

ES: Violence, whether in games or movies, is certainly a hot subject. I can understand both sides of the debate. The genie is out of the bottle though and there is no turning back. Game ratings aren't effective and there is little to no regulation. I personally don't play violent games but I also do not have a strong opinion one way or another.

> "WE HAD EDITORS WHO COULD ACTUALLY BEAT A GAME. THEY WERE PLAYERS FIRST AND WRITERS SECOND."

RETRO: The climate for videogame news and information has certainly changed since then. Do you think it's harder now that the audience expects news on an hourly basis?

ES: A magazine like the old *EGM* couldn't exist today. Even in the mid '90s the writing was on the wall. The Internet was growing by leaps and bounds and the world became a smaller place really fast. This not only affected the game magazines but all print magazines. Look at how few remain today. Cost also is a factor. A print magazine costs $7 to $10.

RETRO: With the Internet, instead of a half-dozen sources for videogame news we have thousands of sites, blogs, forums, and such. Do you feel this has helped or hurt the industry?

ES: I like the Internet. Type in anything and you have the answer. If you want to see if a game is good there are a hundred reviews of it. Some will be well done, some not. Forums are good, as this offers interaction with others sharing your same tastes. I'd like to think that *EGM* was the precursor to this as we were game players and we weren't afraid to tell it like it was.

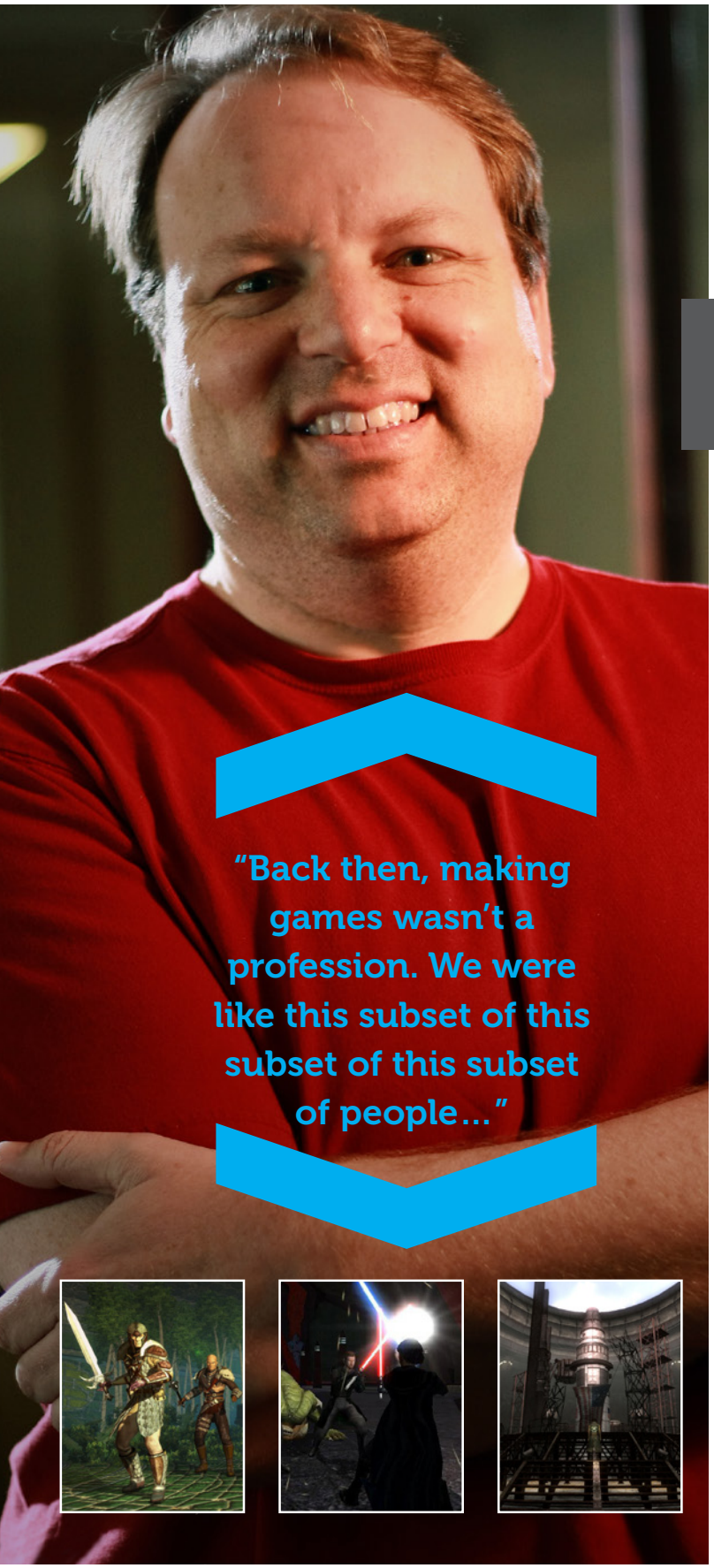
RETRO: Thinking back to when you were at *EGM*, is there anything you would have done differently?

ES: That's a tough one. Everybody makes choices and decisions. I would like to think mine were sound but other people may differ. Granted I was obsessed with getting the news and seeing that the magazine did well. Perhaps I was too obsessed.

RETRO: Do you have any advice for today's generation of videogame journalists?

ES: To all those who want to write about videogames, do it. Be honest in what you say. If you are, people will respect you and read your opinions.

Once former editor and art director of EGM, *Martin' Alessi brings his vast experience to* RETRO. *As of late he is busy re-mastering Genesis* Strider *in anticipation of the PSN/XBLA reboot.* RETRO *would like to thank* Galloping Ghost Arcade *for the use of their location for the interview photos. More information about this arcade can be found at* www.gallopingghostarcade.com



FEARGUS URQUHART

by Andy Eddy

How a young, scrappy Feargus Urquhart built an RPG empire.

Dev-olution is a regular *RETRO* column that looks at how veteran developers got their starts in making games. If you have comments about the column or recommendations for who you'd like to see covered in a future installment of Dev-olution, you can reach Andy at andy@readretro.com.

> "Back then, making games wasn't a profession. We were like this subset of this subset of this subset of people..."

If you want a job in the game industry these days, there are many paths you can take, including focused studies at specialty schools (such as Digipen in Washington State, California-based Ex'pression College, and Florida's Full Sail University) and degree programs at major colleges (such as MIT, Northwestern, Tulane, and UCLA). However, another popular method has been the "learn by doing" route, which is to start at a game company as a tester, then pick up the essential skills by osmosis and progress upward through the org chart from there.

One such industry veteran who first walked in through the tester door is Feargus Urquhart, co-founder and CEO of Orange County, California-headquartered developer Obsidian Entertainment (*Neverwinter Nights 2*, *Fallout: New Vegas*, *South Park: The Stick of Truth*).

In the late-'80s/early-'90s, he ran a BBS called Dargaard Keep (under the name Lord Soth), where users were, among other things, playing pen-and-paper games via the board, and he dabbled in programming while studying bioengineering in college. He was also an avid RPG player with Infocom games being his gateway to such titles as *Wizardry*, *Bard's Tale*, and *Ultima III* and *IV* — games he admits that he "played the crap out of."

He says he was part of a group of local gaming friends, and with the Irvine-based Interplay not far away, a number of those pals ended up working there. In 1991, one of those friends urged Urquhart to pursue a tester position, a totally unplanned, unanticipated change to his career path.

"Back then, making games wasn't a profession. We were like this subset of this subset of this subset of people...who knew how many of us did this? I had my five friends. It felt so...it was just like this was a hobby that was super-cool. How could you ever do this?" he says. "To be honest, it never occurred to me in those early days that this was a job that I could do."

But he did find game-making to be a viable career path — and, in fact, swiftly found himself on a fast track: He worked as a tester on two games, moved up to associate producer a little while later, shortly thereafter made a jump to a producer role, and in 1996 was offered a position overseeing Interplay's entire RPG division, which became the Black Isle Studios label. Under Urquhart's leadership, the group developed and shipped such properties as *Fallout 2*, *Planescape: Torment*, the *Baldur's Gate* series, and the *Icewind Dale* series.

In the early 2000s, Interplay found itself battling fiscal losses and the subsequent departure of CEO Brian Fargo, and while Urquhart states that the Black Isle titles were profitable, he found himself contemplating a change amid a deteriorating company culture. In 2003, he and a number of his friends left Interplay and in June — banding together in Urquhart's attic — they founded Obsidian. Almost immediately, the studio landed the contract to develop *Star Wars: Knights of the Old Republic II*.

"At the end of August 2003, we signed the deal...and we were off to the races," Urquhart says.

In slightly more than a decade of operation, the studio has been quite busy, but that's especially been the case in the last couple of years. Obsidian — first in conjunction with THQ as the publisher, and later Ubisoft — recently saw the release of *South Park: The Stick of Truth*, which was developed with the blessing and support of the cartoon's creators, Matt Stone and Trey Parker. They also have two other projects in progress: the Kickstarter-funded RPG *Pillars of Eternity* (due out this coming winter) and the MOBA *Armored* Warfare, which was announced at the Game Developers Conference in March and is being created in partnership with Russia's Mail.ru (it's slated to go into closed beta later this year).

Hey, with all this work going on, Obsidian is probably employing a lot of game testers...

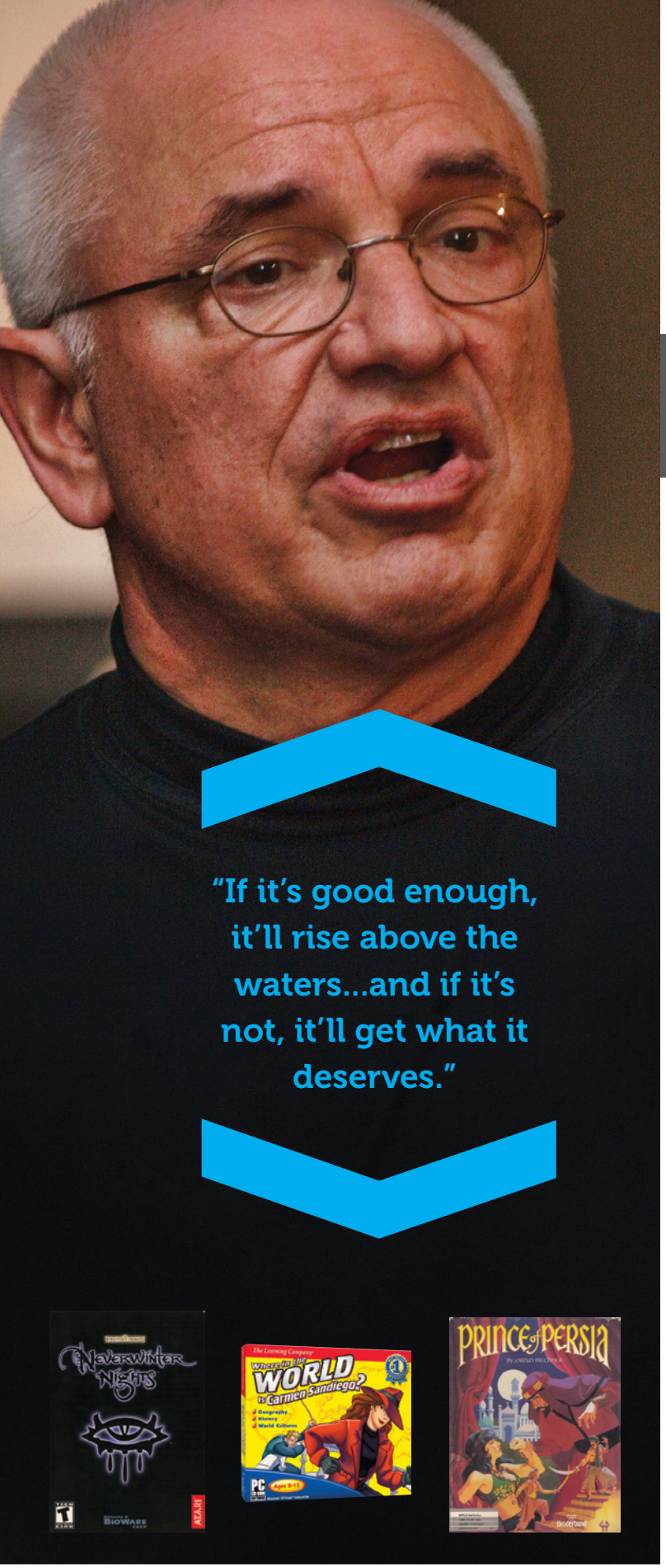
Andy Eddy was never a tester; he came into the game industry as a journalist, and has been stuck in the same dead-end job for over 25 years. His life is a real-time RPG that's still in development.

DON DAGLOW

by Andy Eddy

Don Daglow's path from hobbyist to 30-year games veteran.

Dev-olution is a regular *RETRO* column that looks at how veteran developers got their starts in making games. If you have comments about the column or recommendations for who you'd like to see covered in a future installment of Dev-olution, you can reach Andy at andy@readretro.com.



In many ways, your real life can end up playing out like a videogame. You may have the best intentions to follow a certain path only to find that you're forced to take an unexpected turn... or end up at a crossroads where one path looks much more inviting than the one you originally planned to take.

In the early '70s, Don Daglow was a college student in Southern California with aspirations to be a professional writer. One day he returned to his dorm to discover a computer terminal — courtesy of a grant received by some students and a faculty member — "clacking away," and after taking up an offer to learn to program on it, ended up programming some games as a spare-time hobby.

"And the rest, as they say, is history...but talk about one little thing changing your life," Daglow says in hindsight. "That was it."

While most of the resulting efforts — which included a baseball game and an expansion on an existing *Star Trek* game that originated with someone else — were intended to be shared among other students at his college, there was in fact some swapping (unofficial in some cases, officially in others) taking place between colleges that expanded the audience for his software. When Daglow started getting letters from others across the country who were playing his games, it sparked a revelation.

"Oh, wait a second," Daglow realized. "People somewhere else are actually playing my games."

After Daglow graduated, he held three simultaneous teaching jobs — working at a middle school by day, teaching Spanish at an adult school at night, and then spending afternoons, weekends, and summers teaching education in a Masters-degree program at a nearby college. And while he was getting his share of "fan letters," he still didn't consider game-making to be a professional avenue for himself; the concept of home computers and selling games to consumers, he said, was "science fiction of 30 or 40 years in the future." However, in the late '70s, he purchased an Apple II, which gave him new hope that he could create some salable products. His first project was a variation of his baseball game.

Then, in 1980, his life story sprouted another game-like branching path — and while it wasn't as dramatic a life change as the one that got him into programming, it was a major course change, nonetheless. "Pure dumb luck," he said, "[Mattel was] doing a radio ad for minorities on a minority radio station, and I happened to be listening, so I heard the ad and called them up."

The call led to Daglow being hired as one of the first five programmers creating games for a new Mattel console called Intellivision. After working on making an educational game called *Geography Challenge* — which was never released, because it was meant to be played using the Intellivision Keyboard Component that never made it past the test-marketing phase — he switched development teams and his first professionally published title was a god game/simulation called *Utopia*.

Since then, Daglow has had a long, storied career in games that has taken him to Electronic Arts (including *Adventure Construction Set* and *Earl Weaver Baseball*), Brøderbund (including *Prince of Persia* and *Where in the World is Carmen Sandiego?*) and his own Stormfront Studios (including *Tony La Russa Baseball*, *Neverwinter Nights*, and *The Lord of the Rings: The Two Towers*). He also received a Technical and Engineering Emmy in 2008 for his work on *Neverwinter Nights*, and currently volunteers as president of the Academy of Interactive Arts & Sciences Foundation, as well as advising development teams at various stages of their projects through his Daglow Entertainment consultancy.

Daglow admits he's got "another original [concept] I'm working on that I'm hoping to turn into something." He's been creating the initial game himself, and connecting with friends to help build pieces of the game as he needs them. "If it's good enough, it'll rise above the waters...and if it's not, it'll get what it deserves and we'll see what happens."

If Don Daglow's life is a videogame, he now seems firmly locked onto the adventurous path he's blazed for the past 40 years or so. But it's clear there are still quite a number of levels yet to be conceived and designed.

Andy Eddy started writing about games on his Atari 800 in 1983 after he failed to make millions as a game developer with it. Commiserate on Twitter to @vidgames.

ACTIVISION®

ARCHITECTS

Industry Icons:

Garry Kitchen and David Crane

by Mike Kennedy

Take a leap back in time with two of the architects behind Activision's third-party revolution.

When it comes to game mechanics these days, it often seems that revolutionary new ideas are few and far between. But back in the early 1980s almost every game concept was a new one, sending gamers into a frenzy with each new release.

Two of the gentlemen responsible for creating some of the best titles in videogaming's "golden years" are Garry Kitchen and David Crane, and they recently took some time to sit down and chat about their opportunity to influence the formative years of our favorite pastime.

So grab your favorite beverage, sink into a comfy chair, and prepare to soak up some wisdom from two of the pioneers who helped make games what they are today!

RETRO: In general Activision's games were a far cry better than most anything Atari (or any other developers for that matter) themselves were releasing. How were Activision's games all light years ahead of Atari's own releases? It's almost like you guys "held back" until you left Atari and started Activision.

David Crane: When we founded Activision, we had both a greater responsibility for the quality and ultimate market success of our products, and a greater range of creative freedom. As owners of the company we each required more from ourselves and everyone else who worked there. Atari's focus was making home versions of their arcade hits. Activision had no arcade hits and had to come up with original game concepts. That different focus was a big factor in bringing about great, original titles.

As the "upstart" start-up we were driven to improve on what was out there, and Atari was the standard. We would often spend days, and sometimes weeks, on the smallest detail of imagery or gameplay until the entire design team agreed that a particular detail was better than the competition.

As time went on, we felt pushed by our own products as well. We not only had to be better than the competition, but we also had to be better than the previous year. It was a lot of pressure, but it made for great games.

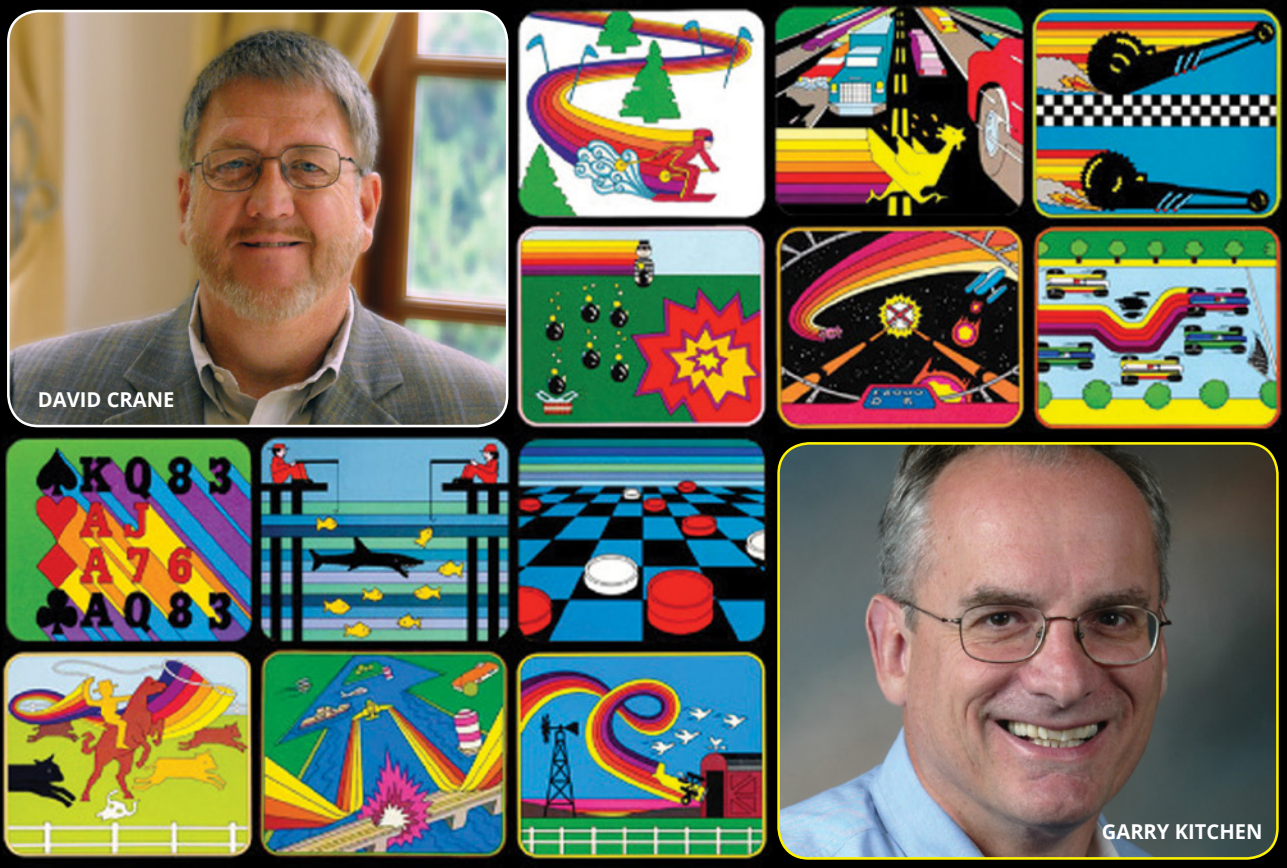
Garry Kitchen: From my standpoint, not having come from Atari, I joined Activision because their games were better than those from the competition. The original founders had set the quality bar high for a game bearing the Activision name and it was up to me as a new designer to maintain or exceed that level of quality. It was a highly competitive environment, in a fun and respectful way, to see who could raise the bar to a higher level.

RETRO: Who was in charge of your fantastic-looking box art and instruction books? And when and why did the trademark rainbow graphic come into play? Does any of the original artwork still exist to your knowledge?

DC: Activision was the perfect synergy of four top game designers and a marketing genius. Our CEO, Jim Levy, spent as much time working on the company's presentation to the public as we did making the games.

I was in Jim's office one early day where he had every Atari 2600 game on his bookshelf. He pointed to them and commented "They have no common art direction...Every box is slightly different, even on the spine." He felt that a publisher should have a "look" that consumers would identify with. You see that look when you view your collection of 2600 games lined up on the bookshelf.

The four founding game designers had opinions as well. We were appalled that many videogames misrepresented their screen art on the box, leading to a consumer being disappointed when they got the game home. We were proud of our game imagery, and we didn't believe in false advertising, so we insisted on a true



game screen on the box. The ultimate compromise was a stylized artistic cover such as those people have come to expect on a novel, and a true game screen illustration on the back.

Once we came up with the trade name "Activision" (we incorporated as Computer Arts Inc. just to put something in the box), the rainbow was one of the logo treatments that we liked the best. Bob Whitehead first put the monochrome logo at the bottom of the screen, which we adopted to separate us from Atari. A couple of years later some of our more creative new designers added the rainbow to the onscreen logo. Garry, do you want to tell about that?

GK: I agree, no doubt Activision had some of the very best marketing of that videogame era.

One interesting tidbit is that *Keystone Kapers* was the first game to display the Activision logo with a rainbow. Not sure if it was the first to ship with it, but adding the rainbow was something I added early in the development of the game. I showed it to David, who immediately took what I had and dramatically improved it, adding the slanted "flying A" effect. From that point on, all future Activision 2600 games displayed the enhanced logo. In hindsight, the Activision logo with rainbow was likely the first example of many successful collaborative projects that David and I have worked on over the years.

Re: the original art, I have the original painting for the cover of the *Keystone Kapers* manual. And I thought David had an original piece of art re: *Pitfall!*. Dave?

DC: Sort of...I have the original concept painting (oil on canvas board) developed during the packaging phase of *Pitfall II*. This did not end up as the final cover art, but it includes all of the elements of the game.

I have left instructions with my family that it is to go to the Videogame History Museum when I am no longer around to enjoy it.

RETRO: What gaming "generation" do you each feel was the best?

DC: For most people, the "golden age" of videogames is the one where they played videogames to the exclusion of all else, and that era usually ended when they got out of school and had to earn a living. Those people have a very clear "golden age" that they can point to. It is the time in their life when they were having the most fun (and few responsibilities).

I am the opposite. For me, I transitioned from school to *making videogames for a living*. (You have to think about that to see how different that is from the average game player.) But in a similar fashion, my favorite era is the time when I was having the most fun. There are few things more enjoyable that starting your own company doing something you love. I also love a challenge, and programming for the Atari 2600 was the most challenging thing I have ever done. So for me it is the '80s.

GK: I have different feelings about each generation. I agree with David that the '80s generation was my favorite, for me because of the pioneering nature of what we were doing. When I wrote my first videogame, there weren't 30,000 people attending GDC; in fact, you could probably have fit all of the professional game designers in a small restaurant (or large closet). And the satisfaction of a coding or graphics breakthrough on the Atari 2600 was indescribable.

Re: the current generation, I'm very concerned about the price erosion that has led some gamers to think that a $0.99 game (that I may have worked on for 500 hours), isn't "worth the money"; i.e., isn't worth as much as a soda at a fast food restaurant. And I have grave concerns about the industry's current direction, often designing for monetization over fun. Let's hope these issues work themselves out.

"I WAS GENUINELY SURPRISED WHEN THE EARLY RETRO/8-BIT STYLE GAMES SAW SUCCESS ON PRESENT-DAY DEVICES. – GARRY KITCHEN

RETRO: What characteristics should be a part of any good/fun platform game?

DC: A platform game is all about exploration. You want the player to believe that anything is possible around the next bend — because anything *is* possible. The world should be a place where the player might want to go in real life.

Then for a game to be fun, the designer has to be careful not to confuse "challenging" with "hard." One of my favorite game design lessons on that issue is from Rob Fulop, who asks "You want hard? OK, you walk into a room and find an old man sitting before a locked door." He says "To pass, pick a number between one and a million." That's hard, not challenging.

Combining those two elements, a platform game should take place in an interesting world where the player can complete each task or explore each region with the right level of challenge without causing frustration.

GK: The phrase we use often when talking about good gameplay is easy to play, difficult to master. There has to be a feeling of reward and accomplishment within the first minute or so or you risk losing the player. Also, if the player has to read the manual to play you've already lost them.

As David alluded to to in his exploration comment, discovery is also critical. You want to keep introducing new elements and surprises to encourage replayability of the game. As a player, if I think I've seen everything in a game I'm pretty much done. *Super Mario Bros.*, the king of the platform games in my mind, did that better than anyone.

RETRO: What are some of your favorite platformers and mascots of all time? Are you enjoying any new platformers today on mobile, tablet, or console?

DC: I enjoyed playing *Donkey Kong* in my local arcade. (It arrived midway through the programming of *Pitfall!*, after the game design was complete.) I also liked the way *Sonic* brought us high-speed platform gaming.

In the more modern era, I like the way the 2D physics engine has made objects into platforms. That has added a new dimension of interaction where the definition of a platform has blurred. (I know, that is a genre and not a game, so I will give the nod to *Angry Birds* as the best implemented of the breed.)

GK: As mentioned earlier, *Donkey Kong* was a favorite of mine. I was addicted to *Super Mario Bros.* when it first came out on the NES. I was frankly amazed at the amount of content in it. It felt like you could play that game 100 times and still find something new. I also remember getting hooked on *Miner 2049er* on the Apple II. Despite the crude graphics, it played really well.

On the 2600, *Pitfall II: Lost Caverns* was certainly a tour de force that didn't achieve the installed base of the first game because it came out late in the life of the VCS. And don't forget *H.E.R.O.*, a superb platform game lost in the demise of the 2600.

Super Mario 64 on the Nintendo 64 was an amazing platformer done in 3D. I also remember being impressed with the *Oddworld* series of platformers when they came out.

Platformers on touch-screen devices are very difficult to make fun because that type of game doesn't really lend itself to motion-style (swipe) controls. And don't dare put a game in front of me with a simulated joystick or d-pad on the screen, they are just terrible.

There is a platform game about to come out that I like a lot, designed by some brilliant guys in a small San Francisco studio called Dynamighty. Definitely check out *CounterSpy*, coming soon from Sony on console and mobile devices.

RETRO: 2D Platform games have kind of fallen off the map since the transition to 3D. Do you think 2D platformers still hold up in this current generation of gaming? And on the flip side, do you think 3D platformers are all they are cracked up to be? Personally, I'd take a 2D platformer over 3D anytime.

DC: Well, the distinction between 2D and 3D has blurred. After all, the intention of the 2D platform game's cross-sectional aspect ratio is to simulate a 3D world. But the essence of a 2D platform game is side-view gameplay. And I believe that in certain gameplay scenarios, a player can get a better "feel" for the game's interaction from that viewpoint. Even systems that are capable of full 3D rendering can benefit from side-view gameplay. A 3D platform game can suffer from a lack of player control, and it is the player control that makes a game fun.

GK: Referring back to my comments above, *Super Mario 64* was a 3D platform game done right. *Oddworld* also had a 3D component but maintained solid gameplay and controls. But I agree that in most cases 2D is the right technology for a platform game.

Also, the aforementioned *CounterSpy* effectively uses a 3D engine to create a kickass platform game experience.

RETRO: Where do you think the platform game genre ranks among other genres like shumps, first-person shooters, racing, fighters, puzzle, maze, etc.?

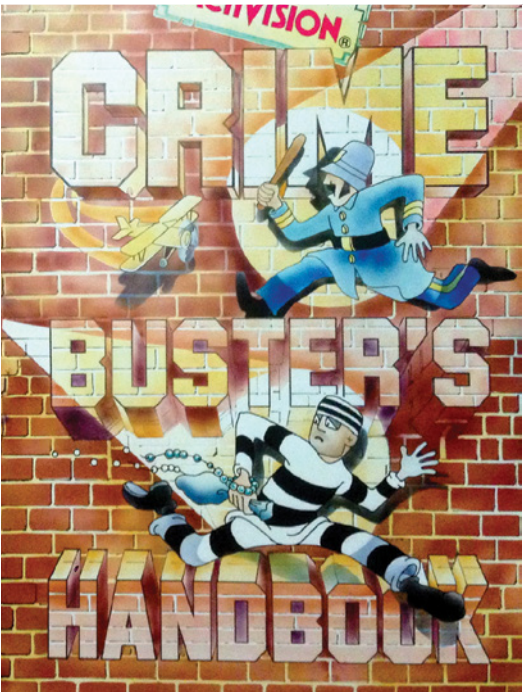
DC: I don't think you can compare genres. Looking back on my career, I once realized that my greatest successes came from switching genres. I would design a game that was different than what was out in the market, for no more reason than I was tired of the predominant genre. And since it took a year for my next game to come out, everybody was tired of that genre and leaped at something different.

What I am saying is that every game genre can have its popularity over all others, but the next year players will flock to something unique and different. In its heyday, the platform game was number one. But where any genre ranks against any other fluctuates dramatically over time.

GK: Like David, I don't think I could rate them on a popularity scale. Everyone has their own genre of game that they're passionate about. More than anything, I'm hoping that new genres continue to be developed, expanding the choice of games for people to enjoy.

RETRO: Thankfully, the retro movement is in full swing. Game designers are creating games that harken back to the less sophisticated games of yesteryear. Do you think these retro-style games will continue to be popular on new gaming devices?

DC: There are two issues here: retro style and retro gameplay. Retro style will always have a following, just as



there are people today who prefer the swing music of the 1920s over any other style of music.

Retro gameplay emphasizes a fun and challenging activity over a story experience. I was at a conference talking to the author of one of the biggest movie-like games of the last decade when he told me "I recently tried to make a simple one-screen game like you did in the '80s...I couldn't do it. I know how to create characters and compelling story lines, and I can produce a mega-hit movie game, but figuring out how to make a simple activity that is so fun and compelling that you can't put it down is really hard."

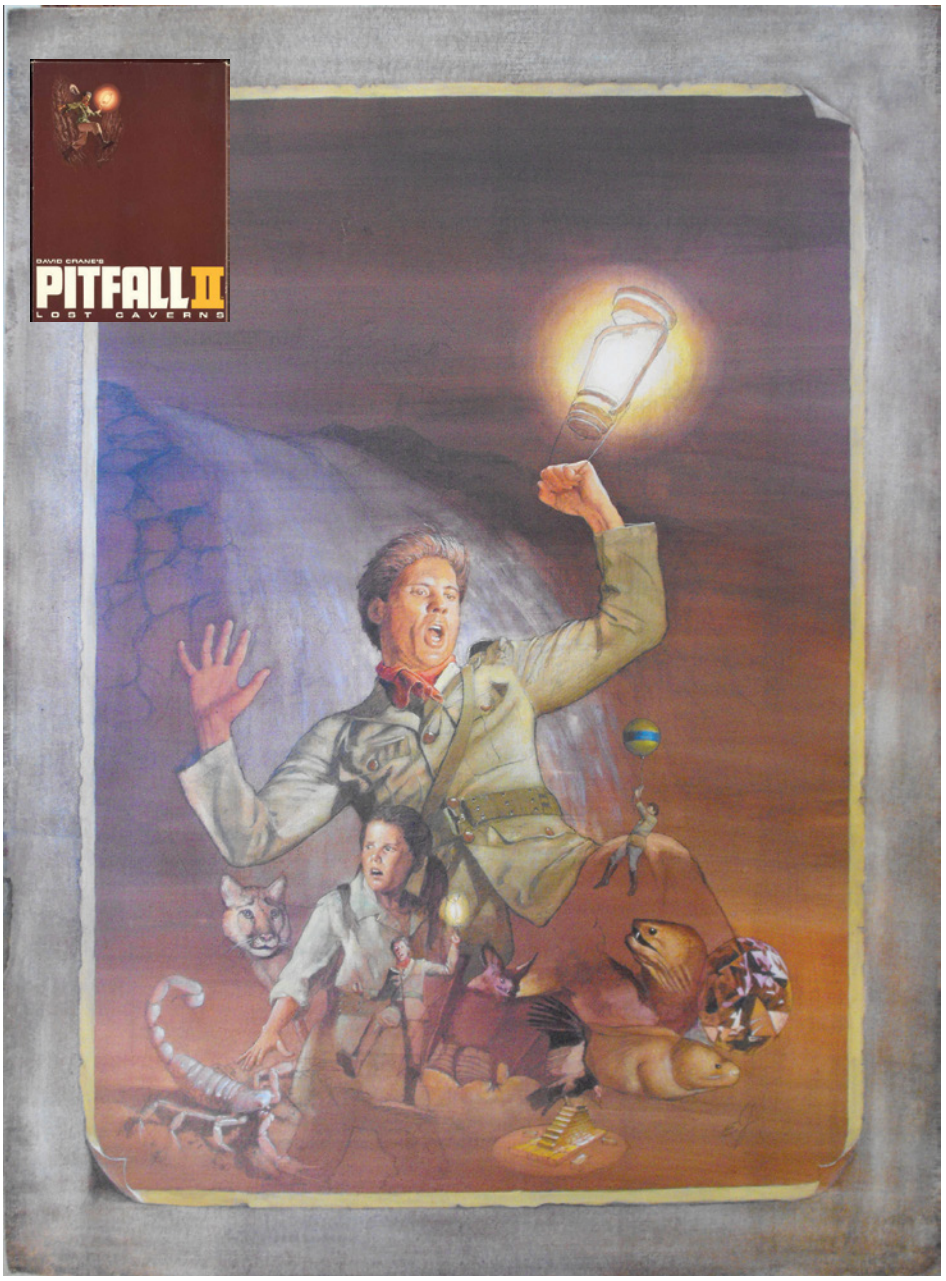
To me that is the essence of the retro games that people still play today. They have almost as much fun the thousandth time they play it as they did the first.

GK: I was genuinely surprised when the early retro/8-bit style games saw success on present-day devices. In hindsight, I shouldn't have been, because it just proves what we've said along, that "it's all about the gameplay." Case in point, while graphics are important, you don't hear anyone complaining about the visuals on *Minecraft*. Great games done in a retro style are still great games, with the added bonus of the visual presentation harkening back to a fondly remembered era.

Retro games will be around forever.

RETRO: What do you guys think will be the next big break in gaming?

DC: For me that would be when people are again accustomed to paying more than 99 cents for a game. (Or is that just wishful thinking?) Whatever the next big break is, I hope it is based on quality of game and not "how do I monetize my customer?"



GK: Hard to say. It could be augmented reality (graphics overlaid on a real-world environment in real time, like the first-down line on football TV broadcasts), geo-location gaming (real-life treasure hunts, races, etc.), virtual reality (e.g., Oculus Rift), or cooperative social experiments like Peter Molyneux's *Curiosity: What's Inside the Cube?* More short term, I'd expect to see a continuing evolution of the *Skylanders* concept, combining physical action figures with videogame play. There's still a lot of innovation to come in that area, combining compelling gameplay with physical objects. I'm interested to see what Nintendo's going to do in that arena.

RETRO: So what are the two of you doing now? Do you have any plans on making more games in the future?

DC: I am always noodling over game concepts. But I spend my days working as an expert, primarily analyzing patents. There is often overlap between patented ideas in non-gaming fields and the innovations that first took place in the early days of videogames. I like to find those connections.

GK: Like David, I spend much of my time consulting as a technical expert with gaming and technology companies on issues involving patent and copyright infringement. But I still find time to prototype game concepts with the hope of releasing something in the near future. We'll see...

All about the BOX ART

25 YEARS AGO BOX ART WAS THE BEST WAY TO TUG AT GAMERS' HEARTSTRINGS, AND NO ONE DID IT BETTER THAN MR. TIM BOXELL.

by Mike Kennedy

Back during the golden years of PC gaming on Commodore 64 and Atari 8-bit home computers, box art was the best way to tug at gamers' heartstrings, and few did it better than artist Tim Boxell. We guess it's appropriate Tim's last name is "Box"ell, because he was a master at conveying a game's quality and play mechanics through his unique art style on dozens of boxes and magazine ads for Synapse Software. We recently had the opportunity to speak with Boxell regarding his influences, the games he plays, and how he brings his art to life.

RETRO: How was it your artistic skills were called upon by Synapse?

Tim Boxell: An art director friend who I had worked with in public television in San Francisco was friends with Ihor. He was working with me at Colossal Pictures at the time, doing the first broadcast stuff for MTV, and Synapse founder Ihor Wolosenko asked him for leads in his search for someone to do the art for the game packaging. I designed all but one of the boxes and painted all of them.

RETRO: In total, how many Synapse games did you design artwork for?

TB: Dozens. I'm not sure of the exact number.

RETRO: Did you only design the box art or was your work used anywhere else, game manuals, in-game graphics, etc.?

TB: I did a bunch of ads, too, and a cool point-of-purchase standup thing with the robot cat, mouse, and android.

RETRO: Your artwork was instrumental in making Synapse boxes stick out from the rest of the crowd. Did you see the games prior to conceptualizing the artwork? Were the games inspiration for your artwork or was your artwork the inspiration for the games?

TB: The games were generally in crude form image-wise when I first saw them. They got the gameplay and functionality done before they refined the characters. I don't know how much, if any, influence I had on the look of the actual games.

RETRO: Your Synapse box art is a very unique "style." Was this style used in any of your other artwork outside of the gaming industry?

TB: I did some magazine covers using the same technique, but it was mainly used for the Synapse art. It was an approach I came up with using animation cel vinyl-acrylic paint using a gouache watercolor technique.

RETRO: What was your favorite box art you created?

TB: *Slam Ball*.

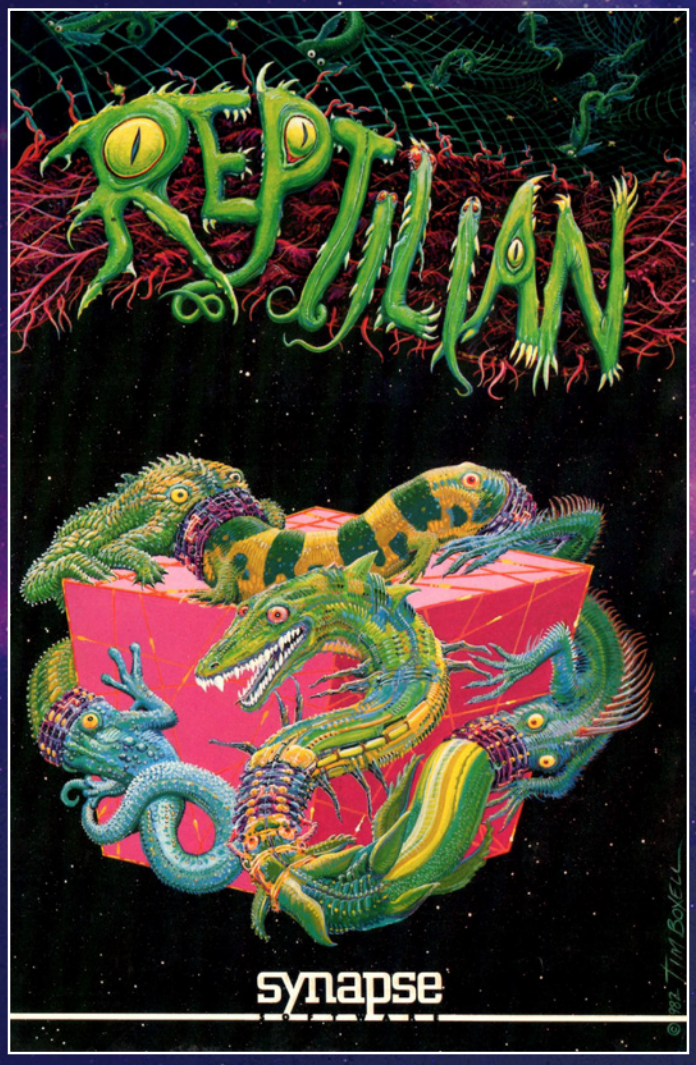
RETRO: Was there any artwork you were working on that didn't end up being used?

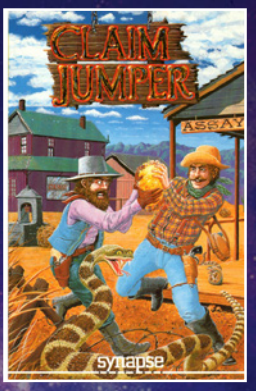
TB: I did the art for *Reptilian*, which was a personal favorite, and the art was printed as box-sized art, but I don't think they ever finished the game. The last art I did for Synapse was painted in London, England while I was supervising the visual effects for a movie called *Electric Dreams*. I think the game came out, but I don't think I have any printed versions of it. Ihor had decided to change the packaging format and the art was done in a circular composition. I think it was called *Robot Wars*.

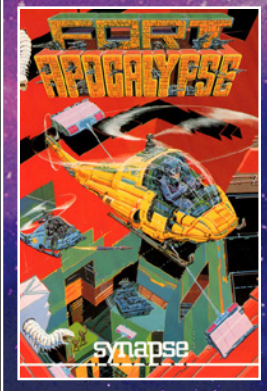
RETRO: Besides working with Synapse did you work with any other software companies throughout your career?

TB: No. I worked for some of the Bay Area tech companies as a writer and creative resource, but no other game companies. I got to supervise the creation of a virtual reporter who interviewed, among others, Ed Catmull, technical head of Pixar at the time, for a Sun Microsystems event. My 3D CG character was animated by Foundation Imaging which did *Roughnecks*, the *Starship Troopers* animated series. I also was involved with the Sony PS2 launch at E3 cutting game footage for the wraparound screen in the specially-built theater.

RETRO: Would you rather create your art like you did in the '80s vs. using the computer-aided tools of today?







TB: Good question. Some of the painting called for a lot of design work. All the title typography was done by hand, and type is something that computers do pretty simply and effectively. It would have been nice to have a digital tool for that. The art itself was fun to do. I was doing the paintings at a rate of roughly two weeks each, working 10 to 12 hours a day and loving it. I painted on illustration board and gessoed Masonite. I wanted to make a memorable body of work like the illustrators I admired.

RETRO: Were you also a videogamer yourself?

TB: Yeah. I gave those horrible old joystick controls quite a beating. Sadly (or maybe for the best) I never made the transition to the XBox or PS2 or 3, but got to watch my son play his way through the *GTA* games, *Mass Effect*, and *The Last of Us*. I don't have the time or the skills to play the new games but I'm in awe of everything about them.

RETRO: What were some of your favorite games?

TB: I liked some of the Synapse games and played *Crossfire* a lot.

RETRO: Did you play games on computers, consoles or both?

TB: I went through a serious addiction to the arcade version of *Centipede*. Went through a lot of quarters back in those days.

RETRO: Do you still have your original artwork for any of the Synapse boxes?

TB: All of it. There was someone who wanted to buy all of it for his own private gallery, but I wasn't sure I wanted it to all be hidden away. Another guy wanted to do a book on the art and maybe have some new paintings created in the same style as the Synapse art. That would be fun.

RETRO: I know there is a good crowd of retro gamers that would love to buy prints of your game box artwork. Are there any plans on releasing them as prints? If so, please put me down for a *Necromancer* print.

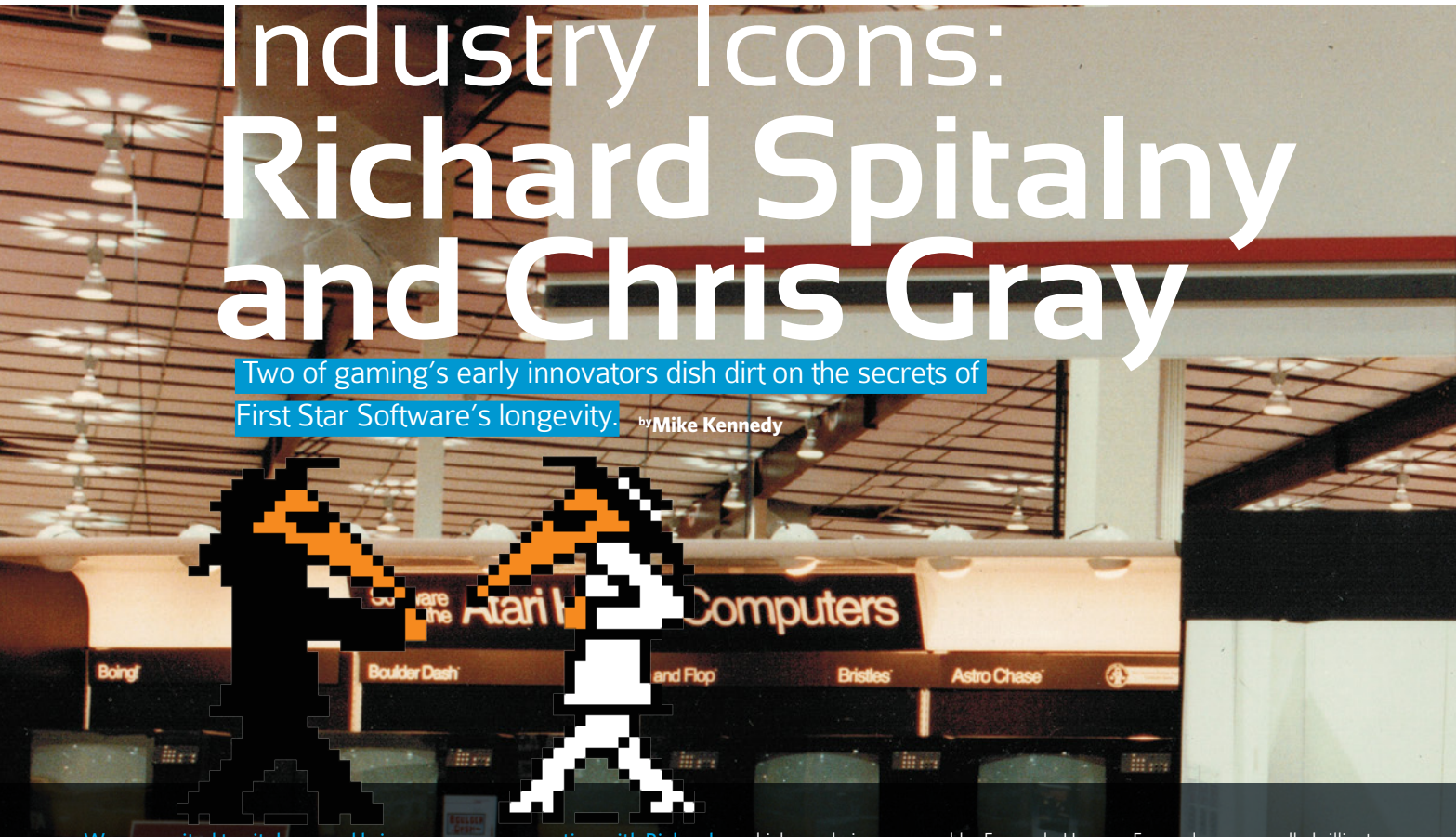
TB: I'm not sure about the reproduction rights. I sold the use of the art for Synapse's needs back when they were in business and retained ownership of the original art. I do have a number of the original prints that I'd be happy to sell.

RETRO: So, what are you doing now?

TB: I did the layouts in pencil, pretty detailed, of a 114-page graphic novel that hasn't been published yet. I did 1250 or so storyboard frames for a feature film that I directed starring the late great Pete Postlethwaite. I still like to paint, but rarely have the time. I've got some film and TV projects in the works. I also teach some classes I wrote including one called "The Art of the Short Film" both online and onsite at the Academy of Art University in San Francisco.

Industry Icons: Richard Spitalny and Chris Gray

Two of gaming's early innovators dish dirt on the secrets of First Star Software's longevity. by **Mike Kennedy**



We are excited to sit down and bring you our conversation with Richard M. Spitalny and Chris Gray. Richard is the president of First Star Software, Inc. and Chris is responsible for designing one of their most well-known titles, *Boulder Dash.*

RETRO: Richard, you have been president of First Star Software, Inc. since 1982. Doesn't this make you one of the only software companies from that time period that is run by the original owner(s)?

RICHARD SPITALNY: The simple answer is "yes," I do believe this makes us one of the few software companies that have been around since the early '80s that are still run by the original owners. (I actually don't know of any others, but I don't want to be so presumptuous as to think we are the only one.)

RETRO: What is the reason for your company's staying power?

RS: In our early history, I would attribute our success and longevity to innovation and quality. We tried very hard to come up with titles that were both groundbreaking and unique. We tried to contribute to what was then considered "the state of the art." We were very fortunate to see the potential of *Boulder Dash* when it was originally submitted to us, and to design and create the interactive adaptation of *MAD Magazine*'s very popular *Spy vs. Spy* comic strip. I'd also have to attribute most of our continued longevity to the number of successful sequels we have released in both series of games.

RETRO: What got you into the software business back in 1982?

RS: Before producing interactive games, I was a movie producer. It was my film partner at the time, Billy Blake, who had invested in a computer retail store which was being managed by Fernando Herrera. Fernando was a really brilliant programmer and one of the early adopters of the Atari 400 computer. As I recall, the serial number for his computer was some ridiculously low number like "14" or something like that.

Back then, you were able to call up Atari and speak directly to the engineers. As I understand it, Fernando actually showed Atari how they could produce 256 colors on the Atari 400 instead of just the 128 colors that they were advertising at the time. He was the first person to program a game with "screen wraparound" so that an object which moved from the left towards the right would reappear on the left side of the screen immediately after going offscreen on the right side. The game I am referring to, by the way, was called *Space Chase*, and it was a game that Fernando published himself before we formed First Star Software.

Fernando's son, Steve, had been born almost completely blind due to multiple cataracts. After several surgeries when his son was about two years old, Fernando used his computer to simulate the type of the eye chart you would see in the eye doctor's office which has a very large "E" at the top and then each row below that has more letter Es in it but in a smaller font than in the row above. Then, using one's hand, you would indicate whether the letter E was facing right, facing left, or whether it was upside down, etc.

Fernando quickly saw that his son's vision had indeed improved significantly after several operations. So, Fernando eventually created a program called *My First Alphabet*, and he submitted that program to an amateur competition that Atari was holding. Not only did he win best educational program, but, he actually won the best of all of the programs submitted in every category. For that, he was awarded the first Star Award ever given out by Atari. It was at this point that Billy and I decided that we would stop our film development company, form a

software company (named after that first Star Award) and focus on publishing games which Fernando would create. The first game Fernando created was *Astro Chase,* which was immensely successful.

RETRO: Who else was involved with the company in your start-up phase?

RS: At first it was just me, Billy, Fernando, and Diana Loomis. Diana had been working as our assistant in our film development company; but, she quickly took over as director of public relations at First Star Software and really helped get us on the map! Billy was also the copublisher of *MILLIMETER Magazine*, a leading TV and motion picture trade magazine. His partner and copublisher was Peter Jablon. Initially, Peter was involved; but, he didn't have much time as he was really running *MILLIMETER*. Interestingly, years later, after selling *MILLIMETER*, Peter returned to First Star Software and has been my partner here for over 20 years.

RETRO: How many games did First Star Release, and what were they?

RS: Hummmm, let's see. Just counting discrete titles (and not any of their sequels) I am sure there are well over a dozen games. The ones that come to mind are: *Astro Chase*, *BOiNG*, *Bristles*, *Flip & Flop*, *Boulder Dash*, *Spy vs. Spy*, *Millennium Warriors*, *The Omnicron Conspiracy*, *Superman*, *Security Alert*, *U.S. Adventure*, *The Works!*, *Rent Wars*, *Panic Button*, and *Romper Room*.

Of course there have been numerous sequels in the *Boulder Dash* series, and there were three games in our *Spy vs. Spy* series. We followed up *Astro Chase* with a sequel for the Mac 10 years later called *Astro Chase 3D,* and we released two *Superman* games as well as two edutainment titles using the *Romper Room* license.

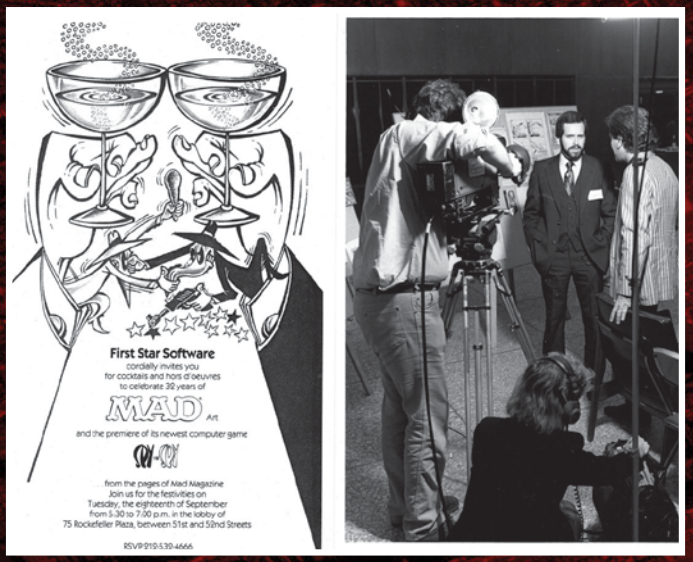
RETRO: Can you tell us any stories about the development of any of those games?

RS: Sure! How much time do you have? Chris will no doubt talk a bit about *Boulder Dash.*

In other interviews over the years I've told the story about how we were offered $25,000 for the Commodore 64 rights to *Astro Chase* before we even released the Atari version [where we were] asked if we could give our answer the next day. [We] were told if we left without taking the deal, the offer would be retracted, only to be offered $250,000 minutes later as we started to leave having said we really did want to take the night to discuss things amongst ourselves.

I've also talked about how Jim Nangano (who created *Flip & Flop*) was in the Navy before he came to work at First Star Software, working in a top secret underground bunker, tracking all the nuclear submarines in the world while sending us updates of *Flip & Flop* on disks, and how we kept stamping "CONFIDENTIAL," in red on the disks — which caused all sorts of problems for Jim with the military police who inspected everything brought in and out of the bunker.

So, today let's talk about *Spy vs. Spy*. Back when I was designing the game with Mike Riedel, it wasn't possible to play over the (non-existent) Internet or via Bluetooth or Wi-Fi. So, games for more than one player were all "turn-based." In *Spy vs. Spy* I was determined to find a way to let both players play at the same time, because that was such an integral part of the comic strip. Both the black and white spies were each going about their business, not knowing what the other spy was doing, and the big payoff came only at the very end, in the very last frame.



In order to recreate that kind of excitement (with two, simultaneous, parallel plots) I asked Mike if it would be possible to split the screen in half horizontally and have the black spy in one half and the white spy in the other half *and* if they could both be active at the same time. I asked if each half of the screen could scroll either in the same or opposite directions at the same time. This was not something that had ever been done before and, not being a programmer myself, I didn't know enough not to make that suggestion. To Mike's credit he said: "I do not know; but, let me see what I can do". The rest, of course, is history and that's how the splitscreen (Simulvision) came about, allowing two players to play at the same time, which I decided to call "Simulplay."

As great and exciting as it was to play the game simultaneously with another player (whether that be a person or AI), it could get a bit confusing, especially as the number of rooms in the embassies increased from level to level. Also, because the rooms looked so similar to one another, it was easy to forget whether you had already been in a room, so we needed a way to let the players know whether they were returning to a room or entering it for the first time in the given match. That is how I came up with "breadcrumbs"...arrows at the bottom of your half of the screen that let you retrace your steps — an idea that was obviously based on Hansel and Gretel.


eaturing Metro Business Computing

First Star's Fernando Herr
New York's Answer
to West Coast
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Superstars

Popular Macintosh in Short Supp

RETRO: You mentioned Fernando Herrera. I really enjoyed his first game, *Astro Chase*. I remember seeing ads for it in the early gaming magazines and thinking those were the best graphics I had ever seen. I never did end up playing it "back in the day," but have since played it over the years and really enjoy it. Did Fernando do the artwork in his own games or did you guys have other artists on staff that worked with the game designers?

RS: Like many developers at that time, Fernando did it all! He designed the game, programmed it, created all of the graphics, sfx and music. I might point out the Mike Riedel, who did *Spy vs. Spy*, operated pretty much like that, as did Peter Liepa for *Boulder Dash*.

RETRO: The one thing that stands out with First Star Software was the quality of games you developed. There were literally no stinkers at all. How did you guys go about green lighting a game idea when it was presented?

RS: Thank you very much for those kind words Mike; if only it was true. Though I actually do agree with you, to a large extent, there were some issues in both our *Superman* games and in a few other cases, we ran out of time and had to release games before they were as polished as we would have liked. We were a very small company to start, and never grew to more than about 15 employees. We always backed anything that Fernando wanted to do, and I went after the *Spy vs. Spy* and *Superman* licenses once we were a sister company with E.C. Publications (*MAD Magazine*) and DC Comics. I gave the go ahead on titles that were submitted to us, such as *U.S. Adventure*, *Boulder Dash*, *BOiNG!*, and *Flip & Flop*. *Panic Button* was my idea, based on the *I Love Lucy* skit with the conveyor belt in the candy factory.

RETRO: Were there any games you passed on that you feel had potential but were never released?

RS: Not really. In fact, probably the opposite. As mentioned moments ago, there were some games that we developed that we did not think were strong enough to be released; at least not on their own. One game in particular that I recall was called *Rent Wars*. We did not release the game when it was originally created; but we did include it as part of a compendium of 14 of our titles released a few years ago call *First Star Software's Greatest Hits*.

RETRO: Let's talk about the Exidy Max-A-Flex arcade game. This could arguably be considered the first arcade multigame. It was an actual arcade cabinet that housed a real Atari 600XL computer mounted to the inside wall of the cabinet. It was based on your most successful titles and allowed the arcade operator to change out the four games (*Astro Chase*, *Bristles*, *Boulder Dash* and *Flip & Flop*) simply by inserting a different game cartridge and swapping out the games and marquee. How was it that First Star Software and Exidy came together to create it?

RS: Our senior vice president at the time, Marc Jaffe, had met Peter Kaufman, the president of Exidy, and it was Peter who had the idea to create what he called the Max-A-Flex system of arcade games. As you point out, these were really coin-op housings put around Atari 600 XL computers. This allowed them to quickly increase the number of titles they offered to their distributors and it also let them recycle the housings. That is to say none of the cabinets were dedicated to a specific title; but rather, the Plexiglas headings at the top (with the name of the game) could be slid in and out and changed easily. So, all they had to do was to pop in a new game cartridge into the Atari 600 XL computer inside and they were ready to go with a new title in the arcade!

RETRO: One of your most prolific games was Chris Gray's *Boulder Dash*. How many ports has the original game had over the years?

RS: I've never really counted; but, I can think of at least 14 off the top of my head, including *Boulder Dash-30th Anniversary*, which we just recently released with copublisher Tapstar Interactive on iOS and Android! It was named as a Best New Game by Apple who featured it upon release!

RETRO: I purchased a licensed version of *Boulder Dash* for the Atari 2600, which just hit the market a couple years ago.

RS: Oh, that's great to hear. Thanks! The guys who programmed that, Andrew

Davie and Thomas Jentzsch, did an amazing job of really pushing the technical limits of that platform, and AtariAge did a great job with the packaging. We've long been a supporter of many of the older platforms. Working with Mean Hamster Software and Atari2600.com we copublished cartridges of *Boulder Dash I* and *II*, *Rent Wars*, *Bristles*, and *Flip & Flop* for the Atari 5200 between 2004 and 2007

RETRO: And isn't there an Intellivision version about to hit?

RS: Yes there is! We previewed it at the Classic Game Expo in Los Vegas just a few months ago; and, if it's not already out by the time this edition of *RETRO* appears I'd be surprised. That will be copublished with Classic Game Publishers, Inc./Elektronite, headed up by William Moeller.

RETRO: Chris, what was your inspiration behind *Boulder Dash*? Are there any stories you can tell us about the development of the game?

CHRIS GRAY: I was spending a lot of time playing games on home computers such as the Atari 400/800 (which my family owned), a friend's Apple II, in the arcades; really any platform I could get my hands on. I was at the early stages of teaching myself how to code games at the same time, learning from what I could see and play, and then using the inspiration to create my own variations and original ideas. There was a coin-op at the time called *The Pit*, which had the concept of digging and boulders and collecting, which I thought was interesting because you could dig your own path.

You weren't constrained by a strict level design, but the boulders didn't roll or behave too interestingly. They just dropped straight down, like *Dig-Dug*. I took that core idea and started playing around with more interesting boulder behaviors, making them roll and so forth, and that was the very beginning of the game, which is several months before Peter Liepa became involved. Peter and I were [eventually] introduced to a local game publisher who was excited by several of my game concepts, including what became *Boulder Dash*. Peter had a lot more programming experience than I did at the time, and became interested in working with me on evolving the original prototype.

RETRO: Chris, did you ever think it would be a game that would continue on for as long as it has, with the release of *Boulder Dash-XL3D* (3DS) and most recently the release of *Boulder Dash - 30th Anniversary* for iOS and Android? What can you tell us about this latest release?

CG: No, I had no idea *Boulder Dash* would be around for so long. It was in the very early days of the games industry, and I was still a 16-year-old in high school when it was released. I didn't have any idea if it would sell well, let alone result in one sequel, or so many others, but I'm very pleased it has been a part of so many people's lives over the decades. At the time, it was exciting enough just to hold the original box in my hand! With today's technology, I think it's remarkable that you can now virtually play every game created on new platforms, no matter what device they first appeared on. That was unthinkable back in the 1980s. And since the original launch, First Star Software have done a fine job keeping the game current through several hardware generations, and it's been rewarding to return to a title that started my career in gaming, and being able to bring some of the lessons I've learned along the way to the new version.

As for the latest version, *Boulder Dash - 30th Anniversary* is now available in the App Store and Google Play store, and it's free to play. We have 220 levels and 10 worlds, and nine unlockable characters with different abilities. We have a cool "2.5D" visual style, built in Unity 3D, and we added ramps and diagonal movement for the first time. The difficulty increases in the cave packs so first-time players can get the hang of it, but trust me, there are some fiendishly challenging caves as you get further into the game. We also have lots of new creatures such as dragons, oni demons, sumos, ghosts, bats and more, along with the classic butterfly, firefly, and amoeba. We've also introduced power-ups, which help players complete the most challenging caves, and treasure chest collecting which allows them to discover new worlds and unlock characters.

You can also purchase the remastered 1984 cave pack as in-app content if you want to experience them again. They're very close to the original versions but tweaked to work with the new engine.

We're now looking into a premium version due to the high level of interest expressed by players, but would prefer a more traditional treatment than free-to-play offers. It won't have ads, although you will be able purchase some of the cave packs as DLC.

RETRO: Are there any plans to rerelease or update any of your other games? If so, what formats are you considering?

CG: I'm looking at revisiting another classic game I created, *Infiltrator*, which people may remember from the C64 days. It was also available on a number of platforms worldwide and was a hit. When it came out, it was the only hybrid flight/action game combined with a stealth adventure on the ground. *Infiltrator* was originally released in the late 1980s, a long time before games like *GTA* started combining vehicles and on-foot gameplay, so I'd like to think it was a little ahead of its time.

RS: And for First Star Software, we're in the process of submitting *Spy vs. Spy Vol. 1* to Microsoft for certification. They requested it for Windows 8 and will be featuring it upon release. Again, perhaps by the time this interview appears. Robots and Pencils handled this port as they did the Android, iOS, and Mac versions. A few years ago, they licensed our designs and gameplay (Simulvision, Simulplay, and the Trapulator) and licensed the rights to *MAD Magazine*'s black-and-white *Spy vs. Spy* characters from Warner Brothers. Together we designed the modern version that is included along with the retro version of our original *Spy vs. Spy* game.

RETRO: Is there anything else you might want to tell our readers about? What will the future hold for First Star Software?

RS: Well, Mike, I am especially excited about an upcoming Kickstarter campaign set to launch later this month (November, 2014). Chris and his team at Tapstar Interactive are using the crowd funding model to create and finance a robust, feature-intensive premium version of *Boulder Dash - 30th Anniversary* for PC, Mac, XBox One, and PS4. On the PC and Mac versions, players will be able to create and save their own levels; and, even share them with other players. We released our first-and-only *Boulder Dash* "construction kit" with a level editor back in 1987, and it's the one thing that the fans have been asking for most ever since!

CG: I agree — and no in-game advertising, either! But we're looking at the Kickstarter campaign as being more than a source of funding. It's about collaboration. We want to engage with gamers that have opinions and ideas up front, during development — we're offering opportunities for up to 1,000 gamers to actually partake in the "beta." And for the more ardent fans, we'll offer rewards that allow them to be the architect of a level, a character, and even a character based on them. I do feel fortunate that First Star Software has embraced this concept and allowed me to run with this. I believe that it promises to fulfill the full potential of *Boulder Dash*. It will be a lot of work, but I expect it'll also be a lot of fun.

Unearthing Primal Rage II

by **Daniel Kayser**

Back in the day, there was much more to the arcade experience than just playing a particular game. There was the ability to challenge both friends and foes for personal bragging rights, the opportunity to make your mark by earning a high score, and the very real risk vs. reward element as you pumped your hard-earned quarters into both familiar and fresh machines.

One aspect of arcades that really stands out was the thrill of the hunt. Finding a brand-new or elusive machine was just as (and sometimes more) exciting than actually playing it, so when you caught word of a new machine coming to town, the anticipation sometimes even outweighed the experience.

As fighting games found an established audience in arcades during the mid-1990s, the unexpected *Primal Rage* earned its fair share of quarters. Its *Mortal Kombat*–esque approach to blood and gore granted it some significant time in the spotlight, so when its seemingly inevitable sequel got canned, it left potential players out in the cold.

Now, fans of prehistoric pummeling can finally fulfill their sequel fantasies as Chicago's Galloping Ghost Arcade has sunk its teeth into the oft-forgotten sequel. I recently had the chance to catch up with owner Doc Mack to discuss how the game landed at his venue, why it was never mass produced, and what patrons can expect once they get the chance to play the highly coveted game.

RETRO: Let's start with the obvious question: How did you get your hands on *Primal Rage II*?

Doc Mack: It was one of those games I thought we'd never see, but was always hoping for. After Bill Menoutis (Tom Brady in the *Mortal Kombat* (2011) scene who was a friend of our Team Galloping Ghost Arcade players) had visited us a couple of times, he told me he had a *Primal Rage II* PCB. He said he was a huge fan of our arcade and what we were doing and if he ever decided to sell his board we would get first shot at it. Honestly, I was skeptical. First, that he actually had it and then, if he did, that he would be willing to sell it.

Months and months went by and then I got a message from him asking that I give him a call. From there we worked out a deal and it was on its way to our arcade. We received the board and got it into a cabinet and made the announcement that *Primal Rage II*, that game that disappeared for 18 years, was now here at

the Galloping Ghost. Bill really liked the thought of it being somewhere that everyone would be able to play it, and we are very thankful to him for wanting his fellow gamers to get a chance to play such a great and historically significant game.

RETRO: We know that test cabinets for *Primal Rage II* were released at some point, but why do you suspect the game was never mass produced?

DM: Several things led to it not being released. Somehow, potential players were upset because they were under the impression that dinosaurs were not going to be in the game. I assume this was enough to turn off fans and create a negative buzz. There were so many other amazing fighting games out then too that it would be competing against. In 1996 Atari was working on four games; *Freeze*, *Beavis & Butthead*, *Vicious Circle*, and *Primal Rage II*. Midway bought Atari and shortly after that, Atari's doors were closed, ending all hopes of those games being completed and released.

RETRO: What can you tell us about the setting and environments of *Primal Rage II*? Does it still take place on "Urth"?

DM: It is still on Urth. The levels are well designed and fit the new "avatar" characters very well.

RETRO: How deep is the roster and who are the characters? Do the original seven combatants return?

DM: All seven dinosaurs return in *Primal Rage II*, as well as newcomer Slash Fang. Each character has a human avatar counterpart to its dinosaur form. When you start the game, you select the avatar form, and use your special move meter to transform into the dinosaur form and do special combo attacks. There are also two hidden ways to play. First, you can play it reversed where you are the dinosaur and the special combo transforms you into the avatar. The other playstyle is a meta form were you can switch between dinosaur and avatar mid-combo! This really added a lot of depth to the combo system and made for some interesting mechanics.

RETRO: Who would you say is the fan-favorite character?

DM: Keena has been well received, but the cast is pretty diverse and I've seen a lot of people trying all of the characters. A lot of people liked the new Slash Fang character a lot, too. Often when they find out which avatar goes with which dinosaur the players tend to go back to who they really liked in the original *Primal Rage*.

RETRO: Like *Mortal Kombat* before it, *Primal Rage* featured some nasty finishers. Is this still the case?

DM: When we first got the game, Pete Hahn, Fill "Pops" Diaz, and Steve "16-Bit" Brownback (all members of Team GGA) spent a good amount of time finding all the finishing moves. Some seemed incomplete, but most were there in gory *Primal Rage* glory!

RETRO: Humans worshipping the combatants were used both as weapons and health boosts in the original. Does that mechanic return?

DM: That pretty much carried over. The worshippers can still be eaten to replenish your super meter.

RETRO: What is it about the *Primal Rage* series that you think arcade gaming fans enjoy/appreciate the most?

DM: Definitely the dinosaurs. The stop-motion animation the game used gave it an amazing and unique look that really made it stand out.

RETRO: The original versions of *Primal Rage* implemented a non-traditional control scheme that saw players holding down attack buttons before using the joystick to specify a move. Did this make the leap to *Primal Rage II*?

DM: It's still in there but they also allow the playstyle to be more of a traditional *Street Fighter* method as well. It was really a good design choice to broaden the controls. It would have allowed more people to get into the game while remaining true to how the original game played.

RETRO: Stop-motion animation contributed to the unique look (and feel) of *Primal Rage*. Does *PR2* feature the same visual aesthetics or go a totally different route?

DM: All the original animations were reused and then expanded upon. The dinosaur forms were all completely new, but animated in the same way with stop-motion armatures. With the attention to detail featured in the game, you can only imagine that it was a painstaking process.

RETRO: In the original *Primal Rage*, players could trigger minigames midmatch for a bit of extra fun. Is this possible in *PR2*?

DM: There aren't any hidden games that we've found, but it might have been something that could have been added if the game was finished.

RETRO: Coverage of the proposed sequel to *Primal Rage* reported that the dragon skeleton Necrosan was *PR2*'s main antagonist. Is this in fact the case?

DM: Yes, Necrosan is the final boss. It really shows how close to completion the game was. Talking with one of the developers, they wanted to make his AI better, but they just didn't get to that before the game was scrapped. If you beat Necrosan, you even see the characters' endings.

RETRO: What types of reactions do you get from visitors who discover that *Primal Rage II* is in fact playable at Galloping Ghost Arcade? Does it see a lot of action?

DM: The first week it was on the floor we had people traveling in from all over to see it. Everyone who came through the door was asking where it was. There was always a crowd around the cabinet and lots of people were taking pictures of it, putting posts online, etc. It's quieted down a lot since then, but a lot of the people from out of state continue to ask about it.

RETRO: Is finding ultra-rare experiences like this part of Galloping Ghost's mission? Are there any other rare highlights that visitors can expect?

DM: Absolutely! Every time we are able to find a game that you can't play anywhere else, it's something really special. We recently brought *Hammer Away* to the arcade floor, which was an unreleased prototype game from Sega in 1991 that was recently found in Portugal. We currently have 80+ games that we are the *only* arcade in the U.S. (if not the world) to have on the floor. We currently have several other prototype games that we plan on releasing soon!

Interested in finding out more about The Galloping Ghost? Here's how you can!

Check out The Galloping Ghost on Facebook:
facebook.com/GallopingGhostArcade
or our websites GallopingGhost.com
or check out the arcade in person at:
9415 Ogden Ave. Brookfield, IL 60513

Want even more on *Primal Rage II*? Visit www.ReadRETRO.com for an additional interview about the game with Pete Hahn, the world record holder for both *Primal Rage* games.

SETH KILLIAN: A True Fighting-Game Revolutionary

by **Daniel Kayser**

As one of the founding fathers of the EVO Championship Series, an annual fighting-game extravaganza that has grown to be the largest live tournament *in the world*, you might expect Killian to exude levels of enthusiasm and even aggression that are often associated with the genre. However, I've come to know Killian rather well over the years, and the opposite could not be more true. Anyone meeting him for the first time will be fascinated to find a relaxed, humble, honest, interesting, and downright pleasant person. Obviously, the irony of the contrast between his real-world personality and any perceived persona is not lost on me.

With *RETRO* celebrating all things fighting in this edition, I couldn't pass up the opportunity to interview this major player in the fighting community. From gaining insight into the strategic elements of fighting games to understanding the importance of getting into the mind of your opponents, learning about the dramatic impact *Street Fighter II* had on his life and even his admiration for, of all things, Karnov's belly, I'm happy to present my interview with one of the fiercest fighting-game opponents — and friendliest folks — you'll ever meet.

RETRO: First off, what is it that you love most about fighting games?

Seth Killian: I love fighters because they're just a really primal, one-on-one test of will, game knowledge, and decision making. To get good, you have to see directly into the mind of your opponent, and fighting games give you a lot of chances to test your guesses in a very short time period.

The way people think is endlessly fascinating to me, and fighters require you to really put yourself in the opponent's shoes. You can see how they think, and even their emotional and psychological attitudes about the world. Is this guy a bully? Does she crack under pressure? What is my opponent's safe happy place, and how can I mess that up for them? There's an immediacy and elegance to fighters that never gets old for me.

RETRO: When you cofounded EVO, did you ever think it would grow into what it is today? Which aspects of the tournament are you most proud of?

SK: I was told that EVO is now actually the largest live tournament in the entire world. Lord knows none of us that worked on EVO ever expected it to grow into anything like that, but we always believed deeply in these games. In spite of the growth, the thing I'm most proud of is that it's open to anyone and still feels more like a family reunion than a show. People come together to play, to compete, and just to have a good time. EVO definitely puts on a show, but there's a feeling of genuine camaraderie and human connection in the room, even beyond what I've seen even at major sporting events. People are there because they love the games and each other. The line between spectators and players isn't there in the same way because anyone is welcome to compete, just like at the arcades we started in 20 years ago.

RETRO: What are some of your favorite early arcade memories that caused you to connect with the genre?

SK: I grew up in arcades, and while I loved many, many games there, *SF2* hit me like a lightning bolt. It showed up while I was in high school, and was a perfect opportunity for a skinny nerd to compete with scary strangers, plus you could just feel the depth radiating from it. This was before the modern internet, before online games, and it was a perfect fit for my competitive side. For me, the magic of the game was closely tied to the magic of the arcade

Clockwise from upper left: **Killian has made his mark on many games, including PlayStation All-Stars Battle Royale; Fans must get a kick out of seeing Killian in an actual game; Choosing your fighter well is a critical component of victory; The EVO Championship has grown into a global event.**

and growing up in general. Getting out of the house, piling into someone's borrowed car, blasting punk rock through the suburbs, and heading to a familiar but just slightly scary arcade, followed by late-night taco runs, etc. My memories of *Street Fighter II* will forever be tied to good friends and the good enemies that forced me to focus and improve myself in a way I hadn't really done before.

RETRO: This year marked the 10-year anniversary of Daigo Umehara's unbelievable performance against Justin Wong in *Street Fighter III: 3rd Strike*. What did that moment mean to you and the fighting game community as a whole?

SK: The moment itself was incredible, but I think its lasting impact on the fighting-game community was the reaction it got from the wider world. It was a perfect snapshot into the magic we'd all shared for years — and *we* knew it was magic — but I think there was something really affirming for everyone in the community when they saw that people outside of our bubble could get excited by it, too. I think it collectively made us feel like "Wow, I guess we aren't just crazy," and like there was a ray of hope — a future for a genre that had been struggling. It showed millions of people what it meant to get hype, and let them share in our genuine, very human reaction to watching people play a videogame.

RETRO: While the fighting-game community is super passionate, it seems that it's hard for new games to gain a foothold. What do you think it takes to make an impact?

SK: That's the continual struggle for the fighting genre — do you play to your hardcore current fans, or do you try to invite new players to the party? Striking the right balance is very difficult, and even the greatest fighting franchises in the world have a spotty track record there, with some of the most cherished games among the hardcore also being some of the least commercially successful. *Smash Bros.* was able to find success and do something original, but they had help from an all-star cast of Nintendo characters and even there it's been a long time since those core innovations. I think there are glimmers of hope from indie developers, with games like *Nidhogg*, *Towerfall*, and *Divekick* doing something new and making some waves, but fundamentally it's just a really hard problem. I think part of the answer is making fighting games a live option for a new generation of players. Most of what you see today is prettier to look at, but essentially the exact same kind of thing you could drop into an arcade 20 years ago.

RETRO: Fighting games seem best played in person — especially with a crowd around to cheer the players on. Can playing fighting games online ever have the same impact?

SK: Honestly I think almost every game gets better with a crowd and people cheering! You can watch speedrunners tear through single-player at Games Done Quick with a lot of hype, and multiplayer games like *League of Legends* and *DotA2* are online only, but still put together live finals that are electrifying for their players. With fighting games, for a long time we just didn't have a real choice between live or online (online was way too slow), so a lot of our competitive culture is built straight from the face-to-face experience. So yeah — cheering crowds do a lot for any game, but even today we haven't found a fighter that really focuses on online play. I obviously love live events, but it would be great to have a real option to play seriously at home, too.

RETRO: The mobile market has been growing tremendously over the years, but do you truly think a fighting game can exist on mobile platforms that would be relevant to the community? If so, what would be necessary to make that happen?

SK: Right now, the best things about fighting games are the worst part of the mobile experience. Mobile devices are just too small for two players on one

TOP ROW: Killian calls the competition at a variety of events; BOTTOM ROW: Crowds gather to get their game on while some stop for a photo op with Seth.

device, but they also have a shaky track record of synchronous (is that the opposite of asynchronous?) online multiplayer. When you add that to the fighting genre's focus on twitch-style action, they aren't a great natural fit. Online tech is only going to improve, so maybe you could make a game that had a slightly slower pace, using touch and sweep to capture the kind of movements you see in something like tai chi? To find success on mobile, I think you have to embrace the strengths of the platform rather than fighting them with weird virtual joypads and buttons. It would take a different style of approach but I think it could be great.

RETRO: Alright, I have to ask. Can you tell us some of your favorite fighting characters?

SK: Ryu and Guile rank pretty high up there for me. They aren't just characters, they are total archetypes, and their moves define a huge chunk of the entire genre. Mastering them taught me more than I've learned from just about anything else in games, and you have to look hard to even find a fighting game that doesn't have a take on "Ryu" in it, which is a testament to true icon status. I also have a very soft spot for Karnov from *Fighter's History Revenge* (aka "*Karnov's Revenge*"). He's just insane and such an obviously terrible candidate for a star character. I love his belly.

RETRO: Are there any past or current trends in fighting games that you really don't like?

SK: I think there are a lot of fighting-game mechanics that are physically harder than they really need to be. There are often valid and interesting reasons why they ended up the way they are, but at the end of the day you have some truly crazy input requirements just to play a normal match. It can be a special feeling to master those techniques, but for every person who does master them, there are probably 20 more who might be great strategists but just couldn't do that standing 720 input. Fighters will always have a high skill cap, but I'd like to see less emphasis on that stuff so more people can discover the real magic behind the games. Depth and complexity aren't the same thing!

RETRO: Beyond fighting games, what other games are you into?

SK: The things I love most in games are new ideas, tight mechanics, and emergent play from complex systems. Fighting games are very good with emergent play and mechanics — that's basically most of what they are — a flexible toolset for creating problems for your opponent, and I still play every new release. Fighters aren't as good with crazy new ideas (mostly for good reason) so to get my fill there, I also play a lot of experimental games. Lately I've been playing *Far Cry 4*, which has a lot of those emergent complex systems in an open world, as well as playing through the games of Stephen Lavelle, aka "Increpare." They are amazing for shaking up your perspective.

RETRO: After a long tenure at Capcom, you officially left Sony Santa Monica earlier this year to "do your own thing." And if your Twitter feed is any indication, you've been doing a lot of travel lately. From Canada to Singapore to Hawaii and more...Is any of that work related?

SK: The travel is a mix of both work and friends — it's hard to keep that balance but I've learned how important it is, not just to your life overall but also to doing good work and staying at your best. Sony was a fantastic time for me but I had the chance to try and build my own thing from the ground up, and I took it. I have a team of pretty amazing people working with me, and I hope I'll be able to show people at least one of the things we're working on in 2015. We've had a lot of fun with it, and hope other people will too.

RETRO: Thanks so much for your time, Seth! It's always a pleasure talking to you! Tell everyone how they can follow you online and thanks again for being a part of *RETRO*'s special Fighting Game Edition!

SK: You can find me online at @sethkillian (or better yet, come out to a tournament and introduce yourself there). *RETRO* is a treasure and it's been my privilege!

WARREN SPECTOR

HOW LUCK LED TO AN ILLUSTRIOUS CAREER IN GAMING.

BY ANDY EDDY

The earlier game-development pioneers didn't have the benefit of college-degree programs or specialized schools in which to learn their craft. Frankly, a lot of them got to where they are by knowing the right people — and often with a healthy dose of luck. Warren Spector isn't shy about that when it comes to the start of his now-legendary career.

"How did I get into games? Pure luck," Spector says. "I was an avid player while I was working on my master's degree and then my (never-completed) PhD. There came a point where the university didn't have a class for me to teach when, out of the blue, I got a call from Steve Jackson Games about an 'assistant editor and game developer' position. Next thing I knew I was a game-dev pro. That was my start in tabletop games."

He says he went from playing any tabletop game he could get his hands on — including being a fan of such Steve Jackson Games titles as *Ogre* and *Illuminati*, and "hardcore wargames" from Avalon Hill and SPI — to actually working on new products at SJG. It wasn't long before he felt "frankly, kind of bored with the tabletop-game world and needed new challenges." And that's when good ol' serendipity struck again.

"A guy who I'd worked with at SJG called to tell me Origin was looking for an associate producer," Spector recalls. "Next thing I knew I was a computer-game developer. Like I said, all luck. Right place, right time."

That move to work with Lord British (Richard Garriott) and his development crew at Origin started him on a spectacular career in videogames that took him from Origin to Electronic Arts to Looking Glass Technologies to Ion Storm to Disney Interactive. It also included working on such iconic titles as *Wing Commander*, *Ultima VI*, *System Shock*, *Thief: The Dark Project*, *Deus Ex*, and *Disney's Epic Mickey*. His electronic-game career spans about 25 years.

Today, his career path has taken a slight departure from creating interactive products to helping instruct others how to make games.

"I'm working full time as director of the Denius-Sams Gaming Academy, part of the Moody College of Communication at The University of Texas at Austin," Spector tells *RETRO*. "Early on, I thought I'd keep some small game-development effort going on the side, but this teaching stuff really is a full-time job!"

Looking back, when asked what games are his favorites from among the ones on which he's worked (and after complaining how much he hates answering that question), he cites *Deus Ex* ("It came so close to meeting the goals I hoped we'd achieve when I first imagined the game") and *Disney's Epic Mickey*.

"[Being] a part of Disney history is pretty amazing," Spector adds, "but it's also because I've received so much mail from people who were touched by the game, whose lives were genuinely changed by the game. Talk about inspiring!"

By the way, Spector also notes that he's "insanely proud" of *Epic Mickey*, "because the team and I got to reintroduce Oswald... to the world."

Do you remember what Oswald's full name is? It's Oswald the Lucky Rabbit. Yes, it seems there's a lot of that orbiting Spector's world.

ANDY EDDY has also had his share of luck, with a game-journalist career that's lasted over 26 years. If you have comments about this column or recommendations for who you'd like to see covered in a future installment, you can reach Andy at andy@readretro.com.

INTERVIEW

Industry Icon: Richard Garriott

by Matt Barton

Lord British weighs in on preserving old worlds, creating new ones, and his out-of-this-world hobby.

Richard Garriott de Cayeux, better known by his fans as Lord British, is a celebrated game designer and publisher. The son of an astronaut, Garriott himself went to space in 2008 — the ultimate vacation for this lifelong fan of science and fantasy. The trip cost him a cool $30 million, a fortune that must have seemed like a distant dream in 1979 when he sold his first game in the local ComputerLand store in Clear Lake City, Texas. That game, *Akalabeth: World of Doom,* was an impressive feat for this self-taught BASIC programmer, but it was his next, *Ultima,* that put him on the (cloth) map.

Disappointed with the way he was treated by publishers, Garriott launched Origin Systems in 1983 with his brothers, dad, and his old friend, Chuck "Chuckles" Bueche. Origin published several major hits for DOS, including *Wing Commander* and *System Shock*. In 1997 the company launched *Ultima Online,* a breakthrough product that became the first truly *massive* multiplayer online role-playing game.

Garriott has never been ashamed of his nerdiness, always eager to don medieval attire and revel with his fellow fantasy fans at renaissance festivals and events hosted by the Society for Creative Anachronisms (SCA). He's also legendary for his fantastic themed parties, and lives in Britannia Manor — a medieval-themed house complete with trap doors and secret passages. Among the crossbows, shrunken heads, automatons, and caveman hair you can also find a spacesuit and, of course, all the Apple II and *Ultima* memorabilia you could ever hope for.

Recently, we sat down to chat with Garriott about his travels in games and the great beyond to learn what made Lord British tick. Let's sally forth, shall we?

RETRO: When you were making the first *Ultimas*, did you imagine that people would still be playing and collecting things for them 30 years later?

Richard Garriott: Of course not. After *Akalabeth,* and *Ultima I* and *II*, I didn't assume there'd be another one after that. It was only after *Ultima III* that I finally went — yeah, this might be going on for a while. So I needed to get serious about it, doing actual forward planning instead of just thinking, "Oh, yeah, I guess I should make another one! What am I going to do about that?"

Later, when I was doing *Ultima V* or *VI*, I heard an author named Bruce Sterling give a talk at GDC. He said, "Hey, you guys doing computer games, you have the exact opposite problem that I do. As a book author, I try to write the best book that I can. And that book is going to be judged against every other book that's ever been written. The chance of that happening is really, really low. But even if I make it to the top 10, it's going to be remembered for a long time. You guys have the opposite problem. The probability of writing the best game ever is pretty high — there's only been a few decades of games, and the art form has gotten much better since its infancy. In fact, even if you wrote the best game ever today, the art form will be better tomorrow — and the machines they work on. It's not going to stand for long. Not only is it going to be beaten, but the machines they run on today will go away."

I sat there, and it was like he was talking right to me. Here I am, writing games since the beginning of the industry, and I'd like to believe that some of them are at least okay. But even I didn't have an Apple II, so I hadn't seen my own works in a decade. I took it upon myself as a challenge to always keep a machine running, so I can at least run my own works.

Fortunately, now with emulators and rewrites, a lot of people are bringing back the early games. They're being refreshed.

RETRO: So do you do a lot of retro gaming?

RG: It depends. The retro gaming I do is when I find an old machine that has a game on it that I like. I still occasionally fire up *Parappa the Rapper,* because I still think the original game is completely brilliant. It was the only time I went out and bought a piece of hardware just to play a game.

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"I DIDN'T CARE IF IT COST ME EVERY PENNY OF MY LIFE SAVINGS, WHICH IT DID, I WAS GOING TO GO TO SPACE."

RETRO: Do you collect other vintage systems besides the Apple?

RG: Yes. I have a couple of the old Vectrexes. The reason I like that machine is the vector graphics. You look at the generation today, they literally [have no idea] what that means, much less how it works or why it's interesting. I keep those because of that period of time they encapsulate.

RETRO: What does your personal game collection look like?

RG: Of course I have one of everything Origin ever made. But if you look at computer games, it's pretty spotty after that. In the era of emulators, I didn't need to have physical copies. I still have things like board games, slot car games. I'm a huge fan of something called *Total Control Racing*, which was a slotless, head-to-head racing game, where you can change lanes instead of being stuck in a slot. Most of these things I collect because they represent a technological cleverness that I admire.

RETRO: I remember last time we talked, you showed me all your old notebooks where you keep detailed notes for all your *Ultima* games. I imagine you must have the ultimate *Ultima* treasure trove full of collectibles.

RG: It's amazing how useful that is. For example, if you're going to build a tile set — say a coastline. For that, you're going to need a tile that is one side grass, the other water, and the inside corners, and puddles. Eventually, you get a set that builds into a pattern. I've built tile sets with traditions like that many, many times. I became an expert in finding the exact minimum number of tiles to create coastlines, dungeon connections, room interiors and exteriors...I've drawn these out on graph paper many, many times. And we still need those today. The tools we have are a lot more sophisticated, and the pieces are more complex, but unless you focus on doing them with the minimal number of iterations, you can end up with an infinite number of pieces.

Every time we bring in new employees, I pull out the old guild books — I sit them down with 20-year-old documents, and explain how those minimum number sets work. I also show them how I did bitmapped graphics back in the day. When I was doing the early *Ultimas,* I didn't have paint programs. I planned out each tile of graphics on graph paper, and the color you perceived in your own mind, knowing that if you turned even or odd bits on, it would change color, or if you set bits behind it called color bits — you couldn't see those on graph paper, but they'd change the color set it was a member of. I wrote all this out on graph paper, typed it into hexadecimal, write a program to copy that hex to somewhere else in screen RAM, and hoped it worked. If it failed, you had to figure out where — on the graph paper, the conversion to binary, hexadecimal, copying it to the screen area...The debugging was an interesting challenge. Most new employees didn't grow up at this scary time, when you had to walk in the snow uphill in both directions to get to school.

RETRO: One thing that makes your games so collectible is all the great stuff inside, the cloth maps — who doesn't want a set of those? It seems amazing now that you had to fight with publishers to get those things included.

RG: My first two games, *Akalabeth* and *Ultima I,* for California Pacific, they came in Ziploc bags. That was the state of the art. When they went out of business and quit paying me, I moved on. I announced that I was going to be a free agent for *Ultima II,* and was looking for a publisher. I didn't know if anyone knew about *Ultima* or would care — it was still so early. I was very pleasantly surprised when every major publisher called me back and said, "Heck, yeah! You already have a successful lineup; of course we want to publish your game." Then I said, great — but I don't want my game in a Ziploc bag. I want a box. Oh, and by the way, I want the manual to be fictional, to give it more substance...and, I want a cloth map inside that box. All of these publishers dropped out except On-Line Systems, which became Sierra. They were the only company that agreed to publish my work.

RETRO: What are your personal favorite *Ultimas*?

RG: I have some very clear favorites. *Ultima IV* was the watershed moment in the series. With the first three games, I'd put in anything I wanted to pay homage to. The influences are obvious — the cloth map was from *Time Bandits,* space travel was from *Star Wars.* There weren't hobbits but there were bobbits. There were a bunch of things I borrowed. With *Ultima IV,* I sat down to create my own world and a story that was deep and relevant.

In hindsight, though, *Ultima IV* was still clunky. Once you figured it out, it was easy to live by its rules. The storytelling got better up through *Ultima VII,* which to me is the best. It's the deepest sandbox reality — anything in the world operates as you'd expect. The world was the deepest and most complete. It has a soft spot in my heart.

Then there's *Ultima Online,* our greatest success both commercially and the impact it made on the industry. Those three are my favorites.

RETRO: What are your thoughts on emulation and abandonware?

RG: Emulation is a good thing. If games were to disappear, fulfilling Bruce Sterling's predictions — that makes me sad. Not just my own games, but things we all look back on and find meaningful. It reminds me of the cinema industry. You may have heard of an early French cinematographer named Georges Méliès. He was very active prior to World War II. During the war, they melted down most of his films to make the plastic heels for shoes — something completely mundane. Then he was almost completely forgotten. But then people managed to find some individual prints that had been scattered around, put them back together — maybe half a dozen of hundreds, but still. They put those together during his lifetime, actually, and it was obvious what an impact he'd made on the history of cinema. For me, these early games being lost is terrible. The good news is that, through emulation, digital copies should be pretty good. We might still lose some of the context, though. We need to preserve things like tile sets, too, those are important for the industry — the ephemera of the production process.

RETRO: What game would you suggest for somebody who is just starting out with *Ultima*?

RG: Everyone has this debate — should I start with *Ultima I* and muddle through...I wouldn't go back to the beginning unless you've done it before. I actually think the three we just mentioned are the right way to jump into it. The order isn't important. They all stand alone well. If you enjoy those, you can deepen your experience by playing the others.

RETRO: I've been told that the characters in the *Ultima* games are based on real people; friends of yours.

RG: Oh, yeah. All of the avatar's companions are friends of mine from the SCA. One of them is my SCA name — so I'm in the game as Lord British and Shamino. The Mage of Honesty is Mariah, who was my assistant for 30 years, Michelle Caddel. Compassion was Lolo the Bard, who was David Watson — he really does make crossbows for a living, and that's what he does in the game. Valor was Geoffrey, who was Jeff Hillhouse, the first employee of Origin. Dupre the Paladin was Greg Dykes. You get the idea. All of us knew each other through the SCA.

Some of the stories about those characters were also from SCA. For example, *Ultima II* was the first time I had characters who could say something. This wasn't conversation — they could just say something. So I asked my SCA friends what they wanted to say. Dupre said he'd think about it and tell me tomorrow. The next morning he had it: "Do you want to buy a duck?" If a character buys a duck and keeps it, the duck lays an egg every day, giving you a small amount of food. If he eats it instead, he gets a giant meal, but no eggs. I said — wow, Greg, that's great, but I can't implement that. I just asked you what you wanted to *say*. So, I went ahead and put that in — "Do you want to buy a duck?" I knew full well the player wouldn't get it. We added a joke: Another of our friends said he wanted his line to be, "Do you know where I can get a duck?" This duck joke had no ending; no fulfillment.

Folks kept going up to Greg — Dupre — after that and asking what was up with the duck; how do they get one? It became a joke around the SCA. People gave him things decorated like ducks, or talk about ducks at feasts.

RETRO: What's the status of your latest project, *Shroud of the Avatar*?

RG: Great. As soon as we're done with this interview, we're going to do an internal load test of the multiplayer. Then we're letting our dev plus people in to test it with a heavier load. In a few days, hopefully, we'll be letting all the beta backers in for our next release. Knock on wood — we hope it goes well.

RETRO: Has it been resonating well with fans of the classic *Ultima* games?

RG: Very well. I'm sure you're very familiar with *Ultima*. Well, if you remember the interesting things that started to happen after we released *Ultima Online* — we had people who were into the stories of *Ultima*; they were looking for one type of experience. Then we had the people looking for the open, PvP world — they were looking for another experience. So, we had to do a balancing act. Again, now we have to prove to people that we really are fulfilling both desires. It's a challenge — one of the bigger ones. I think we have a strategy that will pull it off. We're just excited now that we're picking up new backers with each passing month.

RETRO: Did you hope to turn your success with videogames into an eventual trip to space?

RG: Not exactly, but I always had faith I'd manage to get into space. When I was very young, like most kids, I fantasized about going to space. But then when you get older, you realize it's going to be hard, even with the perfect education. Most people give up on it at that point. But since I lived right next to NASA, and my father and neighbors were all astronauts, I knew I was going to go someday.

It was a real shock when one of the NASA doctors told me I could never go, because I had to wear glasses. That was enough reason medically to prevent me from going. I was so shocked — this random doctor was telling me I couldn't go? I was like, that's not fair!

I then thought, well, if I can't go with NASA, maybe I should invent a civilian space agency. At the age of 13, it sounded easy. A lot of our neighbors, though, retired and got interested in privatizing something in space. I had all these people — actual astronauts — they needed a partner. I was doing okay in games, so I backed their efforts to go to space.

I backed four or five of those, but they weren't able to pull it off. I started to realize that these guys were hired as astronauts, not as entrepreneurs. They were trying to change the opinion of our national space policy; the government. The probability of doing that is very low. I got sad again.

There were only two options — NASA, who'd told us no, and the Russians, who we hadn't asked. They said no, too, but only because it would cost too much money just to see if it were feasible. We took that as a qualified yes. They just wanted money to do the study, and since we'd thought it would come back positive — after all, they'd trained and flew astronauts from other countries. Why should we be any different? So I put up a pretty big chunk of money for the study, with the assumption that I would be that first person. I'd just sold Origin to EA, so I was feeling very wealthy. They came back with a yes, and I had the money, and — that's when the Internet stock market crashed. So I had to sell the first seat to Dennis Tito.

I had to wait for the market to recover, build another company, sell another company, and as soon as I had enough money to pay for that seat — I didn't care if it cost me every penny of my life savings, which it did, I was going to go to space.

So, no, I didn't expect the games to get me there. But they did eventually get me there.

RETRO: Do you plan to go back?

RG: I do.

RETRO: I bet you'd like to go to Mars.

RG: Oh, yes, absolutely. My wife is not too excited about going to Mars, though. I'll have to blindfold her, spin around a few times, and sneak her into the spacecraft.

RETRO: Would you take a one-way trip to Mars?

RG: I would. My wife wouldn't. I'm very supportive of it, though, and I could convince her.

CLASSIC MODS: YESTERDAY'S FUN, TOMORROW'S HISTORY?

BY ALEXANDRA HALL

MODDING MAKES GAMES TIMELESS, BUT MODS THEMSELVES ARE LESS RESILIENT.

I'm retreating, half-dead; a god-like Sonic's hounding me. Speeding by a doorway, I glimpse Lara Croft tangling with Sniper Wolf and EVA Unit 01. Robocop's iconic theme rings out nearby, heralding his demise. Just as I'm about to reach the big keg o' health, I explode into gibs, a victim of Lt. Commander Data's shock rifle. "I believe I've experienced my first emotion," quips Data via voice clip.

I burst out laughing. Welcome to my ridiculous *Unreal Tournament*.

FOREVER INSTALLED (IN MY HEART)

I've loved PC game mods ever since finding *Wolfenstein 3D*'s map editor on a BBS. I love tailoring a game to exactly my taste. Don't like something? Change it. Enabling modders is one of id's greatest legacies.

But Steam patches can suddenly overwrite local files, potentially breaking mods. That's no recipe for longevity, so this past year I decided to create a static folder full of my favorite classic games, modded to the gills, forever ready to jump into for quick fun. Forever installs, if you would.

A CRASS MENAGERIE

That's when my *UT99* started getting strange. It's funny, as my taste in mods is typically pretty low key. My *Dark Souls* is 100% nyan cat-free, and my *Fallout 3*'s pretty damn grim. But something about *UT* makes populating its halls with videogame, anime, and film characters oddly appealing. Looking now, a few of the models are low quality. But for every dud, there are several nicely modeled pop-culture icons with, best case, hilariously glib voicepacks. I have more than enough familiar faces to fill large games, and it's surprisingly fun just playing bots.

May I confess? I also run four separate gore booster and three decal/corpse stay mutators, so when characters die, it's not dissimilar to a messy, crimson Fourth of July... which also makes me laugh. Don't judge?

SERIOUSLY THOUGH

There are lots of serious mods too, of course, including the modern OpenGL renderer, OpenAL audio (excellent 3D headphone surround), stupid-big textures, XBots and XMaps for bot/map management, enhanced items, two grappling hooks, dozens of mutators, and custom gametypes like Headhunters Classic and Monster Hunt. I've barely played the gametypes, but in a forever install, you wanna plan for rainy days, right?

LABORS LOST

Tracking down all this content today illustrates how ephemeral mod scenes can be. My google-fu is fierce, but many mods that once existed are simply gone. Sites go down, links rot, and mods effectively go extinct. It's terrible that these labors of love, so crucial to the scene in their heyday, can just disappear.

Between official preservation efforts, emulation, and piracy, I don't worry about commercial games' continued existence, but the same can't be said for many mod scenes. Communities like UT-Files.com sometimes attempt to compile modern archives, but much has already been lost. I hope modern mod repositories like ModDB.com, NexusMods.com, and Steam Workshop last forever, but can they?

YOU MUST BE THIS SKILLED TO ENTER

As a general rule, the newer the game, the fewer the mods. As fidelity increases, it becomes harder for people to create similarly detailed content. The graphically intense *UT3* has relatively few user maps and models compared to *UT99*, and not just because it flopped. Perhaps *UT 2004* strikes the best balance, able to display reasonably good-looking content that's not *too* difficult to create.

A FUTURE FOR FPS MODS?

Going forward, will we see many FPS games that are both reasonably beautiful and blessed with a plethora of high-quality, user-made content? More importantly, will another FPS ever play host to half the cast of *Smash Bros.*? Despite my doubts I'll hold out hope, given the enjoyment I derive from my irreverent *UT* modding. At the very least, the scene can rest assured that Megatron, Ripley, Samus, and Sailor Moon will continue their eternal clash on at least one player's SSD.

HOW QUAKE CHANGED EVERYTHING

BY ALEXANDRA HALL

QUAKE SET THE STAGE FOR THE NEXT DECADE OF 3D GAME DESIGN.

id Software's contributions to first-person gaming are inestimable, but 1996's *Quake* still stands as its single largest achievement. While a few earlier games, such as Bethesda's 1995 *Terminator: Future Shock*, pioneered isolated features, only *Quake* combined a dizzying array of cutting-edge ideas and technologies into a single package that irrevocably changed the first-person shooter landscape in ways still felt today.

TECHNICAL MASTERCLASS

Though widely regarded as a programming genius, even id's John Carmack faced numerous challenges in creating a fully 3D FPS that could run acceptably on the day's 8MB 486. Clever design and extensive optimization would be key, so id brought on famous assembly programming guru Michael Abrash to hand-tune key parts of the developing engine.

A FEW LESS STELLAR TRENDS

While *Quake* is a very fast game, Quakeguy ran noticeably slower than the blazing-fast, literally 57 mph Doomguy. As realism increased, FPS games would decelerate further; witness *Unreal 2*'s geriatric shuffling.

And *Quake*'s increased complexity and fidelity made it harder for laypeople to create their own content, a trend which only worsened as technology advanced.

Quake also suffered a famously rocky development which saw creative lead John Romero depart soon after, resulting in a confused setting, plot, and single-player game. Perhaps the earliest indication of id's later reputation for prioritizing tech over gameplay.

id combined numerous techniques to render *Quake*'s world with as few calculations as possible. Newly made maps required a lengthy compiling process that stripped away all excess surfaces, leaving only those a player could see. During gameplay, aggressive sorting algorithms further reduced the renderer's workload by culling all non-visible surfaces. A separate, z-buffer-enhanced rendering path optimized display of items and enemies.

According to Abrash, one of Carmack's great innovations was decoupling light and surface rendering. Lightmaps, "baked in" during map compile, provided fast and realistic shadowing which could be augmented by fancy but expensive real-time lighting effects. Countless later games used the techniques pioneered in *Quake*.

ARE YOU BEING SERVED?

Quake supplanted limited peer-to-peer networking schemes like IPX with a true client / server architecture based on TCP/IP, the protocol of the emerging Internet. Seeing that this paradigm shift resulted in a poor gameplay experience over modems, id created *Quakeworld*, which introduced client-side prediction to deliver smooth Internet play before broadband. Simple online play lead to players forming clans, and clans lead to eSports. Dominant players like Dennis "Thresh" Fong became the earliest eSports celebs.

ROLL YOUR OWN

id wrote most of *Quake*'s gameplay rules in a special scripting language called QuakeC, and then made this code available to players, who spawned lots of creative "mods" like *Threewave Capture the Flag*, *Quake Rally*, *Team Fortress*, and *Slide*. As with *Doom*, id later released *Quake*'s source code, enabling the source ports that allow us to enjoy greatly enhanced versions of the game today.

SOFTWARE RENDERING IS SO 1995

3D accelerator cards finally became worthwhile in late 1996, and id was there with vQuake, written for Rendition's Vérité chipsets. Soon after, GLQuake brought pretty, 3D-accelerated shooting to any accelerator that could support the free OpenGL standard. 3dfx Voodoo cards became geek status symbols, leading to today's preoccupation with GeForces, Radeons, and framerates.

GRAVIS GAMEPAD, BEGONE

A true 3D environment demanded a 3D control scheme: Enter mouselook. Now we take it for granted, but *Quake* is where many players learned how to control every future *Call of Duty* game. Meanwhile, a "console" let players enter commands to customize the game to their liking, even writing simple macros: a suitably complex interface for a complex game.

TRUE GAME CHANGERS

id's still around today, but in name only. Here's to that original bunch of creative, goofy weirdos who revolutionized the way we all fragged back in the '90s.

Kohler's Collect-a-Thon!
NESessary Evils

YOUR GUIDE TO BUILDING THE ULTIMATE RETRO LIBRARY

by Chris Kohler

The market for original classic games has never been hotter. Whether you're obsessed with collecting or just want to play your old favorites in their original format, you're paying more for old games than ever before. Each issue in Collect-a-Thon!, we'll break down the current collecting scene for a particular platform.

THE PLATFORM

From the ashes of the Atari crash, Nintendo revived the home videogame market when it released the Nintendo Entertainment System in 1985. It would go on to sell 34 million of these consoles in North America alone, introducing kids to *Super Mario Bros.*, *Legend of Zelda*, *Mega Man*, *Metal Gear*, and many more enduring franchises. Nintendo also pioneered the third-party licensing model — though many enterprising companies still made unauthorized NES games.

COLLECTING IT

Nintendo made NES games from 1985 until 1994, leaving us with a library of 677 distinct licensed games. That doesn't include unlicensed games like those from Tengen, Camerica, etc., of which there are another 90 or so. Since Nintendo cranked out so many millions of pieces of hardware and software, it's not that difficult or expensive to get your hands on a working NES and a modest library of the most popular games.

Nintendo's initial run of first-party launch games shared a common graphic design, from which they get their nickname "black box games." While none of these cartridges are particularly hard to find, the boxes and manuals can be very pricey depending on condition.

THE HOT ONES

Here are the games any collector would go crazy to find in a box of junk at a flea market. Every piece of these games, from the cartridge to the manual to the box, is worth big bucks.

Note: While the rarity of certain items rarely changes, price often does — both up and down. These prices are generally accurate as of early 2014, but anything could happen.

***Stadium Events* (1987)**

Even though this is the rarest licensed NES game anywhere, you've probably played it — it's the original version of the Power Pad game *World Class Track Meet*. Bandai only released a few of these before Nintendo bought the rights and renamed it. Collectors who want the full run of 677 licensed games all fight over the handful of *Stadium Events* that are out there. A loose cartridge can bring over $3000, and a complete-in-box copy might go for $20,000 or more.

***The Flintstones: Surprise at Dinosaur Peak* (1994)**

Taito was one of the publishers that kept making NES games late into the system's lifespan, and this is the rarest. (It also sucks.) Cartridges can sell for over $600, and boxed copies over $1500.

***Little Samson* (1992)**

Another Taito game, but this one is actually a fun, original platformer. Being sought after by both players and collectors means this is almost as expensive as *Flintstones* even though it isn't as rare. Expect to pay upwards of $500 for the cartridge, and $1100 or more complete.

***Bonk's Adventure* (1993)**

Did you know that Hudson Soft made a version of its prehistoric TurboGrafx-16 platformer for the NES? Did you know that to play it you'd have to fork out about $250 for the cartridge alone?

***Bubble Bobble Part 2* (1993)**
***Panic Restaurant* (1992)**
***Power Blade 2* (1992)**

This trio of Taito releases isn't quite as hard to find as *Samson* and *Flintstones*, but still rare enough to merit about $200–300 for each cartridge and upwards of $600 for complete-in-box copies.

***Zombie Nation* (1990)**

The one-and-only NES release from obscure publisher Meldac, it's a bizarre shooter in which you control a giant flying samurai head who comes to the United States to kill zombies. The cartridge goes for about $150.

***Donkey Kong Jr. Math* (1985)**
This NES launch game comprised the entirety of the NES "Educational Series." Apparently kids didn't want to learn addition from a gorilla. The cartridge is only worth about $30, but a mint-condition box can bring over $1000 by itself, with that price going down as the box acquires more wear.

***Stack-Up* (1985)**
This NES launch game required R.O.B., the Robotic Operating Buddy accessory. It came packaged in a large box that held the hands and blocks that R.O.B. used to play it. While the cartridge itself goes for about $45, a complete set is much harder to come by and goes for upwards of $350. Make sure all the parts are in the box!

UP AND COMING

If you're trying to complete a NES collection, you'll be dismayed to hear that there are many more games that are approaching $100 for just a cartridge, and much more for a complete copy. But it wasn't that long ago that *Little Samson* and *Panic Restaurant*, for instance, fell into this category. So if you really want these games, you might consider dropping the cash now in case they go up in value later.

Capcom was one of the great NES publishers, and some of its latter-day games are quite hard to find: *Mighty Final Fight, Snow Brothers, Gargoyle's Quest II, Chip 'N Dale's Rescue Rangers 2*, and *DuckTales 2*. The six *Mega Man* games have also been steadily increasing in value. Mint-condition boxes for *Mega Man* and *Mega Man 5* can get upwards of $100 each (2, 3, 4, and 6 are less rare).

Other late releases that are rare include *Dragon Warrior II, III,* and I*V, Contra Force, Pro Sport Hockey, Wacky Races, The Jetsons: Cogswell's Caper, Cowboy Kid, Gun Nac, Teenage Mutant Ninja Turtles: Tournament Fighters, Color a Dinosaur, Battletoads & Double Dragon, Fire 'N Ice, Dragon Fighter*, and *Bomberman II*. These cartridges alone can sell for between $50 and $100.

UNLICENSED, NOT UNLOVED

If you remember buying or renting unlicensed NES games, the two companies whose products you most likely came in contact with were Tengen and Camerica. None of their games are particularly rare today. Tengen's unauthorized version of Tetris actually used to be worth much more money than it is now; the cartridge can be had for about $35.

The pricey unlicensed games are from more obscure companies. There was the infamous Wisdom Tree, a maker of Bible-themed games. *Sunday Funday* and *Bible Buffet* are the hardest-to-find games from its catalog (though the extras aren't as rare as the games, because Wisdom Tree recently sold off tons of mint-condition boxes and manuals from its storage facility).

Similarly, some games from Color Dreams aka Bunch Games are common, while others are very hard to find. The big ones include *King Neptune's Adventure, Castle of Deceit*, and *Secret Scout*. And we'd be remiss if we didn't mention the X-rated porn games from Panesian — *Bubble Bath Babes, Hot Slots*, and *Peek-A-Boo Poker* — which go for $500 or more loose, and over $1000 complete.

Finally, there are some multi-game cartridges with original titles (as opposed to copyright-violating 100-in-1 carts) that can go for quite a bit; these include *Maxi 15, Action 52*, and a 6-in-1 game produced by both Caltron and Myriad. The Myriad version can cost $1000 loose and $2000 complete.

SPECIAL EDITIONS

Some NES collectibles were given away as contest prizes — or were never intended to be available to the public at all. The most famous are the *Nintendo World Championships* cartridges, used in a 1990 national tournament. Gold versions of the cartridges given away by *Nintendo Power* are worth over $20,000; gray cartridges given to the finalists around $10,000. Similarly, a cartridge used for a college event called *Nintendo Campus Challenge* has sold for over $20,000. Collecting of NES prototype cartridges — the development carts used by publishers while they created the games — has also taken off in recent years. The most valuable prototypes are games that were never officially released, like the NES versions of the classic role-playing games *Earthbound* and *Final Fantasy II*. But even prototypes of released games can be worth money, especially if they differ significantly from the final version.

AVOIDING FAKES

As the prices of NES games spiral higher and higher, there is more incentive for unsavory types to attempt to cheat unsuspecting collectors. As you might imagine, fake *Stadium Events* are quite common. Ask sellers to open the game up and show you the board inside, then compare it to a real *Stadium Events* circuit board, photos of which are easily found on the Internet. Another scam is the rare game with "no label." This is often a fake board with rewriteable EEPROM chips inside a blank NES shell. You can often tell fake games by comparing their labels to real ones and playing spot-the-difference.

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PRIMAL SOUP: RESOGUN AND DEBT OWED TO DEFENDER

by **Jeremy Parish**

How an arcade classic influenced the hottest game on PlayStation 4.

Savor the delicious irony of the PlayStation 4: While experts generally agree it's the more powerful of the two newly launched next-generation consoles (and thus the most powerful console ever), its standout day-one exclusive wasn't a big-budget would-be blockbuster like *Killzone* or *Knack* but rather a smaller, download-only creation: Housemarque's *Resogun*. The simple fact that PS4's hottest property was an independently developed digital title isn't the irony here, of course. On the contrary, that's more like a taste of things to come.

Nah, what makes *Resogun* so interesting is that at heart it's basically Eugene Jarvis' *Defender*. The bellwether for gaming's future amounts to a 30-year-old arcade game.

I can certainly think of worse inspirations. *Defender* may be old news today, but in its time it shook up game design, introducing both new technology and new concepts in a compact package designed to keep players entertained for a couple of minutes, max. Consider how many games grind along for dozens of hours without ever presenting anything new or interesting; *Defender* blew your mind in 60 seconds.

Before *Defender*, games rarely scrolled, and when they did it was always fixed or forced, and always in a single direction. *Defender* let you scroll freely backward and forward at your own pace, laying out its world in an infinite loop of rugged scenery.

Well, maybe "let you scroll freely" isn't entirely accurate; it would be more correct to say *Defender* forced you to dart backward and forward constantly in a desperate struggle to stay ahead of your foes. *Defender*'s enemy formations were relentless, an endless onslaught of invaders demonstrating a variety of behaviors. Some descended in an effort to abduct the helpless humans scattered across the landscape, while others homed in on you to harass and distract you from preventing the abductors from completing their grim work. An alien who successfully spirited away a human would absorb its victim and power up, becoming a deadly Mutant bent on (and more often than not, capable of) destroying your craft.

To even the odds somewhat, *Defender* introduced a second new innovation to arcade games: the mini-map. Most of the screen's top row consisted of a condensed radar that showed the relative positions of your ship,

every alien craft, and ground-based humans. A quick glance offered a quick tactical overview of the entire game — a major advantage. Then again, parlaying that advantage into action was more easily said than done, as *Defender*'s insanely fast pace made for an intensely challenging game even for those forearmed with information on their enemies.

Defender used a spare visual style — thin outlines on stark black — to keep the action clipping along at full steam. Despite using a traditional raster monitor, *Defender* could easily be mistaken for a vector game both in style and speed. Even your ship's projectiles seemed to imitate vector technology, with a bright leading point followed by a fading trail.

What makes *Resogun* interesting is the way that Housemarque interprets the various elements of a decades-old arcade title for a cutting-edge console.

Altogether, these traits gave *Defender* a reputation for being one of the most challenging arcade games of its era — though never unfairly so. Everything you needed to know and do was right there, laid out for your use. But *Defender* offered no quarter, unlike gentler games such as *Donkey Kong* and *Pac-Man*; it immediately set about destroying you at breakneck pace.

Resogun draws almost all of its inspiration from *Defender*, from the two-direction movement and shooting, the endless-loop stage design, and even the need to prevent human abduction by alien captors. What makes it interesting is the way that Housemarque interprets the various elements of a decades-old arcade title for a cutting-edge console.

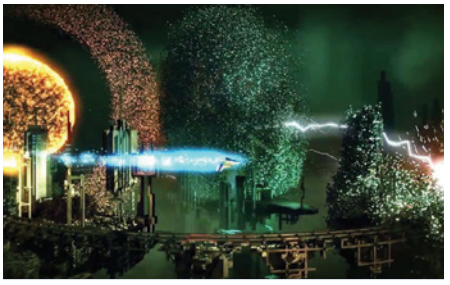
For starters, Housemarque's added a learning curve, something *Defender* sorely lacked. *Resogun* has five different stages with escalating hazards and increasingly tricky enemy formations, and it also offers several difficulty modes. The easiest difficulty is manageable, while the unlockable hard mode makes *Defender* look like a lazy Sunday in the park. Yet despite the lowered barrier to entry, *Resogun* maintains an element of inscrutability by not really explaining how its human-abduction mechanics work. Instead, you have to do the old-school thing and figure it out on your own through experimentation and observation. Meanwhile, it retains the classic arcade emphasis on scoring, meaning that mere survival through the constant enemy waves isn't enough; you have to avoid letting your combo meter wind down, too.

Even more interesting is the role played by the game's visuals. Where *Defender* used sparse graphics to avoid complicating the action, *Resogun* deliberately tries to overwhelm you by pouring on a kind of visual overload. The little enemy detonations of *Defender* have become billowing cascades of voxel particles; every bullet and burst emits a searing light. Everything is neatly color-coded and makes visual sense once you learn to read the screen, but developing an intuition for the action requires the same amount of dedication as mastering *Defender*'s radar.

Speaking of the radar, *Resogun* doesn't bother with that particular feature — it doesn't need to. The endless scrolling of *Defender* translates here into combat mapped onto a sort of cylinder, and as you move back and forth the world "rotates" behind you. The practical upshot of this is that you can see what's happening everywhere at once, including the appearance of abductors come to swipe your humans; their telltale red rings of light can be seen all the way on the other side of the cylinder.

There's no telling what Jarvis thinks of all this, but whatever *Resogun* lacks in originality it more than makes up for in its clever approach to adapting the specifics of *Defender* to work — often in very different ways — for a modern console. And more than that, it's welcome proof that regardless of how technology evolves, great game design is timeless.

Jeremy Parish works as senior editor at USgamer.net*, co-host of the* Retronauts *podcast, and grim overlord of gaming blog* 2-Dimensions.com*. Occasionally, he even finds time to sleep.*



Images from top to bottom: *Defender*, *Resogun*, *Defender* arcade cabinet

The bellwether for gaming's future amounts to a 30-year-old arcade game. I can certainly think of worse inspirations.

From Pixels to Paintbrushes...

THE ART OF ATARI

How the iconic images of Atari's past helped launch a legend

by Tim Lapetino

BEFORE JOYSTICKS HAD MULTIPLE BUTTONS, ATARI WAS FILLING THE GAP BETWEEN IMAGINATION AND CUTTING-EDGE 1970S VIDEOGAME TECHNOLOGY – WITH GORGEOUS ARTWORK AND DESIGN.

As any seasoned gamer knows, Atari is the granddaddy of modern videogames. Without *Breakout*, *Adventure*, and *Missile Command*, there would be no *Halo*, *Grand Theft Auto*, or *Tomb Raider*. The concept that you could play games using your television was still novel in 1977, and Atari was writing the rules as it went along. The Atari 2600 (originally called the Video Computer System) ended up being one of the best-selling videogame systems of all time, with an estimated 30 million consoles sold. This groundbreaking system ignited the popular imagination and spawned a $20 billion industry.

But the games themselves were only part of the story. Marketing and selling the games — in toy stores, video rental places, and even drugstores — was an integral part of sowing Atari into the consciousness of millions of potential players. So, Atari commissioned artwork, hiring a mix of established illustrators and up-and-coming young artists to flesh out the pixel-based worlds of their games. Without precedent or a seasoned industry to set the standard, Atari's artists had to rely on their own creativity, drawing inspiration from movie posters, dime-store paperback novels, and film.

None of this hard work would have mattered if the games weren't great, but that part of the story is history. The Atari 2600 initially languished on shelves and fended off competition from other upstart consoles, but after the introduction of its "killer app" in 1980's *Space Invaders*, the 2600 quickly became a sales behemoth.

The artwork was just one part of a marketing puzzle that included graphic design, advertising, and other elements, but through the lens of history, it's clear that the hand-rendered art created by Atari artists served an even greater role. At a time when graphics were much less sophisticated, these beautiful illustrations — depicting ships sailing on foaming seas, hedge mazes filled with dragons, and astronauts demolishing rainbow-hued barriers — served as an integral part of the overall game experience. These scenes helped flesh out the onscreen worlds of the games themselves, serving as an imagination bridge for game players who were new to the world of bytes and pixels.

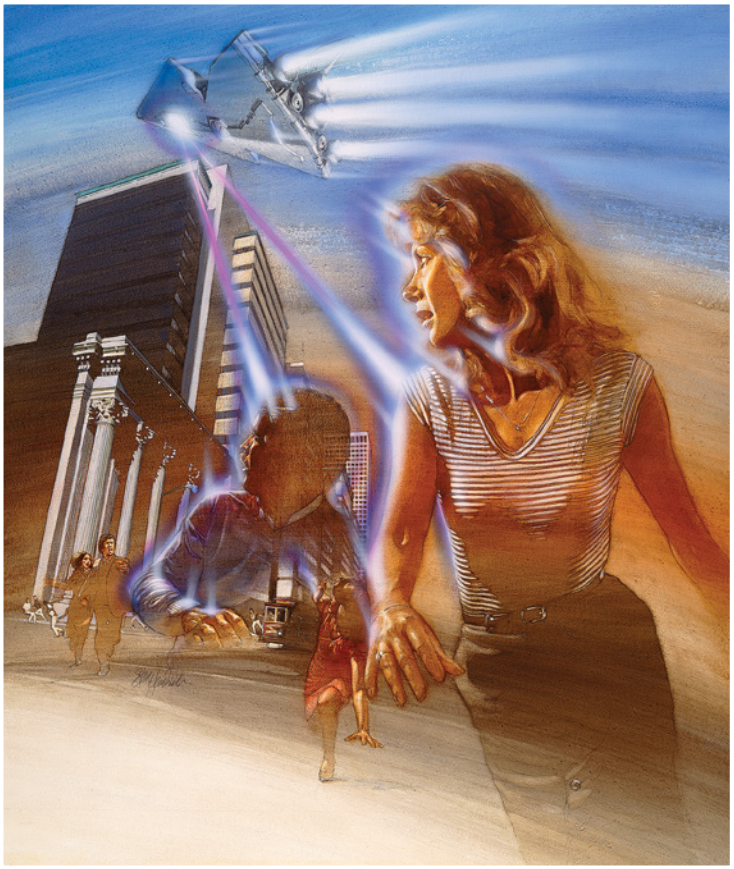
"The artwork was just one part of a marketing puzzle that included graphic design, advertising, and other elements, but through the lens of history, it's clear that the hand-rendered art created by Atari artists served an even greater role. These scenes helped flesh out the on-screen worlds of the games themselves, serving as an imagination bridge for game players who were new to the world of bytes and pixels."

Susan Jaekel, the Atari freelance artist behind *Adventure*, *3D Tic-Tac-Toe*, and *Circus Atari*, explained that it was a very open environment for creativity. "They didn't give many instructions," she said. "It was a very creative environment. They told us, 'You come up with the concept and create it.' These were very large pieces — maybe two feet by two feet — big paintings for them."

Staff artist Hiro Kimura had a consistent process he applied to his work at Atari. "My approach was to first talk with the programmer to see what the game is about, and which features he'd like to see emphasized in the image. Then I played the game if it was available."

"My favorite medium was acrylic, but I sometimes used airbrush as seen in *Joust* and *Pengo*, with water-

CHASING DOWN HISTORY ONE PIXEL AT A TIME



PRESERVING MEMORIES BY PRESERVING ARTWORK

Unlike in today's digital age, artwork from Atari's heyday chiefly existed in physical form, and this means that only a fraction of it has survived. Atari's struggles as a company also complicated the matter. When the company laid off workers and consolidated operations in 1984 and 1985, much of the artwork was thrown out or destroyed, and employees left in charge weren't aware of its value or importance. Sadly, this process was repeated at Atari and at other game companies.

Often, artists were unable to retrieve their original artwork, and occasionally executives or other employees "helped themselves" to favorite works, with some pieces ending up framed in their homes. Even the current owners of the Atari brand don't have access to originals or much reproduction-quality art, as the work has been scattered to the winds. What still exists now is either in the hands of private collectors, or floating around in the form of production artwork — slides or large-format negatives which can be scanned and used for reproduction.

Some collectors have devoted themselves to tracking down this artwork. Adam Harvey is the owner of Videogame & Record Exchange in Ohio, and an avid collector of videogame art. He purchased his first Atari images on eBay many years ago, from a former Atari employee. Harvey explains: "Not only did [this artist] have a few examples that he had done, but he also had pieces from other illustrators as well. He sold me roughly 20 Atari paintings. My first art purchase didn't sink in, but this one did — this time I was hooked. Owning the original paintings today takes me back to that time. It's hard to explain, but seeing the image on the box isn't the same as holding the original in your hands. Little by little, I sold most of my rare games to fund my art collection, and I haven't looked back since."

Other artists and collectors share Adam's passion. Many enthusiasts and others with strong ties to Atari's heyday are excited about celebrating the work of this era and keeping those memories alive.

color and Dr. Martin's Dye." Kimura created artwork for games like *E.T. The Extra Terrestrial*, *Millipede*, *Yar's Revenge*, *Crazy Climber*, *Frog Pond*, and many others.

Kimura elaborated on creating the art for *Centipede*: "The original Atari arcade version of *Centipede* portrayed it as an astronaut in an alien landscape. I viewed it more as the *Hobbit*-like setting with a gnome as the hero, shooting sparks from his magic wand at the centipede and spider. I proposed the idea and it was approved. The only change requested by management after the painting was finished was to eliminate the sparks shooting from the wand, as they deemed it too violent. If you ever wondered what's happening in the artwork — why the centipede is splitting — now you know the reason why."

Dozens of other artists contributed artwork to Atari's games, across multiple platforms, including the 5200 SuperSystem, 7800 ProSystem, and Atari's line of computers. This great stable of talent included many fantastic illustrators, including the likes of Rick Guidice (who did visualization work for NASA) and Ralph McQuarrie (whose conceptual renderings are very well known to *Star Wars* fans), and many others.

Tim Lapetino is an author, speaker, and co-owner of a graphic design firm. He is currently working on a related book, tentatively titled Art of Atari: From Pixels to Paintbrush. *You can follow him on Twitter at @lapetin*

CURT VENDEL: SAVING ATARI'S HISTORY

Curt Vendel is well known in the Atari and classic-gaming communities as a champion of the Atari brand. He runs and operates the Atari History Museum, and has consulted and worked with Atari on multiple projects, including the *Flashback* and *Flashback 2* consoles. In addition to that, he and Marty Goldberg are partners in their own company, Syzygy Co, creating and publishing classic-gaming products and books. Since the late '80s, Vendel has connected with former Atari employees, utilizing interesting techniques to preserve the history of Atari. We discussed his efforts in an interview.

RETRO: How did you go about acquiring the Atari Museum collection?

Curt Vendel: Actually, I'm very close with two of the biggest and oldest Atari retail companies located in California. I would get calls every once in a while from them letting me know that Atari was selling some rooms of equipment to these companies and they would let me know if any prototypes or unusual stuff was in the things they'd bought. If it was going to be a big haul, I would sometimes book a flight and go out to California, because I knew that for everything Atari might be selling, they would also be throwing out just as much. So I'd rummage through Atari's dumpsters and find many important things. Then I'd also buy whatever the retailers would hold off to the side for me.

RETRO: So it wasn't just a matter of timing, but of knowing the right people and planning to be there. You're sort of like Indiana Jones!

CV: Some items have come by chance from former employees or their families contacting me through Atarimuseum.com to offer items for the collection. I have people who watch the flea markets and ham radio fests out in California, and I've occasionally found some gems on eBay, message boards, Craigslist, and other places.

RETRO: So where does your passion for Atari come from?

CV: Atari had a massive influence on me. It steered me into my career as a computer engineer. I loved everything Atari — they were in the arcades, home consoles, and computers — and to me, everything they made was the best. Some people collect stamps or butterflies, license plates or Elvis memorabilia. I collect Atari.

RETRO: What did you find that related to the graphic design, illustration, and art of Atari?

CV: I've either located or received everything from mechanical drawings, to pencil sketches, to airbrushed artwork — some of them are works-in-progress and unfinished. I have a great many, but I've done a bit of trading and selling to others who have a specific passion for videogame artwork. But I have several favorites that I've kept and have hung in my office.

RETRO: Why do you think schematics, artwork, and the like were not viewed as valuable at the time?

CV: Because they were past projects. In Silicon Valley, it's all about tomorrow — making something bigger, better, and faster. So, designs of the past just weren't very important beyond reference.

RETRO: Was Atari's lack of preservation effort a sign of the times? Do videogame companies see things differently today, and why?

CV: No, Atari was no different than others: Activision hasn't kept an archive, Midway was keeping an archive of its Atari Games/Williams/Sente assets, but they were discarded too. Companies just don't seem to care about their history. In the case of Atari, as it got sold, things were just tossed out. For all that I've managed to salvage and rescue, who knows how much is permanently lost forever!

RETRO: You maintain the Atari Museum online and also wrote an expansive book about the company's history. What specific lessons and moments in history are important for people to remember?

CV: It seems Atari was a mix of luck, risk, strategy, successes, and failures, all wrapped up in a lot of people who had no idea that what they were doing was changing the world and the future — they were just having fun!

RETRO: You're an engineer by trade, but what has the art of Atari meant to you?

CV: Engineering is art, and you have to appreciate art to be able to create. Atari had a very distinct look and feel — it was warm and inviting, while being future-oriented — making pieces of imagination become reality. It was high-tech and yet welcoming. It gave everyone a chance to feel like they were stepping into the future and touching tomorrow.

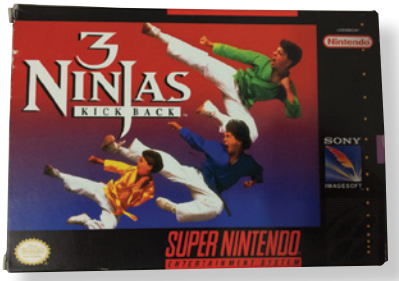
Kohler's Collect-a-Thon! YOUR GUIDE TO BUILDING THE ULTIMATE RETRO LIBRARY

BIZ SNES

by Chris Kohler

Illustration by Thor Thorvaldson

The market for original classic games has never been hotter. Whether you're obsessed with collecting or just want to play your old favorites in their original format, you're paying more for old games than ever before. Each issue in Collect-a-Thon!, we'll break down the current collecting scene for a particular platform.



THE PLATFORM

Nintendo isn't known for technological horsepower these days, but the Super Nintendo Entertainment System rode circles around the competition with its nifty graphical tricks and amazing audio processor. What resulted was an incredible library of games that still hold up today. Nintendo produced enduring classics like *Super Mario World* and *Zelda: A Link to the Past*, and third parties like Squaresoft, Konami, and Capcom delivered some of their best work ever. SNES was the golden age of sprite art; its gorgeous pixel aesthetic still looks great today.

COLLECTING IT

Exactly how many SNES games are needed for a "complete" U.S. collection is the subject of some controversy. There are 723 games with a product code ending in "-USA," although some may only have been sold in Mexico, some were only available as rentals, and two were sold through mail order only. One single unlicensed game was released during the SNES's lifetime — *Super Noah's Ark 3D*.

What makes SNES so expensive is that, unlike on the NES, the games players want to enjoy today actually weren't very popular when they came out. If you want to get copies of *Madden 93* or *Street Fighter II Turbo*, they are available in abundance. But *Castlevania: Dracula X* and *Earthbound* had low print runs.

THE HOT ONES

Here are the games any collector would go crazy to find in a box of junk at a flea market. Every piece of these games, from the cartridge to the manual to the box, is worth big bucks.

Note: While the rarity of certain items rarely changes, price often does — both up and down. These prices are generally accurate as of early 2014, but anything could happen.

Exertainment Mountain Bike Rally/ Speed Racer (1995)

Built for an exercise-bike accessory that let you ride your way to fitness using the SNES, this two-game combo cart was produced in very limited quantities. The cartridge sells for $1,000, and complete in box or sealed copies will get a multiple of that. (Don't be fooled by the *Exertainment* cart with only *Mountain Bike Rally* on it, which is very common.)

Donkey Kong Country Competition Cartridge (1994)

This special version of *Donkey Kong Country* was used for a series of competitions in Blockbuster Video and elsewhere. Nintendo then sold 2,500 of the cartridges, in yellow and green clamshell cases, through its mail-order catalog for $35 each. Today, they're worth about $800; over $1,000 if you have the case.

Star Fox Super Weekend (1993)

Your author actually participated in this nationwide competition, winning a *Star Fox*-themed floaty pen. He should have bought this cartridge, featuring a special version of the polygonal shooter, from Nintendo's Super Power Supplies catalog when he had the chance! Originally sold for $45, *Star Fox Super Weekend* now fetches over 10 times that much. It lacked a box but did include a small authenticity card printed in red ink, which raises the value.

Aero Fighters (1994)

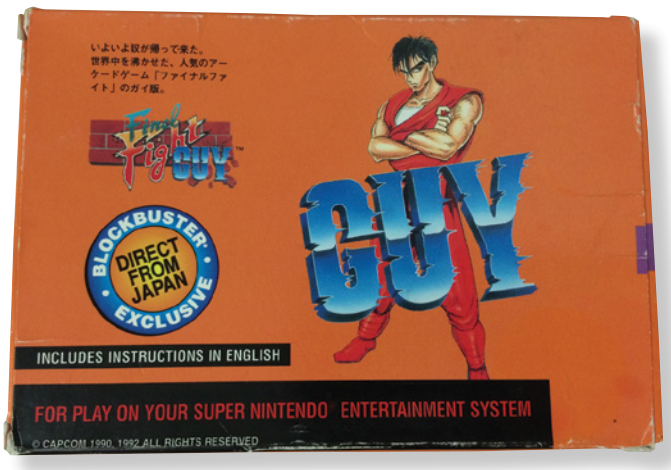
This vertical shmup is a port of the arcade game also known as *Sonic Wings*. The cartridge sells for over $300 and the box and manual, depending on condition, can push it well over $1,000.

Hagane: The Final Conflict (1995)

A side-scrolling action game published by Hudson Soft, this has exploded in value in recent years. The cartridge goes for $350 and a complete copy can get $800–900.

Wild Guns (1995)

It's not easy to rustle up a copy of this wild-west steampunk shooter, which can cost $250 for a cartridge and well over $500 complete.



Final Fight Guy (1994)
This isn't currently as rare or expensive as many other SNES cartridges, but the way it came to America deserves special attention. This is a special version of Capcom's beat-em-up *Final Fight*, with the Cody character swapped out for Guy. It was released exclusively as a Blockbuster rental, and the copies out there today were sold off by Blockbuster stores when they cleared out their SNES sections. Since every copy was rented, it's hard to find good-condition boxes and manuals.

ROLE-PLAYING RULES

The console role-playing genre came into its own on SNES, and it can be quite costly to assemble a collection of them — especially with the boxes, manuals, and foldout world maps that most games came with.

Although Enix didn't bring any of its Super Famicom *Dragon Quest* games to America, it did release a variety of other RPGs, the costliest of which are *Ogre Battle* and *EVO: Search for Eden*, the latter of which can get over $600 complete.

As for Squaresoft, *Chrono Trigger* and *Secret of Mana* seem to be its most prized releases today, with *Final Fantasy II* and *III* not far behind.

Other role-playing games of value ($50–100 for cartridges) include Nintendo's *Earthbound*, *Super Mario RPG*, and *Illusion of Gaia*; the two *Lufia* games, *Harvest Moon*, *Breath of Fire II*, and *Shadowrun*.

UP AND COMING

We're not done listing the rare and expensive Super NES games; not by a longshot. As more and more collectors enter the market to fight over a small supply of games, cartridges, boxes, and manuals for many other games have started to hit record heights.
Rarer SNES games include *Mega Man X2*, *X3*, and *7*, *Castlevania: Dracula X*, *Metal Warriors*, *Ninja Gaiden Trilogy*, *Pocky & Rocky 2*, *Super Turrican 2*, *Knights of the Round*, and *Demon's Crest*. *Incantation* and other games by the publisher Titus can be hard to get complete.

Some sports games that appear to have been sold predominantly (perhaps only) in Mexico can be costly, especially in nice condition. *Super Copa*, the *International Superstar Soccer* games, and the boxing game *Chavez II* are examples.

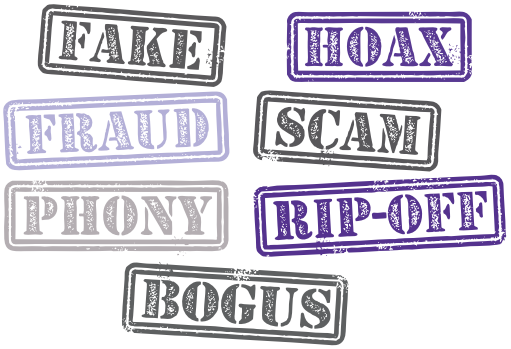
There are also four educational games for kids with chronic diseases — *Packy & Marlon* (about two elephants with diabetes!), *Captain Novolin*, *Rex Ronan Experimental Surgeon*, and *Bronkie the Bronchiasaurus* are hard to find.

And then there's the weird oddity of SNES collecting, wherein carts that don't cost much have boxes and manuals that are unbelievably rare. The most notorious is *3 Ninjas Kick Back* — a cartridge sells for $20, while a mint-condition complete copy recently sold for $2,000.

Even some relatively common games are getting absurd prices in great shape; it can cost $100 to get a complete *Super Castlevania IV* or *TMNT: Turtles in Time* nowadays.

SPECIAL EDITIONS

There were some Super Nintendo carts that were never intended to get out to the public. The U.S. army used a series of three cartridges called M.A.C.S. to train soldiers to shoot; these require a special realistic rifle accessory to play. And Nintendo did more competitions, and so a tiny handful of cartridges for *Campus Challenge* and *PowerFest* are floating around (expect to pay five figures).



AVOIDING FAKES

Since much of the value of Super Nintendo games is tied up in boxes and manuals, there currently exists a brisk market in counterfeit paper. Even if a seller advertises their fakes as being "reproductions," there's nothing stopping a less scrupulous person from buying these fakes and passing them off as real.

Get familiar with what real SNES boxes feel and look like, and if a box doesn't feel like it's made from the same cardboard stock, don't buy it! Ditto the labels on the games, which are also being reproduced now and can be used by scammers to fake a rare game.

Chris Kohler (@kobunheat) is the founder and editor of Game | Life, *the gaming channel of* WIRED. *He is a lifelong game collector and the author of the books* Power-Up *and* Retro Gaming Hacks.

PRIMAL SOUP:

TWO DIFFERENT VISIONS OF THE FINAL FANTASY LEGACY

by Jeremy Parish

Bravely Default and _Lightning Returns_ represent the two underlying forces that define the _Final Fantasy_ series: the familiar and the daring.

These are strange times for the *Final Fantasy* series. Square Enix made a number of miscalculations with the franchise over the past decade, and the whole debacle surrounding *Final Fantasy XIII* in particular left many fans cold. On the other hand, *Final Fantasy XV* seems promising, and disastrous online RPG *Final Fantasy XIV* has found new life as the excellent *A Realm Reborn*. The franchise is far from dead...but it is terribly, terribly confused at the moment.

That confusion was on full display back in February when two very different *Final Fantasy* games launched almost simultaneously in the U.S.: *Lightning Returns: Final Fantasy XIII* and *Bravely Default*. In fact, they were *so* confused that the latter game wasn't even called "*Final Fantasy*," even though that's absolutely what it was. Despite the name, fans of the series took to it far more enthusiastically than the game that actually contained "*Final Fantasy*" in the title, a fact reflected in their respective sales. How did we get to a point where an old-fashioned portable game that Square Enix didn't even want to release in the U.S. (Nintendo handled publishing duties for *Bravely Default*) outperforms the latest HD *Final Fantasy* game?

The clue is in the names of the games themselves. *Bravely Default*, for all intents and purposes, belongs to the *Final Fantasy* series. In fact, it began life as a sequel to *Final Fantasy* throwback spin-off *The 4 Heroes of Light*, which should be in little doubt given all the design elements it takes from *4 Heroes*. But as producer Tomoyo Asano has explained, the team decided to break away from the *Final Fantasy* name in order to give their project some creative breathing room.

Another important factor here is the way Square Enix treats *Final Fantasy* as a brand. The series began decades ago as a sort of Hail Mary throw for a studio about to go under, hence the "final" in the title. It succeeded and saved the company, but despite all the sequels that have appeared to that NES classic over the years, the games never lost that sense of desperation. They've always had a certain devil-may-care attitude about them. No two *Final Fantasy* games play exactly alike, and each new sequel feels almost like a reaction to the last. From the way *Final Fantasy II* abandoned the first game's systems to *Final Fantasy XV* evidently taking the form of a full-on action-RPG, the ultimate underlying theme of *Final Fantasy* is "change." Each game is "final," in a sense, because the next entry is going to be something totally different.

But it's precisely because *Bravely Default* feels so much like *Final Fantasy* that it's not quite *Final Fantasy*.

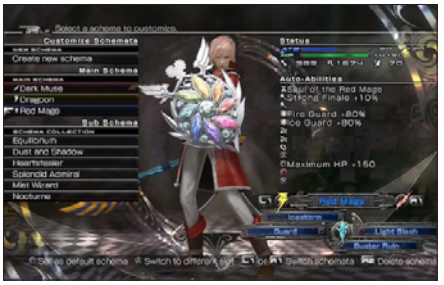
Bravely Default, on the other hand, plays like a deliberate throwback to classic *Final Fantasy*. It features a robust Job system, turn-based combat, classic enemies, and a rustic medieval world. In a lot of ways, it plays like a revamped version of *Final Fantasy V*: Four heroes come together to determine why the world's elements have begun to fade away, earn new Job capabilities, and struggle through a strange altered version of the world at the very end of their quest. But it's precisely because the game feels so much like *Final Fantasy* that it's not quite *Final Fantasy*, if that makes sense; the series as a whole rarely spins its wheels, making Bravely Default something of an oddity. A numbered *Final Fantasy* has only gone full-on throwback once, with *Final Fantasy IX*, and in hindsight that seems more a symbolic gesture than anything: It was the last entry directly helmed by series creator Hironobu Sakaguchi, and it stands as a self-referential tour through his magnum opus.

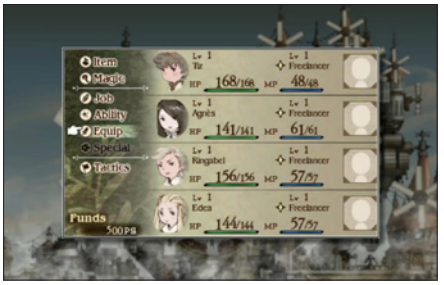
Now, *Lightning Returns*, on the other hand...that's *totally Final Fantasy*, because it plays like no other entry in the series. Oh, it incorporates a bunch of concepts from *Final Fantasy XIII* and *XIII-2*, but it does so in a new way. The concepts of swapping battle stances on the fly and finding enemies' weaknesses to "stagger" them return from its predecessors, but they're reworked to fit into a real-time combat mold. *Lightning Returns* is one part bold step forward for the series' mechanics and structure (with its action-RPG trappings and totally open world) and one part hot mess. It explores new concepts for the series and, despite being grounded in familiar elements, frequently feels like it's all going to come falling down as the result of its rickety ambition.

But, you know, that fragility defines *Final Fantasy*. There's not a single flawless entry in the series; each bold stride a *Final Fantasy* takes leaves some other aspect of the game teetering at the brink of disaster. *Final Fantasy IV* redefined the role of narrative in RPGs...and was suffocatingly linear. *Final Fantasy VII* redefined the scale and presentation of videogames as a whole, but its story was a train wreck and its mechanics grossly simplified. And so forth. Where other franchises churn through the same concepts and mechanics once a year, *Final Fantasy's* creators have an obsessive drive to avoid staying in one place for long—to bring something new and different to each new sequel.

Which is not to say this compulsion always works out to the series' benefit, as we've seen with the *XIII* saga. *Bravely Default* works best precisely when it *is* being predictable, because sometimes it's nice to fall back on familiar, reliable concepts. *Lightning Returns*, on the other hand, would probably have worked better if it had simply been a new title altogether instead of trying to tie up the bewildering *XIII* saga. But taken as a pair, the two games offer an interesting insight into what makes *Final Fantasy* tick: the push and pull of the established and the unknown. As the success of *Bravely Default* demonstrates, sometimes fans need a little bit of familiarity to make the new and strange go down more smoothly...bit it wouldn't be *Final Fantasy* if it didn't betray our expectations just a little bit.

Jeremy Parish works as senior editor at USgamer.net, *co-host of the* Retronauts *podcast, and grim overlord of gaming blog* 2-Dimensions.com. *He is also believed to moonlight as a masked vigilante.*





Kohler's Collect-a-Thon! YOUR GUIDE TO BUILDING THE ULTIMATE RETRO LIBRARY

GENESIS

DON'T COST WHAT NINTEN-DO

by Chris Kohler

The market for original classic games has never been hotter. Whether you're obsessed with collecting or just want to play your old favorites in their original format, you're paying more for old games than ever before. Each issue in Collect-a-Thon!, we'll break down the current collecting scene for a particular platform.

Illustration by Thor Thorvaldson

THE PLATFORM

Although Sega's Master System didn't make a dent against the Nintendo Entertainment System's dominance, its follow-up console, the Sega Genesis, was a tough contender in the hotly contested 16-bit wars. It birthed mainstream successes like *Sonic the Hedgehog* and cult classics like *Gunstar Heroes*, and was the console of choice for players of a new series called *John Madden Football*.

COLLECTING IT

Sega released the Genesis in 1989 and games were produced for it until 1998, when Majesco released a version of *Frogger* on the platform. There are a little over 700 U.S. releases out there. The good news for 16-bit collectors is that they can be acquired much more cheaply than Super Nintendo or TurboGrafx games, since Genesis has not gone up in value as much as other consoles. That said, because most Genesis games came in hard plastic cases, you'll often find them still in the box and that's what collectors look for. So our prices are based on 100% complete copies. Loose Genesis cartridges go for significantly less.

THE HOT ONES

Here are the games any collector would go crazy to find in a box of junk at a flea market. Every piece of these games, from the cartridge to the manual to the box, is worth big bucks.

Note: While the rarity of certain items rarely changes, price often does — both up and down. These prices are generally accurate as of early 2014, but anything could happen.

M.U.S.H.A. (1990)
A shoot-em-up created by Compile, this is actually part of the *Aleste* series that also includes games like *Power Strike* for the Master System. For some reason — a low print run plus the fact that it is an awesome example of the genre — this has become the highest-priced standard Genesis release, regularly selling for over $300.

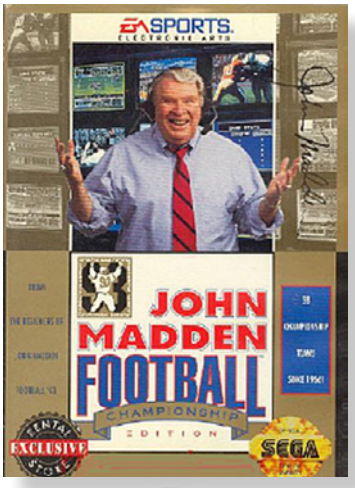
Crusader of Centy (1994)
This *Zelda*-style top-down action-RPG was one of the earlier games released by the publisher Atlus. Like most latter-day Genesis releases, it came in a cardboard box, meaning that the packaging is more likely to be lost or damaged. A complete copy can cost over $300 depending on condition.

Grind Stormer (1994)
Another shoot-em-up, this one created by the prolific designers at Toaplan (*Zero Wing*, *Fire Shark*, et cetera). Called *V-Five* in the arcades, it was brought to the Genesis by Tengen. This is where the prices start dropping off considerably; *Grind Stormer* only goes for about $125 mint and complete.

John Madden Football Championship Edition (1992)
Electronic Arts' sports games are some of the least valuable games on the Genesis (or any platform), but this is a rare exception. Based on the non-rare *John Madden '93*, this rental-only game features a lineup of historical championship teams — the '66 Packers, the '84 Dolphins, etc. Condition is extremely important, as the much-rented manuals are typically beaten to hell. A good copy in nice shape can get around $125.

Aerobiz Supersonic (1994)
Ever wanted to run your own airline? Me either. So that's probably why Koei didn't sell too many of these airline management simulation games. This sequel version is harder to find than the original, and a copy in good condition can go for just over $100.

The Punisher (1994)
As we will see, side-scrolling beat-em-up games are some of the most expensive Genesis releases. This one tops the list, a port by Sculptured Software of a Capcom arcade game licensed by Marvel. Expect to pay a touch under $100 if you want one.



UP AND COMING

The majority of Genesis games are still fairly inexpensive, with only a few hitting three-digit prices. There are a few that hover in the $40–60 range, and might be creeping up over time. If variations of these with hard cases and cardboard boxes exist, the hard-case version is typically worth more.

These include: *Splatterhouse 2* and *3*, *Streets of Rage 3*, *Sparkster*, *Teenage Mutant Ninja Turtles: Hyperstone Heist*, *Time Killers*, *Castlevania Bloodlines*, *Double Dragon*, *Battletoads*, *Contra Hard Corps*, *Cadash*, *Herzog Zwei*, *Gunstar Heroes*, and *Warsong*, among others.

Sega's role-playing games in the *Shining Force* and *Phantasy Star* series also go for $40–60 each. And although sports games usually don't go for more than a few bucks, EA's *Mutant League Football* and *Mutant League Hockey* are beloved classics that can get around $50 each depending on condition and completeness.

The price of Michael Jackson's *Moonwalker* shot into space after the King of Pop's untimely death, but prices have now come back to earth at around $40.

RENOVATION

The publisher Renovation put out a surprising number of cult-classic Japanese games, and so far most of its library is relatively inexpensive. There are shooters like *Gaiares* and *Whip Rush*, platformers like the *Valis* series, *Earnest Evans*, and *El Viento*, and RPGs like *Master of Monsters* and *Arcus Odyssey*. Every Renovation game (except for the total oddball of the group, the not-rare *Jennifer Capriati Tennis*) goes for between $25–40.

GET SOME RELIGION

The Christian game company Wisdom Tree released three Genesis Bible-themed games. They were sold in rather flimsy cardboard boxes, so copies of *Bible Adventures*, *Spiritual Warfare*, and *Joshua: Battle of Jericho* can go between $50 and $100 complete.

SPECIAL EDITIONS

There are some rare and weird Sega Genesis cartridges out there that only appeal to the hardest of hardcore completionists. In 1993, a company called Heartbeat released the *Heartbeat Personal Trainer*. It was a modified version of the Genesis console that had motion sensors and could measure your heartbeat while you exercised. It came with a cartridge called *Outback Joey*, which now sells for many hundreds of dollars by itself. But it's so extremely rare that they don't often change hands.

For a 1995 game competition in Blockbuster Video stores, Acclaim produced a cartridge called *Blockbuster Video Game Championships II*. It played special versions of *NBA Jam Tournament Edition* and *Judge Dredd*. The cartridge, with its plain white text label, sells for around $2000 today.

AVOIDING FAKES

Since Genesis games aren't really that expensive, there isn't an epidemic of fake cartridges going around like we've seen on NES and SNES. However, I have heard reports of fake *M.U.S.H.A.* cartridges recently — so it seems the scammers are catching on.

Also, be aware that there are a great deal of bootleg Genesis cartridges out there made from import-only Mega Drive games. Classics like *Mega Man: The Wily Wars* and *Pulseman*, for example, were never released officially in the U.S. So if you see a Genesis cartridge with one of these games on it, be aware that it's a reproduction.

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PRIMAL SOUP

THE FORGOTTEN DISCIPLINE OF PIXEL ART

by Jeremy Parish

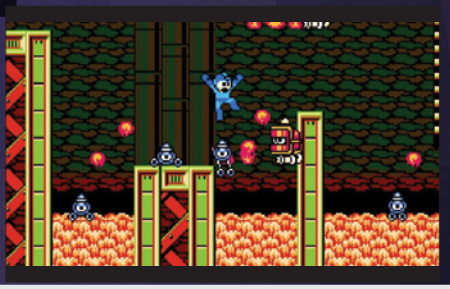
Can you believe it's been nearly 10 years since Daisuke Amaya's *Cave Story* helped ignite the indie gaming revolution? One man almost singlehandedly put together a masterpiece of an action game that played like an extended nod to 8- and 16-bit classics while simultaneously playing quite unlike anything that had come before it, what with its unique physics and hidden endings. *Cave Story* has been played by millions of people...and many of them took away the realization that with enough time, talent, and passion, creative individuals could take the art of game design back from corporate entities.

Besides galvanizing so many aspiring game designers to explore the DIY approach, *Cave Story* also offered a working demonstration of the practical value inherent in old-school pixel-art graphics. The games industry collectively dropped bitmap sprites like a bag full of tumors as soon as PCs and console developed the ability to render objects out of big, clumsy triangles. By the end of the '90s, the sprite art that had defined the medium's first few decades of existence had been relegated to kids' games and puny portable systems.

Then, just a few weeks after Nintendo and Sony released DS and PSP — handheld consoles capable of respectable 3D graphics, relegating bitmaps to the dustbin of history — *Cave Story* came along and proudly presented its virtual world with simple, low-color, low-resolution sprites. This wasn't simply an incidental element, either; on the contrary, pixel art represented a point of pride for Amaya, who published *Cave Story* under the alias Studio Pixel.

The lo-fi look made perfect sense, too. How could a single person hope to put together an entire game of such impressive scale and scope with cutting-edge 3D visuals? But Amaya's minimalist approach — using simple, super-deformed pixel graphics consisting of large areas of flat color and rudimentary shading — placed the possibility of creating an entire world within his grasp. *Cave Story*'s squat character designs didn't require detailed animation cycles, and they allowed a great many things to happen onscreen at once without causing the action to become confusing or distracting. They boldly tied the game back to the 8-bit classics that inspired it while simultaneously giving Amaya the means to up the ante for retro-style action games by filling the (higher than true 8-bit resolution) screen with dozens of flying, spinning, shooting, exploding objects: *Metroid* design discipline with bullet-hell flash.

For every indie game that takes pixel art and does something fresh and unique, there are multiple creations that ride the bandwagon without really understanding the reasoning behind the look they've co-opted.



Needless to say, *Cave Story* became a landmark for game development. Countless aspiring game designers took inspiration from Amaya's creation... and they took its lessons to heart, too. A decade ago, a game that looked like souped-up NES software was practically impossible to come by. These days, you can't swing a dead cat at your Steam library or the latest Humble Bundle without getting fur all over a few dozen of them.

But as often happens when people borrow a great idea without taking the time to make it their own, the purpose and logic that informed *Cave Story*'s visual style doesn't always come along for the ride. For every indie game like *Hyper Light Drifter* — games that take pixel art and do something fresh and unique with the concept — there are multiple creations that ride the bandwagon without really understanding the reasoning behind the look they've co-opted, games whose creators haven't taken the time to observe the creative discipline that informed *Cave Story*'s aesthetics from start to finish.

It's a shame, because there are genuine benefits to using pixel art. It's not just a style or a trend, it's an ethos — a means of expression, a practical workaround to limited resources, and a form of tribute all at once. Take those things away, though, and you end up with an empty imitation. Poorly conceived "retro" graphics have diminished the movement's impact and undermined the style's integrity, and that's a shame.

Thankfully, a few developers still get it. Yacht Club's debut title *Shovel Knight* is quite possibly the most faithful fake NES game I've seen since *Mega Man 9*. The game perfectly imitates the limitations of the NES, from its harsh color-display restrictions to its coarse animation. It totally captures the bold color-blocking style of the best Capcom and Konami NES games. Not only that, but director Sean Velasco says the team actually *removed* frames of animation from creatures to prevent them from seeming unconvincingly smooth.

Which is not to suggest that every game should adhere to the strict limitations of dated hardware. But if you want to evoke a specific style, it's not enough to simply get it kind of right and say, "good enough." Old games appeared a certain way because they were sharply constrained; NES sprites could only consist of three colors plus a transparency, for example. The system could only display a handful of colors from a palette of 52. Sprites flickered because the hardware could only draw so many at a time and would stop drawing objects for a frame in order to ease the burden.

There's certainly nothing wrong with breaking the rules of those old consoles; even *Mega Man 9*, amazingly authentic as it seemed, cheated in small ways to enable things that couldn't be done on NES. But it's important for today's designers to properly understand the nature of what they're mimicking. The best faux-classic games come not just from a place of deep affection, but also from a place of understanding what made them the way they were. Whether the result is intensely faithful to gaming's roots (as with *Shovel Knight*) or a fascinating new take on classic concepts (like Capybara's *Below*), sometimes the best way forward is to really and truly learn to appreciate the past.

Jeremy Parish works as editor-in-chief at USgamer.net, *co-host of the* Retronauts *podcast, and mad curator of handheld museum* GameBoyWorld.com. *He wears neckties and dress jackets in his free time as a desperate ploy to convince people he is in fact a grown-up.*

Kohler's Collect-a-Thon! YOUR GUIDE TO BUILDING THE ULTIMATE RETRO LIBRARY

You're Not Going TurboGrafx 16 Are You?!

Illustration by Thor Thorvaldson

The market for original classic games has never been hotter. Whether you're obsessed with collecting or just want to play your old favorites in their original format, you're paying more for old games than ever before. Each issue in Collect-a-Thon!, we'll break down the current collecting scene for a particular platform.

THE PLATFORM

Back in the day, half the kids had Super Nintendo, the other half had Sega Genesis, and nobody had TurboGrafx-16. Oh, sure, maybe you'd find one kid. He was a freaking unicorn. Going to his house was like walking into an alternate dimension, since almost every game was exclusive. And they came on weird credit card-sized media! NEC and Hudson really gave it a go with this pseudo-16-bit platform, which laid claim to the very first CD-ROM add-on ever, but was never able to make a dent in the market outside Japan even with caveman mascot Bonk leading the charge.

COLLECTING IT

NEC released the TurboGrafx-16 in 1989 and it was off the market by 1995. While it started off competitive with Sega's 16-bit Genesis, it became a niche item by the mid-1990s. Many of the games released late in its life were only produced in small batches and often sold through direct mail; the TurboZone Direct catalog serviced the diehards who stuck it out until the bitter end.

Although few gamers owned a TurboGrafx back in the day, the games were given lots of fawning coverage by the gaming magazines at the time, and we all dreamed of someday owning one. There were only 94 games released on the HuCard cartridges and 44 released on CD, making the total library very small and seemingly easy to finish. But there are many games that are very rare and sought after, and that list keeps growing as more collectors jump into the mix.

THE HOT ONES

Here are the games any collector would go crazy to find in a box of junk at a flea market. Every piece of these games, from the cartridge to the manual to the box, is worth big bucks.

Note: While the rarity of certain items rarely changes, price often does — both up and down. These prices are generally accurate as of mid-2014, but anything could happen.

Magical Chase (HuCard, 1993)
A cute shoot-em-up in which you play a witch riding a broom — just like the *Cotton* series, but totally unrelated. As the final HuCard release, this was printed in very limited quantities. Just the card alone can sell for upward of $2000, with boxed copies getting $6000 or more. The *Stadium Events* of the TurboGrafx.

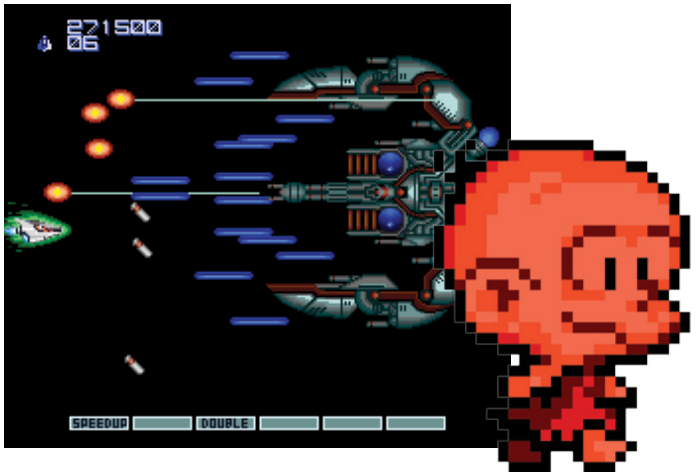
The Dynastic Hero (CD-ROM, 1994)
A slightly tweaked version of the Genesis game *Wonder Boy in Monster World*, *Dynastic Hero* is to the Turbo CD what *Magical Chase* is to the HuCard format — the rarest, priciest release. In today's market, anything less than $1000 is cheap.

Super Air Zonk (CD-ROM, 1993)
Hot on *Dynastic Hero's* heels is this sequel to the shooter starring Bonk the caveman's futuristic descendant. It goes for over $700.

Syd Mead's Terraforming (CD-ROM, 1993)
Syd Mead is a visual artist whose futuristic designs include the lightcycles of *Tron* and the robot Johnny 5 from *Short Circuit*. He lent his singular design sense to this horizontal shooter that bears his name. Expect to pay $700 to own one.

Bonk 3: Bonk's Big Adventure (HuCard and CD-ROM, 1993)
Bonk's final outing was released on both CD and cartridge; the CD version includes a full-quality soundtrack and an extra two-player mode but the main game is identical. The CD will cost you $500; the cartridge about $300 complete in box.

Legend of Hero Tonma (HuCard, 1993)
Irem's port of its 1989 arcade platformer action game is another tough HuCard to track down. Expect to shell out $400 or more for a complete copy.



Beyond Shadowgate (CD-ROM, 1993)
This follow-up to the classic adventure game is not a port of a computer title — it's a true TurboGrafx exclusive. Find another $400 if you want to continue the adventure.

Might and Magic III: Isles of Terra (CD-ROM, 1993)
More like *Might and Magic: Three Hundred Fifty Dollars*.

UP AND COMING

There are actually quite a few more TurboGrafx games that are creeping up in price, especially if they're complete with all of the pieces (see "Know What You're Buying," below). You can expect to have to put up at least $200 each for *Dungeon Explorer II*, *Soldier Blade*, *Godzilla*, *Dragon Slayer: Legend of Heroes*, *Cotton*, and *Shockman*. $150 if you want *Bomberman '93* or the original *Air Zonk*. And there are many games that can get over $100, like *Jackie Chan's Action Kung Fu*, *New Adventure Island*, *Neutopia II*, *Dead Moon*, and even *Ys III: Wanderers From Ys*.

"But those are most of the games I want!" Yep. At least you can still buy *Bonk's Adventure* and *Alien Crush* without breaking the bank — for now.

WORKING DESIGNS

The TurboGrafx is also notable for being the birthplace of Working Designs, the legendary RPG-centric publisher that brought over Japanese classics and lavished tons of attention on their packaging. While the Working Designs TurboGrafx games don't reach the levels of insanity that their PlayStation games eventually would (seriously, little fold-out cardboard characters inside *Lunar*?), they still added some bells and whistles that other publishers did not.

On the HuCard side, we have Working Designs' first two releases, *Parasol Stars: The Story of Bubble Bobble III* and *Cadash*. Expect to pay over $100 each in complete condition.

Less hard to find are the Turbo-CD RPGs *Cosmic Fantasy 2* and *Exile*; sealed copies of these were going cheap a few years ago so you should be able to get at least mint ones for $50–60 today.

The final two Working Designs releases were more limited, so expect to pay $150 for *Exile: Wicked Phenomenon* and *Vasteel*. These originally came with gold foil-stamped, paper slipcovers that wrapped around the CD-ROM cases, so watch out for these if you want truly complete examples.

BIKINI GIRLS

There are no unlicensed TurboGrafx games that were distributed in America, but there are these three oddball discs: *Bikini Girls*, *Local Girls of Hawaii*, and *Hawaii Island Girls*. They're just collections of JPG slideshows of girls in bikinis that play on Turbo CD. Don't laugh. Sometimes this was all you had for porn, back then. Turbo completists will pay $150 each for these glorified slideshows. (Apparently that's what they cost back in the day, too!)

KNOW WHAT YOU'RE BUYING

I've never seen a fake TurboGrafx or Turbo CD game. That said, there are a great deal of aftermarket game cases that you might mistake for the real deal. All HuCard games for TurboGrafx (except the *Keith Courage* pack-in game) came in tall cardboard boxes. So if you have a HuCard game in a jewel case, it's not truly complete without the outer box.

Now, inside *most* of those boxes is a CD-style jewel case that holds the cartridge and the manual. But for the later releases, they cheaped out and just put a plastic tray inside the box that holds the cartridge. So there is no jewel case for, to name two examples, *Legend of Hero Tonma* or *Magical Chase*.

Complicating matters is the fact that eventually they eliminated the outer cardboard box for CD releases. So while *Ys III: Wanderers From Ys* has an outer cardboard box, *The Dynastic Hero* was shipped in a plain jewel case.

In other words: Do your research before you buy a game as "complete!"

Chris Kohler (@kobunheat) is the founder and editor of Game | Life, *the gaming channel of* WIRED. *He is a lifelong game collector and the author of the books* Power-Up *and* Retro Gaming Hacks.

PUTTING TOGETHER A COMPLETE COLLECTION OF MARIO'S ADVENTURES IS TOUGHER THAN IT SOUNDS.

BY CHRIS KOHLER

UNLESS YOU ARE CRAZY LIKE THIS COLUMN'S AUTHOR and therefore buy piles of classic videogames with no rhyme or reason behind your actions, you might be entertaining the notion of building a more focused game collection. And if your tastes in classic gaming run to the platform genre, it's likely that you may consider acquiring all of the *Mario* games.

Congratulations to you! Unlike those poor suckers who decide to collect RPGs or shmups, you'll find it's not too difficult or expensive to get all of the main series games in which Mario and/or Luigi take the starring role. This is because Mario has never not been popular, and all of his adventures were produced in mass quantities. And many of you have probably already been collecting *Mario* games since you were a child, anyway, so you've probably got a head start.

But no franchise as popular as Mario could make it nearly 35 years without some ill-advised cash-in products. And insofar as some of these took the form of computer games, you will have to do some digging if you want to put together a truly complete set of Mario's adventures.

DO THE DONKEY KONG

Before Nintendo brought the NES to America, it licensed the rights to create *Donkey Kong* and *Mario Bros.* games to Coleco for consoles and Atari for computers, and those two companies wasted no time putting Mario's first few games on any platform they could. So there are versions of one or all of these games on the 2600, 5200, 7800, ColecoVision, Intellivision, TI-99, Apple II, IBM PC, Vic-20, and so forth. Many of them are pretty terrible. In the U.K., publisher Ocean released versions of *Donkey Kong* for computers like the ZX Spectrum, MSX, and Commodore. In other words, if you think you have all the *Donkey Kong*s, you probably don't.

Obtaining the original "black-box" line of Nintendo Entertainment System launch games isn't that difficult, although finding the cardboard boxes they came in can be. Sadly for Mario collectors, the boxes for *Donkey Kong* and *Donkey Kong Jr.* can go into three figures. *Mario Bros.* isn't as tough to find because they made more copies. Condition is very important to black-box collectors, so keep an eye out for slightly beat-up boxes and you might get a deal. (And luckily, you technically don't have to buy *Donkey Kong 3*: no Mario!)

And then there are the dedicated handheld devices. Coleco made a *Donkey Kong* LCD game shaped like a miniature arcade machine and two different versions of *DK Jr.* And of course, Nintendo produced many Game & Watch handhelds starring Mario, including *Donkey Kong*, *Super Mario Bros.*, and *Mario the Juggler.* It even did a tabletop version called *Mario's Cement Factory*. All are high-priced treasures today, especially if you want the original boxes.

16-BIT WEIRDNESS

Since it was packed in with many, many Super Nintendo consoles, *Super Mario World* is one of the most common games on the platform. What's hard to find is the box. The pack-in version only had the cartridge and manual. But once Nintendo started selling SNESes without *Mario*, they put a standalone version on store shelves. It originally shipped in a box similar in style to other SNES releases, but this was quickly replaced with the (less desirable today) "Player's Choice" variant. A complete-in-box *Mario World* is now a difficult piece to add to a SNES collection.

There's an often-overlooked Mario game on SNES that's tough to track down. Eventually Nintendo started packing SNES machines with a special version of the multi-game collection *Super Mario All-Stars* that added *Super Mario World* into the mix. It even had an updated Luigi sprite that wasn't just a palette swap of Mario. It also has its own manual (but no box).

Also in the early 1990s, Nintendo thought that it wanted to produce a CD-ROM add-on for the SNES, and tasked Philips with the job. As part of the deal, Philips got to produce games with Nintendo characters. The best one they came up with was an action game called *Hotel Mario*, for their CD-i platform. This is worth it just for the terrible cartoon cutscenes.

YOU CAN'T SPELL EDUTAINMENT WITHOUT TAINT

Nintendo eventually stopped letting other developers create *Mario* action games, but liberally licensed its hero out to all and sundry who wanted to educate the youth of the world. You may know about *Mario is Missing!* (a *Carmen Sandiego*–style geography game) and *Mario Teaches Typing* (impressively, he could do it with those puffy gloves on). But have you played the whole group of three *Mario's Early Years* games for preschoolers on the SNES? Or *Mario's Time Machine*, on NES and SNES?

There's also *Mario's Game Gallery*, a DOS game in which you play against Mario in games of Go Fish and Checkers. The "big box" original version is tough to find today. (It's also the first game, predating *Super Mario 64*, to feature Charles Martinet as the voice of Mario.) But the rarest seems to be *Super Mario Bros. and Friends: When I Grow Up,* a virtual coloring book for MS-DOS released in 1991.

IMPORTS

In the U.S., we got one version of *Mario Bros.* for the NES. Oddly enough, in Japan and PAL regions, they got two *different* upgraded versions of this classic arcade game. *Kaettekita Mario Bros.* (*Return of Mario Bros.*) for the Famicom Disk System has more levels, fine-tuned controls, and a series of advertisements for real Japanese food products. Meanwhile, the Classic Series rerelease of *Mario Bros.* in Europe isn't just the same game in a redesigned box: It, too, has more features, including "intermission" scenes between levels.

Japan also had its weird, authorized-but-not-made-by Nintendo computer games. Hudson Soft created two spin-offs of *Mario Bros.* for various Japanese computers. *Mario Bros. Special* is an original platform game. *Punch Ball Mario Bros.* has Mario carrying around a pink ball that he has to use to defeat enemies. *Super Mario Bros. Special* is a crappy version of *Super Mario Bros.* Finding these is quite difficult today, and forget about playing them on the original hardware unless you buy vintage Japanese computers and cassette tape drives.

One thing you should keep in mind that does *not* exist in Japan is a cartridge of *Super Mario Bros. 2*, aka "The Lost Levels." It was only released on the Famicom Disk System, and any cartridge versions you see are pirates. (But convenient ones, if you own a Famicom but not the notoriously failure-prone Disk System add-on!)

Nintendo sure did love pairing Mario up with the oddest products. There's another rare Mario game on the Disk System called *All-Night Nippon Super Mario Bros.*, which remixes levels from *SMB* and The Lost Levels and adds in DJs from a Japanese late-night radio talk show, for some reason. Since Famicom Disks can be copied, there are a lot of illicit copies of this out there. If you see one on eBay with no disk label and no slipcover art, it's a copy made recently and not worth the $300–400 that an original will fetch.

EVERYTHING ELSE

This isn't even touching all the *Mario* sports games! Or the *Mario Party* series! Or games like *Golf* on the NES, in which Mario is clearly the main character! One thing's for sure: You could probably collect only *Mario* games for your entire life and never quite be done.

Rarity Report

by Jeremy Parish

Little Samson

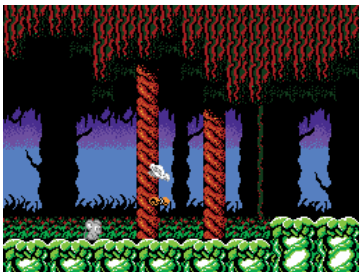
NES | 1992 | MARKET PRICE: $600–1000

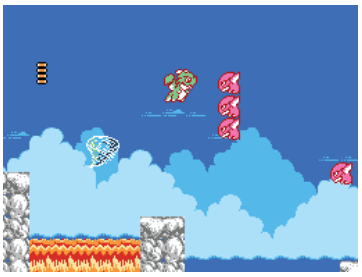
WHAT IS IT?

Widely considered a true NES masterpiece, *Little Samson* represents one of Taito's final 8-bit home releases in the U.S. Like all of Taito's end-of-life NES titles (see also *Power Blade 2*, *The Flintstones*, *Bubble Bobble 2*), *Little Samson* sells for absolutely preposterous prices these days. Expect to shell out nearly a thousand bucks for the cartridge alone, and even more for a complete-in-box copy in decent condition.

WHY SO EXPENSIVE?

A perfect storm of rarity and reputation have driven *Little Samson*'s price into the stratosphere over the past decade. Taito produced very few copies of its final wave of NES releases, and of those few titles *Little Samson* was the most obscure at the time. Yet it was also the most ambitious and creative, which has made for a game that collectors overlooked for years and now covet eagerly. Granted, NES prices in general have skyrocketed thanks to nostalgia and a growing collecting scene, but outside of truly rare releases (like *World Class Track Meet* or the golden *Nintendo World Championship* carts) there's nothing quite on *Little Samson*'s price tier.





IS IT WORTH THE HYPE?

Barring the question of whether *any* game is worth $1000, of course, the answer is…yeah, it really is. *Little Samson* is a true gem of a NES platformer, with some of the most stunning graphics and music ever seen on the system. Not only that, but it plays well, too, with extremely varied mechanics and a clever narrative arc. *Little Samson* tells the tale of four heroes who come together in order to save the realm, or the world, or whatever…really, the particulars of the game's objectives aren't as important as the fact that *Little Samson*'s pantomime plot creates an excuse for some of the most entertaining action of any 8-bit release ever made.

Each of *Little Samson*'s opening stages introduces the game's playable cast. Besides the eponymous protagonist, there's also a dragon, a golem, and a mouse. Each character features wildly different play mechanics. Samson basically amounts to a Son-Goku-come-lately, a monkey-like lad wielding a rod and capable of climbing walls and even ceilings. The golem boasts prodigious strength and the highest endurance of any character, the dragon can fly and shoot flames, and the mouse balances out his paltry sliver of a life meter by slipping into areas too tiny for his companions and chucking powerful bombs at enemies.

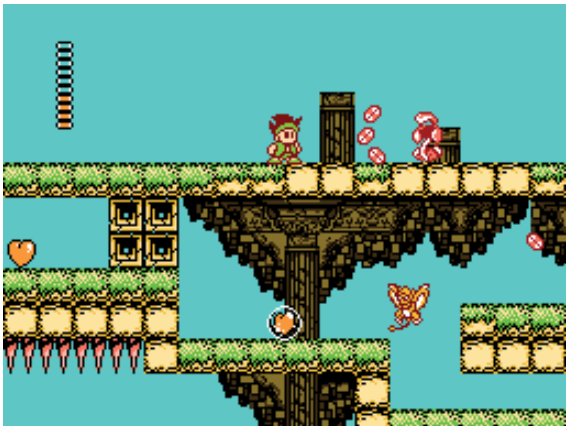
Once you work your way through the introductory prologue, the characters meet up and, in classic comic book style, fight one another before becoming friends. With your party assembled, you work your way through the remainder of the adventure — a collection of dazzling levels and enormous bosses — with the freedom to swap between your four party members at any time. The free-swapping style had appeared in other NES games like *Teenage Mutant Ninja Turtles* and *Contra Force*, but *Little Samson* trumps them all in terms of the party's diversity, situational advantages, and sheer quality. It looks great and plays wonderfully.

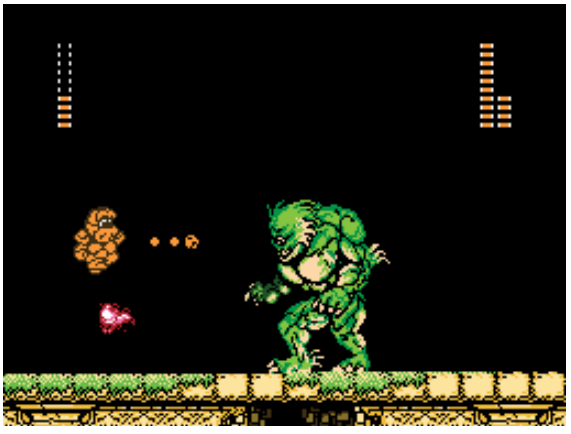
In other words, this isn't one of those pricey-but-wretched games you'd buy simply to be able to claim you own it. It would make an eminently playable centerpiece for any collection.

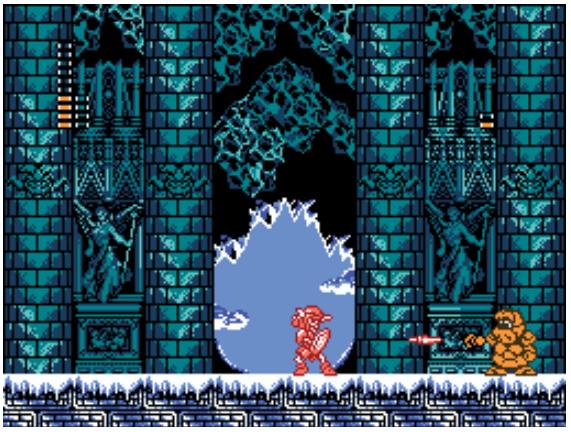
BUT I DON'T WANNA PAY $1000!

Sorry, them's the breaks. Taito's NES games aren't exactly clogging up the reissue pipeline. Square Enix bought the company back in 2007, and aside from the NES version of *Elevator Action* they've done exactly nothing with Taito's back catalog on Virtual Console. That seems to be Square's overall mindset with all its peripheral properties, actually. The company has access to a huge collection of great classic games that we'd love to see made available, but outside of a glut of *Final Fantasy* releases and some questionable iOS versions of classic *Dragon Quest*, the company seems content to sit on those golden oldies.

It's not quite so absolutely bleak as all that, though. *Little Samson* has no text or dialogue to speak of, so if you have means to play Famicom games (the Japanese versions of NES games), you can import the relatively common Japanese release for a fraction of its going rate in the U.S. and enjoy the exact same experience as the more expensive American release. It still ain't cheap, but I managed to track down a cartridge-only copy of the game on Yahoo! Auctions (what Japan uses instead of eBay) for about $80 last fall — a savings of roughly 90%. Keep your eyes peeled for "*Seirei Densetsu Lickle*," the game's original Japanese title, and get friendly with a Japanese resident who's willing to be your import mule. Unless you use a proxy service, unfortunately, Yahoo! Auctions users rarely ship overseas.







SILVERBALL SPOTLIGHT

A BEGINNER'S GUIDE TO (PIN)BALLING ON A BUDGET.

by **Preston Burt**

Thinking about buying a new pinball machine for your home? Well, are you sitting down? A factory-fresh, top-of-the-line, limited-edition pinball machine can cost close to $10,000*. By comparison, right now, for just a few thousand more, you can buy a brand-new car**. Conversely, a fully working electromechanical pinball game would only set you back around $250, depending on the title. That provides for a wide range of options for features, themes, and cost between those two extremes when purchasing a new pinball machine. Depending on the type of game you're looking for, there are a variety of choices to maximize the bang for your buck. Below, divided by era of machine, you'll find my picks for some of the best values in pinball.

Electromechanical

If you want something that just screams "retro," then an electromechanical pinball is your best bet. The distinctive bells and chimes of EM games can be a soothing, calm harkening back to a simpler time. Though the mechanics of the machine may be dated, the fun they provide is timeless.

Abra Ca Dabra (1975)

If we're talking EM, then it's a given that we include a Gottlieb on the list. Gottlieb was the premier maker of pinball machines during the late '60s and early '70s, and the classic "wedgehead" design arcade lineup. Though aesthetics shouldn't be the sole deciding factor on purchasing a pinball machine, it sure doesn't hurt to have an evil sorcerer casting spells into a giant fiery cauldron on the backglass. Before the advent of multilevels and ramps, taking aim at this game's numerous drop targets makes for both a challenging and fun game. If you want a classic table for less than $500, this is it!

Runner-up: Grand Prix (1977)

Race your way to the checkered flag with satisfying spinner shots in this Steve Kordek–designed classic.

Early Solid State

If Gottlieb ruled the roost for EMs, then Bally absolutely dominated the shift to digital. Gone were the score reels and relays, these late '70s and early '80s games were powered by circuit boards with LED displays. While many Bally titles from this era such as *Fathom*, *Centaur*, and *KISS* are considered absolute classics, they can also set you back a pretty penny. However, there are plenty of overlooked gems to be had if you don't mind oddball themes.

Harlem Globetrotters on Tour (1979)

In the late '70s, the Harlem Globetrotters would leave the basketball court to go on tour and wound up on everything from lunch boxes to episodes of *Scooby Doo*, and yes, even a pinball machine. A current favorite among competitive

dated theme and goofy artwork, has a lot to offer skilled and novice players alike. Inline drop targets provide for a satisfying step-by-step accomplishment to advance your bonus while triple spinners offer a chance to make a really satisfying shot while racking up points. However, my favorite feature on this game also provides for some of the worst heartbreak in pinball. You've never suffered such an indignity until you've been the victim of a "double flipper bitch" by letting the ball pass through your two upturned left flippers — causing your own demise. I've seen many people double over in defeat in front of this game only to get up, press start, and do it all over again (and again, and again...).

Runner-up: Flash Gordon (1981)

Queen's soundtrack to the endearingly bad sci-fi movie is the only thing missing from this machine. Battle the Merciless Ming with inline drop targets, stainless steel ramps, a mini flipper, and beautiful Kevin O'Connor artwork.

Late Solid State/ Alphanumeric

Pinball in the mid-to-late '80s advanced to allow multileveled play, modes, better sound packages, and more reliable circuitry. The move to alphanumeric displays meant even further player interaction, with flashing instructions and the ubiquitous '80s "Just Say No" anti-drug slogan. Though this was the period between the two booms, manufacturers had certainly hit their stride.

Rollergames (1990)

There's hardly a game that encapsulates the '80s better than this example. *Rollergames* was a very short-lived television show about roller derby that tried to takes its cues from professional wrestling. The show's lack of appeal probably contributed to a lack of interest in this pinball machine, which (good for you) has helped keep prices down. Theme aside, this is a solid design from pinball superstar Steve Ritchie (*Black Knight, High Speed, AC/DC*). Skate your way past your virtual opponents by slamming them into the wall, dropping them in the pit, and "cracking the whip" with magna-flip! This neon-infused time capsule featuring product placement for Pepsi-Cola, Thermos, and Slice soda was produced on the then-perfected System 11 hardware, just before the shift to the DMD era. A magnet, three flippers, multiball, crossover wireforms, drop targets, and a ramp to an upper level of play make this Williams cheesefest a perfect addition to any collection.

Runner-up: F-14 Tomcat (1987)

"Master of Flow" Steve Ritchie delivers another hit, flying high off the popularity of '80s movie classic *Top Gun*. This game delivers quick-playing action and introduced the "Yagov kicker" which sends the ball back to the player with "blink-and-you-missed-it" speed.

Dot-Matrix Display (DMD)

If pinball ever had a steroid era, then this is it, because these games are juiced with big-time movie themes, multiple ramps and toys, and killer audio. Essentially they threw in everything except the kitchen sink. More features certainly translates into greater expense, but arguably even greater fun!

Gladiators (1993)

Let's be honest, *Gladiators* was probably never on anyone's "must-play" list. By the mid-1990s, pinball was at what some would consider the apex of the entire industry. Pinnacle games such as *Twilight Zone*, *The Addams Family*, and *Terminator 2* each had enough Hollywood name recognition and packed-out features to demand a production run of over 15,000 each. With big-budget, brand-name titles being released left and right, it was easy to pass over this unlicensed futuristic fantasy game from Gottlieb. However, keeping price in mind, *Gladiators* is perhaps the most affordable DMD game around and more fun than some of its higher-priced and more recognizable siblings. The full-featured game from designer Jon Norris doesn't pull any punches and delivers deep, mode-based rules while boasting four flippers, a moving ramp target, and a shaker motor, all with custom dot-matrix animations. Coming in at or below $1,000, this game could be the best value in pinball.

Runner-up: Baywatch (1995)

Don't hassle the Hoff in this surprisingly fun game featuring the world's only sharkfin flipper. Packed to the gills with custom speech and all the bells and whistles, this game has remained surprisingly affordable compared to similarly robust games.

These titles are only the tip of the iceberg! There are plenty of other options that didn't make the list, which can provide hours of entertainment without breaking the bank. So whether you're looking for retro or modern, there's something out there for everyone. While finding the right game for you is easy, the hard part is limiting yourself to just one.

*Jersey Jack Pinball's "The Wizard of Oz" Emerald City LE - $9500 MSRP

**2015 Nissan Versa 1.6 S - $12,815 MSRP

Preston Burt co-hosts the Gameroom Junkies *podcast, founded the Atlanta Pinball League, and is an organizer for the Southern-Fried Gameroom Expo in Atlanta. Follow him on Twitter @nocashvalue80 or drop him a line at nocashvalue80@gmail.com.*

TOKUSATSU AND YOU

BY KEVIN TAMBORNINO

WE UNMASK TOKUSATSU TO REVEAL ITS IMPACT ON GAMING.

Not many Westerners know the meaning of "Tokusatsu" (**特撮**), but there's little doubt you'd recognize this form of entertainment if you saw it. Whenever a masked superhero, seemingly in his pajamas, karate kicks a giant rubber monster in the face, that's tokusatsu. The word means "special filming" and the genre has been popular in Japan for more than half a century. Like all very popular things in Japan, tokusatsu also has a place in gaming.

Tokusatsu can refer to any live-action production with heavy use of stunts or special effects. Monster movies like *Godzilla* fall into this category, but for now let's focus on the tokusatsu superhero shows. The most famous of these are *Ultraman*, *Kamen Rider*, and *Super Sentai*. All of these shows have had English versions over the years. *Ultraman* was released in the west with its original name, *Kamen Rider* became *Masked Rider*, and if you grew up in the early '90s you know *Super Sentai* as *Mighty Morphin Power Rangers*.

In every episode of these shows there would be some giant, unbelievable-looking monster destroying part of the town. The heroes would dress in their helmets, gloves, and jumpsuits so they could attempt to fight it. The first time they battled they would always fail to destroy the monster. However, after some flashy special effects and intense yelling they would transform into their more powerful form and defeat it. Kids eat this stuff up.

So, what does this have to do with gaming? From the days of the Famicom up until the current generation of consoles there has been a constant stream of games based on these properties. Tokusatsu superhero titles are nearly always action games or fighters since those genres fit so well with the source material. There are some interesting exceptions though.

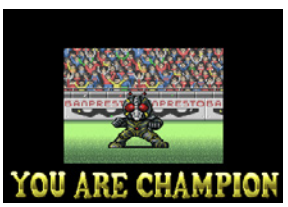
The Super Famicom game *Battle Soccer 2* brings characters from *Kamen Rider*, *Ultraman,* and the anime series *Gundam* together for a friendly game of soccer (which is apparently what defenders of the earth do in the off-season). Another oddball title is *Ultraman Hiragana Dai Sakusen* for the Bandai Playdia. It's a learning game made to teach kids to read and write phonetic Japanese while battling full-motion video monsters. Needless to say, a lot of these titles never left Japan.

One title that did make its way to the English-speaking world is the fan favorite *Viewtiful Joe*. Hideki Kamiya directed this game in 2003 as an attempt to mix the tokusatsu style with American comic books. The superhero, Viewtiful Joe, has moves, transformations, and poses straight out of the tokusatsu playbook.

Viewtiful Joe was not the only time director Kamiya would use tokusatsu for inspiration. A decade later he directed *The Wonderful 101* which is an all-out homage to tokusatsu superheroes. The game is not based on any specific television show or movie but takes the best parts from this entire style of entertainment. It's a love letter to the genre.

Lastly, I would like to recommend a game that wasn't localized but needs no Japanese skill to play: the arcade and PC Engine game *Wonder Momo*. This quirky beat-em-up is a parody of other tokusatsu superhero shows and games. You play as a high-school girl named Momo, who must fight a constant barrage of cheap-looking monsters. Mostly she just does a lot of leg-revealing high-kicks until there's a chance to transform into Wonder Momo, a futuristic, jumpsuited heroine. What makes this game interesting is its framing device: It takes place on the stage of a tokusatsu live performance. You can see the pixelated audience watching the show/game from the sidelines. Because of this, the game makes it clear that everything happening is just pretend. Despite any perceived threat the enemies pose, it's all just a show. This biggest actual threat are the photographers in the crowd trying to take upskirt shots of Momo.

As you continue to collect and play Japanese games be on the lookout for tokusatsu superheroes. They wear masks to conceal their identities but you know that deep down, they really want to be seen. Find them.



GLOBAL GAMER JAPAN

ROCK. PAPER. GAME MECHANIC.

BY KEVIN TAMBORNINO

ONE CLASSIC DIVERSION TURNS UP IN VIDEOGAMES MORE OFTEN THAN YOU MIGHT THINK.

Remember playing rock-paper-scissors? Rock beats scissors, scissors beats paper, and paper beats rock. I used to play it with my friends to determine the winner of an argument or claim the last piece of pizza. As I grew older and started resolving disputes with words, I kind of forgot about the game. That is, until I came to Japan.

Rock-paper-scissors, or "janken" as the locals call it, is huge in Japan. I see it played everywhere I go. Kids at the park play it to choose who is "it." Celebrities play it on wacky variety shows. Businessmen in suits play it to decide who buys the beer after work. I wouldn't be surprised if the prime minister of Japan was elected though a week-long janken tournament.

Janken extends beyond killing time or finishing arguments. It is so ingrained in the culture that its use bleeds into videogames. Janken has been used as a game mechanic in many titles across a variety of genres. In fact, for many games, the battle system is just round after round of rock-paper-scissors.

The NES title *Princess Tomato in the Salad Kingdom* is a strange game to begin with, an adventure that takes place in a world inhabited by anthropomorphic vegetables. Things get even odder when the battles take place as janken tournaments with evil, rival vegetables. It often feels like luck, rather than skill, determines the winner of these battles.

Many anime adventure games in the 16-bit era also used janken battles or had their franchise characters play janken within minigames. How does Sailor Moon settle her grievances in *Sailor Moon Collection* for the PC Engine? With a few friendly rounds of janken.

I previously wrote about *Yo-kai Watch* arcade machines (*RETRO* #7). There are many machines like these in arcades and shopping centers. They use collectable cards or medals to bring characters into the game. Once the characters are summoned, kids play out the battles with simple three-button minigames. Many of these are based on janken since it's a system that kids already know.

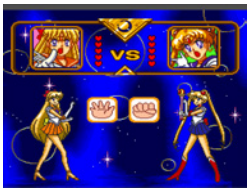
Ranma ½: Ougi Jaanken, based on the popular anime/manga series *Ranma ½*, uses the janken mechanic in a clever way. It's a standard falling-block puzzle game, but the blocks contain icons for rock, paper, and scissors. If you stack, for example, paper on rock, you clear all the rocks below it. It's a bit difficult to figure out at first but a fun game overall.

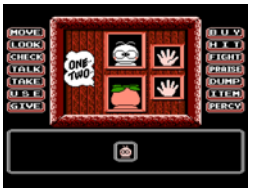
The 3DO and Sega Saturn also had versions of a "strip rock-paper-scissors" game called *The Yakuken Special*, but really, the less said about that, the better.

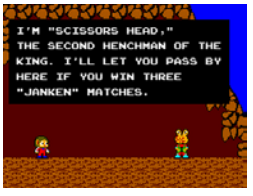
There are other, less obvious uses of janken. Many games use a janken-style system to determine how weapons or magic spells take effect. In the *Fire Emblem* series, this is presented as the "Weapon Triangle." It shows which weapons will be most effective against others in battle. Swords beat axes, axes beat lances, and lances beat swords. Knowing which weapons to use against different enemies is vital for victory. *Pokémon* uses a version of janken as well.

The fighting series *Dead or Alive* also has a janken dynamic hidden behind the flashy fighting moves. In this case the system is based on the three basic types of moves. Striking (punching/kicking) beats throwing, throwing beats holding, holds beat striking. You don't need to know this system to enjoy the series, but understanding it can make you a better player.

These are just a few of the many examples of janken found in games. There are dozens, maybe even hundreds more. Some of them are lame, but at least a third of them rock. [*You're fired. Consider this your walking paper. —Ed.*]





KEVIN TAMBORNINO *explores the culture and mechanics of Japanese games for* RETRO Magazine. *His favorite retro game is rock-paper-scissors.*

THE NES NATION

The *Dragon Warrior* Giveaway

by Pat Contri

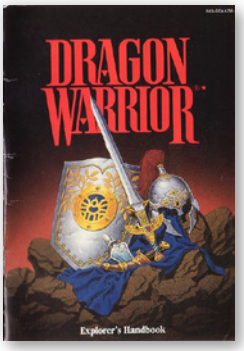
In August 1989, Nintendo released the RPG *Dragon Warrior* in North America. It wasn't an insignificant release, since the *Dragon Quest* series was huge in Japan, with the third installment already being developed. Nintendo assumed that U.S. players would have a similar response. One little problem: The RPG genre was almost unheard of among American console gamers. They were too busy with their *Super Marios* and *Contras* and *Adventures of Bayou Billys*.

If Nintendo didn't realize this fact, it must have been crystal clear after *Dragon Warrior*'s release and subsequent substandard sales. Not even *Nintendo Power* magazine's extensive coverage of the game over the course of '89 seemed to help matters much. So what was Nintendo to do about a successful franchise in Japan that wasn't up to snuff in the U.S., as well as thousands upon thousands of unsold *Dragon Warrior* games?

In the fall of 1990, Nintendo of America unleashed a monumental giveaway: a *free* copy of *Dragon Warrior* was mailed to anyone who subscribed or resubscribed to *Nintendo Power* magazine. A free game giveaway to this extent was unheard of, and given the fact that a new NES game cost at least $40, and the magazine subscription was about half of that, it was no surprise that hundreds of thousands of gamers/their parents cashed in and were introduced to the RPG genre via a free copy of *Dragon Warrior*.

Indeed, that was how I first encountered *Dragon Warrior*, and RPGs as well. Wow, a free game! I mean, my mom once bought me a new copy of *Jaws* for next to nothing from the flea market next to New Jersey State Prison, but this was even better!

Since this was Nintendo's first big push toward indoctrinating the Western console audience into the world of RPGs, they had to make sure that it stuck. Nintendo not only sent each player the game, but also a bevy of bonus material to make sure they would understand the type of game they were seeing and ideally transition into the RPG genre as smoothly as possible. It wasn't exactly a "soft sell." So what was included in the package mailed to hundreds of thousands?



CONGRATULATIONS LETTER FROM *NINTENDO POWER*

In this letter, Nintendo thanked you for subscribing and strangely addressed you as a "Power Animal," which sounds like an aggressive overcompensation for the slow-playing *Dragon Warrior*. Hey NoA marketing team, let's pump the brakes a bit.

DRAGON WARRIOR II LETTER FROM ENIX AMERICA

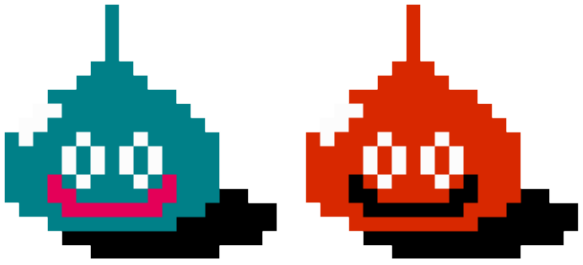
This letter from Enix conveniently let you know that you could grind slimes for another 50+ hours by buying the Christmas 1990 sequel. While I applaud Enix's confidence, it comes across like a desperate love letter from someone you went on one awkward date with who's already ready to elope.

OVERWORLD / MONSTER ID MAP AND DUNGEON MAPS POSTERS

These oversized maps showed off the monsters and revealed the entire game-world. These posters would prove to be helpful and totally essential by themselves, if it wasn't for the...

EXPLORER'S HANDBOOK

This *64-page step-by-step walkthrough* detailed everything you could possibly want to know about the game. If Nintendo's distrust in Western gamers' attention spans wasn't already apparent, the Explorer's Handbook made it loud and clear.



There you have it — Nintendo's grand *Dragon Warrior* giveaway experiment. It was an obvious and somewhat desperate hard-sell, but did it pay off? While it did not lead to substantial American sales for the game's three sequels (Enix's pleading letter was ignored), the plethora of free games at least helped establish the RPG genre in North America, which paved the way for the success of games like *Final Fantasy*. This would be *Nintendo Power*'s last free game giveaway. A shame, since there were only so many prison flea markets with questionably cheap NES games I could count on as a child.

AXIOM VERGE

by Brady Fiechter

Glitches are your friend

RAP SHEET

Publisher:
Thomas Happ Games
Developer:
Thomas Happ Games
Platforms:
PS4, Vita, PC
Release Date:
2015
Players:
Single-player

We all play games for different reasons, and the path to that ultimate reward can wind many ways. Exploration is where it all begins in *Axiom Verge*. Isolation, utterly alone in a mysterious world, find your way out, whatever "out" even means. "In the most general sense, you can interpret 'conflict' to mean combat, but it can also apply to any situation where there are problems confronting the player that can be solved through exploration," says Tom Happ, the guy who's singlehandedly building the world of *Axiom Verge*. The game's filled with glitches. You can control them, find ways to exploit them, and find them infiltrating your head as the reality of what's going on becomes more nebulous.

To *Axiom Verge*'s designer, what is a glitch? "I'd say anything not specifically intended by the creator, which nevertheless emerges as a result of a set of rules and the data they operate on." In simple gameplay terms, you have a few weapons that are as much tools as killing devices, manipulating enemies and transforming glitched tiles and other artifacts. "In the context of *Axiom Verge*, this means you cause [glitches] to happen," continues Happ. "You don't necessarily have control over what happens however — the nature varies from one creature to the next, from one room to the next. You'll need to try your *Axiom Disruptor* in different situations to see."

Axiom Verge tells you right off the start that its world is "Beyond Reality." Mystery and alien are its lifeblood.

"I've been a fan of sci-fi since I was old enough to know what it was. I think I've always been drawn to the sense of possibility and potential it offers," says Happ. "I know there are some who prefer their fictional worlds to be more 'grounded,' but, when you think of it, the reality we experience every day is an infinitesimal fraction of what is possible. So sci-fi is, when you get down to it, a closer approximation of the full scope of reality than non-fiction. Without sci-fi we'd be like shut-ins trapped in our homes, curtains drawn, content to explore the patterns on our wallpaper for the hundredth time rather than looking outside.

"The world of *Axiom Verge* is trying to get closer to what might lie beyond the limited scope of our senses," explains Happ. "It's not just alien in the sense that it's in the far future or on a distant planet or the like. The opening scene where you wake up in a mechanical egg is probably the most prosaic aspect of it; it keeps getting stranger from there."

Maybe it's somewhat obtuse to call classics like a *Zelda* or a *Castlevania* or even a *Mario* — the spiritual dust that pretty much birthed the galaxy of gaming we run around in today — a bit alien, a bit strange. Maybe it's all perspective. The most compelling game worlds, to me, are those that pulsate with the unknown, the surreal ideas of what twist inside our imagination and beyond

"I ONCE HAD A FOLLOWER COMPLAIN THAT TOO MANY OF MY TWEETS WERE ABOUT MY PERSONAL THOUGHTS AND NOT ENOUGH ABOUT THE GAME, AND I ALMOST REPLIED, 'BUT THE GAME IS ENTIRELY MY PERSONAL THOUGHTS!'" — THOMAS HAPP

the boundaries of normal shapes and forms. In *Axiom Verge*, we are exploring through the character of a scientist who has died during one of his experiments, wakes up in that mechanical egg, and is...somewhere very much abnormal. In *Axiom Verge*, the laws of reality are fractured: "Life. Afterlife. Real. Virtual. Dream. Nightmare. It's a thin line."

"Our present universe is governed by certain laws and constants," says Happ as he breaks down what goes on in his brain. "For example, the formula for gravity, F = Gm1m2/r2, appears to be consistent throughout the universe. However, these laws are kind of arbitrary — we observe them because they happen to make our existence possible, but they aren't the only means through which sentience can emerge. There will inevitably be other universes operating under different constants and datasets. What do you think those are like?"

I like to believe Happ's wonderments are why *Axiom Verge* exists in the way that it does, and he's answering some of his creative questions within its walls. It's a videogame, sure, with guns and jumping, but aren't some of the better gaming experiences born out of that feeling extending beyond the walls of familiar repetition and mechanics? With indie games undergoing more small and one-man design approaches, expression can matter.

"It's about as personal as it can get," says Happ. "I once had a follower complain that too many of my tweets were about my personal thoughts and not enough about the game, and I almost replied, 'but the game is entirely my personal thoughts!' I don't have a way of separating the two things, like if I was on a team. I sometimes wonder if this is what it's like for writers, as well."

"Feeling" is one of the more fun esoteric notions we get to knock around in conversations about games, but you have to admit, trying to understand that general feeling is pretty important. In an earlier reveal of *Axiom Verge*, Happ said that he endeavors to discover "that magical feeling."

"I think it is the same as it is for a player," he explains. "It's discovering a new thing that wasn't explicitly created for you to experience. Something that nobody can tell you about and you won't read about in a guidebook. You're an explorer in uncharted territory."

Being an explorer in uncharted territory is the essence behind my favorite games. Even something outside the genre, like, say, *Resident Evil*, transports you into a house of discovery. There's poetry in searching through spaces. It's the atmosphere that can shift, but there's a common thread we tend to wrap ourselves around when we get lost in a game world.

Axiom Verge's Hero, Trace

The Power of Glitch

There seems to be a bit of a philosophy that extends outside of the *Axiom Verge* code, but maybe I'm reaching. I'll take it as a good sign that I want to know more of what's driving the game's mysteries, and Happ is certainly colored by his interests as a creator.

"Our universe is a vast collection of data points and seemingly arbitrary rules that appear to come together in a way that results in our existence. It is often debated that this is teleological — it was created for the purpose of our existence. If that's the case, then anything in our universe not contributing to this might be thought of as a glitch. But I'm more inclined to think that purpose only has meaning with regards to sentient beings, and so a true glitch is something that can only be created by a person or other thinking entity. You might, in hindsight, say that a certain aspect of life (say, an earthquake) is a glitch, but it is more that the same rules that make earthquakes are also the ones that make people."

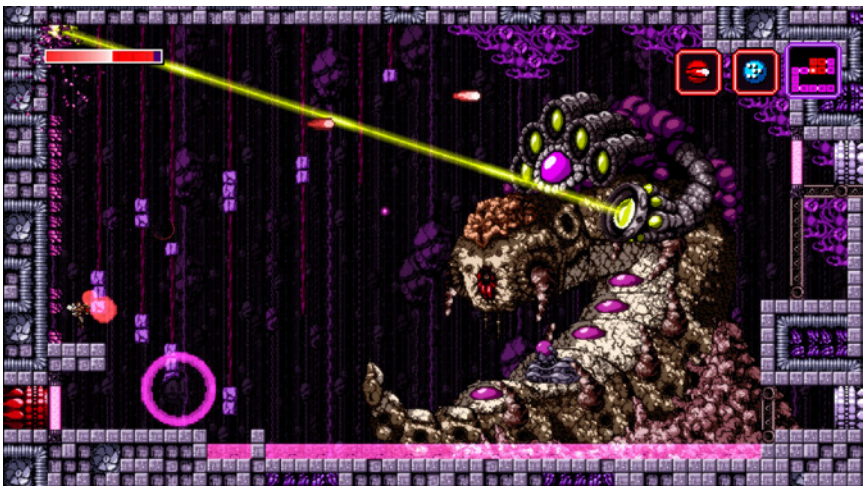
"I THINK IN TERMS OF GAMEPLAY MECHANICS FOR AXIOM VERGE, I'M MOST INTERESTED IN EXPLORATION — THIS IS PROBABLY TRUE FOR ME IN REAL LIFE AS WELL." — THOMAS HAPP

I think in terms of gameplay mechanics for *Axiom Verge*, I'm most interested in exploration — this is probably true for me in real life as well," says Happ. "So I find games like *Hohokum* or *Fez* to be compelling because they achieve the same end, exploration, but provide new kinds of obstacles and different means of bypassing them. The kind of conflict is different but there is still a sense of facing problems and overcoming them. So I'm always looking at this sort of thing to find alternatives to the 'shoot until it's dead' method of problem solving, which, while often exciting, limits the kind of stories you can tell. But then sometimes just moseying around isn't quite engaging enough, either. I think if it was an easy problem to solve, videogames would be completely different from how they've turned out."

Dropping the *Metroid* reference in a conversation about a game that is heavily inspired by the spirit of exploration is inevitable, but again, what is *Metroid*, when you break past the confines of archetypal referencing? That whole essence thing will always linger like an unsettling fog whose enticing beauty can't be denied.

"I think it's more about replicating a certain feeling than replicating the game itself," suggests Happ. "I don't think players today can start up *Metroid* and experience the same enjoyment when you're lost in some deep corridor and a bomb opens up a new passage. It's like watching an old film you know was revolutionary at the time but you've seen it echoed in so many films since that it's lost the surprise. So you have to be creative in thinking of other things that can bring back that feeling."

Where do you begin? "Different people certainly seem to cite different aspects as the most important part of *Metroid*," continues Happ. "The dramatic tension, the atmosphere, the relationship between Samus and the baby (in the case of the sequels), the challenges it provides, etc. For me, I think the most compelling aspect is how exploration is handled. Not just in terms of the classic room-to-room maze structure we're all familiar with, but also in terms of what happens within each individual room, where the environment is made of clearly defined blocks, each of which could house a secret. I think this is a key thing



that's often overlooked in modern games, where environments are typically non-interactive set-pieces and utilize icons or the like to demarcate things of note."

That distinct geometrical presence in the terrain is conspicuous the moment you see *Axiom Verge*. It's uniquely effective as a design choice, and actually can carry a tactile satisfaction that engages not unlike a good headshot; touching what's in front of you, whatever that might be, is part of good immersion. Oftentimes we forget that despite early designers making choices based on limitations, those choices could still be the most effective way to express a certain vision. And sometimes that vision might change, especially when you've been on it for years, like Happ.

"I'd originally wanted to create the perfect amalgam of my favorite side-scrolling games, to the point where your main weapon was a combination diskarmor and grappling hook that could transform into a wheeled vehicle," he points out. "But over time I found that certain things weren't going to be fun (like when the thing you use to attack is also trying to latch onto rocks). The visual aesthetics originally were going to resemble more late NES-era games like *Shatterhand, Ninja Gaiden, Super C*, etc., but I felt there was a dissonance between the visuals having angles and curves, and the mechanics where you destroy blocks, so it started moving more toward the original *Metroid* and *Super Mario Bros.* look."

Name dropping is hard to avoid sometimes; we all know what *Metroid* and *Super Mario Bros.* equate to. But being inspired by something great is a lot easier than living up to it. And times have certainly changed, with new expectations in the audience and personal growth in the designers themselves who have something to live up to. It says something that Sony swept in to help take *Axiom Verge* to its conclusion, for the PlayStation 4. If you like what you're hearing so far, the game will have to speak for itself next year, glitches and all.

THE POWER OF TWO (OR MORE)

It's admirable that Happ has been a one-man-does-everything force for over five years, but there is always a point when any creation can benefit from added support. Recently Dan Adelman, who was Nintendo's head of digital content and a key figure in their indie titles, joined Happ to help facilitate *Axiom Verge*'s forthcoming release. Adelman has previously had a hand in games like *Shovel Knight, Cave Story, Retro City Rampage*, the *Bit.Trip* series, and *World of Goo*.

Kohler's Collect-a-Thon! YOUR GUIDE TO BUILDING THE ULTIMATE RETRO LIBRARY

NINTENDO SIXTY-FOOOOUR!

by Chris Kohler

The market for original classic games has never been hotter. Whether you're obsessed with collecting or just want to play your old favorites in their original format, you're paying more for old games than ever before. Each issue in Collect-a-Thon!, we'll break down the current collecting scene for a particular platform.

THE PLATFORM

When Sony and Sega launched their respective 32-bit, CD-based game machines in 1994, Nintendo bided its time. It told gamers to wait for its revolutionary 64-bit system — twice the bits! — that would be powered by a Silicon Graphics chipset that could produce more glorious 3D graphics than the competition's. The Nintendo 64 was as powerful as Nintendo said it was, but Nintendo's refusal to move away from the archaic cartridge format doomed it before it even hit the shelves. Even though it was steamrolled by PlayStation, Nintendo 64 still played host to some of the best games of the generation, from *Super Mario 64* on day one to *Legend of Zelda: The Ocarina of Time,* both of which helped to lay down the design rules for the new era of 3-D polygonal gaming. And it gave us the analog thumbstick, too!

COLLECTING IT

As an old man with one foot in the grave, I start feeling my age most acutely when I see grown actual adults at retro-game conventions pointing at Nintendo 64s and saying, "I got this for Christmas when I was 4." I'm sorry, are you Benjamin Button? The N64 was the first thing I bought with money from my first high school job. And that wasn't *that* long ago, right? Right?

Anyway, even if some of you are a little young to be having midlife crises and buying your old toys again, the fact remains that Nintendo 64 collecting is hot right now. Its library is small — there were only 296 games released in the U.S., and that's 100 more than made it out in Japan. So collecting a complete set was, at least for a while, easily attainable, especially if one was only trying to acquire the cartridges.

But as more and more collectors are taking up the N64 as one of their platforms of choice, we're finding that some of the games, especially their boxes and manuals, can be quite hard to get a hold of, and that's caused some very surprising price spikes in the last few years. Luckily, all of the standard-release cartridges are still fairly affordable.

THE HOT ONES

Here are the games any collector would go crazy to find in a box of junk at a flea market. Every piece of these games, from the cartridge to the manual to the box, is worth big bucks.

Clay Fighter 63 1/3: Sculptor's Cut (1998)
Quite a few of the rare Nintendo 64 games were exclusive to rental stores, or otherwise limited in their availability. This improved version of the parody Claymation-style fighting game was exclusive to Blockbuster. Since rental game manuals often took heavy damage, finding the *Sculptor's Cut* manual in great shape is perhaps the biggest challenge. The cartridge will cost you $200, but a mint boxed version will go well over $1000 — how much so depends on the condition of the box and instructions.

Stunt Racer 64 (2000)
Another Blockbuster exclusive, this racing game by Midway gets anywhere from $400 on up for a complete, mint copy.

Transformers Beast Wars: Transmetals (2000)
This, too, seems to have been a rental exclusive at least for a time. Expect to pay $400 for a complete copy.

Worms: Armageddon (2000)
This version of the once-popular strategy series seems to have been printed in very low numbers. Loose cartridges are starting to reach the $100 level, with a complete copy taking twice that.

Bomberman 64: The Second Attack! (2000)
This sequel to *Bomberman Hero* has a cult following but few copies to go around. Complete copies are now selling for over $300.

Super Bowling (2001)
Before it began to crank out all manner of shovelware for Wii and Nintendo DS, UFO Interactive published this N64 game very late in the console's life. Collectors are becoming more aware of its rarity, which has pushed the price for a loose cartridge up to about $50–60 and complete copies well past $300.

Illustration by Thor Thorvaldson

International Superstar Soccer 2000 and **International Track and Field 2000** (2000)
This pair of sports games by Konami also seem to have been released in very limited numbers, as the U.S. versions are tricky to track down. Complete copies seem to be hovering in the $120 range.

EXPENSIVE, NOT RARE

There are many, many more Nintendo 64 games that are getting into the realm of three-digit prices, especially mint and complete. Several of them were actually published by Nintendo in significant quantities! So the prices seem to be more about sheer demand in these cases. Nintendo's *Conker's Bad Fur Day* and *StarCraft 64* are highly sought after. The Mario series, in terms of sheer numbers, must be the most common games on the platform, and yet nice copies of *Super Mario 64*, *Mario Kart 64*, *Paper Mario*, *Super Smash Bros.* or any of the *Mario Party* games are between $50 and $100. Same for the two *Zelda* games, *Ocarina* and *Majora's Mask*.

On the third-party side of things, Konami's *Goemon's Great Adventure* and *Castlevania: Legacy of Darkness* are hard to find, as is *Harvest Moon 64*. Atlus games like *Ogre Battle 64: Person of Lordly Caliber* and *Snowboard Kids 2* are also getting expensive.

Less sought-after games that are also jumping in price as more collectors aim for complete sets include *Tom & Jerry in Fists of Fury*, *Rat Attack!*, and *NFL Blitz Special Edition* (another rental exclusive). And while it's still inexpensive to buy a loose cartridge for the limited-release *Indiana Jones and the Infernal Machine*, the box and manual make a $20 cart into a $100 complete copy.

SPECIAL EDITIONS

The game industry's grand tradition of packaging random tchotchkes in with games and labeling them "special collector's editions" began, eh, roughly around this time period. Two N64 special packages seem to have been released in very limited numbers and thus sell for quite a bit when they surface today. A copy of *Gauntlet Legends* that includes a metal Warrior figurine goes for around $400 (the box has a window through which the figure can be seen). And Midway's *Rampage 2: Universal Tour* had a limited edition that included a plush stuffed toy of one of the game's monster protagonists. This varies wildly in price whenever one comes up — the last one sold for $2000.

NOT FOR RESALE

To this day, Nintendo produces versions of its games with special labels that read NOT FOR RESALE, to be placed in store demo kiosks. The Nintendo 64 had many of these, and some collectors are trying to build full sets of all of them. Since the game boards themselves are identical, most of these cartridges only command a small premium above the price of the retail game.

There are a few big exceptions — namely, unfinished beta versions of games that Nintendo placed in stores but never intended to get out into the wild. These always have distinguishing physical characteristics. A demo of Acclaim's *Turok 2: Seeds of Evil*, which has a black and white text label, sells for over $300. So does *Donkey Kong 64*, which is distinguished by being on a gray cartridge, not the banana-yellow cartridge that the retail game ships on.

But the big one, and the holy grail for N64 collectors, is the *Legend of Zelda: Majora's Mask* gray Not For Resale cartridge. Recently, two copies of this sold on eBay for (are you sitting down?) $1400 each. Note that the gold Not For Resale cart, which is identical to the retail game, is only worth around $100.

PROTECT YOURSELF

While I have not seen a 100 percent fake Nintendo 64 cartridge yet, there are some scams out there. Some N64 collectors will pay high prices for "variant" cartridges. Some games that came on colored cart shells are also out there in standard gray versions, which are much harder to find. The problem is, unscrupulous sellers could print out fake labels, swap some boards around and make themselves a fake "variant" to dupe someone who can't tell the difference. So if you're going to wade into the murky area of variants, be sure you know how to tell the real thing!

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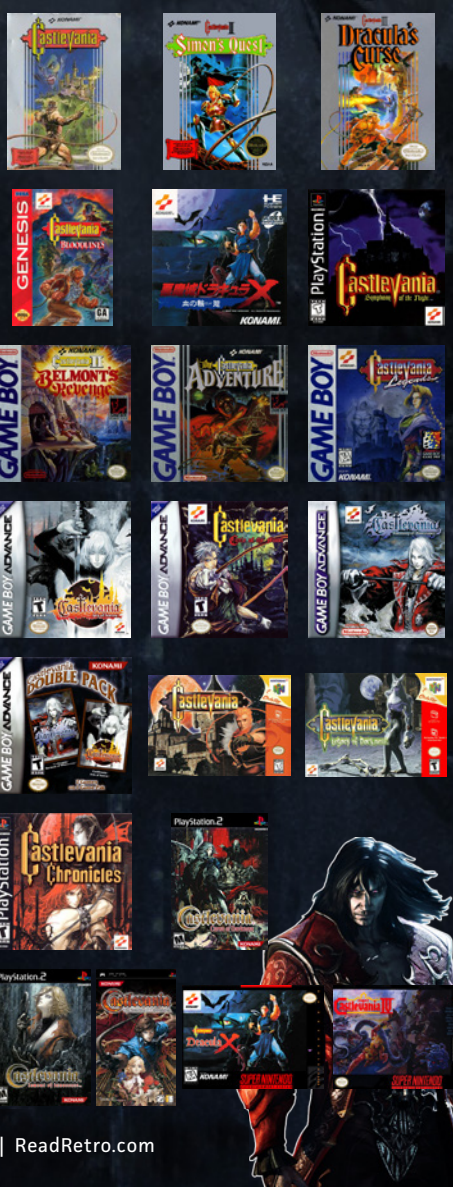
Collecting Castlevania

BY CHRIS KOHLER

You'll have to crack the whip if you want to slay this substantial collection.



Not many gaming franchises have had the staying power of *Castlevania*. Sure, the popularity of Konami's series of vampire-killing action games has had its peaks and troughs. (And now, after *Lords of Shadow 2*, it may be at its nadir.)

But to chart the history of *Castlevania* is to watch the evolution of videogames themselves: 8-bit sprites, the 16-bit console wars, the gorgeous 2D art of PlayStation, the awkward 3D puberty of Nintendo 64, the domination of Nintendo DS — name an era, and there's a *Castlevania* game there to help define it.

With that kind of longevity, it should be no surprise that the series has fans from many eras who want to collect every single release. Somewhere along that journey, one must ask: What constitutes a "complete" *Castlevania* collection, anyway? And what *is* a man? Come with me on this journey, as we discover how to turn your miserable little pile of *Castlevania* secrets into a majestic, complete pile.

SIMON'S EARLY YEARS

In the beginning, there was *Castlevania* on the NES. The first three games in the series were very popular on the 8-bit machine and produced in mass quantities, so it shouldn't be too hard to get the original game and sequels *Simon's Quest* and *Dracula's Curse* into your collection. If you want to gild the lily on this, you can search out one of the earlier print runs of *Castlevania* — these have a "five-screw" cartridge shell variant, and the box has a "hangtab" on the back used for hanging the game on a store's rack. That's the original-original.

Versions of the original *Castlevania* were also released in the U.S. for the IBM PC, Commodore 64, and Amiga computers. These are incredibly difficult to find and often in poor or incomplete shape when you do.

PORTABLE POWER

Buying all of the *Castlevania* games for the black-and-white Game Boy is where things start to get expensive. Buying a complete copy of the first game in the portable series, *The Castlevania Adventure*, will cost you about $50–60 — and that's the most common of the four. *Castlevania II: Belmont's Revenge* is well over $100 complete in box. The latter-day release *Castlevania Legends*, the only game to star a female Belmont and unfortunately also one of the worst games in the series, was produced in small quantities and sells for nearly $40 loose and $200 complete.

And then there's *Kid Dracula*, which is not only one of the rarest *Castlevania* games in the U.S. but one of the toughest games to find across the Game Boy library. Complete copies sell for over $300 when they even surface, and the cartridge alone will cost you about $50–60 — that's at the very top end for loose Game Boy carts! (And yes, *Kid Dracula* is a *Castlevania*: In Japan, it's known as *Akumajou Special: Boku Dracula-Kun*, making it clear that it is part of the *Akumajou Dracula* series, as *Castlevania* is known in Japan.)






16-BIT BATTLES

Arriving just in time for the Super Nintendo's first Christmas, *Super Castlevania IV* was a reboot of the original battle between Simon Belmont and Dracula that used as many of the whiz-bang new graphical features of the SNES as it could possibly manage. This was never an expensive SNES game, but the recent rise in popularity of Nintendo's 16-bit platform for collectors has driven *Super Castlevania IV* prices up.

Castlevania: Dracula X has always been expensive, however. A reworked (inferior) version of the Japan-only PC Engine game *Rondo of Blood*, it is nevertheless a holy grail of *Castlevania* collectors in the U.S. The Sega Genesis got its own unique entry in the series, *Castlevania Bloodlines*. There are two distinct printings of this game: one in a hard plastic case, and another rereleased by Majesco in a flimsy cardboard box. The latter sells for considerably less, if you want to add a copy to your shelf on the cheap.

RISE OF THE METROIDVANIA

While some other 16-bit successes struggled in the leap to CD-ROMs (sorry, *Contra*), *Castlevania*'s debut on PlayStation would prove to be an enduring masterpiece that would help define a new genre. *Castlevania: Symphony of the Night* was a big enough hit that finding a nice complete copy today is still fairly easy. The follow-up game *Castlevania Chronicles* is not a sequel to *Symphony* but an enhanced version of another Japan-only game in the series. It's getting tougher to find by the day!

On Nintendo 64 was a separate branch of the series. These initial attempts to translate *Castlevania*'s vampire-whippin' gameplay into polygonal 3D could not be called successful. The first game, again titled simply *Castlevania*, is still fairly cheap in complete condition. The follow-up, *Castlevania: Legacy of Darkness*, is more expensive. (Again: Neither are very good.)

Konami continued to gamely attempt to make 3D *Castlevania* work, with results that were never truly satisfying. On PlayStation 2 we pretended to like *Castlevania: Lament of Innocence* and *Castlevania: Curse of Darkness* (the latter also having a release on the original Xbox).

But it was the Metroidvania-style games on the Game Boy Advance that truly continued the series' legacy. If you're going to track down copies of *Castlevania: Circle of the Moon*, *Castlevania: Harmony of Dissonance*, and *Castlevania: Aria of Sorrow*, make sure to beware of fakes! There are tons of bootleg Game Boy Advance games out there, some with very convincing boxes and manuals. Look closely at the cartridge labels and boxes, comparing them to the originals, before you buy.

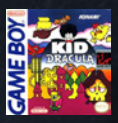
There are two more Game Boy Advance games: *Castlevania Double Pack* collects the first two GBA games into a single cartridge, and a barebones port of the original *Castlevania* is on GBA as part of the "Classic NES Series."

Once you've got those out of the way, all you have to do is get the Nintendo DS trilogy (*Dawn of Sorrow*, *Portrait of Ruin*, and *Order of Ecclesia*), that one PSP game (*Castlevania: The Dracula X Chronicles*), the why-did-they-do-this fighting game for Wii (*Castlevania Judgment*), and the *Lords of Shadow* series (the two main-series games on PlayStation 3 or Xbox 360, the Nintendo 3DS spin-off *Mirror of Fate*, and the *Lords of Shadow Collection* disc for good measure)...and you've completed your *Castlevania* collection!

Sort of!

IMPORTED DELIGHTS

Throwing a bit of a wrench into our so-called "complete" collection is the fact that there were a few *Castlevania* games that never left Japan. Only a month after the release of the original *Akumajō Dracula* for the Famicom (NES), Konami released a separate version for the Japanese MSX computer. This was actually released in Europe as *Vampire Killer*. Another game called simply *Akumajō Dracula*, released on a later Japanese personal computer called the Sharp X68000, was the version that was rereleased as *Castlevania Chronicles* on PlayStation.



Kid Dracula only appeared on Game Boy in the U.S, but there was a Famicom version in Japan as well. Most notoriously, *Akumajou Dracula X: Rondo of Blood* for the PC Engine Super CD-ROM never appeared on our TurboGrafx-16s. If you really want to be a completionist, you'll also want the Sega Saturn port of *Symphony of the Night*, which had various additional features (and slowdown).

And there's one more important import: While owning the 1988 arcade iteration *Haunted Castle* may be an impossible dream, a version of the game was released for PlayStation 2 in Japan as part of a series of ports of classic arcade games called *Oretachi Ge-sen Zoku* ("We, the Arcade People").

Then again, if you are so crazy in your *Castlevania* collecting as to acquire a *Haunted Castle* machine, and maybe even the unique 2009 machine *Castlevania: The Arcade*, please invite me over to your house.

Castelvania Timeline

1986	Castlevania
	Vampire Killer
1987	Castlevania II: Simon's Quest
1988	Haunted Castle
1989	Castlevania: The Adventure
	Castlevania III: Dracula's Curse
1990	Akumajō Special: Boku Dracula-kun
1991	Castlevania II: Belmont's Revenge
	Super Castlevania IV
	Kid Dracula
1992	
1993	Akumajō Dracula
	Castlevania: Rondo of Blood
1994	Castlevania: Bloodlines
1995	Castlevania: Dracula X
1996	
1997	Castlevania: Symphony of the Night
	Castlevania Legends
1998	
1999	Castlevania (Nintendo 64)
	Castlevania: Legacy of Darkness
2000	
2001	Castlevania: Circle of the Moon
	Castlevania Chronicles
2002	Castlevania: Harmony of Dissonance
2003	Castlevania: Aria of Sorrow
	Castlevania: Lament of Innocence
2004	
2005	Castlevania: Dawn of Sorrow
	Castlevania: Curse of Darkness
2006	Castlevania: Portrait of Ruin
2007	Castlevania: Order of Shadows
	Castlevania: The Dracula X Chronicles
2008	Castlevania: Order of Ecclesia
	Castlevania Judgment
	Akumajō Dracula: The Medal
2009	Pachislot Akumajō Dracula
	Castlevania: The Arcade
	Castlevania: The Adventure ReBirth
2010	Pachislot Akumajō Dracula II
	Castlevania Puzzle: Encore of the Night
	Castlevania: Harmony of Despair
	Castlevania: Lords of Shadow
2011	
2012	Pachislot Akumajō Dracula III
2013	Castlevania: Lords of Shadow Mirror of Fate
2014	Castlevania: Lords of Shadow 2

TRIP WORLD

RARITY REPORT

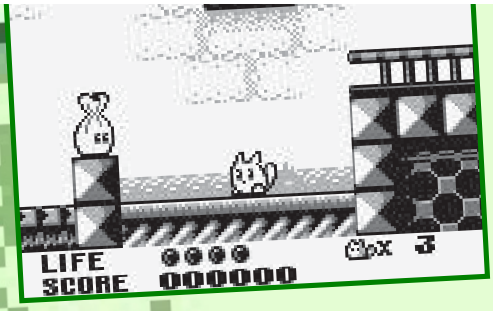
GAME BOY | 1992 | MARKET PRICE: $800–$3000 by Jeremy Parish

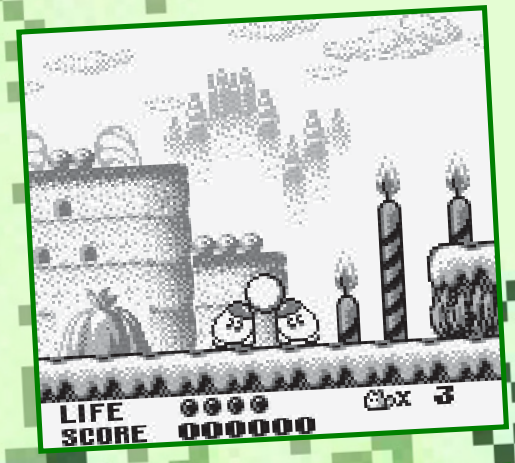
WHAT IS IT?

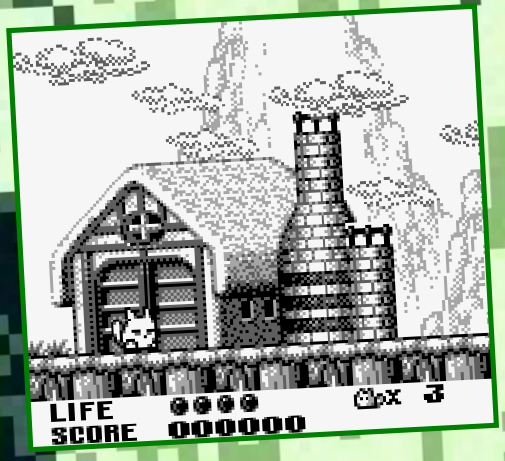
One of the most preposterously rare Game Boy releases of all time, which is kind of weird given that it was published by Sunsoft, a major supporter of the platform. *Trip World* features the richest audio-visual stylings the system ever played host to, along with a decidedly unique approach to platforming.

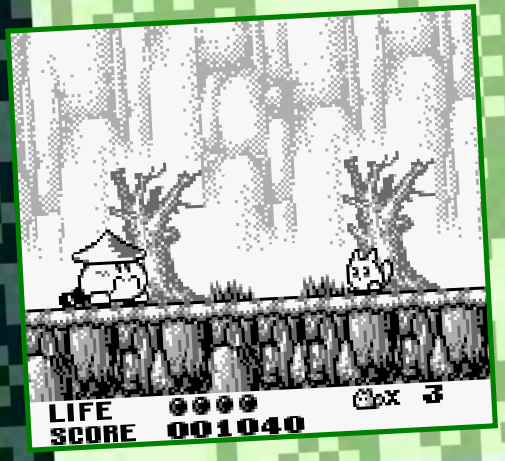
WHY SO EXPENSIVE?

A combination of a low print run, spotty global publishing, and a sterling reputation make *Trip World* a keen example of the principles of supply and demand. The game saw a brief retail run in Japan and Europe — never in the U.S. — and some estimates peg its production numbers in Europe at the low five figures, if that. Combine that with high demand generated by its legendary reputation and the general difficulty of finding well-cared-for vintage Game Boy games (kids and cardboard boxes do not make a collector-friendly medium) and you have a shockingly expensive rarity.









IS IT WORTH THE HYPE?

It's hard to justify dropping the price of a nice computer on a single game you can clear easily in an afternoon, but at the very least it's safe to say that *Trip World*'s reputation as a beautiful and unique work holds up. You'd be hard-pressed to find any classic black-and-white Game Boy title that looks this nice — each and every section of the screen has a unique layout and graphical style, with wonderful details for the attentive.

Equally impressive is *Trip World*'s unconventional play style. While it seems on the surface like a typical platformer, if you stop to observe how enemies interact with you, you'll eventually notice that most of them actually aren't enemies. Only a handful of creatures in the world pose any real threat to you; you can bump into creatures with no ill effect, and most of them will either ignore you or approach you playfully. You can kill them, but there's no advantage to doing so.

Between the elaborately crafted backgrounds and the abundance of critters going about their business, *Trip World* manages to create the sensation of, well, a world. Through which you're taking...a trip. It's an early example of content tourism in the most literal sense, a low-difficulty romp through a lovingly crafted land. Unless you get hung up on the bosses (which can at times be tricky, especially given how little active combat exists in the game on which to hone your skills), you can blast through *Trip World* in no time at all — which makes for a pretty low entertainment-time-to-cost ratio.

But you're not really meant to approach *Trip World* with the same mindset you would a typical action game. It's more about enjoying the sights and playing around with protagonist Yakopoo's ability to transform into flying and swimming forms or interact with the creatures and other inhabitants of the world in different ways.

BUT I DON'T WANNA PAY $3000!

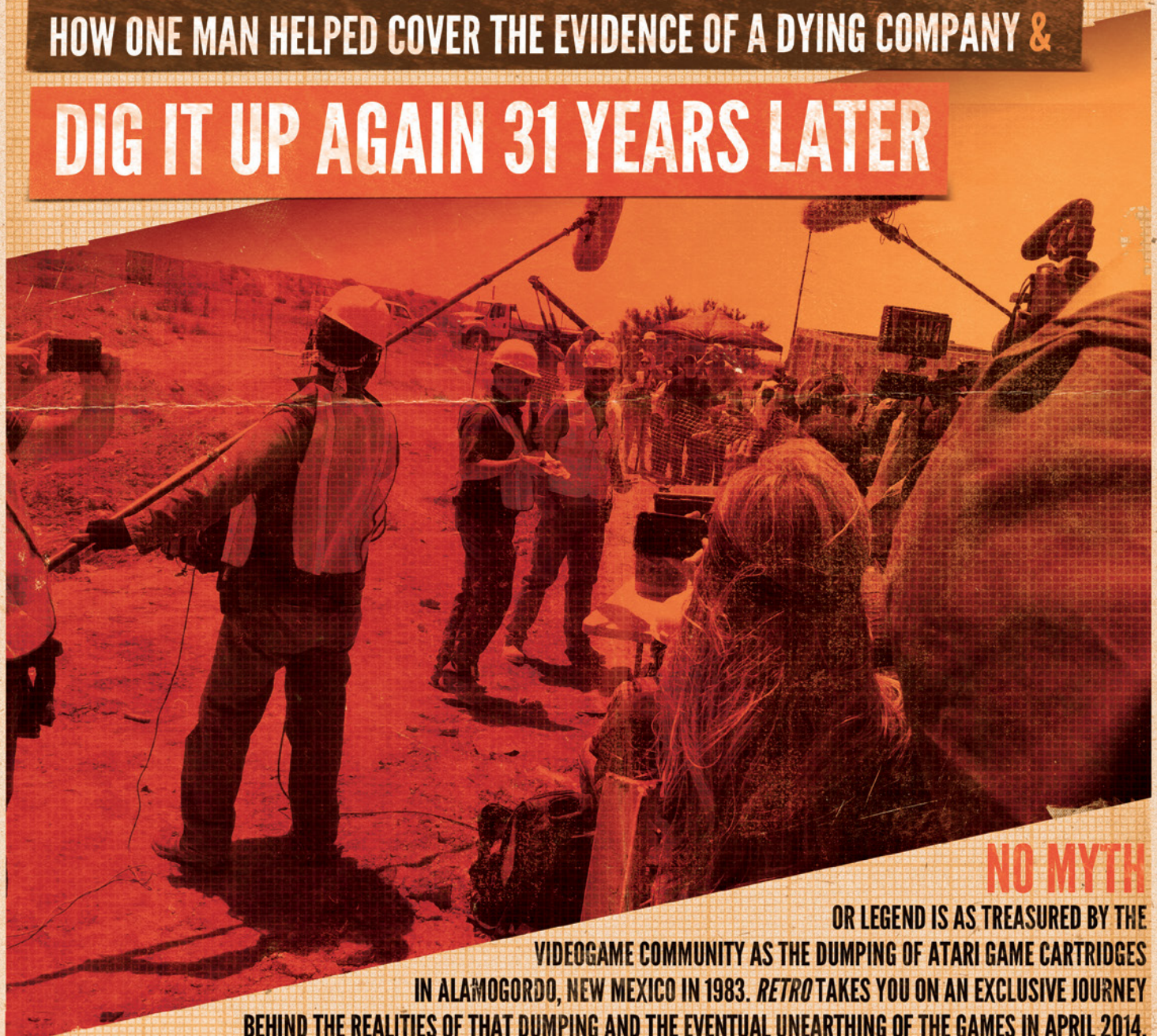
Ah, well, sorry. Sunsoft reprinted and remade a fair number of its games (and others!) once the Game Boy Color revitalized the Game Boy market, but *Trip World* wasn't fortunate enough to enjoy that boon. And it seems unlikely we'll ever see any sort of compilation featuring Sunsoft's old 8-bit releases, either.

But all hope is not lost! If you're really determined to own *Trip World* legitimately, you do have a much more affordable avenue available to you than dropping an entire paycheck on a 30-minute videogame experience. Sunsoft republished *Trip World* on both the European and Japanese Virtual Consoles, where it costs about $3. You'll need to buy a European or Japanese 3DS (or 2DS) in order to access the eShops in those regions, but that sure beats buying an actual *Trip World* cartridge — a bare cartridge alone costs about three or four times what an imported 3DS would. "Great deal" really is a relative concept.

BY MARTY GOLDBERG

BURIED TRUTH

HOW ONE MAN HELPED COVER THE EVIDENCE OF A DYING COMPANY & DIG IT UP AGAIN 31 YEARS LATER



NO MYTH OR LEGEND IS AS TREASURED BY THE VIDEOGAME COMMUNITY AS THE DUMPING OF ATARI GAME CARTRIDGES IN ALAMOGORDO, NEW MEXICO IN 1983. *RETRO* TAKES YOU ON AN EXCLUSIVE JOURNEY BEHIND THE REALITIES OF THAT DUMPING AND THE EVENTUAL UNEARTHING OF THE GAMES IN APRIL 2014.

The desert air was crisp if not dusty, the blowing wind betraying the pending dust storm moving in on the horizon.

The archeologists were busy peeling back the layers of time, hoping to beat an almost sure loss of visibility. As the storm hit, a member of the crew slowly appeared through it to stand in front of the observers. It was reminiscent of a scene out of the opening of Spielberg's *Close Encounters*. Except instead of returned World War II planes, these artifacts were displayed in the hands of Zak Penn, who was wielding the objects like Moses using his staff to part the Red Sea. The artifacts of interest? Packages of Atari cartridges.

Yes, this desert locale was a city landfill and these archeologists were digging through layers of garbage to find long-lost videogames. Add to that they were all there doing it for a Zak Penn–helmed documentary as mobs of people and media watched, and you have what appears to the uninitiated as an odd spectacle.

But even those familiar with the legend of the dumped cartridges were often confused by the numerous myths that sprung up over the years. In fact, even after the documentary aired in November 2014 as *Atari: Game Over* (a production of Microsoft's now-closed Xbox Entertainment Studios), many of these tales still frustratingly survive in the media and public consciousness.

Now, for the first time, and accompanied by accounts of the dig from some of the key players, the full truth of the dumping in Alamogordo will be told.

Back to the Future

Our journey back to where it all began centers around one key individual. No, not *E.T.* developer Howard Scott Warshaw, but Jim Heller. You see, Jim was the one responsible for dumping all the equipment at Alamogordo back in 1983. Growing up in the San Francisco Bay Area, Jim's first job was at IBM's San Jose manufacturing plant in the early '60s, before getting a two-year certificate in electronics from Seattle Community College in 1967. After a short stint in Dallas with Texas Instruments and a slew of other tech manufacturing jobs through the early '70s, in 1976 he found himself being invited to work at Atari.

The invitation came via a former co-worker at a Palo Alto company called Coherent Radiation, Loren Schoof. "At Coherent Radiation I met and worked with Loren Schoof, and they were looking like they were going to go under. So I left and so did Loren, and two months later Loren called me and he was running the (consumer) manufacturing part of Atari," says Jim.

Two weeks later, in September 1976, Jim found himself as the test supervisor at the Consumer Manufacturing building located at 1196 Borregas. He was smack in the middle of the golden period of home *Pong* machines. But in manufacturing, things weren't always so blessed.

"When I started work, Atari had a stack of defective *Pong* PCBs that exceeded 135,000 units. My group worked through these in about six months to a year. In the early stages of Atari, many of our line technicians had no formal training. Two technicians shared a single HP465. The scopes were left on auto-run. Each tech used a separate channel and looked for a blob on the screen, as the scopes could not be synced on a given signal. As time progressed, I was able to hire qualified technicians with military or tech-school training."

Jim also found himself helping out on the manufacturing line, much to the dismay of some of the workers. "On the *Pong* assembly line, Atari had six people inserting the main integrated circuit into the PCB during final assembly. When I would get bored, I would take a position in front of these six people and start inserting ICs, then hear that I was working too fast as they had nothing to do. Whenever employees would complain about the amount of work they had to do, I would just sit down and quietly show them that I could do two–three times as many operations. Complaining usually stopped."

By the early summer of 1977, focus shifted to manufacturing of Atari's banner consumer product, the Video Computer System. Stationed at the new final assembly plant at 1215 Borregas, Jim noted the manufacturing was anything but smooth, and initially included having to put together and test the consoles without the main ICs in place.

"We couldn't get enough processors, so we had to run the machines down the line anyways. We had special fixtures made with the ICs that were in short supply built into them. The tech just placed the board on the fixture and tested the game. We installed sockets so the missing ICs could just be inserted into the board. No soldering required. The 2600s had quite a few problems with the PCBs. 10–15% of the PCBs were under etched, leaving almost microscopic shorts between traces. The shorts could be cleared with a trouble light. There were numerous solder bridges missed by the people on the line stationed right behind the wave flow machine."

Within the year, Jim transformed from jeans and a shirt to a suit and tie as Loren Schoof was promoted to VP of Consumer Division operations, leaving Jim as operations manager. His duties now included overseeing all Consumer Manufacturing, Test Engineering, Manufacturing Engineering, and Special Projects (i.e. research on manufacturing some of Atari's products in development, such as the upcoming computer line). It also had him flying all around to help set up new manufacturing plants in places like El Paso, Texas and Hong Kong.

PUTTING A PRICE ON HISTORY

Sandy Huner of Amsterdam, Netherlands was one of the lucky people to bid and win a recovered game that the city of Alamogordo put on eBay. We checked in with him to ask what it meant to get an iconic part of history.

RETRO: Tell us a bit about your background: how you got started in collecting and how long, what you specialize in, etc.

SANDY HUNER: The Atari 2600 was my first console as a kid back in the eighties; I saved for at least six months so I could get it. 20 years ago I found my 2600 plus around 20 cartridges while rummaging through my stuff at my parents' house, and fell in love with the system again. I immediately resumed collecting for the system, heading out to flea markets and getting the U.S.-only editions through trades and eBay. Within a few years my collection was up to 1000+ carts.

RETRO: Did you follow the dig when it was occurring?

HUNER: I have been following all the speculations on the landfill for years, so when the dig was announced, I followed it closely, hoping they would find the carts. And they did.

RETRO: Why did you want to acquire one of the auctioned dig cartridges?

HUNER: With this being such a great Atari story ending the golden age of videogames, any serious Atari collection should have one. I really wanted to buy an *E.T.* cartridge but with prices going sky-high I had to settle for *Missile Command*. Since we moved house my collection has been in storage as there is no display room, so I guess I will frame the landfill cartridge and display that instead.

RETRO: What does the whole burial and dig series of events mean to you?

HUNER: I think it's a great initiative, and I'm hoping they will release a DVD to accompany my cartridge.

By 1979, Schoof and one other management member had quit Atari, which Jim claims was because they were hit on by new CEO Ray Kassar, leaving him reporting to Schoof's replacement Paul Malloy. Getting bored, he started spending more and more time at the El Paso, TX plant where the 2600's games were being manufactured on Beacon Street, and soon began directly overseeing operations at the plant and commuting from Sunnyvale to El Paso. "Sometimes I was there for a week, sometimes for two weeks. I actually ran the assembly operation down there for a while back when it was non-automated."

It was in El Paso that the roots were laid for the event which would forever link Jim to an iconic moment in videogame history.

From Under to Over

1981 turned out to be a watershed year for Atari. The company's rapid growth and success saw it entered into three separate industries: coin, consumer, and computer.

Coin had been its traditional roots, where the entire company began. Starting in 1979 — thanks to Taito/Midway's *Space Invaders* and the subsequent golden-age games of that period — there had been an explosion in demand for video coin-ops by non-traditional operators such as gas stations, doctor's offices, department stores, etc.

Consumer itself had started as a side project for *Home Pong* and had grown into its own division by the time of the VCS. The foray generated large losses for the company in 1978, helping to cause Nolan Bushnell's departure and install Ray Kassar as head of Atari with a mandate to make the Consumer Division and its performance strong again. A licensing of *Space Invaders* for the VCS would do just that. The success of that game seemingly put Atari at the forefront of an explosion of videogames in the consumer electronics industry (and made the Consumer Division and its operations the golden child of Atari Inc. in the eyes of Warner).

You see, like coin, the consumer industry had also gone through tremendous growth since the late '70s, expanding beyond traditional locations like toy stores and major retailers into anyone that carried consumer electronics of any type. Atari had gone from $6 million in profits on almost $200 million in sales during '79 to $80 million in profits based on $415 million of sales in 1980, going from contributing 2.8% of Warner's profits in '79 to 31% in '80. That growth was primarily driven by Atari's Consumer Division, which had grown from sales of $80 million in 1979 to $250 million in 1980, a rise of almost 212%. Both Atari's and its Consumer Division's earnings were expected to double by the end of 1981.

Atari security watching destruction.
San Jose, Spring 1983

Boxes of consoles and games loaded.
San Jose, Spring 1983

Console destruction.
San Jose, Spring 1983

Pouring concrete over crushed games.
Alamogordo, 1983

By the end of the second quarter of 1981 Warner was already reporting a 47% increase in second-quarter earnings even while its traditional divisions like Record and Music Publishing (Warner Bros., Elektra, and Atlantic) recorded major losses. Why? The increase was chiefly driven by Warner's consumer electronics and toys division, i.e. Atari. It was clear 1981 had exploded for Atari, its competitors, and for videogames overall across coin, consumer, and computer.

But this explosion of consumer demand turned out to be more than Atari was prepared for. In fact, it was more than all the companies creating product were prepared for, as all were overwhelmed in the onslaught of new retailers and sizeable orders leading to a massive shortage of product for the second half of the year. Atari had sold out of VCS units in March, and put a halt on all new products until after Christmas, when it expected to expand production. Both Mattel and Magnavox tripled production of their systems and were still falling short of fulfilling orders for the Christmas season. Organized crime was actually getting involved hijacking delivery trucks, and even retailers were stealing extra product from shipping docks at Atari's distribution warehouses

Atari took on $1.23 billion in sales with $287 million in profits, over half of which came from the Consumer Division. Even competitors in the home arena like Mattel with their Intellivision would take in $250 million in sales by year's end. But it was Atari's next step that got them in trouble and would send the consumer videogame industry into a nosedive: They talked retailers into placing large orders to cover the entire year of 1982 in one fell swoop, in order to beat any potential shortages. Part of it was driven by actual potential demand, but a good portion of it was driven by greed and the demands to not only keep feeding the large sales bonuses Atari's marketing people got for 2600 game sales, but Warner's stock value as well.

Jim Heller was killing time in El Paso when the mound of manufacturing orders started coming in. As he explained, the first three months of the new year was traditionally downtime for manufacturing, but it turned out to be the busiest ever as 1982 came around. Atari's reported sales shot through the roof (as did Warner's stock value) with reports of about $2 billion in sales and $323.3 million in profits.

There was only one problem: Atari used their sell-in numbers to report their quarterly earnings and overall projected earnings for the year. ("Sell in" is the numbers of units shipped to retail; "sell through" is the number of units sold to consumers.) The problem with doing that is it's not based off of any real tracking of the actual market. If something should happen...say a slump in product demand...a company like Atari could get in real trouble. Especially if they also had a product buyback program in place for old and unsold stock, as Atari did in this instance.

As David Schreiber, who was in videogame retail at the time recently explained in the Atari Museum group on Facebook: "When we sold Atari and other [types of videogames] you could "stock balance"; get a credit [from the manufacturer, for unsold merchandise] and buy more stuff that would actually sell. If was great, as you could take chances on lesser titles and if it did not sell just return it. Unlike today's distribution where it's the hot potato method, after you buy whatever stock you want it's yours forever, no returns or price adjustments. That's a big reason we got out of videogames."

By the beginning of the summer of 1982, just around the time when *E.T.* was being negotiated, executives at Atari were finding themselves in a peculiar situation. Distribution warehouses around the country were flush with stock from canceled orders from retailers and from lack of projected reorders. What caused it? A slump in demand that nobody saw coming, combined with heavily increased competition hitting the home market.

Gordon Crawford from Capitol Group (major investors in both Warner and Atari and responsible for helping bring the two together) saw it coming: "At the January 1982 Consumer Electronics Show, there were three or four new video hardware systems and about 50 new software companies — all the warning lights went on for me. Then", at the June CES show, it was worse! There were about 200 new software companies. This was a business that the year before it had essentially been a monopoly, and now there were hundreds of new entrants. By this time, Warner was almost a game stock."

It was the nightmare logistics scenario that some in Warner's other divisions (such as music) had been warning would happen. They had been urging Warner to have Atari adopt the same manufacturing and tracking practices as the music industry. It fell on deaf ears because Warner Communications couldn't see their cash cow declining. Warner management became aware of it not long after, and the response from both companies was to try and keep it hidden and play games by changing report dates and extending their 4th quarter.

Then Warner and Atari couldn't hide what was happening any longer, and on December 7th they announced their earnings had been lower than projected. Atari was 80% of the consumer industry at that time, and when something that large announces earnings problems (especially when analysts had been predicting this was all a bubble ready to burst) you're going to hurt everyone, and shockwaves immediately went through the rest of the consumer industry. The entire month of December was a downward rollercoaster for those that were publicly traded. By January '83 the layoffs began and throughout the rest of the year, companies that had just opened the year before started shuttering. And that's when Atari started destroying and burying product.

The Burials

Jim had switched over to run Remanufacturing during 1982. Located on Caribbean Drive in Sunnyvale and originally part of customer service (or "customer circus" as Jim puts it), their job was to take in claimed defective merchandise from retailers and individuals and remanufacture (repair) them for reuse.

By spring 1983, Jim got word from above that he should destroy the 130,000 consoles that had been piling up. Those in turn were destroyed by a 1500-horsepower hammer mill in San Jose, owned by Markovits and Fox (a metals recycler). Then in late spring he was told he'd be receiving large quantities of unsold merchandise from distributors that would need destruction as well.

David Schreiber provides the context from the retail side of things: "Back then, stores would take back pretty much anything anytime so there was a ton of crap being returned by stores and individuals, especially with the panic of the crash (or at least the crash in the news). We had two fulltime people just handling returns. By the way, less than 10% were actually bad; they just couldn't be resold as new."

Jim adds, "In early summer of 1983 I was told that my operation would be closed and moved to El Paso, TX at the automated new cartridge facility on Pellicano Drive. All trucks were diverted to El Paso and my facility was dismantled and all benches, test equipment, and conveyor systems were sent to El Paso. Then in August of 1983 I was assigned to El Paso as an advisor for the receiving process and provided corporate housing, and commuted to El Paso weekly. All returned Atari cartridges were sent back to San Jose, CA for destruction. Atari became very popular with the local truckers, as all freight at that time was inbound to the El Paso area with nothing returning. Atari got some good deals on freight because of this."

On September 19th, 1983 Jim got word that shipping the cartridges to San Jose was getting too expensive and to try and find a different method of

destroying the returns. Going to an El Paso landfill, Jim was spooked after seeing packs of scavengers digging through it. The next day, a woman in purchasing at El Paso suggested looking at Alamogordo, NM because of their anti-scavenging laws. After checking it out and being assured scavenging was not allowed and the merchandise would be properly bulldozed and covered in dirt, financial arrangements were made. Over the 22nd through the 24th, 12 truckloads of game cartridges for both the 2600 and 5200 systems (around 748,000 in total) and console and computer systems themselves were delivered to Alamogordo. The majority of it was new-in-box merchandise returned from stores along with a small amount of items accumulated in the El Paso warehouse.

The trucks couldn't get close to the actual pit, so they had to park a distance away and have the pallets manually unloaded and moved for disposal in the pit. During that process, local teens started raiding the trucks and stealing games to resell, eventually being arrested by police.

As Jim recalls, "When I got to work on Monday morning, the telephone switchboard was very active with news reporters wanting to know why Atari was dumping good material and that local kids in Alamogordo had been arrested. Not knowing exactly what to do, I decided to have six truckloads of concrete delivered to the Alamogordo landfill, and have the games buried under a layer of concrete. Any further deliveries of Atari games were to be stopped."

When asked why he feels the dumping garnered a large amount of national and international press coverage and the other disposals did not, Jim stated he felt it was because of the coverage from the local reporter at Alamogordo's newspaper being picked up by the major media along with the timing of the financial problems in Atari and the greater industry.

Jim returned to Sunnyvale on the 29th and was laid off on the 30th, walking away never to think about it again. In the interim, the dumping captured the imaginations of gamers everywhere as it morphed into a mass dumping of millions of *E.T.* game cartridges (which itself had wrongly been blamed for everything from bringing down Atari to crashing the consumer industry) and even burials of prototypes (which also never happened).

In the spring of 2013, Jim read a *Yahoo! News* article about Fuel Entertainment being granted permission to excavate the Alamogordo landfill, now being called the "E.T. Dump." Contacting Fuel in early June, he supplied them with photographs of the dumping that he had taken along with documentation and the full story of what he had dumped. Over the rest of the year he helped Fuel, Lightbox, and local Alamogordo historian Joe Lewandowski locate the original dump (Jim's photos can be seen in the paperwork held by Joe in the resultant *Atari: Game Over* documentary), and on April 24th of 2014 he joined the crew there for the dig, along with ex-Atari employees Howard Scott Warshaw and Jerry Jessop.

The fact that he was there and had shown them exactly what he had buried was not shared with the rest of the crew, nor the archeologists leading the dig. This tidbit was also excluded from the documentary, most likely because it would spoil the entire film. (I'm told by director Zak Penn that Jim appears in the extras package that's only available on the Xbox as a separate download.)

The crew wound up digging up about 1,377 games consisting of over 60 game titles for the Atari 2600 and 5200 game systems — many popular titles were in the mix — all located just outside the concrete cap. Jim explained the uncovered portion by stating, "I didn't know how much concrete I would need, and consequently was about three truckloads short."

Seven months later, 100 of the games would go on auction and net $37,000 for the city of Alamogordo based on the soon-to-be-dispelled lore of the games that had been buried in 1983...but it was just another day on the job for Jim Heller.

Michael J. Mika and Ernest Cline
THE ROM TESTERS

Michael J. Mika (head of development at Other Ocean Group) and Ernest Cline (of *Ready Player One* fame) were on hand to observe and assist at the dig. The two were also lucky enough to take some of the first recovered games to try and get them to work in their decaying state.

RETRO: How did you get involved with the dig?

MICHAEL J. MIKA: My friend Gary Whitta recommended me to Zak, I think. I've known Gary for a while and he's now a screenwriter like Zak and I think they crossed paths.

RETRO: What did you do while waiting around the site before they recovered anything?

MIKA: I spent most of the day talking to people and hanging out with my friends, Ernie Cline, Andrew Ayre, Jerry Jessop, and Howard and his wife — we were all just geeking out all day. We spent a lot of time with the Mayor and many of the city employees, all of whom were "dig children" who benefited from the initial dumping of the games.

RETRO: How were you chosen to be the one to test out some of the recovered carts? Who else was with you and why?

MIKA: Ernie and I kept saying "I wonder if they work?" So Zak grabbed a stack and said they had some equipment. That was a huge revelation, so we hunkered down in one of the trailers. Problem was we didn't really have any tools. The production team ran to town and found a cheap soldering iron and the camera man rejiggered his camera rig to be a makeshift soldering board-mount. We were against the clock. The city wanted every copy of the games to be rounded up. At one point, Ernie hulked out on a cartridge and tore it open, and pulled the EEPROM off of the board. As they were rounding up the games, we managed to see, ironically, the screen come on for a brief moment, and it was E.T. in a pit, and then it died.

RETRO: Favorite and worst memories of the day?

MIKA: My favorite memory of the day was just as the sandstorm started, I was hanging around with all these friends — people I've known for years, watching the diggers work, and realizing I was in the middle of the desert digging up Atari games. It felt like what I was put on this planet to do. The worst memory was later that night when I spent an hour hacking up landfill dirt. My lungs were filled with it. I thought I was going to die.

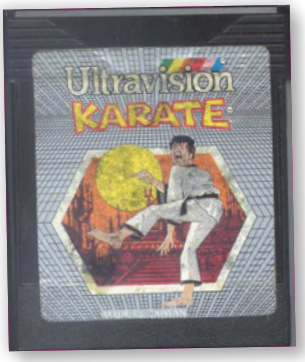
Kohler's Collect-a-Thon!

YOUR GUIDE TO BUILDING THE ULTIMATE RETRO LIBRARY

HAVE YOU PLAYED ATARI TODAY?

by **Chris Kohler**

The market for original classic games has never been hotter. Whether you're obsessed with collecting or just want to play your old favorites in their original format, you're paying more for old games than ever before. Each issue in Kohler's Collect-a-thon, we'll break down the current collecting scene for a particular platform.



THE PLATFORM

The console that launched an industry! Atari's Video Computer System, later rechristened the 2600, wasn't the first programmable game console, but it was the first colossal hit. Atari only intended to sell the VCS and its cartridges for one, maybe two holiday seasons. But its incredible popularity meant that consumers didn't want to upgrade to a new console: They wanted games, games, and more games. Even though 2600 was a primitive piece of hardware, designers kept figuring out new tricks that let them create more and more sophisticated experiences. The leap from *Combat* (1977) to *Xenophobe* (released in 1990!) is mind-blowing.

COLLECTING IT

Beginning an Atari 2600 collection is cheap and easy. Finishing one is expensive and nearly, if not entirely, impossible. It's cheap to start because common Atari 2600 games and hardware are as cheap as they've ever been. They rallied a bit in the mid-2000s as 1970s kids started to turn 30 and wanted to buy up their old toys. But with Nintendo reigning as the hottest thing going today, interest in Atari has dropped off. The good news is you shouldn't have to pay too much to get a console and a fair number of fun games. Even some of the games that used to be considered super-rare are coming down in price significantly.

Here's the ugly flip side, though: While prices have dropped on the common stuff, the truly rare items have only gone up. So once you start looking for uncommon boxes and truly rare cartridges, you'll find yourself competing with collectors who've been amassing Atari stuff since the '70s. And some of this stuff is still so rare that not even those old-school collectors have them! And they have money. Chances are good that The Guy In His 50s Whose Kids Have Moved Out is going to outbid you.

Atari didn't have a licensing program like Nintendo, so all third-party 2600 games are unlicensed. A low barrier to entry for programming and manufacturing these games meant that many fly-by-night obscure publishers made 2600 games. There are so many rare games and rarer boxes and manuals (there is *one* known copy of the manual for *Air Raid*, for example) that a truly comprehensive list would probably take up more space than we have here. So we'll just name a few representative examples of the kinds of gems you'll find on the 2600.

THE HOLY GRAILS

Most collecting circles only have one grail; Atari has a whole cupboard full of them. Some of the most rare Atari 2600 releases are still being discovered. That *Air Raid* manual only turned up in 2012, for example. The complete game (released by the wonderfully named company Men-A-Vision) sold for $33,000 at the time.

A Biblical game called *Red Sea Crossing* was advertised and released back in 1983, but a copy wasn't turned up until 2007. It sold for $13,800 in 2012.

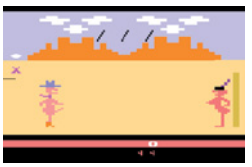
Like *Red Sea Crossing*, many Atari 2600 games only exist in single-digit quantities. There are only a few known copies of Answer Software's *Gauntlet*, to name another example, or *Birthday Mania*, a game produced by a small developer that could be personalized for the birthday gift recipient. These are the games that Atari collectors who've been at it for 40 years would give their eyeteeth for.

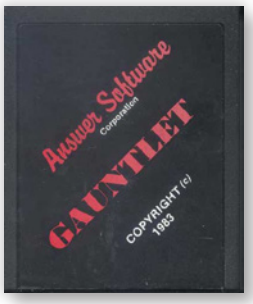
There are even grails that are assumed to exist, but haven't turned up yet. The box and manual for a game called *Karate*, by the company Ultravision, for example. The cartridge sells for thousands of dollars. The box and manual? If you had one, you'd be looking at an easy five figures. But nobody does yet — not that we know of, anyway.

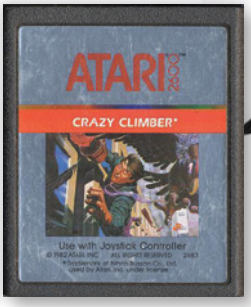
ATARI'S OFFICIAL GAMES

Atari was the predominant maker of 2600 titles, as you might imagine, and most of them are fairly common. ("So common they buried a bunch of them in New Mexico!" I can hear you saying from here.) Many of these aren't even worth that much in mint sealed condition; I'm pretty sure there are still dealers cracking open shipping boxes of them as we speak.

Illustration by Thor Thorvaldsor







But some of Atari's games are harder to find, usually because they only distributed them to those post-crash 2600 diehards through their mail-order Atari Club. Of these, *Swordquest Waterworld* ($75 loose, $400 complete), *Quadrun* ($100–200 loose, $600 complete), and *Crazy Climber* ($75 loose, $250 complete) are the most notorious.

The boxes for later-release games like *Gremlins* and *Pengo* can be difficult to find, often pushing the price up past $100 for each. (Again, we're talking about the 2600, not the more common Atari 5200 versions!) The 2600 version of *Track & Field* included a special controller to pound on and an oversize box, and that will run you well over $100 for the whole thing as well. Atari also produced NTSC versions of the PAL games *Asterix* and *Obelix*, which are worth quite a bit (again, these weren't even discovered to exist until recently) — just make sure you're buying NTSC and not PAL before you shell out the cash.

THE BIGGEST THIRD PARTIES

Pulling a *Red Sea Crossing* out of a dumpster is unlikely, but there are many more weird, obscure third-party Atari 2600 games that are more common. Here are some of the publishers you'll see most often, and their rarest games.

Activision: The company that invented the very idea of the independent console game publisher made mass quantities of most of its games. It's the company's later, post-crash releases like *Double Dragon, Rampage, Ghostbusters, River Raid II*, and *Kung-Fu Master* that can be harder to find complete or loose.

Imagic: Its game *Subterranea* can get over $200 complete in box. It also published *Atlantis II*, a more difficult variant of the game *Atlantis*, that was used for a high-score contest. The only way you can know for sure is if you play the game and look at the score display. If your copy has the elegant calligraphic digits in Figure 1, it's a $1 common. If it has the ugly plain text in Figure 2, it's a $1000 rarity.

Figure 1: *Atlantis*

Figure 2: *Atlantis II*

Coleco: Most of Coleco's Atari games remain fairly easy to track down, although the *Kid Vid* games, which used synchronized audio on special cassette tapes, are difficult to find complete.

Spectravision/Spectravideo: This publisher changed its name halfway through its life. Anything "Spectravision" is fairly common, anything from "Spectravideo," including *Mangia, Gas Hog*, and *Bumper Bash*, is pretty rare, especially the boxes.

Parker Bros.: *Frogger* and *Q*Bert* are two of its most common games, but the sequels *Frogger II: Threeedeep!* and *Q*Bert's Qubes* are much more expensive — don't mistake these for their common predecessors!

VARIANTS

Rare variations of otherwise common games can get big money on the Atari market, as longtime collectors look for something — *anything* — to add to their collections. Variants represent your best chance at scoring big in today's market, because often, a seller won't realize they're holding a rare variant of a common game.

Examples: The Sears Tele-Games version of *Superman* is commonly found with a text-only label, and the Atari version with a picture of Superman on the label. But a Sears version with a pic of Supes? That's worth over $500, maybe much more. Additionally, the box for the Sears version (but again, not the Atari version) of *Math Gran Prix* is exceedingly difficult to find.

So remember: Don't just research the game, research the publisher, the label, and everything else.

THE FUNNY STUFF

Even if you don't want to own every Atari game, there are a few wonderful conversation pieces out there that you might want to track down. There's the pornographic games by the companies Mystique and Playaround, the most notorious of which is *Custer's Revenge*. Purina commissioned a game to advertise dog food called *Chase the Chuck Wagon*. Atari did a very limited-release game given away to Coke executives called *Pepsi Invaders*. Johnson & Johnson even made a game called *Tooth Protectors*.

FURTHER READING

We haven't even scratched the surface! There are so many more rare Atari 2600 games out there, games that you'd be able to sell for three figures or more if you found them at a garage sale. Luckily, there are some great resources out there to find out more about your finds. AtariAge.com and Atarimania.com have extremely detailed databases of games, variants, and international releases. And Atari2600.com has a hand-curated price guide for the rarest titles, which takes online auctions and private sales into account. That should help you get started, so happy hunting!

Chris Kohler (@kobunheat) is the founder and editor of Game|Life, *the gaming channel of* WIRED. *He is a lifelong game collector and the author of the books* Power-Up *and* Retro Gaming Hacks.

UNDERSTANDING THE SIGNIFICANCE OF SOULCALIBUR®

by Aaron Dennis-Jackson

>>*Street Fighter II* and its bazillion-hundred clones mostly focused on martial artists beating the hell out of one another with fists, feet, and the occasional supernatural energy burst. SNK's *Samurai Shodown* series introduced weapons, but it wasn't until Namco unleashed 1995's *Soul Edge* that this style made a successful transition to 3D. It turned out that we really, really liked beating seven shades out of each other with great hunks of metal and wood. Who'da thunk?

In addition to swords and nunchucks, the *Soul* series innovated in the realm of narrative as well. Unlike the groundbreaking 3D *Virtua Fighter* games that preceded it, the *Soul* series is big on story. It all revolves around the ultimate evil, Soul Edge, a sword of immense power that also has the unfortunate effect of turning whomever wields it insanely evil. Cue everyone tussling and bashing each other in order to attain that power, whether for good or ill ends.

As with fighting games in general though, the interesting story found here can be viewed as being inconsequential — in the end, this is all about cool characters hitting each other with glorified sticks, and the *Soul* series has some of the most creative and inventive character design in the genre. Sure, you've got your bog-standard samurai and hot-ass lady ninja, but then there's the massive mountain man from America's wilds, a Greek baker's daughter-turned-Hephaestian-emissary, a German knight wielding a massive two-handed sword, and perhaps most interesting of all, a...Voldo. He's a crazy, incredibly bendy dude who has a fighting style akin to a methed-up hoopsnake attempting to kick your butt. It's an incredible display that's exaggerated by his weird circular blades and fetish gear get-up, blindfold included.

Because of its immense popularity, it was inevitable that *Soul Edge* would get a sequel. Well, it did, but as *Soulcalibur* arrived in arcades in mid-1998, it wasn't the hit its predecessor was simply because arcades were on the decline. The titular weapon — a portmanteau of "soul" and "Excalibur," and the only weapon in existence that can defeat Soul Edge — is the MacGuffin this time around, and of course there's a new crew of combatants to choose from.

Soulcalibur also took another step away from its brethren with the introduction of the 8-way running mechanic. Unlike say, *Tekken*, which really only has sidestepping to make the battles three-dimensional, *Soulcalibur* let you move freely in eight directions. This could have easily been screwed up, but its tight implementation magnifies the intensity of matches. To say it opens up combat is an understatement, and while on the surface having only horizontal and vertical attacks seems shallow, the freedom of movement gives it all the depth it needs; a small diagonal step back makes what is normally a sure-hit vertical whiff past by a whisker, but leaves the loser in range for a perfectly timed horizontal sweep.

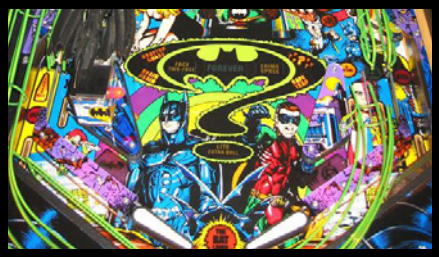
While the arcade version wasn't as big a hit as its predecessor, console versions of the *Soulcalibur* series more than made up for it. Ultimately Namco stopped bothering with arcade versions. Instead, the developers gave us new game modes that extended the experience. They often involve quests, with multiple, actually different weapons to win for each character. These modes have only became more numerous and deep with each iteration, establishing a formula that more fighting games should implement.

Franchises like *Street Fighter*, *Tekken*, and *Mortal Kombat* dominate the genre, but whether it be its weapons, characters, or non-traditional game modes, the innovations brought on by the *Soulcalibur* series were enough to make fighting fans take notice. With these innovations having already been established, though, the series has grown somewhat stale. That said, it will be interesting to see where Bandai Namco can take it in the future. Fingers (and weapons) crossed that *Soulcalibur* can once again innovate and leave its mark on the stage of history.

Did You Know: *Soul Edge* was the second 3D fighting game to feature characters that fight with weapons (the first being *Battle Arena Toshinden*).

HOLY PINBALL, BATMAN!

BY DAVID GILTINAN



WHERE DOES HE GET THOSE WONDERFUL PINS?

As a kid growing up in the '80s, I was too young to realize Adam West's *Batman* television show was supposed to be campy. Instead, I just assumed the '60s sucked. My other limited exposure to the caped crusader as a child was watching *Super Powers* on Saturday morning cartoons. If you've seen that show, then you know why I wasn't a huge *Batman* fan. I needed more action, more brooding, and apparently more Michael Keaton.

Tim Burton's *Batman* movie, which starred Keaton as the title character and Jack Nicholson as the Joker, was just the catalyst the *Batman* franchise needed. The summer the film was released, and for years afterwards, the bat symbol was plastered everywhere — t-shirts, bedsheets, shaved into people's hair, and yes, eventually on videogames and pinball machines. Due to *Batman*'s popularity, the pinball machine was a success and would eventually lead to the creation of two future games — more than any other superhero (Spider-Man had two and Superman only had one. Take that, Man of Steel!). So let's take a journey to look at how Gotham's winged warrior took the pinball world by storm.

BATMAN (DATA EAST - 1991)

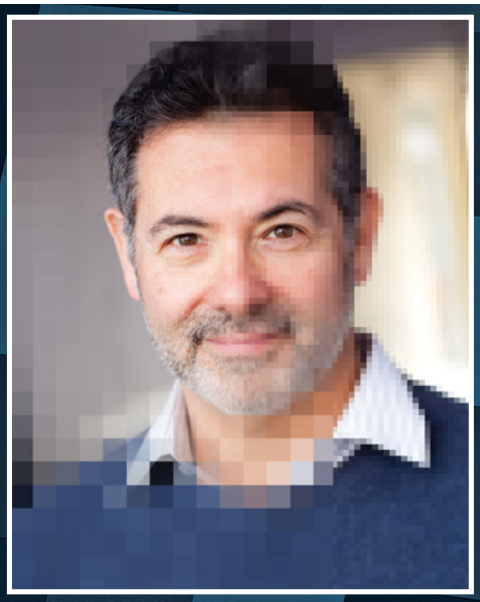
The promotional flyer for this game used the familiar movie catchphrase "Wait till they get a load of me!" and for good reason. *Batman*'s first pinball machine was pretty advanced for the time. It featured one of the first dot matrix displays (or DMD) ever used on a pinball machine (Bally's *Gilligan's Island* beat it by two months). Perhaps to save costs, the DMD used by Data East was slimmer than the current industry standard. Critically speaking, when compared to later iterations the game wasn't that great: two flippers, one main ramp, and cheesy music that didn't fully capitalize on the Danny Elfman soundtrack. Sure, it's fun and it has some great artwork featuring Keaton, Basinger, and Nicholson, but it was mostly just a way for the manufacturer to cash in on the bat craze.

BATMAN FOREVER (SEGA - 1995)

Riddle me this: What's big, mean, and green all over? No, it's not the Hulk, it's *Batman Forever*. Sega Pinball, which was essentially Data East under a new name, released this widebody game that was bigger and badder than its predecessor in every way: more ramps, more flippers, and a gigantic display. With the super-sized DMD, the game could accommodate up to six players and even allowed for team play where two players as Batman and Robin teamed up against Two-Face and the Riddler for a high-score showdown. Sound board technology had come a long way since 1991, so this game was able to showcase more advanced audio and even authentic movie clips featuring Val Kilmer, Tommy Lee Jones, Jim Carrey, and more. At only 2,500 units sold, it's hard to tell whether the sales suffered due to a declining interest (and increased campiness) in the *Batman* franchise, or whether there was just too much stiff competition from other pinball companies at the time.

BATMAN (STERN PINBALL - 2008)

To use a fairy-tale analogy, Data East's game was too cold, Sega's game was too hot, but Stern's *Batman* pinball machine was juuust right! Designed by the great George Gomez (*Monster Bash*, *Revenge from Mars*) prior to becoming Stern Pinball's VP of game design, he capitalized on the *Dark Knight* trilogy's great story as players attempt to protect Gotham from Scarecrow, Two-Face, and the Joker. The game features some really satisfying shots and includes a moving wrecking ball/crane target, an accelerating Batmobile return ramp, a mini upper playfield, and plenty of multiball action. Having transitioned from Data East to Sega Pinball to Stern Pinball, Stern was long the torchbearer for all of pinball as the last surviving manufacturer. Its *Batman* game was released at a time when pinball was on life support, and theme, production cost, and gameplay were all critical, must-hit targets. *Batman* proved popular enough to keep breathing life into Stern and they have since tried to capture that success with numerous other superhero titles including *Iron Man*, *X-Men*, and *The Avengers*. I can't say Stern's *Batman* is the best pinball machine I've ever played, nor even the best superhero pinball machine ever, but it is hands-down the best *Batman* pinball machine in existence.



Actual Targa+ board used by WTARG. Looks very similar to the original Targa 16, but added features like chroma key.

AN ANIMATED LOOK AT THE BEGINNINGS OF MORTAL KOMBAT

by **Warren Davis**

Sometimes you find yourself in the right place at the right time. There was a particular instance of that in my career which led to my marginal involvement in the juggernaut that would become *Mortal Kombat*. As with most juggernauts, no one involved had any inkling of what the future would bring. From our limited perspective, anything was possible. We entered into each new project with enthusiasm, hope, and with any luck, a bit of inspiration. In the case of *Mortal Kombat*, I think most people involved were pretty confident they were making something cool. But the idea that they were creating a franchise that would last over 20 years? Nope — that wasn't on their minds.

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CIRCLE 143 ON READER SERVICE CARD

In the mid-1980s, I had started experimenting with video digitization, which is the conversion of a video image (like you'd see on your TV) into pixels (like you'd see on a videogame screen). The earliest system I played around with ran on an Amiga computer and was very crude. You pointed a black-and-white video camera at your subject, and shot through a color wheel that had red, green, and blue sections. It took around 30 seconds to scan the object (as the color wheel turned through each section) and then software would assemble the different colored scans into a single frame. Needless to say, the object you were shooting had to be stationary — making animation a very tedious and time-consuming process. Still, to those of us who were making videogames, this was an exciting development filled with almost endless possibilities.

Keep in mind that most video arcade systems at the time were only capable of showing 16 colors on the screen at one time. These digitized images were in full color — 8 bits of red, 8 bits of green, and 8 bits of blue. For the technically inclined, 16 colors requires 4 bits to store, and you can store 2 pixels in one byte of memory. Whereas to store 24-bit images, you would need 3 bytes per pixel and there are 256*256*256=1,677,216 possible colors that can be displayed. In the world of 1980s arcade hardware, you really didn't have the luxury of having 3 bytes per pixel. Reducing that to 5 bits of red, green, and blue (15 bits total) would allow you to fit a pixel into 2 bytes of memory instead of 3. The total number of colors you could display would only be 32,768, but that many gradations of color still looked photographic compared to games like *Pac-Man* and *Joust*. Regardless, making a system to allow even 2 bytes per pixel wasn't quite cost effective in the mid-1980s.

Not long after, a more advanced digitizing system came out called the Targa board. If you've ever heard of a .tga file, this is where that file format originated. There were actually a number of flavors of this board — the Image Capture Board (ICB), the Targa 16, Targa 24, and Targa 32. All were circuit boards that fit into a motherboard slot on a standard PC. One of the great things about the Targa boards was that it didn't have a color wheel. You pointed a color video camera at your subject and the software did the rest. Another great feature was that an SDK (Software Development Kit) was available which allowed any programmer to write their own software to control the board. Which is exactly what I did. I had visions of pointing the

Now legendary within the fighting-game community, the colorful cast of *Mortal Kombat* was brought to life through some rather innovative engineering.

camera at actors dressed in elaborate costumes doing gymnast-like action moves that would be video-grabbed and converted instantly into a form that could be displayed and controlled by our game software.

Unfortunately that dream was still years away because the process was limited by the speed of the computer and the speed of the Targa. Even though the Targa could digitize an image in a fraction of a second, the processing of that image and saving of it to the hard disk was extraordinarily slow. But there was a way to digitize movement, although not a great one. Rather than point our camera at a live subject, we could videotape the subject in action, and step thru the tape one or more frames at a time, grabbing whichever frames we wanted. An artist would have to manually erase the background (not particularly fun or easy), and by doing so we would turn each frame of video into the digital equivalent of an animation cel.

The final hurdle was the videogame hardware itself. As I said, most videogame systems could only display 16 colors (or 4 bits per pixel). Luckily, around this time, Eugene Jarvis (along with hardware designer Mark Loffredo) was developing a new hardware system capable of displaying a whopping 256 colors at a time. Actually, luck had nothing to do with it — we all could see the potential in using digitized images, and knew that as hardware got faster and cheaper, this was where the industry had to go. Also, in the coin-op world, we believed we had to stay one step ahead of the home consoles, or else no one would want to go out and play a videogame in an arcade.

256 colors was a lot better than 16, but it still wasn't as good as 32,768 (which as I mentioned earlier is how many colors you could get with 16 bits per pixel). So this created another problem — how to "reduce" the number of colors to no more than 256 without losing the photographic quality of the images.

This problem of reducing the number of colors in a "true-color" image while degrading it as little as possible was actually becoming fairly common throughout the computer graphics world, and a lot of research was being done in this area. I became an expert on the latest algorithms available — implementing them and comparing the results with a wide variety of image types and color schemes. (The best algorithm for color reduction I ever found was called the Wu algorithm, it gave amazing results — but it wasn't developed until years later.) Of the algorithms available, I found the one that seemed most acceptable and incorporated it into my software to control the Targa board.

I named the program WTARG (for Williams Targa, not Warren Targa, honest!) and while crude at first, it was functional. The first game developed for our new hardware was *NARC*, developed by Eugene Jarvis with George Petro and Jack Haegar. There was actually a competing game being developed by myself and John Newcomer which was never completed, but that is a story for another day. Both games used WTARG for image generation. But while some of *NARC*'s graphics look considerably more photographic than any prior games, particularly the backgrounds, others were "cleaned up" almost to the point of looking artist-generated rather than digitized. There is a certain "noisiness" to those early digitized images that made them look more like movies when played back. Still there was no denying that videogame graphics took a leap with the advantage of more colors.

The next game to use WTARG was *High Impact Football* designed by Eugene Jarvis and John Newcomer. (Its sequel, *Super High Impact Football*, would be designed by Ed Boon.) One little idiosyncrasy of that game was that every player had the number 88 on their jersey. This was so

These digitized graphics might seem dated now, but in the early 1990s this was truly cutting-edge content.

that they could reuse images on which the number is visible by flipping them horizontally. The number would still be 88! I was no longer working at Williams when *High Impact Football* came out — also a story for another day — but I returned in 1991 to fill the gap of a programmer who left in the middle of developing *Terminator 2: Judgment Day*. Here was a great example of a property that would benefit greatly from the use of digitized images. After all, what would be more appropriate than movie-like graphics on a movie-based videogame?

I was somewhat astonished, though, to find that four years later everyone at Williams was using the same WTARG as when I left! I thought someone would surely have taken up where I left off and made improvements. After all, cameras had gotten better, computers had gotten faster, and memory was becoming cheaper and more plentiful. And Truevision had come out with a successor to the original Targa, the Targa+, which had chroma-key capability.

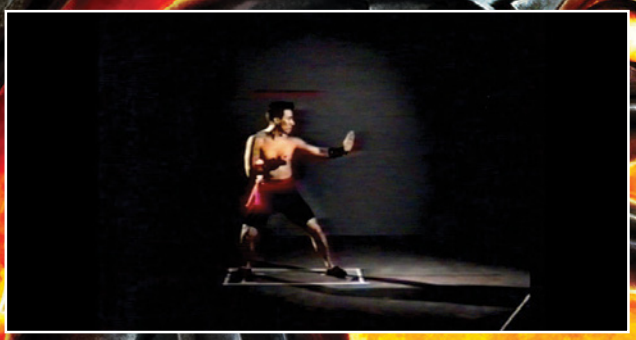
For *Terminator 2*, we were still pulling digitized images off of videotape. This made sense, since a lot of our reference material was shot in California on the actual sets. We also had access to some of the actors — Robert Patrick and Eddie Furlong. We got Linda Hamilton's stunt double. And Arnold Schwarzenegger's stunt double wearing an Arnold mask. Those videotapes got sent back to us in Chicago where artists went through the tedious process of freezing each frame, grabbing it, and manually removing the background.

At some point during the development of *T2*, eventual *Mortal Kombat* co-creators Ed Boon and John Tobias let me know they were planning to use WTARG for their next game, a fighting game. As Ed Boon puts it, "At the time, digitized graphics was Midway's specialty and what set our games apart visually from our competition. We had already done a sports game (*High Impact*) and we were looking for another genre to apply the same visual approach to. So a fighting game was a natural fit because we could make our characters very big on the screen which would make them look that much more realistic."

John Tobias remembers that he "had just come off of *Smash TV* and *Total Carnage*. Both were games that had very small character sprites. I was really looking to feature characters onscreen as large as possible and a fighting game was the perfect match. We also had a very small team and a really tight schedule. In my prior two games, every frame of animation was hand drawn and I knew I wouldn't have time to do that with *MK* considering we started with a single artist (me) and were looking to complete the project in about six months."

Ed recalls, "We didn't really have an audition process for *Mortal Kombat*." John adds, "The actors were friends, or friends of friends who happened to also be skilled martial artists." To get their images, John had to go through the same process as all the previous games. The actors were shot on Hi8 tape in front of a neutral gray background to make it somewhat easier to strip out.

SOME FUN FACTS ABOUT THE DEVELOPMENT OF *MORTAL KOMBAT*



ED BOON ON THE CONCEPT...

"Originally we wanted to make a Jean-Claude Van Damme videogame. We actually grabbed images (using WTARG) from the movie *Bloodsport* to create a demo that we sent to Van Damme and his people. I believe I have that video somewhere in my basement but I haven't found it yet. It's actually very interesting to see, especially some of the very early concepts we had for *Mortal Kombat*.

JOHN TOBIAS ON CASTING...

"The actors we used in the first *MK* game were friends or friends of friends who happened to also be skilled martial artists. On the later digitized games, casting became more about an actor's physical appearance in costume than their skills as a martial artist. Actually, once the image-capturing part of the process was sped up with blue-screen keying, we were able to spend more time in post-production with each character's individual animation sequences. That meant if an actor couldn't kick quite high enough, we could manipulate the image later to get what we were looking for. So an actor's physical appearance became more important than their athletic skills as a martial artist. Of course, it made the process easier if the actor could perform an actual roundhouse kick. There were usually only several frames of animation per sequence, but as the character rosters grew the work added up."

TOBIAS ON COSTUMES...

"The first game's costumes were composed of pieces purchased from sporting-goods stores, costume shops, and scavenged clothing from thrift shops. We used anything that we could find that matched our rough character sketches and didn't cost a lot of money. On *MK2* and *MK3* we hired costume shops to custom stitch certain costumes. At one point we hired a shop to do our Baraka costume. They did fine on the clothing pieces, but the arm prosthetic and over-the-head mask were not at all what we were looking for. The mask was an over-sized, foam-sculpted piece covered in a flesh-colored felt. It looked like a twisted college mascot. It was really funny. We were speechless when we saw it.

We had the shoot already scheduled and had to do something quick, so Rich Divizio (the actor who played Baraka) and I had to run out to Chicago Costume on Irving Park and Milwaukee and pick something off the shelf. I found a green, glow-in-the-dark Nosferatu mask that barely fit over Rich's head. I took an X-acto knife and cut a few pieces off and filed the nose down. I spray painted it a flesh color and airbrushed in highlights and details. Then I used a set of chrome press-on nails to get the character's over-the-gum teeth. On camera it ended up looking just like the character sketch. After that experience, we started bringing in a professional make-up artist to do all of our prosthetic work. On *MK2* I became more aware of how light reflected off of certain types of material and we started using only wrinkle-free fabrics as opposed to cotton, which showed wrinkles under the lights. The problem with wrinkles is that they changed from frame to frame and exposed our already-limited frame count even more. We also hired a guy named Mark Runyon, who sculpted Shao Khan's helmet and armor pieces. He did a great job and really set the bar for us in terms of costume direction on the next game."

TOBIAS, ON THE IN-HOUSE COMIC BOOK:

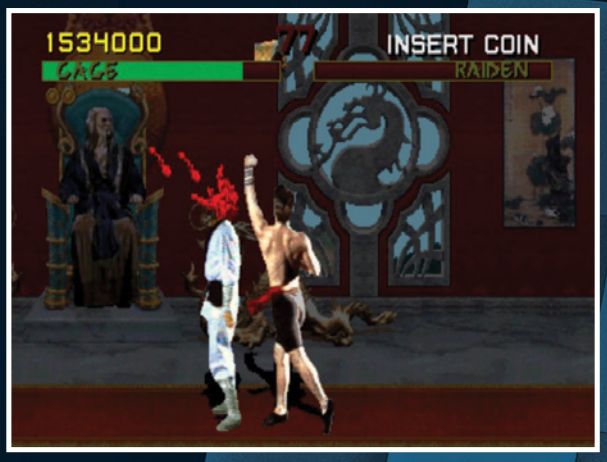
"I had this elaborate backstory for the game that we really didn't have a place to tell. The hope was that through the short character bios and use of character archetypes, players would sort of fill in the blanks and everything would make sense to them. I think that worked out better than any of us thought it would. But, we thought it would be cool to make the backstory available to players. I drew the comic at home in the evenings. We begged for money from management to pay the production and printing costs and hoped enough players would order the books, which were only available by mail order through an ad in the game's attract mode. Our licensing director at the time, Roger Sharpe, helped us push it through and we printed a couple thousand copies."

BOON:

"We actually stuffed comic books into envelopes by hand and mailed them out by ourselves for quite a while until it got out of control and we had to hire somebody because so many orders were coming in."

TOBIAS:

"Ed would order pizza after work to entice folks in the studio into helping us open the order envelopes and fill out shipping labels. The cool thing about the experience is that it was one of our first experiences with the fanbase outside of the arcades. Many of the orders would have letters with questions about characters and secret moves. Some would have fan art tucked in with their three bucks. We actually wrote back to a few and even wrote finishing-move button combinations on a bunch of the envelopes. I sketched characters on some. I remember Ed writing cryptic riddles with dead-end answers on a few. It was hilarious. I wonder if any players saved the envelopes?"



Once *Terminator 2* was finished, over a period of a few months, some exciting things happened. Under the auspices of Jack Haegar, we built a blue-screen studio from scratch with professional lights and cameras. We got a treadmill and took off the top part — the part you grab with your hands. Not too safe, but we needed to be able to turn it to any angle without any visual obstruction. We purchased a Targa+ and I rewrote WTARG to take advantage of chroma keying, so artists didn't have to manually remove the background.

Our game hardware went through some improvements as well — instead of being able to display 256 colors total, each object was able to have its own "palette," the 256 colors which would make just that object look best, regardless of anything else on the screen. This dramatically improved the photographic quality of our games, and I eagerly supported that feature in WTARG. John Tobias recalls that midway through the development of *MK2*, "we switched to blue-screen keying and I remember specifically using it for the first time on our reshoot of Jax."

According to Boon, "with every new game, the process of capturing, separating, and animating our characters became more and more automated as WTARG became more and more sophisticated. The difference from the first *Mortal Kombat* to the third was night and day."

WTARG was used for all of the *Mortal Kombat* games (until they started being developed on our 3D system), all of the *NBA Jam* games, and more. When we were making *Revolution X*, the last game I worked on at Williams, we had rock legends Aerosmith onsite for a couple of days. WTARG had progressed to a point where we could point a video camera at a live subject in our blue-screen studio and within a couple of minutes see that animation running on our game hardware.

But by the mid-1990s, it seemed that the world was moving toward 3D graphics using texture-mapped polygons, and while textures for those games could and would be digitized from photos or video, the notion of digitized video animation slowly became unnecessary. (Although it would be used to sometimes excellent effect in home games as PC hardware grew faster and capable of real-time video playback.)

Oh, and by the way, WTARG was not my only contribution to *Mortal Kombat*. Ed Boon wanted to incorporate a full-screen image of Goro during the attract mode (the screens that cycled through when no one was playing the game). But memory limitations were so tight we couldn't do it. However, I'd been working on image compression algorithms for *T2* for some in-game movies when the player travels from the future into our present, and also at the end of the game when you defeat the T-1000. Ed asked if I could compress the Goro image and let him borrow the decompression software. I said "sure," and then added jokingly..."But you'll have to pay me a royalty." We both laughed. But months later when *Mortal Kombat* became a smash-hit game...I actually got a small bonus check. I never was sure if it was because of that comment, or if I would have gotten one anyway, but either way I was grateful for the check and the opportunity to contribute to one of gaming's greatest franchises.

Warren Davis began his career in videogames at Gottlieb Amusement Games, and following its closure moved to Williams/Bally/Midway. His titles include Q*bert, Us. Vs. Them, Joust 2, Terminator 2, and Revolution X. *While at Williams, he pioneered the use of video digitization in games such as* NARC, NBA Jam, *and* Mortal Kombat. *Other arcade titles include* Lotto Fun *and* Exterminator. *Following a move to L.A., he worked on a couple of home games for Disney, then briefly became an Imagineer in its VR Studio. He worked on* Spyro: Enter the Dragonfly *for GameCube and PS2, and an edutainment title for PCs,* The Lunar Explorer. *More recently, he worked for ILM helping to develop previsualization software for movies.*

WHY JOUST PINBALL NEVER TOOK FLIGHT

This might seem obvious, but games like *Street Fighter*, *GoldenEye*, *Halo*, *World of Warcraft*, or even the classic arcade game *Wizard of Wor* are often more fun and compelling when played with other people. Though they can all be played individually, it is through competition that these games really find their strength. Pinball, in contrast, is typically a single-player game. Though it is possible to play multiplayer games on a pinball table, those games are turn-based and only have players competing for high-score bragging rights. Actually, one of the appeals of pinball can be its solitary nature. You can battle the machine on your own over and over again, trying to activate every aspect of the software or each mechanical feature, leaving your name on the scoreboard for all to see. However fun a solo game can be, though, sometimes it just feels like something is missing.

During the golden age of arcades, game developers realized that by allowing two people to play a game at once, operators could double their earnings. The previously mentioned *Wizard of Wor*, made by Bally Midway, was one of the earliest videogames to do this successfully, but it wasn't until Williams Electronics' 1982 *Joust* that the multiplayer concept found its footing. The goal of this bizarre game was to manipulate your flying, knight-bedecked ostrich by flapping its wings to collide into enemy knights riding waves of vultures. Despite the odd premise, the game turned out to be a smashing success. Hoping to capitalize on that success of the video arcade, Williams turned to its veteran pinball designer Barry Oursler to transfer the game's success to its struggling pinball division with a *Joust* pinball machine.

When looking solely at the specs of *Joust* pinball, it seems comparable to other games at the time: four flippers, multiple sets of drop targets, and spinners. But at first glance you would hardly recognize it as a pinball machine. Gone was the sloped incline of the cabinet and the traditional artwork-emblazoned backbox. Instead of one large forward-facing playfield, *Joust* introduced two smaller playfields that met in the middle, facing each other. Absent was the standard pinball plunger, and instead of one set of buttons, there were two — one on each end. It was obvious that this game was different, but what made it a *Joust* game?

The new cabinet design did feature the recognizable Python Anghelo artwork from the *Joust* arcade game, along with many of the same sound effects. But the gameplay was distinctly different. The intent of the original *Joust* was to create a sense of cooperation, but oftentimes two friends would coin-up in competition instead, charging headfirst at each other rather than destroying bad guys. Last player standing was the name of the game, and so it was with this new, unusual pinball experiment. Instead of just a high-score contest, it was a head-to-head battle to the end to see who could avoid sabotaging themselves and survive the longest, all while juggling three balls and the taunts of opponents.

Innovative features abounded. Only the player who knocked down all their drop targets first could score points for a certain period, and this required precision. Accidentally shoot your opponent's spinner and uh-oh, you just gave them your points! When asked about his favorite feature of the game, Oursler stated, "Probably the 'kill shot'. That's when you shoot the ball across to the other player's side and it goes right between the flippers. [They] would lose a life."

Sounds like a blast to play, right? Well, it is — but as you might suspect, only with two players. In single-player mode, one person controls all four flippers, and the gameplay can become unwieldy and confusing. The true appeal of the game was definitely the competitive aspect. Without that, it just wasn't as much fun. Despite the flawless execution of the game's two-player design, it wasn't very successful, and only 402 units were produced according to the Internet Pinball Machine Database (ipdb.org).

Because not many games were produced, and because the videogame was so memorable, the *Joust* pinball machine is a hot commodity among collectors. Owning one will cost you a pretty penny, but playing one is still an option. *Joust Pinball* has been shared at numerous expos and conventions around the country thanks to the generosity of show runners and collectors. So, be on the lookout for this rare gem. Just make sure you have a friend on hand when you flap your way to victory!

Preston Burt co-hosts the Gameroom Junkies *podcast, founded the Atlanta Pinball League, and is an organizer for the Southern-Fried Gameroom Expo in Atlanta. Follow him on Twitter @nocashvalue80 or drop him a line at nocashvalue80@gmail.com.*

BILL KUNKEL'S EXPERIENCES AS AN EXPERT WITNESS IN THE

CAPCOM VS. DATA EAST

Case (1993 – 1994)

Bill Kunkel was my idol growing up. In the early eighties I anxiously rode my bicycle every four weeks to the local Begley's drug store to pick up the latest issue of Electronic Games *magazine. I first met Bill, or "The Game Doctor" as we knew him in the pages of* EG*, at the 2001 Classic Gaming Expo in sunny Las Vegas. We shared a nice and lengthy discussion about all things gaming and ultimately became friends. We shared booths at other trade shows and our paths crossed in the business world, as we both worked with J2Games. In education, we helped develop our coursework together while he was teaching at the University of Nevada, Las Vegas (UNLV) and myself at Canisius College in New York. He even asked me to create the front and back cover artwork for his biography* Confessions of the Game Doctor, *published by Rolenta Press.*

During this time he began documenting his experiences to avoid potential problems with the increasing amount of misrepresentation taking place on the Internet. As a result, he wrote several articles for my website, GoodDealGames.com. He provided stories concerning the famous lawsuit between Atari and Magnavox regarding Pac-Man *and* K.C. Munchkin, *Nintendo vs. Galoob and the Game Genie, Alex Pajitnov and* Tetris, *and of course the following article as an expert witness during the 1993 lawsuit of Capcom v. Data East. The article you are about to read, appearing for the first time in print, was written a decade later in 2003, long before the tragic loss of Bill on September 4th, 2011. Now, I am happy to share it with the world! — Michael Thomasson*

by **Bill "The Game Doctor" Kunkel**
(archived and contributed by Michael Thomasson)

By 1993, the last thing I was looking for was an expert witness gig facing off against yet another of the most popular and powerful software developers in the business. So of course I wound up working the expert witness deal for tiny Data East against the all-powerful Capcom, whose *Street Fighter II* had ignited a revolution which made 2D fighting games the dominant genre in the electronic gaming world.

I was working in my home office when a gentleman named Michael Hayes called. He was from the law firm of Fenwick & West, a name even I recognized as a heavyweight player. He told me they were defending Data East, which was being sued by Capcom.

"That figures," I remember thinking. Capcom's PR people had always been very good to me, whereas I didn't know anybody at Data East. And, of course, Data East was a relatively small player compared to Capcom, a company so powerful that it tipped the balance of the 16-bit videogame wars when it made a version of *SF2* available on Sega's Genesis after having previously played exclusively with Nintendo.

Michael explained that the games in question were Data East's *Fighter's History* and, of course, Capcom's *SF2*. As it happened, I had just seen the Data East game at the Kwik-E-Mart down the block, so I promised to check it out and get back to him.

About three minutes into playing *Fighter's History* I figured I didn't even have to go home. I phoned Michael from a pay phone outside the convenience store. "I'm sorry," I told him with no small amount of relief. "But if they're going on 'look and feel' I don't think you've got a shot." "Look and feel" was one of the traditional standards by which copyright infringements were obtained, and it's pretty much what it sounds like: Does the product look and feel the same as a preexisting product? In this case, there was no question that *Fighter's History* looked and felt pretty damned much exactly the same as *SF2* — but only in the sense that, to a non-comic book reader, "all these superheroes look the same."

"Look and feel's not the issue," he assured me. Capcom was basically claiming that all of the "realistic" 2D fighters from companies such as Data East and SNK were infringements on its own *SF2*. I put the word "realistic" in quotes because the *Mortal Kombat* games, which were almost as popular as the *SF2* franchise, were considered exempt from copyright infringement by Capcom.

The reason given by Capcom for Midway's clearance was that the fighters in the *MK* games were "fantasy characters," unlike the real-world fighters in its franchise. Of course, hard as I thought about it, I could never recall seeing a real-world martial artist levitate into the air, turn themselves upside down, then whirl their legs like helicopter blades in order to rocket across the fighting surface to deliver a knockout blow to an opponent.

The fact was that most of the *Street Fighter* characters were about as realistic as the fighters in a thousand Hong Kong martial arts movies. The so-called "chop socky" film explosion in the '70s following the international success of Bruce Lee was hardly producing tutorials in the execution of legitimate karate, kung-fu, judo, etc. Like contemporary neo-classic martial-arts films such as *House of Flying Daggers* and *Crouching Tiger, Hidden Dragon*, these early films were more fairy tales than gritty unarmed-combat films such as the later *Bloodsport* series, which didn't come along until 1988.

I have always believed that the real reason Capcom gave *Mortal Kombat* a bye, however, was its unwillingness to face the legal guns which Midway (owners of the original arcade license) and Acclaim (holders of the home gaming rights) would surely bring to bear in such a case.

There were, of course, other players in the woodpile as well. Several smaller companies in the coin-op business were also making 2D fighting games like Data East and felt either immediately or imminently threatened by Capcom's attempt to preempt the field. Then there was the rumored personal animosity which, at the time, often played a large part in dealings among Japanese companies. And, as it happened, Capcom's Japanese executives were said to be furious over the fact that the *Street Fighter* development team had recently defected to SNK.

But the bottom line was the same as it had been in the Magnavox vs. Atari case — Capcom was trying to lock up a genre. I may be a fool, but I'm a stubborn fool, and the issue of genre plundering always gets my hackles up.

I signed on and immediately went to work, researching the various legal points that would be used in Data East's defense. First, we attacked the idea that the characters in the *Street Fighter* pantheon were original creations which should belong solely to Capcom. A mature Internet would have been a big help, but I did have a rather large library of anime and manga. One by one, the characters that populated *SF2* were revealed as types rather than archetypes. I recommended the lawyers read the book *Manga! Manga! The World of Japanese Comics* by Frederik L. Schodt, then the leading English-language work on the subject (it also contained a drawing of an old manga character who looked uncannily like Bison). The lawyers liked the book enough to hire Schodt himself as an expert witness. Capcom's lawyers maintained that specific characters in *Fighter's History* were doppelgangers for *Street Fighter II* combatants, but we were able to dig up a considerable body of evidence to prove that the characters Capcom was claiming as its own creations were in fact icons, plucked from the grab bag of Japanese culture and literature.

Another issue involved the use of play mechanics. Capcom maintained that certain moves in *Fighter's History* duplicated specific fight sequences, known as "combos," in *SF2*. Now this was an important issue since it implied that Data East was drawing unfair advantage in terms of player familiarity on the back of their game. This was an especially tough nut to crack, in that it was pretty obvious that Data East had probably done just that.

I argued, however, that there was a certain ergonomic logic to these moves that placed them beyond the realm of individual ownership. If, for example, you wish your fighter (who is on the left side of the screen) to execute a forward flip, it only made sense that the button mashing and controller shifting duplicated the motion desired of the surrogate fighter. A forward

flip from the left side of the screen should obviously be executed by hitting the directional controller in a rapid left-up-right fashion. A right-up-left sequence would be anti-intuitive and unplayable. The fact that other companies' games were duplicating *SF2*'s command system mostly demonstrated that it was a sensible system — that and the fact that there were a lot fewer buttons on coin-ops and home games in the early '90s, thereby limiting the possible number of combination moves.

I think I was an important witness in the *Pac-Man* trial and I probably earned Galoob a few bucks in that litigation. But this trial was my shining hour. I got to participate in numerous skull sessions with the excellent lawyers at Fenwick & West, breaking down the arguments of the Capcom lawyers and offering insights into the game business that very few people could have provided. I was also solid on the stand through several rounds of cross-examination, unlike the poor kid who wrote the How-to-Play strategy guide for *SF2*. He was Capcom's big expert witness and fatherly Bill Fenwick gutted him like a fish. It was so bad that the Capcom legal posse requested a recess and retreated into a room with the hapless witness in tow.

We speculated on whether he was getting worked over as we ate lunch during the break.

In retrospect, however, all my articulate testimony and straight-edge logic almost got shut down before I could deliver it. Apparently the judge had seen the games and, being an elderly gentleman, must have thought the case was a slam dunk. Indeed, the games must have appeared identical to someone not versed in videogames — they had, after all, appeared almost identical to me at first glance.

His Honor walked into the courtroom with a look on his face that said: "This one is over." He announced he was prepared to rule immediately and sweat broke out on the faces of the Fenwick & West lawyers. "Mr. Kunkel has been brought here at great expense," they pleaded, putting me over as the last word in the games business, selling me hard. And I didn't blame them; I was with KKW (Katz Kunkel Worley) when this case came along and they were paying us massive bucks on an hourly basis for research, analysis, and testimony.

I wondered if I was going home early, but the judge looked irritated and then gave in, allowing that they would hear my testimony. My first appearance was good enough that the judge, to his credit, reconsidered his position. He noted that there were obviously more facets to this case than he had initially realized and so we all sat down to play for several days of testimony and deliberation.

Fenwick & West seemed very well pleased with my performance, but there was one thing about me that scared the hell out of them — I absolutely sucked at 2D fighting games. To be honest, I pretty much hated them and this period of dominance by the 2D fighters was tough for me to deal with. The idea that I would practice these elaborate moves for hours was about as exciting to me as watching grass grow.

Somewhere, in their heart of hearts, I know that my lawyers had a terrible fear that, unable to dent my rep as an Expert, the Capcom lawyers would try a desperate gambit.

"You are such an... 'expert' at these games, Mr. Kunkel," they might say, "why don't you come over here and show us how well you play the game itself, hmmmm?"

Of course, Fenwick & West wasn't spending its own money — the bucks came from Data East, which was not only fighting for its life, but for the lives of several other companies. Millions were spent solely to produce elaborate splitscreen animations comparing and contrasting the "original" characters from *SF2* with the supposed copies in *Fighter's History*. Every day the trial continued, the billings continued to swell.

So what were a few thousand bucks to teach Bill Kunkel to become a top-notch *SF2* player?

Their solution: Bring in a *SF2* gunslinger to tutor me. He spent two days, somewhere in the neighborhood of a $5,000 billing, teaching me to play the game at an acceptable level. I was better than he expected, but my lack of combo knowledge appalled my sensei. So hour after hour, a mental meter ticking away in my head, I learned how to execute every character's special moves. By the end of this grueling training period, I was good enough that my mentor described me as "not awful anymore."

Of course, I was never called upon to go anywhere near either of the games in court. Everything went like a dream and, in the end, Capcom's case was kicked out of court, based on the arguments we had developed. It felt good — and prosperous.

Unfortunately, I guess Fenwick & West may have been a little too liberal in their willingness to spend Data East's money, as that venerable game company basically went out of business shortly thereafter, despite the win.

I think the most ironic thing about the whole deal was the fact that Data East had actually invented the martial arts genre with its '80s arcade game, *Karate Champ*. When another company (Epyx) copied *Karate Champ* down to the last pixel, Data East sued them.

They lost when the Ninth Circuit Court ruled that all karate games would be more or less the same, just as all baseball, football, basketball, and other sports games would inevitably share common characteristics. In fact, it was that very ruling that led Data East to believe it would have no trouble producing a *SF2*-type game, since all 2D fighting games would be "more or less the same."

Coda: On the way home, my flight was delayed and I decided to kill some time in the airport arcade. Bursting with about eight hours' worth of personal tutelage at the hands of an absolute friggin' street fighting beast, I felt like Luke Skywalker after Yoda taught him to levitate the spaceship out of that swamp.

I walked up to the latest *SF2* incarnation (probably *Championship Edition*) and plunked down my token on the control board since a young kid was already playing. He offered to go two-player and, of course, he cleaned my expensively trained clock.

The worst thing was the way he would giggle every time he landed a blow, the little snot. Naturally, he was on my flight and the whole ride back to Vegas from California he would nudge his parents, point at me and crow ("*That's* the guy I beat at *Street Fighter II*, Mom! Dad! Man, I wiped him *out*!").

Michael Thomasson is one of the most widely respected videogame historians in the videogame field today. He currently teaches college-level videogame history, design, and graphics courses and is the founder and president of the highly respected Good Deal Games videogame database. Michael also oversees one of the largest collections of videogames in the world, encompassing almost 12,000 games. Michael's classic-gaming organization also sponsors retro-gaming tradeshows and expos across the United States and Canada. His website is GoodDealGames.com.

ARCADE ARCHIVES

by Chris Ainsworth

The Rise and Fall of American Laser Games

In 1990, half a decade after the birth, boom, and death of the arcade LaserDisc craze, a small spin-off company called American Laser Games released *Mad Dog McCree*, a live-action LaserDisc light-gun game.

Robert Grebe, founder of American Laser Games, had previously developed a system called ICAT (Institute for Combat Arms and Tactics), a police trainer built around an IBM PC, a modified handgun, and a series of prerecorded scenarios that could be selected by the training officer. Unlike its competitors at the time, ICAT was interactive, featuring a branching video system with a variety of outcomes based on the reactions and accuracy of the trainee.

For the American Laser Games take on the ICAT system, the team mated Amiga 500 motherboards to a series of custom PCBs designed to interface between the standard home computer, peripherals, and the Sony LDP-1450 LaserDisc player (a notorious weak spot for arcade collectors, as the LaserDisc hardware was not designed for the frequent seeking of short segments, leading to the popularity of Out of Order signs on many an arcade cabinet).

Based in Albuquerque, New Mexico, ALG filmed the games' action scenes on existing sets in the region, the most notable being Old Tucson Studios in Arizona, where the observant player may recognize locations from a long list of westerns, including the *Little House on the Prairie* TV series and 1972's *Gunfight at the O.K. Corral*. Once edited and transferred to LaserDisc, the scenes were supported during gameplay with graphical overlays rendered by the Amiga, crudely denoting instructions, scoring, and gunshot markers.

Mad Dog McCree was the first of the American Laser Games titles and, bolstered by sensationalist headlines decrying the morality of marketing a police trainer for entertainment spectacle, was a moderate arcade success, leading to the development of nine more games in the genre from 1991 to 1994.

With the success of *McCree* and others, ALG turned its attention to the home market, focusing development efforts on Trip Hawkins' unsuccessful 3DO console (a modified version even serving as a platform for later arcade releases) and other CD-ROM systems, until declining sales led to a 1999 buyout by Her Interactive, itself an earlier spin-off of ALG and most known for games based on the venerable *Nancy Drew* license, drawing the American Laser Games heyday to a close.

One year later, Digital Leisure, the current holder of the *Dragon's Lair* and *Space Ace* franchises, acquired the development and licensing rights to the entire American Laser Games catalog. As is often the case with a Digital Leisure property, highlights from the ALG library have since made their way to both DVD and multiple modern platforms, including the 3DS, Wii, iOS, and PlayStation Network, offering both the nostalgic and the newcomer an opportunity to play some of the finest examples of the B-movie arcade experience, the LaserDisc light-gun shooter.

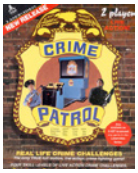
Chris Ainsworth (@driph) is a videogame designer and writer in Las Vegas, Nevada. He has been an avid gamer since that first satisfying click of a Star Raiders *cartridge into the Atari 400, and blames the membrane keyboard for his two-finger typing style.*

WITHIN A SHORT FIVE-YEAR SPAN, ALG RELEASED 10 DIFFERENT LASERDISC LIGHT-GUN GAMES. HERE ARE SOME OF THE HIGHLIGHTS:

MAD DOG MCCREE (1990)
The one that started it all. Bad cowboys, shoot them!

SPACE PIRATES (1992)
Laughable low-budget sci-fi, *Space Pirates* stands as a giant of B-movie gaming within a catalog made up entirely of B-movie games.

GALLAGHER'S GALLERY (1992)
Shoot crap in a grocery store with Gallagher. What?



CRIME PATROL (1993)
If you were really good at this game, they'd recruit you into the actual Delta Force. Kind of like *The Last Starfighter*, but real.

CRIME PATROL 2: DRUG WARS (1993)
Like *NARC*, but dumb(er).

FAST-DRAW SHOWDOWN (1994)
Another shooting-cowboys game and a fitting thematic endcap, *Fast-Draw Showdown* is historically significant for being the only vertical-orientation LaserDisc game released to arcades.

WAS THIS THE WORLD'S FIRST ARCADE SUPERHERO GAME?

PRO-VID-GUARD-ARGUS

BY WARREN DAVIS

They say you always remember your first, but for me it's kinda fuzzy, and I remember feeling all thumbs during most of it. I'm speaking, of course, about the first videogame I ever worked on, which also happened to be the first superhero-themed video arcade game ever made...well, that *would* have been made. My game was never released, you see, and who knows what other unreleased superhero games might have been cooking back in 1981? The world's very first superhero game was 1978's Atari 2600 *Superman* (explored in this very issue of *RETRO*). But in 1981's arcades, where graphics were just moving from "blocky pixels" into something approaching "cartoony," no superhero games had yet emerged.

Some backstory. In 1978, Warner Brothers released *Superman: The Movie* to great success. The tagline was "You'll believe a man can fly." And the movie did not disappoint. It was leaps and bounds (no pun intended) beyond the previous live-action incarnation of *Superman*, the George Reeves TV show of the 1950s. The story was too big for one film, so it was broken up into two, the second film focusing on three Kryptonian villains released from the Phantom Zone in the first.

The 1970s also saw the blossoming of the video arcade industry. The earliest videogames (*Pong*, *Space War*, *Tank*, etc.) were hugely successful and everybody seemed to want to jump on the bandwagon. Especially poised to make that leap were pinball manufacturers. For one thing, they already had an infrastructure of assembly lines to build games. And they already knew "coin-op" (the industry term for coin-operated machines). Plus they were facing a desperate reality — videogames were displacing pinball machines in the arcades. If they wanted to keep their doors open, they had to learn to diversify. Of the major pinball manufacturers, Bally was the first to enter the videogame market, with Williams, Stern, and Gottlieb to follow.

Gottlieb licensed a couple of Japanese-designed games (*New York*, *New York* and *No Man's Land*), and manufactured them in its Bensenville plant. But it knew that if it was going to enter the videogame business for the long haul, it needed to create an in-house design team. To that end, Ron Waxman, VP of engineering, and Howie Rubin, VP of marketing, started hiring. Most of the team was inexperienced — expected for a new industry — so they hired a "guru"... someone with a track record who could design their first in-house game and be a mentor and inspiration to the new hires. That guru was Tim Skelly, known for creating such games as *Rip-Off* and *Star Castle* for Cinematronics, and that first game was *Reactor*.

As Skelly developed Reactor, Waxman and Rubin gave the other programmers a simple edict — "Make us a videogame!" There was no oversight, no planning, or even a strategy as to what sort of games to make. The idealist in me wants to believe that management knew on some level that videogames were a developing art form in which very few design rules had yet been established. More likely, they realized that no one at Gottlieb could tell a good game idea from a bad

■ **A screenshot of one version of *Pro-Vid-Guard-Argus*. The hero is in red and yellow.**

one. So they gave the programmers (who were also the designers) free reign.

One of those programmers was Tom Malinowski, a self-taught coder who had written some simple games for his home computer. Malinowski was inspired by the movie *Superman II*. One of the big set-pieces in that movie is a battle between Superman and the three Kryptonian villains in the streets of Metropolis amidst skyscrapers and pedestrians. Superman and the villains slam each other into buildings, throw buses and manhole covers at each other, and endanger the citizens of Metropolis. But they have identical powers so they couldn't manage to kill each other. At some point, General Zod realizes that Superman cares about the earthlings, and purposefully puts them in harm's way. In order to protect the citizens, Superman realizes he's got to move the fight away from the population. So he leaves.

Tom envisioned his game as having a similar scenario, albeit without the "running away" part. The only problem (initially) was that *Superman* was a property of DC Comics, which was owned by Warner Brothers. Gottlieb, at the time, was owned by Columbia Pictures. The idea of Columbia licensing a property from a competitor was distasteful. Plus, Howie Rubin had previously worked for Atari and had some bad experiences there in the development of the 1979 *Superman* pinball machine. So with a *Superman* game being particularly unlikely, Howie contacted Columbia's licensing department to see if it could get the rights to any superhero. The answer was no, and as Howie puts it, "We tested some waters, but were not very aggressive."

So without an actual superhero to license, Tom had no choice but to create his own. Jeff Lee, who provided the graphics for the game, has a copy of a design doc handwritten by Tom dated January of 1981 called "*Super-Hero*." Whether Tom was hopeful to get the *Superman* license at that time or knew that it was never going to happen is unclear. But sometime in 1981, Tom got the green light to proceed with his concept. Jeff designed a suitably generic superhero character, and Tom was off and running.

So what was the game? Well, our unnamed hero battles a bunch of supervillains but can't kill them. The main goal is to protect pedestrians on the street. The player uses a trackball to fly around. Most of the screen is just empty sky to fly in, but on the right and left side are the edges of buildings. Other locations appear in later levels, notably a bridge. On the bottom is a street/sidewalk where pedestrians and vehicles pass from one side to the other. The villains can fly into the buildings, creating rubble which blasts out and falls somewhere on the street, potentially crushing pedestrians. They also could grab pedestrians to carry them away and pick up vehicles to drop on them. Superman, err...I mean, our hero, could grab a pedestrian or car from a villain by crashing into them and then returning it to the ground. He could also pulverize falling rubble before it hit the ground. There were more features, but I'm not sure if they were part of the initial design or came later — the game would go through at least four iterations and have four different titles in its struggle to reach the production line.

ALTHOUGH I HAD A FEW YEARS OF EXPERIENCE OUT IN THE "REAL WORLD," I HAD NEVER PROGRAMMED A VIDEOGAME BEFORE.

I was hired by Gottlieb in January of 1982. Although I had a few years of experience out in the "real world," I had never programmed a videogame before. But I was familiar with assembly language, which was the language of all videogame hardware at the time. Still, I needed to learn some basics before I could be entrusted to develop a game by myself. As it turned out, Tom was in need of some help. The game was turning out to be bigger than anything he had done before, and he was a bit overwhelmed.

He assigned me to deal with the rubble. As I mentioned earlier, the villains could crash into the sides of the buildings and create piles of rubble which fell onto the street below. The problem was...what do you do with these piles of rubble? As they accumulated, they eventually covered the street, leaving no room for new rubble and using up foreground objects (sprites that our hardware could display in limited quantity). Looking back, I can't remember why we just didn't have rubble disappear after a few seconds. It's possible we may have tried that and Tom didn't like the way it looked. But for whatever reason, I was tasked with programming a bulldozer that would come out from one side of the screen and push any rubble sprites off the screen. When enough rubble accumulated, the bulldozer would reappear in the opposite direction to perform the same task.

In addition to the bulldozer, I also worked on the game's diagnostics. This was a mode that could only be entered when the coin door was open. A switch inside the cabinet allowed an operator to put the game into diagnostic mode where they would get a menu consisting of tests (typically memory, sound, switch, and sprite tests) and settings (difficulty, extra life level, number of lives per coin, etc.). This was also a good learning experience for me since it involved all aspects of the hardware.

At some point, the game became ready for testing outside of Gottlieb. It needed a name, and that name was "Protector" — presumably because "Super-Hero" was a little too meta for that era. In fact, the term

Another screenshot, from the bridge level, showing some energy bolts falling down.

Marquee created for the inhouse joke version of *Pro-Vid-Guard-Argus*, featuring a rotund hero based on Gottlieb's VP of Engineering, Ron Waxman. (courtesy of Jeff Lee)

"meta" wasn't even known then, except as a prefix. At any rate, some time after *Protector* was deemed testable, I moved on and began experimenting with gravity and randomness (two topics I did not get to explore on *Protector*) on a playfield of my own design, a pyramid of "cubes," which eventually became *Q*bert*.

I should point out that Gottlieb's videogame division was working out of a separate plant from pinball — one with a large manufacturing area currently sitting empty. *Reactor* was being field tested in local arcades and Tim Skelly was still making adjustments to it, but it would be several months before it started production. And although at that time Gottlieb didn't enforce deadlines or milestones on any project — adopting a freedom it would in some cases regret later — it was keenly aware that once the production line started rolling, it wanted to keep it rolling. Shutting down the production line meant laying off workers and losing momentum, which translated into lost revenue. The pinball industry was used to ups and downs, but it always did what it could to keep the line rolling — usually by lowering the production output (the number of games built per day) rather than shutting down completely. So management was very hopeful that after *Reactor*, *Protector* would be the second in-house game released.

Field testing in local arcades was essential for any new game, for a couple of reasons. First, we (those of us working on the game) would often go to the arcade and watch people play. This is not as creepy as it sounds — watching other people play was not uncommon. But while others would watch just to see what a new game was about or how good the current player was, we would watch to see how the player responded to the game. Did they pick up the controls easily? Did they get frustrated? Did it seem too hard? Too easy? Were they having fun? Any number of us might go to watch a game on test, but it was up to the designer/programmer to make the changes. Management and others might offer advice or suggestions, but the programmer was the one to fix it.

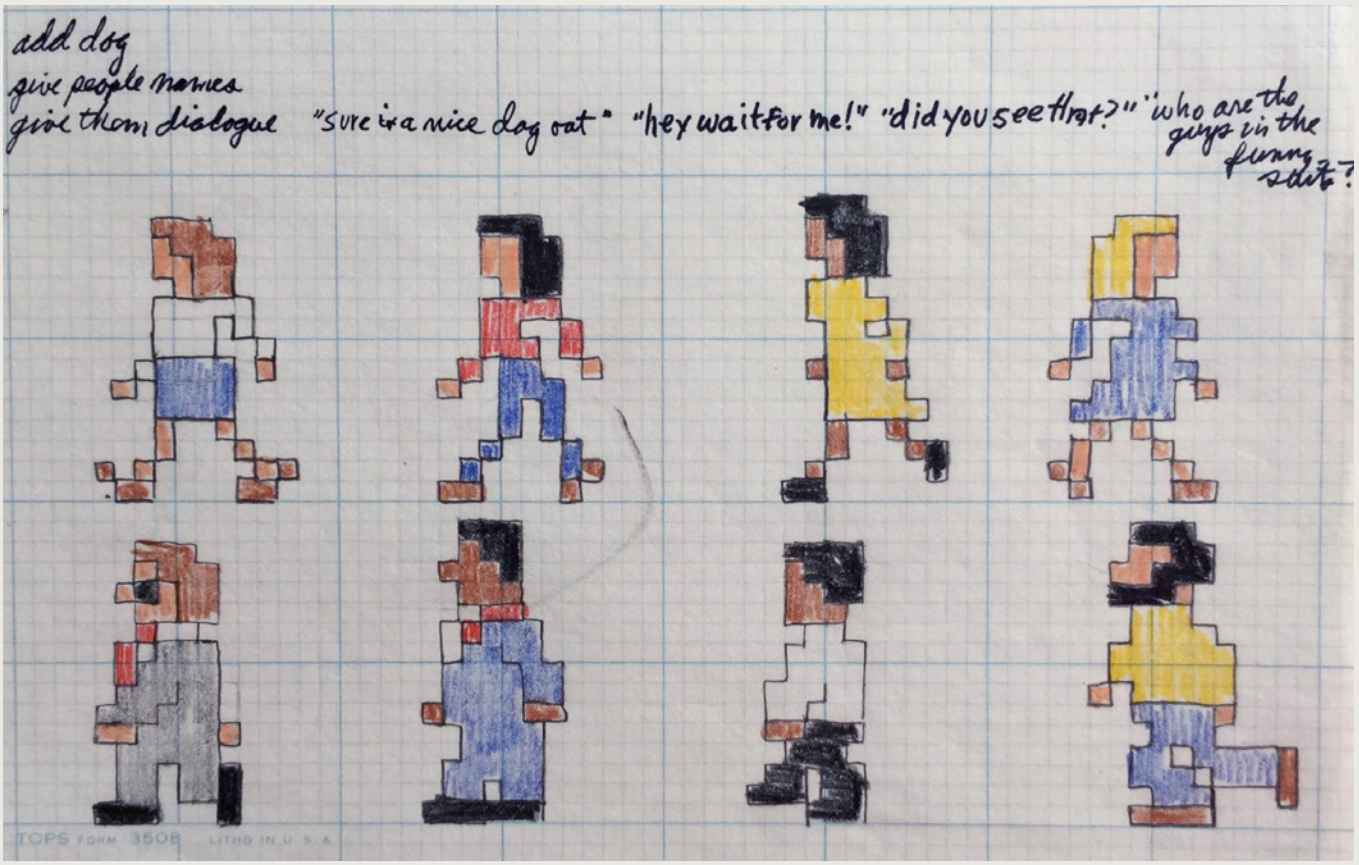
The second valuable piece of information we got from field testing was monetary. How many quarters were going into the coin box? New games almost always tended to get a lot of play initially as players checked them out. After a week or so, if the numbers dropped, that was a clear indication that players weren't coming back. Another way we used to get feedback on a game was through focus groups. There would be a small group of people in a room with a one-way mirror who would play the game for a while, then sit down and answer questions posed to them by a moderator.

Unfortunately, the test results for *Protector* were not good. A number of factors may have contributed. One was that you controlled *Protector* with a trackball. Precision was likely an issue, as was the lack of any force feedback when you slammed into a villain. Another problem was in the design. You didn't actually kill the villains, you just tried to knock them away and keep them from smashing the buildings or picking up cars and such so you could save the pedestrians. This could be unsatisfying at best, or psychopathic if you enjoyed letting the pedestrians die. Changes had to be made.

AFTER A WEEK OR SO, IF THE NUMBERS DROPPED, THAT WAS A CLEAR INDICATION THAT PLAYERS WEREN'T COMING BACK.

It didn't help that the game suffered from some technical issues, due mostly to Tom's inexperience as a programmer. Kan Yabumoto, a fellow Gottlieb programmer best known as the creator of *Mad Planets* and the Escher screen which was my inspiration for the *Q*bert* pyramid, believed that poor memory management caused slowdowns. Videogames operated on a 60Hz loop, meaning that the screen got refreshed 60 times a second, and whatever processing you had to do in order to paint a given screen had to be done between refresh times. If your processing went over 1/60 of a second, you'd miss the refresh and the game would appear to stutter. This was a problem.

Dave Thiel, who did the game's sounds, recalls a focus group resulting in the trackball being changed. "Players didn't understand what was unsatisfying about the interaction so they reached out to the familiar and insisted that a joystick would fix it." Shooting was added. I think it was supposed to be heat vision, but as we had a sprite-based system, it looked more like projectiles. At some point you became able to kill the villains. In one version, presumably the last, the rubble was removed. Strange "energy spikes" came down from above and would zap pedestrians if they touched one.



■ **Jeff Lee's designs of some pedestrians, with his notes. The guy in the lower right is Warren Davis. (courtesy of Jeff Lee)**

Management so believed in the potential for this game that they refused to give up on it. Jeff Lee has a 13-page memo with notes from a meeting on March 29, 1982 attended by a number of us, myself included, which contains, as Jeff puts it, "... an excruciatingly detailed discussion of gameplay possibilities." Tom did his best to accommodate suggestions and made changes dutifully.

The first name change was from *Protector to Videoman*. Why? Not sure. Perhaps just so that when it went out on test again, players would think it was a completely new game, or even if they recognized it, the new title would imply that the game itself had changed sufficiently to give it another go. When *Videoman* didn't catch on, the next version became *Guardian*. Still no improvement. Next, in an attempt to give the main character a non-generic identity, they went with the more specific yet somewhat arbitrary and puzzling *Argus*.

After months of changes to gameplay, graphics, and titles, the game was becoming something of an internal joke. I started calling it "Pro-Vid-Guard-Argus." I'm not sure exactly when the plug got pulled, but pulled it eventually was. Management was very disappointed, as I'm sure Tom was. I'm told that some version of Pro-Vid-Guard-Argus is available to play using MAME, which is actually quite amazing and awesome. Gotta love MAME.

There's another version of *Pro-Vid-Guard-Argus* I haven't mentioned yet. With all the conversations, hand wringing, and hair pulling trying to figure out how to make this concept fly (again, no pun intended), someone thought maybe the answer was to go a comical route. And to that end, Jeff Lee created a superhero, *WaxMan*, bearing an astonishing resemblance to Gottlieb's VP of engineering, Ron Waxman. The rotund hero was swapped into the game and a marquee was created, but as far as I know, this version of the game was always intended as a joke and never tested...although I'm pretty sure Howie Rubin lobbied for it. In fact, Jeff Lee says he has drawings in his archives of "a couple of other fat guys in costume which are *not* Waxman."

Though the game never made it to production, there are a couple of things about it which are noteworthy. One is the fantastic work Jeff did on crafting the pedestrians who walked back and forth on the street. Each one of them is unique, not just in their look, but in the way they walk and carry themselves. That he could accomplish this with so few pixels and colors is amazing. (And as a tidbit of trivia, the guy with the afro and beard is me.)

The other noteworthy thing about this game is that it connected me with Jeff Lee and Dave Thiel, the two people who would become my collaborators on my next project. I often speak about *Q*bert* as being my "first" game, and that's true in that it was the first game to which I could claim some authorship as designer and sole programmer. But *Vid-Pro-Guard-Argus* was technically my first. And it's true, you always remember your first. Even if it is a little fuzzy.

Kohler's Collect-a-Thon!

YOUR GUIDE TO BUILDING THE ULTIMATE RETRO LIBRARY.

LIVING THE DREAMCAST

BY CHRIS KOHLER

THE MARKET FOR ORIGINAL CLASSIC GAMES has never been hotter. Whether you're obsessed with collecting or just want to play your old favorites in their original format, you're paying more for old games than ever before. Each issue of Kohler's Collect-a-Thon! breaks down the current collecting scene for a particular platform. This time out, we're tackling Sega's beloved Dreamcast!

THE PLATFORM

If the incredible success of Yu Suzuki's Kickstarter for his long-awaited *Shenmue III* proved one thing, it was that Sega Dreamcast has a posse. Sega's final game console had a brief life. It launched in November of 1998 in Japan and not quite one year later in the United States, but was discontinued in March 2001 when Sega bailed out of the hardware biz for good.

It didn't have a whole lot of support beyond Sega itself, but somehow Dreamcast managed to leave a remarkable legacy of well-remembered classics. Largely, these are fighting games and shoot-em-ups from Capcom, plus a genre-spanning variety of games that were the product of Sega's design teams at their creative zenith.

COLLECTING IT

There were roughly 250 Dreamcast games released in the United States, a fairly manageable library if you're looking to collect 'em all. No single game has permanently broken the $200 barrier yet, although a few are coming close. And you can still find Dreamcast games in the CD racks of your local thrift store. So you can see why some collectors might be tempted to knock out the complete Dreamcast set, which doesn't take up much shelf space, either.

THE LIMITED EDITIONS

Two of the most expensive U.S. Dreamcast games to acquire are "limited editions" of its big games. *Sonic Adventure Limited Edition* was actually shipped out to Hollywood Video rental stores in advance of the Dreamcast's U.S. launch, so that customers could try out the Dreamcast that summer. There are a few differences between *Limited Edition* and the final game, and the case, manual, and disc are all easily identifiable by the "Limited Edition" line. (Some sellers who don't know their stuff occasionally price this as a standard Sonic, so you might get a deal if you're eagle-eyed!) Many of these games have Hollywood Video stickers on the case, manual, or even the disc, so "clean" copies will fetch more money, up to $200 in some cases.

There's also a *Shenmue* limited edition. In this case, you'll have to look for a small "Limited Edition" graphic in the upper corner of the case. Sega released 20,000 of these for the game's first run, and they included a soundtrack CD alongside the three game discs and the "Passport" Internet disc. Yeah, a case full of 5 discs. These are breaking $100 more often these days, with the renewed interest in *Shenmue*. But that

could drop when things cool off. Regular *Shenmue* goes for about $50 as of this writing, but again, that's a bit inflated due to recent events.

THE HEAVY HITTERS

Capcom was cranking out fighting games like nobody's business during the Sega Saturn and then Dreamcast eras. Sega's platforms could handle arcade-perfect conversions of games that the original PlayStation struggled to run, and so these consoles were the perfect place for 2D fighting.

Some of the more obscure games can be quite pricey these days. *Project Justice*, the sequel to *Rival Schools*, can cost upward of $150. 3D arena fighter *Power Stone 2* and *Street Fighter III: Third Strike* aren't as tough to get, but are still in the $70–80 range. And hovering around $40–50 are classics like *Marvel vs. Capcom 2*, *Capcom vs. SNK*, *Street Fighter Alpha 3*, *JoJo's Bizarre Adventure*, etc.

In general, the later in Dreamcast's life it was released, the harder it is to find; print runs on earlier games like the first *Marvel vs. Capcom* and *Power Stone* seem to have been higher when publishers were more exuberant about Dreamcast's chances in the marketplace. By 2001, they were just serving a few remaining diehards.

Capcom's rival-turned-business-partner SNK also had some Dreamcast rarities of its own, mostly *Fatal Fury: Mark of the Wolves*, another game that can top $100 these days.

SHOOTING FOR THE TOP

Even more niche than fighting games were shmups, which Capcom also cranked out like crazy. *Cannon Spike*, *Mars Matrix*, and *Giga Wing 2* are the three shooters you'll pay anywhere from $50–100 for. There's also *Bangai-O*, developed by action kings Treasure and published here by Crave Entertainment, in the same price range.

THE HORROR!

Survival horror was quite the popular genre during the years 1999–2001, so it's no surprise that Dreamcast was full of horrific or otherwise highly grimdark adventures. Capcom, which really was just cranking out games left and right, of course had the now-classic Dreamcast exclusive *Resident Evil: Code Veronica*, followed up with ports of the second and third *Resident Evil* games. Those two are harder to track down, and you'll probably pay upward of $50 for each but less for Veronica.

There's also *Carrier* by Jaleco ($10–20), Illbleed ($80–90), the memorably awful *The Ring: Terror's Realm* ($20), and Sega's own D2 ($40–50) among others.

FIRST PARTY

It was Sega that delivered many of the true Dreamcast classics. Since most of these were printed in fairly large runs, you shouldn't have a very hard time tracking down *Seaman*, *Jet Grind Radio*, *Space Channel 5*, *Samba de Amigo* (although its maraca controllers can cost up to $100), etc. In fact, I've seen lots of sealed copies of some games like *Chu Chu Rocket* and *Phantasy Star Online* kicking around even today, so study up before you get suckered into buying a "rare" sealed Dreamcast game. They could be really cheap.

Sega's classic RPG *Skies of Arcadia* is pretty expensive, though, with most copies now way over the $50 mark. Speaking of RPGs, Dreamcast had a few of these, although they aren't quite as crazy as RPGs on other platform in terms of price. *Grandia II* might cost you $50, but make sure it has the soundtrack CD that all copies included.

BACK IN BLACK

You'll note that a lot of the expensive games, these four included, have black spines on the GD-ROM cases; these were released after Sega did some mild rebranding and changed the packages from white to black. In general, these latter games were released in lower print runs. So if you see a game in a black case, you might want to check to see if it's harder to find. Even some games that don't go for a lot of money, like *NBA Hoopz*, don't actually come up for sale that often.

Oh, and one last thing: If you do want to collect every Dreamcast disc that Sega sold, you may find that you want to track down all of the Web Browser discs. Versions 1.0 and 2.0 are dirt-cheap, but the limited-release 3.0 browser might cost you $75 or more.

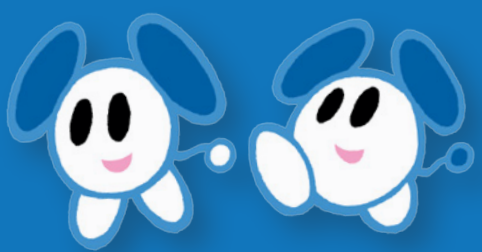


Illustration by Thor Thorvaldson

PRIMAL SOUP: NES REMIX

LAYS BARE NINTENDO'S DESIGN STRENGTHS

by Jeremy Parish

More than a minigame collection, *NES Remix* digs into the nuts and bolts of the classics.

For those of us who cut our teeth on software designed in the fires of sink-or-swim cruelty, the single most grating feature of modern videogames just might just be the dreaded tutorial.

Gone are the days where when you could plunk a quarter in a machine and find yourself dropped into the thick of things, your only hint at how to play a few terse sentences printed to the side of the controls, or a bit of broken English flashing during the attract mode. Now games gently nudge you in the right direction, forcing you to Simon Says your way through a seemingly endless stream of step-by-step lessons before allowing you to venture out on your own anywhere from 15 minutes to five hours later. The challenge of modern games doesn't come in learning to play but rather in staying awake long enough to get to a point where you're actually *allowed* to play.

Lest this come off as an old-timer's get-off-my-lawn screed, there's a reason tutorials became a permanent fixture: A whole lot of games are really badly designed and make no sense at all. Tutorials aren't the industry treating its consumers as brain-dead idiots so much as a bashful confession that games often don't make a lot of sense and require arcane knowledge, trial-and-error experimentation, or both.

That's one big reason I've always been drawn to Nintendo's software. While the Nintendo catalog is far from perfect, they may well have the industry's best track record when it comes to creating games that greet new players with intuitive, intelligent design that instructs without being obtrusive. For every tiresome, didactic *Twilight Princess*, you have something like *Super Metroid*, where the thoughtful placement of obstacles, enemies, and power-ups guides you toward proper play techniques without ever being obvious about it.

And nowhere is that better demonstrated than in the recent surprise release of *NES Remix* for Wii U.

You could easily write off *NES Remix* as a watered-down take on *WarioWare*, or as a transparent attempt to snag a slice of the iOS free-to-play market by repackaging old games. In truth, neither of those claims would be entirely wrong — it is both of those things. But there's more at work here than recycled assets and ideas, and for anyone interested in better understanding why certain games work intuitively, *NES Remix* could practically serve as a textbook.

> The thoughtful placement of obstacles, enemies, and power-ups in Nintendo's best games guides you toward proper play techniques without ever being obvious about it.

Take, for instance, how *NES Remix* presents *The Legend of Zelda*. You begin with simple tasks like collecting the wooden sword from the old man in the cave, or defeating a screen full of enemies. As you progress through the challenges, your objectives grow more challenging: Clear a swarm of enemies without taking damage, refill your health, or collect a piece of Triforce. By the end of the *Zelda* sequence, you're practically clearing entire dungeons.

In short, the *Zelda* events in *NES Remix* train you to play *Zelda*, starting with basic tasks which it progressively combines into more elaborate missions. It is, in effect, a tutorial disguised as a minigame collection, encouraging you to build a repertoire of game mechanics by presenting them as standalone events. Shiny stars and Miiverse stamps act as the sticks and carrots that goad you to mastery.

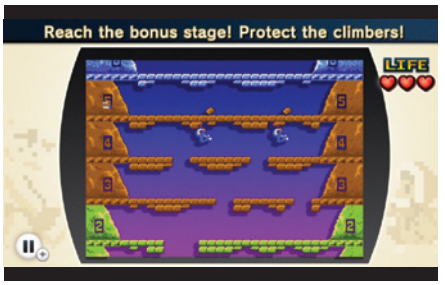
What I find interesting about this approach is that (outside of the "remix" sequences that mash game concepts together in new and surprising ways) *NES Remix* doesn't actually do anything that all those old NES games didn't. Its tutorial tasks consist of challenges already present in the original games. You had to figure out how to collect a weapon and defeat enemies in order to progress in *The Legend of Zelda*; how to leap barrels to advance in *Donkey Kong*; how to climb vines and unlock Kong's chains to beat *Donkey Kong Jr.*; and so forth.

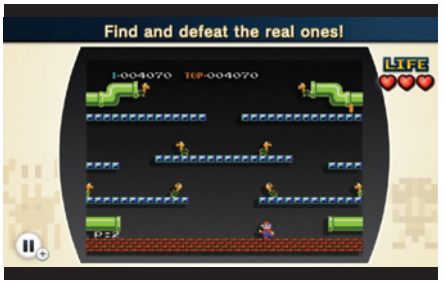
All *NES Remix* does is parcel those instructive videogame moments into standalone sequences, supplemented with pats on the back for good performance. If you break down the divisions between challenges and the little blurbs of instructional text, *NES Remix* basically gives you classic NES games as they originally were.

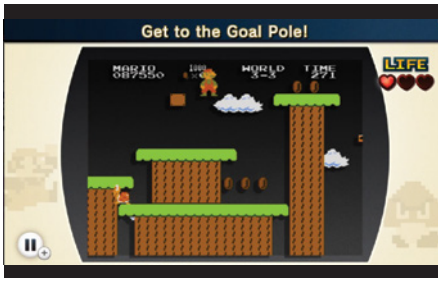
The uncharitable could view *NES Remix* as a pointed commentary on the way today's gamers need to have instructions doled out to them. *Super Mario Bros. is just too confusing without being told to jump on Goombas and collect mushrooms!* But that's not really fair, or accurate. You can still see the pick-it-up-as-you-go approach at work in games as recent as *Super Mario 3D World*, which in classic style dispenses with instructional text in favor of clever level design that encourages you to learn through self-motivated discovery and experimentation. Not every modern game treats us like halfwits, and not every classic game worked as smoothly to teach newcomers the ropes as did *Super Mario Bros.*

NES Remix shows the genius inherent in Nintendo's best classic creations, but it also lays bare the crumminess of lesser titles like *Urban Champion* and (sorry) *Excitebike*. By reframing old NES games as contemporary minigame collections, *NES Remix* reveals the subtle ways the classic greats taught us to play them without our ever realizing it. And by comparing its bite-by-bite structure to the seamless flow of the games it deconstructs, it offers a few pointers for current-day game designers looking to exorcise the evil of nagging tutorials from their work.

Jeremy Parish works as senior editor at USgamer.net*, co-host of the* Retronauts *podcast, and grim overlord of gaming blog* 2-Dimensions.com*. Occasionally, he even finds time to sleep.*







MULTIPLAYER MADNESS: SUPER SPRINT

BY ROBERT WORKMAN

ATARI'S THREE-PLAYER RACING EXTRAVAGANZA HELPED BRING A CLASSIC RACING BRAND INTO THE '80S.

Striding into a '90s arcade, what could be better than racing against friends in games like *Daytona USA* and *Super Off Road*? Back in the '80s these adrenaline rushes were a little harder to come by, mainly because networked cabinets weren't yet popular. That didn't stop Atari from crafting a legacy series into something contemporary for the '80s — something three players could enjoy.

Thus was born *Super Sprint*. The game debuted in arcades in 1986, allowing three players to control Formula One–like cars through a series of eight race tracks, all from an overhead perspective. Each track offered something diverse and new, such as opening and closing gates that provided an opportunity for a shortcut (assuming you didn't get smashed) or avoiding obstacles like oil puddles and small tornadoes, each of which could send your car careening into the wall, triggering a fiery explosion.

If the *Sprint* series sounds familiar, that's because it actually got its start back in 1976. Two players could drive their way through that black-and-white racing game, using simple-looking checkerboard-patterned cars as they went through a series of tracks. Limited four- and eight-player models were available as well, in full-color raster versions. Their distribution wasn't nearly as wide as *Super Sprint*'s, however.

Super Sprint utilizes a steering wheel and gas pedal for simple control, though certain techniques help ensure a first-place victory. Along with taking advantage of shortcuts (and avoiding those tornadoes), you could learn how to handle tight turns with a quick flick of the steering wheel, or even perform small slide techniques while keeping on the straight-and-narrow. Most rookies just ended up in those fiery wrecks, though.

Super Sprint became an arcade favorite, based largely on its multiplayer appeal. Atari would also revisit the formula with other game releases. A two-player version, called *Championship Sprint*, came out around the same time, with a smaller cabinet that some arcade owners found more convenient. Even with one less player, the game delivered the same sort of racing action as *Super Sprint*.

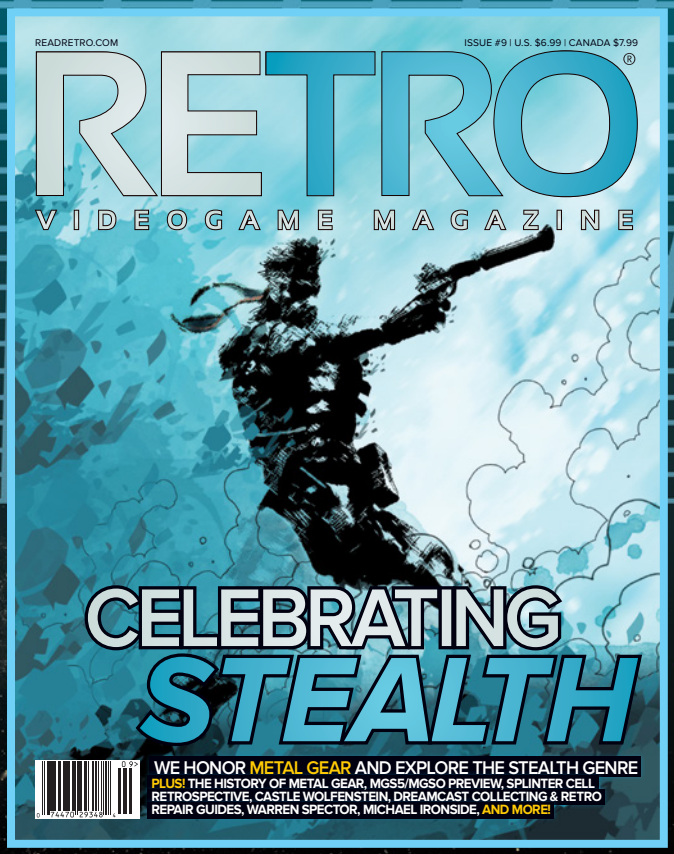
In 1989 Atari released a variation of *Super Sprint* called *Badlands*, which took place in a futuristic, apocalyptic world. This version of the game worked the same in terms of control, but offered several track variations, as well as new obstacles to overcome. Although the game wasn't as well received as the *Sprint* titles, it became a favorite of many arcade-goers, and is still enjoyed by some today.

Although *Super Sprint* left its mark on the arcade scene, it would eventually find new life through home releases. A few years after its arrival in arcades, *Super Sprint* made its way to the NES courtesy of Tengen, the same company behind NES ports like Atari's controversial Tetris and Sega's *After Burner*. The port did moderately well, despite slightly condensed visuals and the loss of player three. A much later version came packaged with *Spy Hunter* in a two-game bundle for the Game Boy Advance, released by Destination Software. It wasn't as good, though, mainly due to the condensed size of the screen.

The original *Super Sprint* would live on through a number of arcade packages released by Midway, starting with the *Arcade Party Pak* for PlayStation, followed by *Midway Arcade Treasures* for Xbox, PlayStation 2, and GameCube, and later *Midway Arcade Origins* for Xbox 360 and PlayStation 3. These versions were completely true to arcade code, right down to the three-player option.

Although arcade racing has changed quite a bit over the years, *Super Sprint* is often regarded as one of the key titles that defined it. A modern version would certainly be nice — even with the tornadoes.

DID YOU KNOW? *Super Sprint* left such a mark that it ended up being a minigame tie-in with several other popular releases, including *Jet Force Gemini* and *The Simpsons: Hit & Run*. It was also the influence behind another popular Tradewest/Midway arcade racing hit — *Super Off Road*.



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