SYZYGY

MAGAZINE

Interviews with Tim Skelly and Owen Rubin

Complete Original Inside!
Frank Brunner's lost Tailgunner artwork

The Next Generation
Console Wars...
Who Will Prevail?

THE ONLY HARDCORE ECLECTIC VIDEO GAME MAGAZINE

Alternate cover art...

VECTORS UP YER BUM!!

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Babes and video game nerds meet in a rare encounter. It's called *E3*.

The Rise and Fall of Vectors! Part 1

In 1976, an MIT graduate named Larry Rosenthal, who had been attempting to lure various coin-op companies to buy into his new **Space Wars** video game prototype and his patented vector graphics display, finally landed at Cinematronics, a company based at El Cajon, CA and in the business of manufacturing **Pong** variations. Rosenthal's demand of a equal split of future **Space Wars** profits between himself and the manufacturer, as well as the licensing of his Vectorbeam monitor rights, were scoffed at by all companies in the business...all except Cinematronics, then co-owned by Tom Stroud and Jim Pierce, who decided to give it a shot.

Space Wars itself was based upon a game which had been around for years, initially created by MIT student Steve Russell (and his hacker buddies) as a demonstration of the capabilities of the old PDP-1 computer. Whether or not the "Space War" game idea itself was actually copyrighted by Rosenthal is not clear, but there have been murmurs that he actually obtained the copyright of the game from Russell, which would contradict the well-known rumor of the game being public domain. What is known, however, is that Rosenthal possessed the copyright to his vector display, which he called the "Vectorbeam" monitor, and which he licensed to Cinematronics for each **Space Wars** game produced.

This new vector display was capable of rendering only straight lines between points, no solid or rounded shapes as in the normal raster displays, and even though this limited the detail of the graphics to some degree, the resolution was phenomenal, a bright crisp contrast to the heavily pixelated games of the time. To his credit, Rosenthal's use of the vector display seems to have been proven as a major reason behind the success of **Space Wars**, as the first coin-operated video game, **Computer Space** (designed by Atari founder Nolan Bushnell and produced by Nutting Associates

in 1972), had also been based on Russell's "Space War" game. In contrast to Rosenthal's **Space Wars**, Bushell's **Computer Space** was a blocky, slow mess, which was more frustrating to play than fun. **Space Wars**, having the technological advantage of coming five years after **Computer Space**, was a smooth,
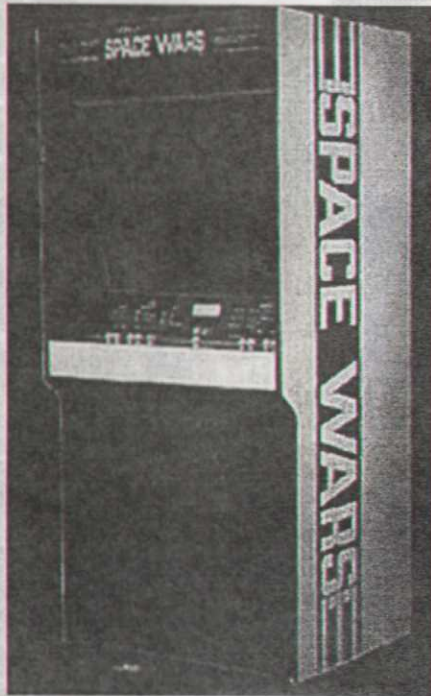
Rosenthal's creation that started it all. The behemoth known as **Space Wars**.

fast and beautiful creation, with many options to spice up the head-to-head spaceship battle. Players could choose to make the center of the screen a "Black Hole" which would suck the ships into its core and destroy them. They could also choose to have an expanded universe, in which the battle would continue outside the screen, players using only their memory as a reference to extrapolate shots and flightpath, intercepting their opponent. Or players could choose "Bounce back" which would limit the game to the boundaries of the screen. **Space Wars** was a wonderful creation

that quickly impacted players across the country.

Space Wars became wildly popular in arcades, rated by game operators as the top earner of the year in 1978. Sales figures of the game are estimated to be in the neighborhood of 30,000 units, and given Rosenthal's deal with Cinematronics, it is safe to assume that he quickly became a very wealthy man, the profits of **Space Wars** netting him what would appear to be an *eight figure sum*.

The video game business was, and always has been, all about following the leader. If a game, a game feature, or a specific technology became popular (a word synonymous with 'profitable' in the coin-op world), it was certain to beget derivatives. Thus began the fabled and meteoric rise of vector games in the world of coin-operated amusement. And if the folks at Cineamtronics had stopped the **Space Wars** manufacturing line, and switched off the loud equipment, a dull rumble could have been heard, to the north, at the industry acropolis of Atari.

Space Wars stayed atop the charts for months to come (in fact it was still one of the top ten games in 1980) but Rosenthal soon left Cinematronics to start his own company which, like his display technology, he also called Vectorbeam. Whether or not Pierce and Stroud grew a dislike for the 50-50 profit split with Rosenthal and pushed him out, refusing to repeat the arrangement on his next game, or whether a different situation occurred, is unclear. The split off was definitely not amicable, but either which way, Rosenthal used the substantial revenue from **Space Wars** to start Vectorbeam, which was solely dedicated to producing coin-operated vector games (the only company *ever* which mayclaim this).

Vectorbeam also had the right to produce **Space Wars**, and they did, dropping the "s" and calling it simply **Space War**, but with the exact same fea-

tures and gameplay of the original. Other than **Space War**, **Speed Freak**, the unique vector driving game, was the only real production game that came from Vectorbeam as it existed under Rosenthal. **Speed Freak** was the most advanced driving game of its time, and it definitely lived up to its name; your speed increases exponentially as you hold down the throttle in fouth gear, giving good players an amazing ride for a quarter. The cars which the passed the player's on the road existed in 3-D and were wireframed, a predecessor to the tanks which would later be used in **Battlezone** by Atari.

Back at Cinematronics, immediately after Rosenthal left in early 1978, Tim Skelly was hired as the sole game designer, beginning work on **Starhawk**, a first person shooting game. However, when Rosenthal left to form Vectorbeam, he cleaned house, moving all of his developing tools over to Vectorbeam and taking the only copy of the instructions for programming the CPU, which requiried Skelly to effectively start development from scratch and reverse engineer Cinematronics' own CPU board. The result was **Starhawk** missing the AMOA show of 1978, an omission detrimental to sales at the time. **Starhawk**, however, made the show in London soon afterwards and was still enough of a success to keep the doors open and, along with the still popular **Space Wars**, kept Cinematronics' workers employed.

Skelly pressed on and created **Sundance**, a very unique game but one with numerous manufacturing flaws. The phosphor coating on the inside of the game's monitor was applied incorrectly, flaking off and causing the monitor circuit boards to short out. Additionally, the monitor circuitry itself was very fragile, as they added a gray scale adapter to it, requiring lots of cuts and jumper wires. This resulted in most **Sundance** machines arriving at their distriubutors DOA, therein immediately returned for a refund. [*More about Sundance in 'A Quick Look'*].

Dan Sunday, a designer at Vectorbeam along with Rosenthal, had started the development of the game **Tailgunner**, and also a primitive "rotating rings" game that would later inspire the creation of **Star Castle**, both to be released by Cinematronics after the buyout. Yes, that's right, Vectorbeam only
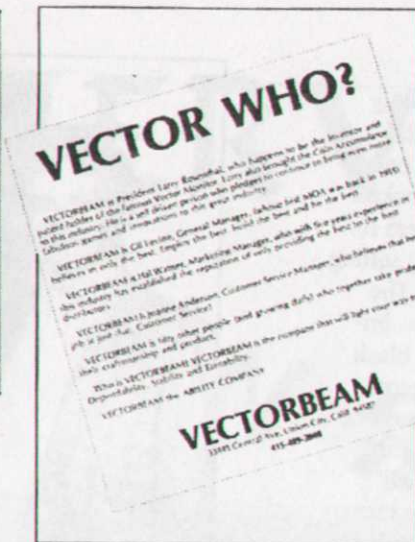
lasted about one year (from the fall of 1978 to the fall of 1979) and then Rosenthal sold the factory and the Vectorbeam technology rights to Cinematronics. He then took his substantial wealth (even after the failure of Vectorbeam he was still easily a millionaire) and left the game business for good, never to be heard from again.

One mystery he may have left unanswered forever is the game **Scramble** [*flyer pictured end*]. Some say it was produced, and others claim only a flyer and a mock-up cabinet were ever produced. No **Scramble** has ever been found, and nobody with a definite recollection of ever seeing a **Scramble** has ever spoke out. It may very well remain a mystery...

The game **Barrier**, manufactured just after the Vectorbeam buyout by Cinematronics, is also an interesting story. **Barrier** was a game designed at Cinematronics as an excercise for newly-hired programmer Rob Patton, and was initially named **Blitz**. Jim Pierce, co-owner of Cinematronics, came up with the gameplay idea, which was curiously identical to the handheld Mattel football electronic game which was very popular at the time. As Skelly remembers, "To make Jim happy, we put it out on test. It did very poorly, to put it nicely, and we stuffed it in the closet."

Bill Cravens, President of Vectorbeam, visited Cinematronics before the buyout, looking for something his company could build and and sell quickly. "Cinematronics sold him **Blitz**." Skelly says, "And we all laughed our asses off."

However, the laughter died abruptly, as this happened only a matter

of weeks before the buyout of Vectorbeam by Cinematronics, which nobody at Cinematronics had apparently forseen. "When Cinematronics took over Vectorbeam they found themselves stuck in Vectorbeam's position," says Skelly. "They had employees, an assembly line, and nothing to build. So—and here comes the irony—they were forced to endure the fate they had intended for their foes: they had to build **Barrier**."

Meanwhile, while the rival frat house rubs were going on down in El Cajon, Atari had just unleashed **Lunar Lander**, its first vector game, which, like Cinematronics' first vector, was based on an older computer game which had been around for a while. It had an interesting control lever for thrust, and the display was virtually identical to what players had seen on the black and white vector monitors of Cinematronics and Vectorbeam. **Lunar Lander**'s production was stopped abruptly, however. In fact, so abruptly that cabinet production was well ahead of the rest of the assembly line, and when **Asteroids** machines were grossly outselling and earning **Lunar Landers**, the pre-produced cabinets of **Lunar Lander** went out with **Asteroids** in them. **Asteroids** was the biggest vector game ever, and Atari's biggest coin-operated game ever. If **Space Wars** got vector games' proverbial foot in the door of mainstream arcades, **Asteroids** knocked it off the hinges. Gamers across the nation were entranced by its bright, pulsing graphics and wonderful gameplay.

Back at Cinematronics, Vectorbeam's factory would produce only a very small number of **Barrier** games. And before its doors were shut forever, **Warrior**, the world's first one-on-one fighting game, would be manufactured and unknowingly start a family tree which would later blossom in the mid 80's with **Karate Champ**, and even later in the 90's with the blockbuster Japanese import **Street Fighter**. As with Barrier, it would be built under the name 'Vectorbeam a Cinematronics company' and very few were produced. Warrior utilized the best video game cabinet artwork ever, exterior and interior, to make it a wondrous spectacle. It was created, once again, by Tim Skelly. [*see more about **Warrior** ahead with artist Frank Brunner*].

Sunday and Rosenthal's **Tail-**

gunner would be given finishing touches by Skelly and released at Cinematonics to mediocre results. Likewise, Scott Boden's **Solar Quest** acheived only modest production. However, things quickly looked up as Skelly's **Star Castle** began a run of success for Cinematronics (helped by **Asteroids** possibly?) selling well and giving players some color to look at. The rings in **Star Castle** were each a different color, implemented with a multi-colored overlay over a black and white monitor. Along with being a great game, and spicing up the display with its overlay, it was one of (if not the) first video games with an element of complete artificial intelligence. A small 'fuseball' chased the player around, adjusting to the movement of the player's spaceship, and acting independently of the rest of the actions in the game, not in a pattern as with the preset artificial intelligence in **Space Invaders** and other games.

    Rip-Off was next from Skelly. It's gameplay possessed another first. It was the first two-player co-operative game. Although games like **Space War** and **Tank** had pitted players in head-to-head battle, **Rip-Off** challenged them to work together, as that was the best way to protect your fuel canisters from being stolen and achieve high scores.

    The final game by Skelly, and the final black and white vector game produced by Cinematronics, was **Armor Attack**. Controlling your tank on a downtown war zone, players had to navigate buildings, battle other tanks, and also deal with attack from the air, an element unique to the bird's eye viewed tank game. Helicopters zoomed onto the screen, attempting to ambush and destroy the players tanks.

    Skelly left Cinematronics before **Armor Attack** saw production. "Why?" you ask. "Where did he go?" you say. Well, read on...as I ask Tim those very things and more in an exclusive interview.

Tommy Stroud, Jr. and distributor Lou Boasberg with **StarHawk** at its debut at the London game show.

Centuri and Rock-Ola licensed several games from Cinematronics and manufactured them in cocktail cabinets. *Left* is the flyer for the very rare **Rip-Off** cocktail. *Above* is an ad for the even rarer **Barrier**.

INTERVIEW:
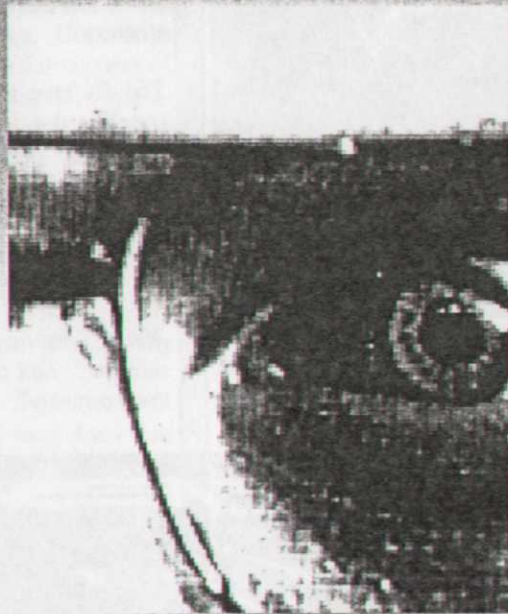
Tim Skelly

JWC: *Let's start off with what games you did while at Cinematronics...released and unreleased?*

Tim Skelly: Well, it's easier to say which games I didn't work on at Cinematronics: **Space Wars**, of course; **Blitz/Barrier** because I refused to knock off Mattel football; and anything after Armor Attack. Most of those I didn't do were at least started by Scott Boden. **Solar Quest** was all his.

JWC: *OK... that leaves* **Star Hawk**, **Sundance**, **Warrior**, **Star Castle**, **Rip-Off** *and* **Armor Attack** *– What about any unreleased?*

TS: The only game I worked on that wasn't released was **War of the Worlds**. The game play was just too boring, so I shelved it. Later, after I left, it was ported to the color system, but no one fixed the game play problems. Trust me, there are no lost classics from that company. However, I did do a really cool animated mandala program that a user could control. Very hypnotic, but just for fun, not a product. It may have influenced my ideas for **Reactor**, now that I think about it.

JWC: *Ah,* **Reactor***'s a great one. Was it your first raster?*

TS: Yes, my first finished raster game, not counting the hobby computer games I did before I got into the business. When I left Gremlin/SEGA I was about half-way through a sort of cross between **Space Invaders** and **Tailgunner**. At that time we were working with a cool background-plane raster add-on that let us do huge play-fields and some limited full-screen animation. I don't think any games every got built that used it. I left my game with two other programmers, but I hear they never really got a handle on what I was doing.

JWC: *How was your approach to visuals different with* **Reactor***? A relief to finally be rid of black and white vectors?*

TS: Boy, was I glad to get into raster displays! Initially, vectors were cool because of the smooth rotation and scaling, but besides being black and white, we really couldn't put very much up on the screen. The look of **Reactor** is sort of a result of not having any graphics tools when I made it. I hand coded every data table for the graphics based on graph paper drawings. I certainly wasn't going to go for a lot of detail that way!

JWC: *True, but what you did with the Vortex and the Core were visually stunning...*

TS: Yeah, it was really the animation of the Vortex, with sprites, and the dynamic stamp definitions in the Core that made it look so cool.

JWC: *You just said you worked at SEGA/Gremlin before Gottlieb...how was that?*

TS: I was at Gremlin/SEGA during the vector months--it was that short. And our working name for **Eliminator** was "F**k Your Buddy." Obviously, the goal of the game was to win by preventing the other players from scoring. However, when we put it out on test, we discovered that players were playing cooperatively! The bastards! I had done too well with **Rip-Off** and poisoned their minds! And cooperative play on **Eliminator** really sucked.

JWC: *OK, speaking of* **Rip-Off***, every two-player game up until that time had been a head-to-head battle or race or contest of some kind...why did you choose to do a game where cooperation would be the best strategy?*

TS: Believe it or not, because of market research. My girlfriend at the time was a disc-jockey with a major rock station. They got periodic corporate reports on the "state of the youth" ...yeah, 'Ha ha'.... and one thing that came up was "a desire to cooperate." Not that I would build a game around research like that, but I had pretty much designed the game in my head and that one element really made it click.

JWC: *Why do many of the* **Rip-Offs** *we find today not have side-art? Did they run out of art later or something...and ship them anyway?*

Rip-Off was also licensed to Centuri for use in cocktail table cabinets. Here is the rarely seen flyer they used for its promotion.

TS: As far as I know, they all went out with side art. However, Jim Pierce became cheaper and cheaper with every game, so I can't rule out the possibility that some were shipped without art. Still, it seems unlikely.

JWC: *Were the reasons for your leaving Cinematronics after* **Rip-Off** *mainly financial, a disenchantment with the royalty benefits and "sharing of the wealth" ?*

TS: Actually, I left right after finishing **Armor Attack**, which was released after I had moved on.

JWC: *Oops...that's what I meant...*

TS: Well, there were no benefits to speak of and my salary sucked, so I had been looking around for a while. Gremlin/SEGA offered me a good deal. Gottlieb/Mylstar soon offered me a better one.

JWC: *I'm guessing it was frustrating to be freelance and negotiating a great deal for yourself right as the market for video arcade games was being cut in half...*

TS: Negotiating my own contracts was fun. That was how I
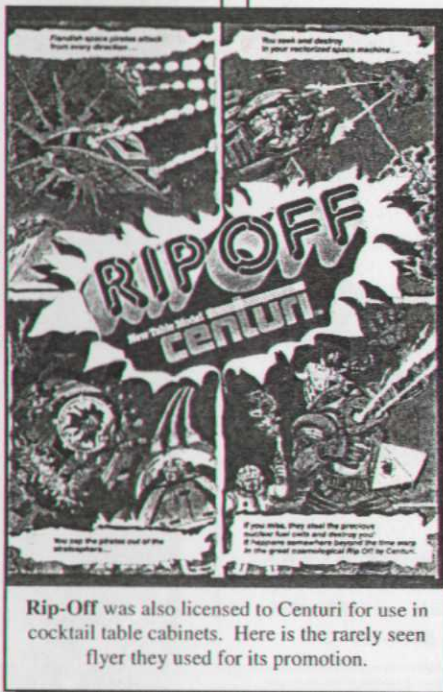
got to be the first designer with his name on the screen in **Reactor**. But that didn't stop me from being naive. And yeah, by the time I got a really good contract, the market had hit bottom. Figures, huh?

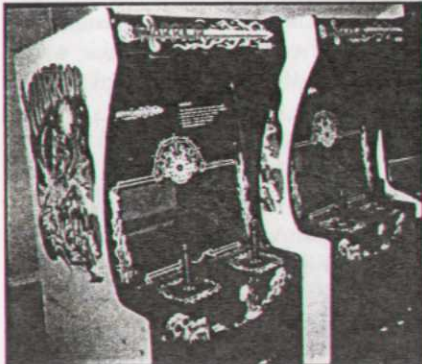JWC: *Vector monitors were an admitted problem at Atari, did you all at Cinematronics suffer because of operators general notions of raster monitors being more reliable?*

TS: Yeah, at Cinematronics we had the same problem with toasting monitors. Our solution was to keep the beam as far away from the tube wall as possible. I really wanted to blast some electrons over there for effect, but it was just too risky. But thanks to the financial success of **Space Wars**, our operators really didn't have too much trouble with the whole vector thing. Of course, we just about erased all of that good will with **Sundance**, but that was because the game boards were cut, jumpered and kluged together. It had nothing to do with the display itself. No, our biggest problem was distribution, and I've never really known why that was. Cinematronics just had a hard time moving units into distributorships in the mid-west.

Warrior, the first one-on-one fighting game, was covered in an earlier interview of Tim, by JWC, in GameRoom magazine's March 2000 issue.

JWC: *How much attention did you guys pay to what Atari was doing when they began to pump out vector games?*

TS: Larry Rosenthal owned legitimate applications patents on applying vector display technology to coin-operated video games. And then later Tom Stroud and Jim Pierce owned them. Cinematronics sued Atari and eventually won, in principle, but by that time Atari was an 800 pound gorilla. Our interest in our competitor's games didn't really depend on whether their products were vector or raster. We all played for the same quarters.

JWC: *Well, when operators saw the 800 pound gorilla releasing* **Asteroids**, *did it help you guys at all? Or hurt? Like, "the industry giant Atari is putting them out, there must be something to these vector games." Or maybe the other way, "I don't have to hunt for a Cinematronics distributor for my vector games, I can now get them anywhere since Atari is doing them."*

TS: Well, unlike laserdisc games, I don't really think operators saw vector games as anything special. What we gained from the vector display we lost in color and volume of graphics, so really, it just came down to gameplay. Now, if there was any influence, it was the introduction of **Space Wars**. That game convinced operators that the vector display was at least as dependable as conventional raster systems. But you're right, I'm sure some distributors were more comfortable dealing with a really big company rather than a little rinky-dink outfit.

JWC: *Small compared to Atari...but you guys got rolling with the big three of* **Star Castle**, **Armor Attack** *and* **Rip Off**, *which*

probably even outshipped a few of Atari's vectors. What kind of production runs did they have?

TS: Your guess is as good as mine. Really. There are so many variables-- which distributors were being friendly, how reliable was the game, what else was out at the time the game was released, which games were released during the run of the game, what were profit expectations at that moment. Sales and manufacturing numbers are very difficult to calculate, especially twenty years after the fact.

JWC: *OK well, for the record, my guess is probably ten thousand for* **Star Castle**...*little less for* **Rip Off** *and* **Armor Attack**....*judging from how many we see these days. I probably see more* **Star Castles** *than any Cinematronics game...*

TS: Yes, and **Star Castle** would be the most likely to survive because it was the only game we did that had multiple colors, and wouldn't look so out of place in a later arcade environment.

JWC: *Right, you all used color overlays on black and white monitors. What about color monitors...was there ever any R&D focusing on a color vector monitor at Cinematronics while you were there, pre-***Tempest**? *I know* **Cosmic Chasm** *was well after you left...*

TS: No. Not even talk of color displays when I was at Cinematronics. It was at least a year, or year and a half, after I left before they did anything along those lines.

JWC: *Ok before I forget, what about the centerfold star field in* **Star Castle**? *Whose idea was that?*
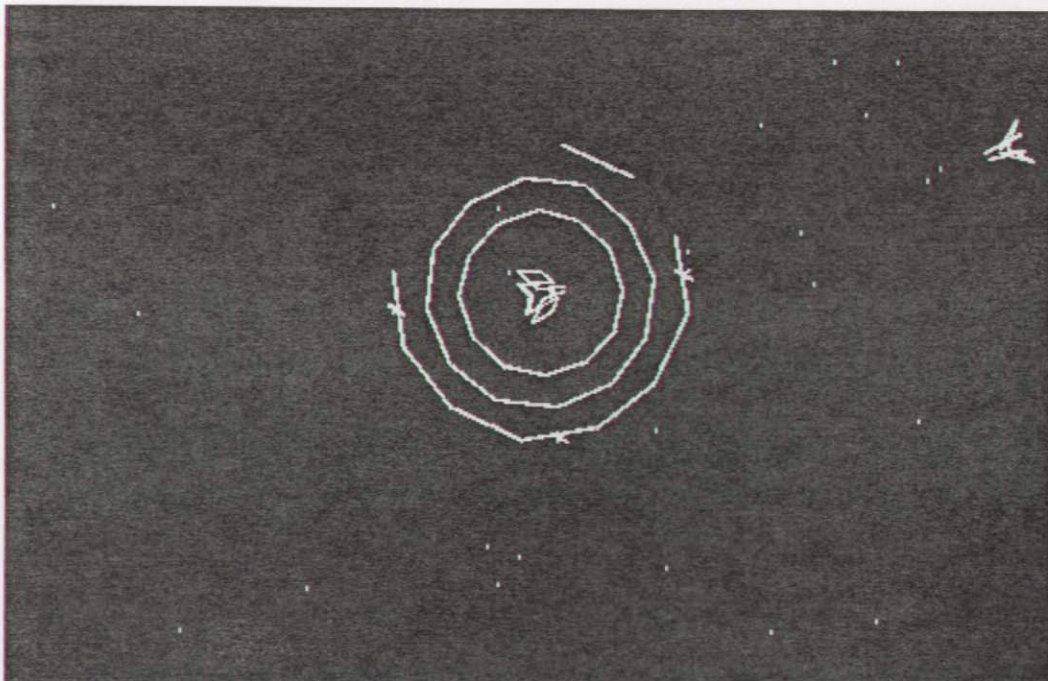
TS: I think that the management guys were a little unhappy. For those first few years video games in general had an image almost as bad as first-person shooters do today, so they were very cautious about content. But the game was already shipping and nobody knew what we did, nor could anyone show what we had done, so they backed off pretty quick. Nobody but a comic book artist.

JWC: *A weird question but I always wanted to ask you what you thought of* **Yar's Revenge**?....*one of the biggest games ever for the Atari 2600, selling something like over a million copies... and it definitely borrows a page from* **Star Castle**...

TS: Ah, OK, let me tell you the whole story. One night Scott and I were working by ourselves at the office. I was working on **Rip-Off** and he was working on **Star Castle**. Scott was adding the star field. Because Larry Rosenthal had used all of the recognizable constellations in his background for **Space Wars**, it just didn't look original enough when we used them. We tried a random field but the distribution of stars just wasn't right. We did one by hand and it was just 'blah.' When I designed **Star Castle**, I couldn't help noticing that the gun shooting from the center looked...well, penile. So, I exaggerated that aspect slightly, goofing with some people's theories about why it was mainly boys playing video games. Scott knew this and came up with the connect-the-dots centerfold idea for the stars. Neither one of us believed in subliminal messages, but we thought that any advantage we could pick up was worth trying.

Immediately Scott went to the nearest convenience store and bought a copy of every porn magazine they had. We went through all of them, looking for a full-figure shot with an aspect ratio similar to the screen. Scott claims to remember the magazine we used, but I don't. I do know it was one of the milder ones. When we found a picture that worked, we traced it and threw out the magazines. Believe it or not, we did care about the feelings of the women in the Cinematronics workplace. I very much doubt the Cinematronics management shared our sensitivity.

And the only remarkable incident to arise from this was a little test I tried. Just like guys join bands to meet girls, my theory about male comic book artists is that they teach themselves art chiefly so they may draw pictures of naked women. Rick Bryant was the comic book artist who did the cabinet art for **Star Castle** from my designs. Rick did indeed like to draw naked women. So, whenever I saw someone play testing the game, I'd ask if they noticed anything at all about the stars in the background. Everyone said "No." When Rick visited from New York where he lived, I asked him about the star field. Without hesitation he said, "Sure. It's a naked women. There's her leg, there's her…" He saw it all. [*laughter*].

JWC: *[laughter] Management didn't freak then?*

TS: I remember in the really early years when people would ask me what I did for a living, I would say "I make arcade games." Then they'd ask, "You mean like shopping arcades?" I mean the *really* early years. And I'd say, "Atari." Then they understood.

This is an occasion where I'd like to be a magnanimous, nice guy...and generous to all my fellow game makers. But I'm not. It bugged me then, and it bugs me now that play-alike console games are and were given the same attention as coin-op originals—especially those that were practically ports. Original console games are fine with me, even the ones that were just built on a game feature that originally appeared in coin-op. And I'm not saying that it wasn't difficult to create a great console game, even with a coin-op version to emulate. Actually, to the contrary, porting down is an art form in itself. But accolades given to knock-offs of any kind have always bugged me unless some acknowledgement is made of the original idea.

But now as for the money they made from them, that's a very different story. I don't begrudge anyone a nickel. I was always glad to see designers get their piece of the pie and more power to them.

JWC: *It's actually a really good game. One of the best on the 2600. But you never played it?*

TS: No...never saw or played **Yar's Revenge** so I can't really comment about that game in particular. I can say that I had mixed feelings watching the end of *Tron* and seeing a very **Star Castle**–like game at the climax of the picture. Thanks for the compliment guys, but where's my credit?

JWC: *Which part...?*

TS: Right near the end--

JWC: *...Oh....when* Tron *tries to throw the disc through to destroy Master Control...*

TS: Right.

JWC: *I didn't make that connection until now, actually, but you're right. Actually ...wasn't it? No...Star Castle wasn't in Flynn's arcade...but there was a Sundance ...and both Space Wars...*

TS: Yes, and if you watch the letterbox version of *Ghostbusters*, there's a **Star Castle** on the right side of the screen when the guys slide down the pole to answer their first call.

JWC: *And...also in Stephen King's* Maximum Overdrive*...and also...I believe Spicoli plays one in* Fast Times at Ridgemont High*. So basically,* **Star Castle** *is everywhere!*

TS: [*laughter*] There was a guy in Los Angeles around that time that wrangled arcade games for film productions. I have no idea who he was. But because of the non-raster, high refresh rate of the Vectorbeam display, the vector games could be filmed without producing that annoying rolling screen artifact. Also, the intensity of the display was low enough to not wash out on film. So I think art directors liked **Star Castle** because of the cabinet design and colorful art, and because of the screen overlay which made it one of the only vector games with multiple colors. Sometimes it's just pragmatics and not popularity.

And by the way...um...going back to the cartridge thing, I don't wish to take anything away from anyone's favorite cartridge game. It's like arguing over who recorded the best version of "I'm a Man." As long as Muddy Waters gets mentioned somewhere, I don't mind.

JWC: *Sounds like you mind just a little, though, huh?*

TS: Hmm...well, I used to keep a Charles Addams cartoon on my bulletin board. It showed two beavers standing in front of Hoover Dam, and one says to the other "I didn't build it, but it was based on an idea of mine." It was not there because I thought I had built the Hoover dam and other people were taking credit for it. It was there to remind me that ideas are nothing. Execution is everything. In other words, "Hey, Tim! Don't be the beaver!"

JWC: *I hear ya. Ok, now before you go, you have to tell us the story behind Frank Brunner's unused* **Tailgunner** *artwork... because you were saying how you were already familiar with it...*

TS: Okee dokee, yes, the story of the Tijuana **Tailgunner**... Tommy Stroud Jr. [son of Tom Stroud, Sr., co-owner of Cinematronics –*JWC*.] was running Vectorbeam after the Cinematronics purchase. And Tommy was also a wanna-be designer. While I was down in El Cajon putting the finishing touches on the version of **Tailgunner** that was eventually released, Tommy and a Vectorbeam production manager were secretly assembling another cabinet. And I need to mention that, in all fairness, reversing the star field motion and calling it **Tailgunner** was his idea. But one day shortly before production was to begin, Tommy's version of **Tailgunner** gets delivered to us at Cinematronics. And now, this cabinet was painted silver...and decaled with fake rivets. What Tommy wanted from Frank was side art that looked like the kind
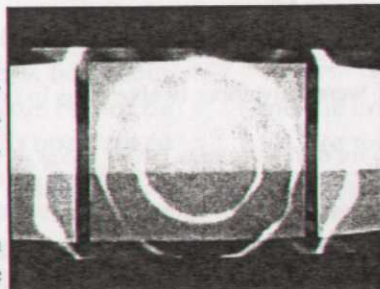
Tron Castle: Tron's disc bounces off the MCP's rotating rings.
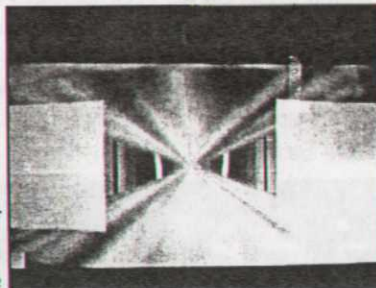
Finally making it through!

of things painted on W.W.II airplanes. You noticed the bordering around Frank's artwork...

JWC: *Yeah...the shield type thing...*

TS: Right, well we could see what he was going for, but still, it was a real stretch! If nothing else, I don't know of any W.W.II bombers with *guys* painted on the side! Worse, Tommy and his production manager had taken the half-silvered mirror from **Warrior** and added it. Behind the mirror was an array of multi-colored Styrofoam balls, this gaudy, swirly, curved background and something that looked like fiberglass insulation, all of it lit up with a blacklight! This was supposed to be a galaxy. Okay, now the mirror thing *really* did not work. And so now, here's **Tailgunner**, a true 3D game, that now looks like totally flat white lines, suspended in front of a day-glo fruit salad!

JWC: [*laughter*]

TS: [*laughter*] Oh, we all died laughing... myself, Scott Boden, and at least two techs. Then Scott and I ran out and bought a bunch of toy dinosaurs, fuzzy pink cloth and dingle-balls. We covered the control panel with the fuzzy cloth and dinosaurs and rimmed the screen area with the dingle balls. And Ta-da! The Tijuana **Tailgunner**! We brought Jim Pierce and Tommy's dad, Papa Tom, down to the lab. They cracked up, too, but then we all got embarrassed for Tommy and agreed to take off the trimmings and not tell anyone about it. Obviously, Jim and Papa Tom eighty-six'd Tommy's cabinet ideas. And as for the art, we really liked it, but it would have been much better with a babe.

JWC: *Why was it with a dude then?*

TS: Ordinarily it wouldn't have been. However, the 70's were a very feminist time and we were still hoping women would play these things. Frank is, of course, a comic book artist and therefore way into drawing naked women. So he *certainly* didn't choose to put a guy in there!

JWC: *So...you're saying Tommy ordered Frank to make the Barbarian a dude because he hoped to attract more girls to the game?*

TS: Yeah, Tommy's girlfriend was the one putting the feminist pressure on us, so I think he just caved in to her opinion. Unless Frank or Tommy cares to correct me, neither anticipated the result of combining Frank's heroic artwork with the name **Tailgunner**. [*laughter*]

JWC: *Ok, we better leave it at that! [laughter] Unofficially... just counting in my head, did anyone do more released vector games than you? Seems like you did the most.*

TS: Yeah, I don't think anyone else did as much vector work. But I've always had the advantage of being a solo act, except sound. At one point I'm sure I held the record for designing released video games, period. Of course, at that time I think

Skelly cont.

there were only about twelve of us in the business.

JWC: *What about updates? Hasbro is dusting off a lot of the classics...what game of yours do you think best lends itself to be updated? For some reason, I am picturing kids today really digging into an updated* **Rip Off** *or* **Star Castle**...

TS: Honestly, I can't think of a classic game that wouldn't be really cool updated for today's game systems. But as for my games... a few years back at Incredible Technologies I did a rough four-player version of **Rip-Off**. It was a lot of fun, but the market at the time dictated that we do a two-person fighter instead. Maybe someday I'll get around to doing another updated version. I hope so.

I hope so, too. We'd like to thank Tim for giving all us arcade loiterers of yesteryear some great games to play, and for adding his insight into our look at a wonderful, if slightly tragic, time in video game history: the vector years. But this was only half of the story...the other half was at Atari, where **Asteroids** *would break all the records and* **Tempest** *would ...well...break. The fall of vector games cost most of the general public the experience of one of the best vector game creations ever (or video game creations, for that matter)* **Major Havoc**. *As Tim was our resident guru in Part I, Owen Rubin, creator of Major Havoc, will be with us in Part II. So what are you waiting for, you Pappa the Rappa poser? Flip ahead and see for yourself!*

•*JWC*

ColecoVision prototypes

By Kevin Gatland
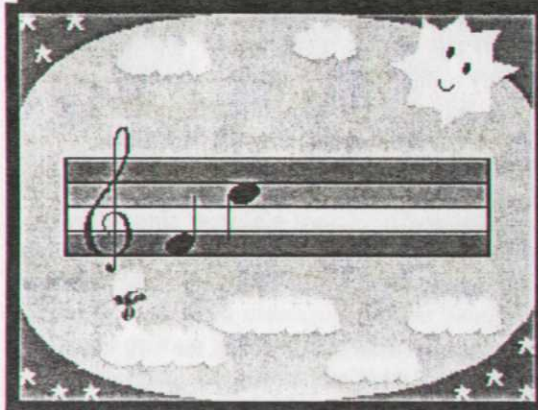
What I know is that a woman took an internet class with a friend of mine. He does some computer programming on the side, so he got talking to her about that, and when she mentioned that she used to be a programmer with Coleco, he asked if she had any games that she had made. She gave him the two chips, and since my friend doesn't have a ColecoVision, he tried them out and my place, then just gave them to me. I'm not sure the exact title of the Smurf game, although there was a rumored game called **Smurf Play 'N Learn**, so I'm guessing that is what it is. The other had a title screen, so you can see for yourself. No known copies of these games exist in cartridge form, and so far these are the only prototypes to surface, although there is most likely at least one more copy of each, possibly later versions that are more developed. **The Berenstain Bears** game was supposed to use a Kid Vid controller, similar to the one released for the Atari 2600, but it is unknown if one exists for the ColecoVision anywhere, either in finished or prototype form. I'm not sure if the Smurf game also used this controller or not. It is very likely it could have, since programmers generally worked on interrelated projects. Either way, the games are both unplayable in their current form using standard controllers. They appear to be more like demos, although there is enough code to indicate that a little more work went into them than that.

Kevin Gatland is a long time cartridge collector for most classic systems, with a fairly sick number of Atari 2600 cartridges in his possession.
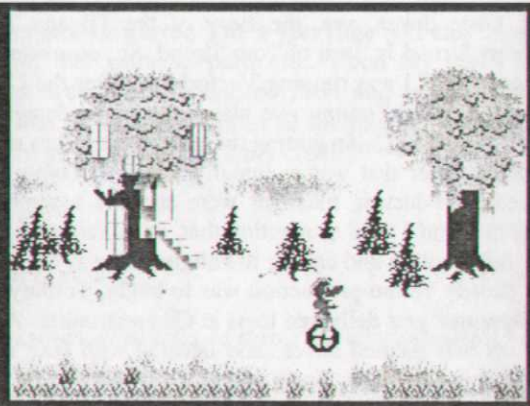
*G*reetings, gamers. What's the story, Morning Glory?

As you may or may not notice, the raw, beauteous video game eclecticism of this inaugural issue cannot be gauged on modern devices. I am proud to boast that a riotous success is certain. Well...then again, in this age of *Pocket Gamer Magazine* and *Northern Japanese 3D Shooting Gamer Magzine* I'm not sure if the video game world is ready for this type of a eccentric publication. Who but we make the transition, page to page, from **Major Havoc** to **Soldier of Fortune**, from the Vectrex to the X-Box, from the ColecoVision to the Playstation2 ?

Will every issue posses so much range? Yes, hopefully. Our focus on any one of the three time periods (past, present, and future) of video games will fluctuate randomly from issue to issue. But I believe an element of each is always necessary. And of course, it's a lot more fun that way. *So what is the magazine about?* It's about video games. Period.

Have you ever picked up *PC Gamer* and read a great review and then gone and bought the game based on that review and it was a pair of Y-fronts? Of course, we all have. And if you go back to the issue where you read the review, you'll notice the software company that made the game has several ads in that issue. If video game magazines were regulated like Wall Street...well, there ya go. However, lap dogs we are not. If you read a review of ours, rest assured it is a straight shot. You'll notice the NUON write-up I did later in the issue. Project X/NUON was something I was extremely excited about. And I still am. As you read this, **Tempest 3000** should be preparing to ship. NUON was a wonderful idea. However, it has virtually no chance of attaining a large scale success. So that's what I was forced to say. I will probably buy one if I can afford it when they are released. But I certainly can't recommend it to someone else for video games (for DVDs, that's another story). You will read reviews of NUON games by the hardcore underground and all the games will get phenomenal marks. You will read reviews of the same games by the hipsters at IGN.com and they will be trashed. And of course, the truth lies in between. That's what we try to be. Cynical yet huggable. Objective and disturbed.

If NUON does succeed, I will not only be amazed but extremely happy. But whether it meets failure or success, the advancements Project X has already led to in the area of home entertainment will certainly be evident in the months and years to come. Why will anyone ever buy another game system unless it plays CDs and DVDs? Why will anyone ever buy another DVD player unless it plays games and allows access to the web and online gaming? This kind of overlap and versatility beget by Project X three years ago is now going to be *expected* in the upcoming console wars. The DC, PS2, NUON, X-Box and Dolphin project will result in some of the most interesting games, ads, press wars, and bargain bins ever seen. It is a great time to be a gamer, folks. We are like Don King ...

and the system manufacturers are like the prize fighters. Whoever wins, we win. (As long as the market can handle that stress and not crash. Shhh. Don't even say that.)

This video game progression will always be a focus point of ours. **Warrior** was the first one-on-one fighting video game and **Rip-Off** was the first two player cooperative game. **Star Castle** was possibly the first with random, independent A.I. Genres and gameplay elements we now take for granted were spawned in the work of the talented and opinionated Tim Skelly, interviewed at length in this issue.

Owen Rubin's **Major Havoc** is one of the most unique games you will ever play. Everyone crashes directly into the walls on their first attempts. And at this stage, while Rex is busy dusting himself off, some people get discouraged. If you can hang in there and learn how to use the JUMP button successfully, then you are in for a treat and one heck of a fun challenge. I hope you enjoy hearing about this game in the Q&A I conducted with Owen in the pages just ahead.

Vector games make up a large portion of this issue. I love vector games, their graphics, their cabinet artwork, the stories behind them, the operators hatred for them and their useless parts. But best of all, I love the time when they were big. The proverbial video game BOOM. And while the far more popular raster games were having their day in the sun, so did a few vectors. Even more, however, were produced in relatively low quantity and were not largely successful.

This coupled with the interview with creator Doug Engel, focusing on the Atari Jaguar and the brilliant new game **BattleSphere**, may lead some of you to believe that I have a fascination with the video game underdogs...the fringe games and systems. This is not true. **Pac-Man**, **Link**, **Sonic**, **Crash Bandicoot**, and the Dodge Stealth in **Gran Turismo** are heroes of mine as well. I choose to view my appreciation for the unique and not largely received as simply not overlooking important video games based on their lack of financial success. If I did that, why would I expect anyone to ever pick up this *underdog* magazine?

So, the tag line is: 'I love video games.' And so do you. Or you wouldn't be reading this. So in turn I hope you love this issue. Because I do.

Until the Queen mother plays **Reactor** in the nude, make mine Syzygy.

Excelsior, you punk!
—JWC

A QUICK LOOK AT:

SUNDANCE

by CINEMATRONICS

Sundance consists of two opposing "Tic Tac Toe" looking 3 x 3 grids. An upper grid and a lower grid. The perspective is very 3D'ish. You are looking between the grids.

The object of the game is to simply catch "Suns", and you're given a certain amount of time per quarter, to catch as many a possible.

For single player play:

The control panel consists of a 3 x 3 keyboard with each key corresponding to each panel of the playfield grid. Pressing one of these keys will cause a corresponding panel in the playfield grid to "open up" allowing you to catch a Sun.

Randomly, a panel in the upper grid will open up and a Sun will fall out. If not "caught", the Sun will simply bounce up and down between the to grids until time runs out.

Each Sun is worth one point. Flashing Suns are worth five points.

Also available to the player is a "Nova" button. Instead of waiting for each Sun to fall into an open panel, the player can "Shoot" the Suns by opening a panel and pressing the fire button, this launches a fast moving "Nova" which destroys the Sun and the Nova,

allowing you to launch another Nova. You may only have one Nova on the screen at one time and if you miss (open the wrong panel) you must wait for the Nova to bounce back down again and recapture it before you can fire it again.

For dual player play:

Everything is the same as above except player 2 controls panels in the top grid allowing him to capture Suns on the upper grid.

Suns are still launched at random, from either the top or bottom grid. A player may catch another players Nova for which he/she will get no points, but will allow the other player a chance to launch another Nova.

There are buttons to allow selecting 2, 3 or 4 fireballs on the screen at one time, and a button to make the grids disappear (panels appear to open in space in the same place as always, just without the reference lines of the grid to help with perspective.) Any of these buttons may be pressed at anytime during game play.

-Zonn

- Coin accumulator gives continued play and continued profits

- One or two player action

- On the exclusive Vectorbeam monitor

- Sixteen levels of line intensity explode on the screen
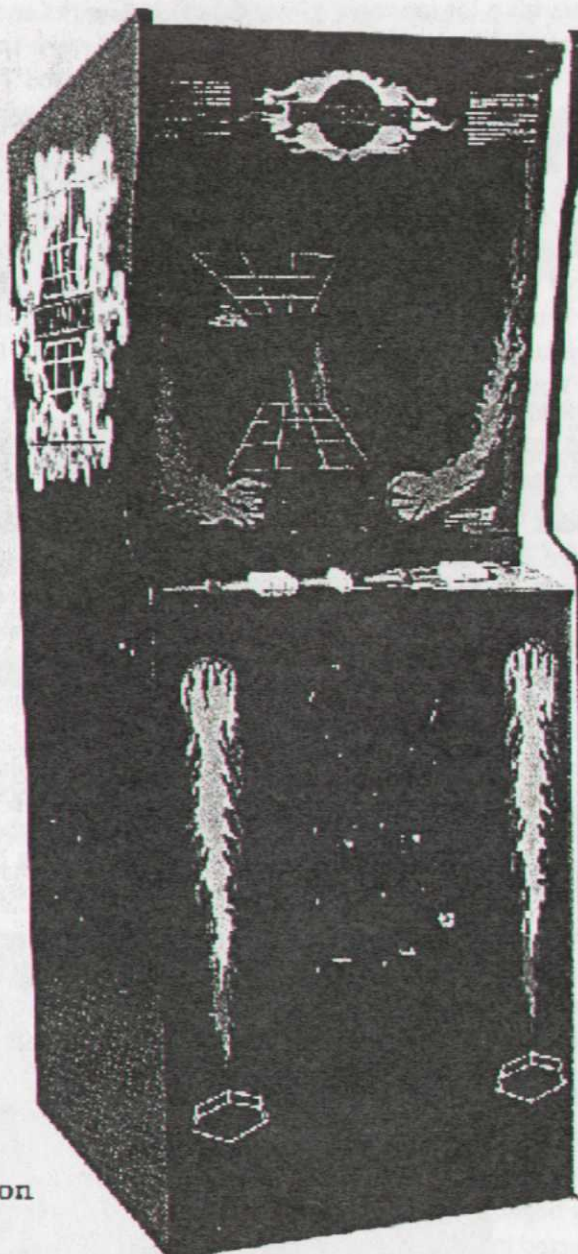
The day of the U.S. release of **The Legend of Zelda: Ocarina of Time** for the Nintendo 64 I got in around midnight, and found a very interesting message on my answering machine, although I thought nothing of it at first. My friend, eloquent as ever, bleated out of my machine. *Play.*

"Dude, the new **Zelda** is awesome. You grow old and sh*t." *<click>*

Well, I had forgotten it was being released that day. And I was immediately annoyed at myself for being too much of a slacker to fill out a gooch slip at Electronics Boutique so that I could buy it without delay. Then, still annoyed, I remembered when **Donkey Kong** was released for the Atari 2600. My uncle bought it for me the night it came out. No gooch slip. Just
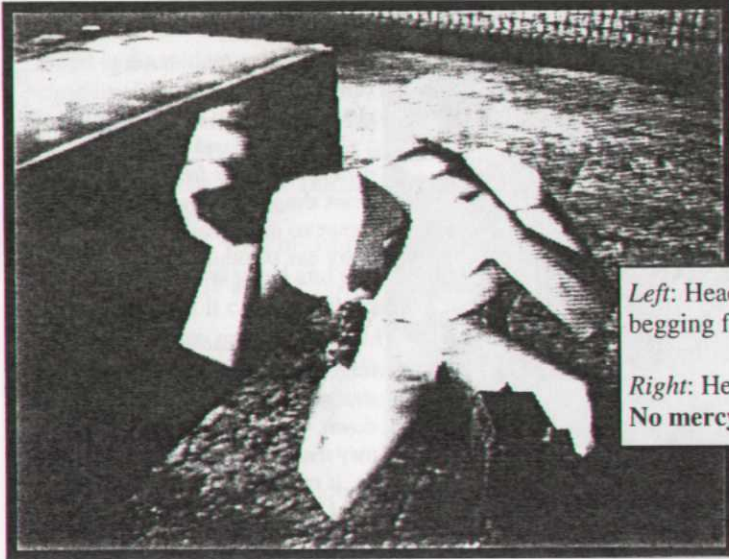
Left: Head down, begging for mercy.

Right: Head gone. **No mercy!**

walked up and paid. And it was as anticipated than the newest **Zelda** was. So what leads to the shipments being—

Wait a minute! I thought to myself. *He said, "You grow old."*?

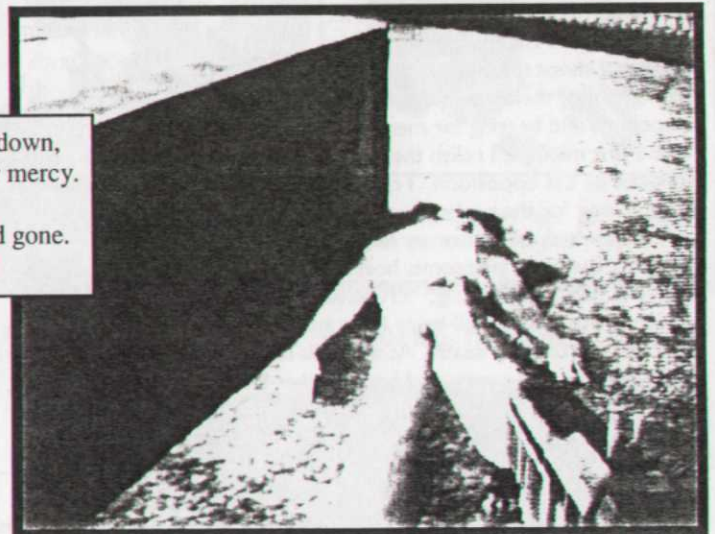Even though it was late, I called my friend immediately to get the scoop.

No answer. Big surprise.

I then sat in contemplation, envisioning a game where you play for several real-time years, learning how to crawl, being a bratty two-year old with a slingshot and an unkind disposition. A game where you learn. You sleep. You eat. You—

<ring! >

It was my friend calling back. I was immediately disappointed. He explained to me that you don't truly grow old. You go to sleep and wake up 7 years later. Time does pass, but artificially. The sun rises and sets in a matter of 3 minutes or so. Although I was slightly let down, I was still intrigued and impressed when I finally played it.

And it was then that a certainty occurred to me: game designers would not stop until they had achieved total and com-plete realism.

Now, in a game like **Zelda** or **Mario**, realism is one thing. Because in their case, complete realism is still one big, lush fantasy world. But in a third person shooting game like **Soldier of Fortune**...well, then it is an entirely different barrel of monkeys.

Soldier of Fortune was released earlier this year by Activision from Raven Software. It runs on the Quake II en-gine.

But I am really amazed at how many people have never heard of or played it.

This game, based on the ever-popular freedom fighter magazine of the same name, is realistic violence taken to a whole new level.

This is not normal video game violence. You aren't shooting a zombie or a undead grunt banished to hell; you shoot actual humans.

"So what's the big deal?" you say. "Lot's of games have that." That's right. You shoot humans in the old Taito game **Front Line**. Even the first game with a microprocessor, Midway's **Gun Fight**, features one human shooting another. So this is nothing new, right?

Wrong.

In these older games, your human target merely falls

to the ground, a bloodless lump of monochromatic pixels. In **Gun Fight**, you might as well be shot with a tennis ball, because you immediately gain your feet to fight again, unblemished. In **Quake** and **Doom**, gore is everywhere, but you are mainly destroying inhuman creatures who seem to remain relatively pain-free throughout you assaults. A game like **Sin** toes this line, but is Candyland compared to **SoF**.

In **SoF**, not only is the graphical violence extreme, but the game designers made the injured human targets react in agony and in a very *human* manner when they are wounded.......

...........Upon playing the game for the first time and initially shooting a thug, I thought I had shot the wrong guy. I shot him in the leg, and he grabbed his thigh in agony. Enemies don't react this way in video games. Enemies are fearless, heartless creatures which are *destroyed*, not killed. *Weakened*, not injured. Yet, this *had* to be an enemy; he was clad in 'thug regalia' and was *still trying to shoot me*. I realized this opponent had to be finished off. Kill or be killed.
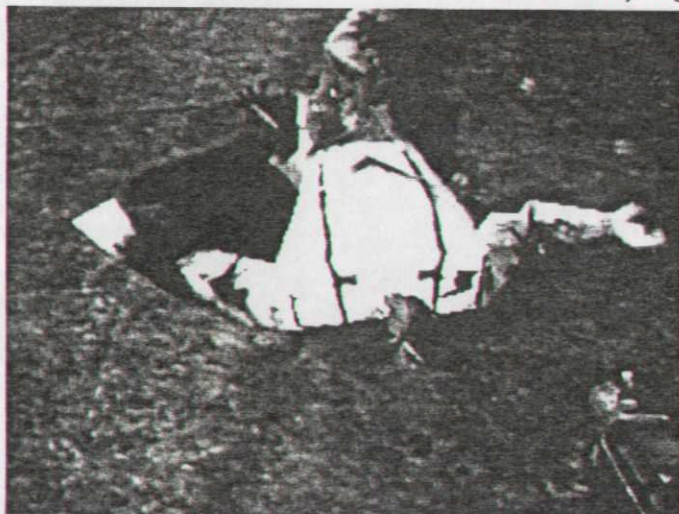
<blam! >
Headshot.
Thug goes down.
Heart rate goes up.
From a distance, my mind whispers to me that I just killed someone. I frown and cautiously proceed.

Fire comes at me from all sides. I am ambushed. I am faced with superior numbers. I am forced to defend myself. I am faced with the same mortal danger which I threaten to unleash on my opponents. I take a hit. My enemies are ruthless. I become ruthless. I shoot them when they are down. I shoot them when they are weaponless and begging for mercy. After a few minutes, I relish the agony exhibited by the opposition. I crave more. I long for the perfect non-vital body shot which will cause my targets to exhibit the most gruesome, horrific display of pain and suffering. I receive a sense of enormous well-being from sneaking up and silently slashing a surprised terrorist to death. At my desk I notice my face is covered with a thin glaze of sweat...and I realize that I'm no longer sitting down.

Perhaps the element of the game which causes my deepest sentiment of moral hesitation is the sniper rifle. I cannot proceed on foot into the superior numbers which are set up at an outpost in the snow. If I am too pass the brigade of superior firepower I must eliminate the enemies from afar. Peering into the scope of my rifle, I spy this poor slob of a soldier. He is unaware of my presence and the crosshairs zeroed in on his genital region. I almost feel sorry for him. Then I do. Then I don't. Then I shoot. *Blam!*

<squish-thud> Another target eliminated.
Wait, no. He is still hobbling around, grabbing his crotch. Wait! Excellent...now he is falling down in spasms. Lie still dammit. *Blam!*

<skwlop> Got him. A pool of blood slowly creeps from beneath his tattered crotch.

I am becoming heartless and robotic. I eliminate them all. I sneer at the whining of the wounded, at their pathetic gestures for mercy.

Once disarmed, a few wise-guys hold up their arms and exclaim, "You got me," seemingly hoping they will not be eliminated yet taken prisoners. How unchivalrous. For this, I see how gruesome a display I can make from slashing them with my knife. I smile thinly. I am pleased.

For poise, I fire a round or two into the bodies of the dead as I pass. These rounds bring more blood from the freshly killed. I realize *robotic* is not what I am becoming. A robot would never waste a round on a fell opponent. *Sick* is what I am becoming. I'm a leering explicative frozen on the faces of my slain opponents. A killer.

I am reminded of the cheesy slogan on the helmet of a soldier in *Full Metal Jacket*: "**I AM BECOME DEATH**." Except it doesn't sound so cheesy anymore.

Just when I think I have seen the most tormenting wound, I catch a glimpse of an enemy which I somehow, unbelievably, left alive, crawling with one leg only, his other previously lost to a round from my 12 gauge. His femur bone is visible as he drags himself along leaving a trail of blood. His determination is valiant. His life, however, is *over*. I stand above him and shoot him at the base of the brain stem, a clean death in exchange for his exhibition of valor.

Then I veer around the corner and see a terrorist holding a gun on a terrified hostage in a suit.

"Stop screaming," the terrorist yells.

I concur. The hostage is a tootie fruity. Yet, I must save him anyway.

One blast from my 12 gauge disembowels the terrorist. Another beheads him, his noggin vanishing in a blast of blood spray, leaving the top portion of his spine visible.

The freed hostage runs around aimlessly in a circle, chanting "Call 911! Call 911!"

I try and calm him down. I stand in front of him. I point the gun at him, in an attempt to quiet him lest he give away our position.

"Call 911," he yells once again.

The back of his suit is torn to bleeding shreds as my shotgun blasts. He does not go down. Afraid that wounded him may make even more noise than before, I finish him off with my 9mm. It takes not one, but 3 shots to the midsection to bring him down. I have to grin. He died hard for a tootie fruity.

I am interrupted by a message explaining that my mission has failed due to an unusual high rate of friendly casualties.

I frown and do not quite understand. Did I not kill? Was this not my task? Was it not gruesome? Give me another chance. I will make sure the weak suffer more. Their injuries will be grievous and unpleasant. Their anguish will know no bounds. Their bodies will dismember more fantastically. I can do it. I know I can.

But that is the next game..
I discovered this game on a Thursday, and played it until the wee hours of early Friday morning. The Thursday before that I had spent the early evening skateboarding in the park ,and on the way home I bought an ice cream cone for a little girl sitting on a park bench, struggling to put on one of her rollerblades. A lot can change in a week.

Oh well...I'm on my way to the pawn shop to see what new high caliber weapons they have in stock.

Heh. Only kidding.

Or am I?

•JWC

Buckle up, frail gamer. Here come the...
Console Wars

Dreamcast: SEGA loves to be the first to raise the stakes. The Genesis beat the SNES to the marketplace, as did the Saturn with the PSX. Even the SMS was a then powerful little system, superior to the NES, with some nice moves. (And don't forget those cool 3D glasses!). Well, they did it again with the 128-bit race, and it looks like their success will be more "Genesis" that "Saturn." The E3 buzz seemed to be "Hmm, the Dreamcast graphics look practically the same as the Playstation 2." Well,

Sega Dreamcast

give it time and the PS2 will put some distance there, but not before the DC has recruited a mass of dedicated fans. The superb DC games are coming out in drones. Games like **Rayman 2**, **Crazy Taxi**, **Tony Hawk**, **RE:Code Veronica**, and **Dead or Alive 2** are *the* best games on the market right now.

Every aspect of this system and its design leave you nodding and saying to yourself, "Uh huh. *Nice*." Now, the peripherals (digi-cam, keyboard, etc.) are slightly annoying, but they aren't in any way shape or form detracting from the Games, which SEGA understands will always be its bread and butter. It is *really* hard to find anything wrong with this system. Maybe the only thing you can point to is SEGA's lack of in house games. They don't seem to be putting out "Space Harrier 2000" or some other games you might expect and desire.

The DC will, of course, be around for quite awhile...long after the PS2 is released and still kicking frantically when we see the Dolphin. If it can keep its current pace, it has the best chance of anyone to see green grass and pretty girls...and if **Castlevania: Unleashed** hadn't been cancelled , it just might have gotten Guns' anthem, but it will have to settle with the eliteness of Jumpin Jack Flash.

Playstation 2: The Emotional Engine? Hmm. Slow down there, hip-hop.

Yes, we have all heard about it's jagged graphics problems, and it has been rumored to be buggy and not the Messiah of the home market, like everyone initially believed . But rest assured, it will have top developers, top games, and top ad campaigns. This means you better get used to seeing this guy *every*where. And it does have more power than the Dreamcast (although not *nearly* as much as its specs might lead you to believe, because of its lack of anti-aliasing hardware) and as an added bonus, it can also play DVDs. It has the market on its side, as well as a *ton* of satisfied PSX fans to draw from.

Riding the success of one of the biggest machine of the 90's should be easy, and although it is off to a slightly bumpy start, I'm guessing **Gran Turismo 2000** and **Metal Gear Solid 2** will make everyone want to tear themselves away from *WWTBAM?* and play this machine raw. The games available thus far are mediocre as

Paradise City: Metaphysical domination of the home console marketplace.

Jumpin Jack Flash: It's alright. In fact, it's a blast."

Helter Skelter: "Go to the bottom or get back to the top of the slide?"

You Light Up My Life: By making me put set aside the games, go outside, get some sun and meet some girls.

Bye, Bye, Bye: See ya in the bargain bin by Christmas.

Neat stand and a very "next-gen" design.... but that controller looks oddly familiar, eh?

Gran Turismo 2000. The first was the best home driving game in the world. Will the newest PS2 version live up to its name? Sure looks like it!

Simple. Blue. Classic. Taking a page from the *Spinal Tap* book of marketing, the box is so blue, "It's like, 'how much more blue can it be?' and the answer is 'None. None..more blue.'" (Yeah, I know this is a BnW mag for now. Use your imagination, punk!:)

best I can tell; **Street Fighter EX3** looks like nice but a game I could get for the N64, with less graphical tightness. And **DoA 2** is almost identical to the DC version.

So, yes, the PS2 is a bit bloated and overpriced, and although it is certain to have a huge launch, its long term success is a definitely in doubt. The mediocre software released thus far has already resulted in a decline in Japanese PS2 software sales. It is in danger of being caught in between players who just bought a DC and want to stick with it, and others with a PSX who want to stay with the cheaper and still nice PSX games, waiting to see what is going to happen with the Dolphin or X-Box before they spend $299. Oh yeah, I forgot to mention that it has practically the same Dual Shock controller as does your PSX now. Yes, the Dual Shock is nice, and I know the theory about not kicking a dog unless it bites you on the bum. But maybe give me a new and innovative controller for my $299, if you please. At least give it a shot.

And you're not supposed to say these things in printed magazines (hey! That's what we're here for!) but word 'round the campfire is that it's *already* been determined that playing copied "backup" games on the PS2 is extremely easy, just as it was on its predecessor. Of course, an additional rumor is that the newer PS2's will correct this and be *unmoddable* (laff!). This, of course, is utter nonsense. Everyone heard this about each of Sony's revisions of the original PSX, and each time all they did was rearrange the internal parts so that the instructions for installing the current mod chips became moot. Modding the new rev was a matter of figuring out how they rearranged everything... which takes around 14 seconds. So, yes, look for "GET YOUR PS2 MOD CHIPS HERE!" all over the net. And stock up on CD-R's...because you want to be able to make a copy of **GT2000** in case your original that you purchased for 50 bucks gets scratched or ruined. Hehe.

So, yeah, the "in" sentiment among hardcore gamers is definitely that this is an over-hyped piece of crap. Over-hyped? *Yes.* Revolutionary? *No.* A darn good system with 400 games currently in development? *You betcha.* Will there be a backlash against Sony for promising a revolution and delivering only a nice upgrade? We'll soon see. It's set for release on 10-26-00, and the pre-orders themselves are already making it at the very least **Helter Skelter.**

Nuon: Hmm. The idea behind this technology is all Gn'R. Bu t as Tim Skelly and Charles Addams so eloquently put it earlier in this issue, "Ideas are *nothing*." And the result of
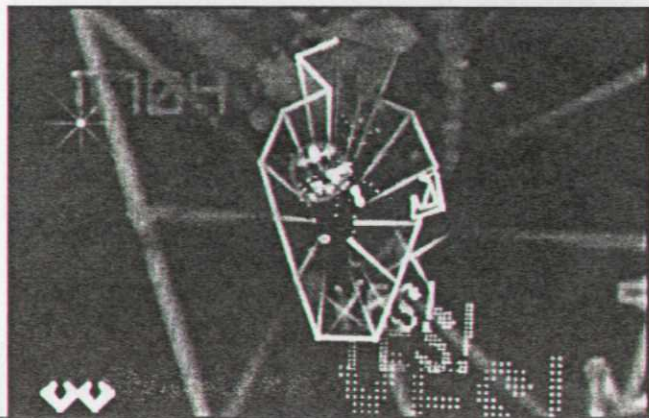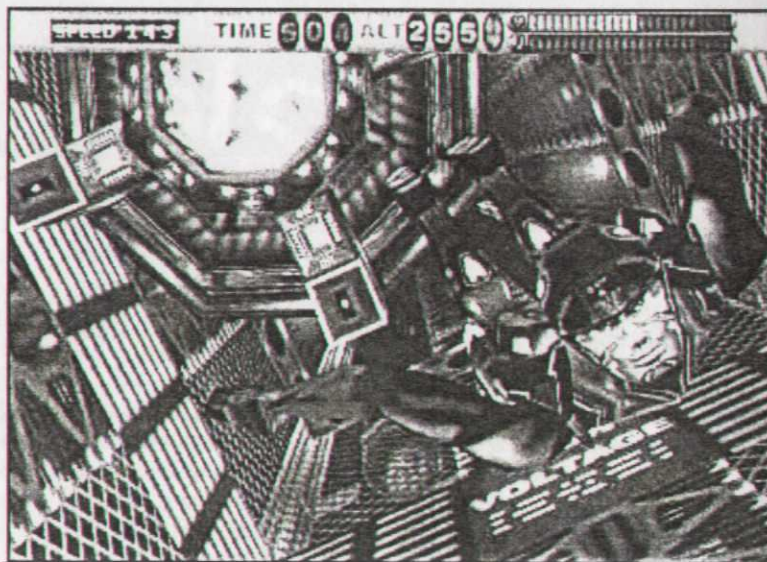
Freefall: 3050 A.D. This game intrigues me. It's hard to come up with a unique game these days, but it looks like Total Arkade Software has done it.

this nice idea and even nicer piece of hardware is looking to be a Debbie Boone double-live LP. Once again, the time between the initial development of a really cool system and when it is actually brought to the marketplace is far, far too long. They missed the big DVD player season, which was last Christmas, when player prices were cut in half. So, most people that want a DVD player now have one. Why are these DVD owners going to buy another one for more money? Simply put, they aren't.

We read about Project-X/NUON like 3 years ago or more. And I *think* it is out now. Yeah, if you re-read that last sentence, it should give you a hint to the potential success of NUON. No sales guy at any electronics store I recently visited had ever even heard of NUON players. Now, salesmen at these stores are generally clueless of course, but one question they always know the answer to is "When is [viable product] going to be released?"

In all fairness, the NUON is not a dedicated game system; it is an elite DVD player which, as an added attraction, plays games. Additionally, it packages in the ability to browse the Web and email. It also has the newest Jeff "YaK" Minter Virtual Light Machine, as well as his newest game, which looks to be the best game of the year that nobody will see, **Tempest 3000**. The latest **Iron Soldier** game is also due out for the NUON, and if it is anything like the first two in the series, then it should be nice. And another game, **Freefall 3050 A.D.**, looks very intriguing. I must say, I really can't wait for this one—it seems you play the game as a free falling law officer. *Wha?* Heck yeah, it sounds just wacky enough that there may be something to it. So...some interesting and nice games at launch, actually, but sadly its gaming power is already obscure before its even released.

Of course, I am rating it as a console because of the next-gen games it is launching with. Also because of it's online gaming capabilities. If you want the best DVD player on the market, then you want a NUON player. But on the whole? Well, I have my fingers crossed for you VM Labs guys. Really. That said, let the evil hand of objectivity rule: I seriously doubt the DVD advancements or the high-end name of Toshiba will pull it out of obscurity, in terms of large scale success. The big names of Yak and **Tempest** do, however, combine to pull it out of an N-Sync jam session and onto hi-fi turntables everywhere with You Light Up My Life.

The Yak is back with **Tempest 3000**! Is anyone other than JWC excited?

X-Box: Microsoft getting in the console race? Make anyone nervous? (JWC raises a meek hand). And yet, something kind of exciting about it as well, eh? The reported power it will have is mindboggling for a home console. But beyond that, we know next to nothing about the system. All we can go by is what they tell us.

Bill Gates. Rich? *Yes.* Smart? *Yes.* In touch with gamers? *Hell, no!* Here is what he said at this year's Games Development Conference: "You'll be able to download updates to games, add-ons, and new stats," says Gates. "And you'll also be able to download demo versions of games from the Internet." Hello? Brett Wheer? Bill, my overpaid-underworked-Howdy-Doody-looking buddy ol' pal, that is what I have a PC for!! Don't tell us about how we are going to use your system for troublesome chores like downloading and installing wads and patches! Tell us how fun and revolutionary the games are going to be! Tell us how we are going to be able to snuggle our fanny down and play games like an animal with minimal hassle. When you start talking "download" and "install" and attach "Microsoft" to the sentence, my mind starts picturing corrupted files and invalid exceptions, etc.

So, please, please refrain from trying to bring *too* much PC gaming to the console market. And please don't mention "install" or "download" any more than you have to. It makes me want to go to the magazine stand and see what the latest DC previews are. Remember, most people use Windows/MS programs. And they are extremely buggy. While you are reading this, 18,000 fatal exceptions are occurring all over the country on MS programs, causing users to lose their unsaved information.

Now, however, with that off my chest, I am very excited because 1) this is a U.S. home console (not seen since the Atari Jaguar). 2) the raw power and gameplay possibilities. 3) Putting SEGA, MS, Sony, and Nintendo in a jar and shaking it to make them fight is going to be FUN! But I am really curious how MS will go about trying to coerce players into purchasing something whose major revolutionary selling points seem to be doing what their PC can already do (which everyone already has). The answer is (and I really hope they know this) impressive launch titles. Do not do as NUON has and rely on impressive hardware to sell itself. Impressive hardware is *nothing*. It is impressive *software*, which therein necessitates said hardware, which makes the difference.

All the lapdogs at EGM are busy telling you this is not a PC in home console's clothing...which is nothing more than Microsoft talking and EGM repeating it. The fact is, it is a PC. A non-upgradable one. Of course, one can make the argument that all console's are...but, well, the major difference between a PC and a console in the past has been 1) Online gaming 2) Downloadable add-ons and 3) Raw 3D acceleration. The console's in their progressive advancement have, for the most part, eliminated these main differences. Of course they've made a stab at the other, being upgradeable, but not in the truest sense. Nintendo's Expansion pack (as well as the old 32X and all those various shades of malarkey) is a far cry from being able to build a top-performance machine from independent manufacturers, as it is with the PC. So, EGM is right, in a sense. And it's wrong, in a sense. But it seems MS will focus on PC style gamers for their base. And these gamers have already built a top performance, 3D accelerated machine. The X-Box will do more to blur the line between console and computer gaming than any system ever has. From MS's point of view, I just don't know if that's a good thing.

So what's its prognosis? Well, even with some impressive launch titles, it's major hurdle will be luring players that are completely immersed in their Dreamcast or PS2 to buy another game box (not to mention the Dolphin on the horizon). It's gonna be rough.

I am, however, a realist, and *good lawd* does MS have the funds to pump into this thing. And, hey, the U.S. needs a home console of its own! But...but why does it have to be from Microsoft? Simple...they're the only ones who can do it and succeed. It has potential to possibly gain the hardcore gamers and maybe even take the green grass and pretty girls, but that is just potential. What it has a definite lock on is Helter Skelter.

Dolphin: Well, I don't know what to call it. Nintendo recently said it wouldn't be called "Dolphin" in the end. And, as with the name, not much is known about this one, other than constant speculation about what games will be released for it. It won't be released until sometime in 2001 (late 2001 most likely), so it's too soon to even guesstimate, although one thing is for sure, the marketplace is getting more and more crowded each time Nintendo releases a system.

The other certainties are that Nintendo is a marketing genius and they will undoubtedly release the system with a 'wow-me-must-have' launch title that drops jaws: Mario, Zelda, Pokemon (gag), etc. Nintendo just plain and simple knows games (Nintendo is Latin for video games, from the root *Ninterus plurus*). As Bill Gates' address at this year's GDC was slightly disturbing, Nintendo of America's president Minoru Arakawa said it best: "We're building a machine with only one purpose—to play video games." Ah. See? Now, *that* has a nice ring to it. Gotta be Jumpin Jack Flash.

•JWC

What? No Paradise City?

That's right. Nor will there be one until the industry crashes or goes into another serious recession. In my estimation, there have been only 2 Paradise Cities in the history of the home cartridge/cd consoles: the Atari 2600 and the Nintendo Entertainment System.

The 2600 achieved dominance by default, strumming Slash-like riffs because it was the first, getting an important head start on its competition. And the NES hummed to Axl's riotous vocals because it was released when (believe it or not) nobody thought people cared about video games anymore. Yes, that's just *lewdakrisp*, now, looking back. But that singular move gave Nintendo the edge it is still riding to this day, and one they will call upon next year, when we finally see the Dol-

BATTLESPHERE :the Jaguar's Brilliant Epilogue

One of my favorite games, probably the game I played the most in the arcades of yore, was **Tempest**. When I saw a television commercial in early 1995 for a new Atari system (one which challenged me to "Do the Math."), I was quite intrigued. When I saw **Tempest 2000**, I was simply blown away, and in my mind, it remained the best home cartridge game on planet Earth until the release of **Mario 64**, occupying my time for hours upon days. Many other titles were awe-inspiring at the time, creating worlds that didn't exist on the Genesis or the SNES, games like **Doom** (which was linkable), **Aliens vs. Predator**, and **Iron Soldier**. Many more titles, however—like **Checkered Flag**, **Kasumi Ninja**, **Trevor McFur**, and a weak port of **Ralden**—served to only offer embarrassment

The Jaguar was one of those systems that pushed the technological envelope, but one which others quickly stepped on and over to get to the next level. Atari had licensing problems. Atari had the leadership of the Tramiels, who failed to repeat the success they brought to the home computer division with the Jaguar. Atari had a whole slew of enemies out there, companies which had suffered in Atari's shadow 10 years earlier and were quite resentful, eagerly getting in a kick while it was down. The Atari Jaguar was the world's first 64-bit home system. Period. Where were the 64 bits of power hiding? How come we never saw all of them? Valid questions. One's which I will discuss with Doug Engel, one of the designers of the most advanced and unique games on the Jaguar, and one which fans have been anticipating for years, literally. And it is also one that you don't want to miss. Read on, fair gamer...you just might learn something about the harsh realities of garage video game development, licensing agreements, and the uphill battle an underdog video game faces...

JWC: *Let's start off with 'what led you to get into game design?'*

Doug "Thunderbird" Engel: I've always had an interest in video games and electronics, since way back when the original **Pong** came out. When I was in junior high school, I befriended a fellow student named Scott LeGrand, and he shared the same interests. We used to spend a lot of time in the school's computer lab programming our own video games and playing them. We bought a ton of Atari 2600 games and that's what got us involved with Atari. Both of us had always wanted to form our own company and write video games for a living, and working for Atari was almost an ultimate fantasy of ours. By the time we graduated from school the video game industry had crashed and so we both got involved in regular jobs. There was practically no work for video games programmers back then.

A few years later, Nintendo and Sega had brought out their 16-bit systems and revitalized the industry to the point where other companies started looking at producing newer and more advanced systems. Atari and 3DO both came out with their newer consoles in late 1993 and they both were actively seeking new developers.

**JWC:** *This is when the BattleSphere project began?*

T-Bird: Yes, at the time, it looked like a great opportunity for us to get into business, so we approached both companies about developing a space-combat game for them. 3DO didn't seem to take us very seriously, while Atari took us seriously enough to register us as developers and give us a development system. However, nobody was willing to fund our development so we had to produce the game ourselves and still work our full-time jobs to support ourselves and finance the production of our game. So, we started out working part-time on our project.

JWC: *How did you guys think up the name 4Play?*

T-Bird: We were originally called "Phalanx Software" at the time we started work, but soon we brought in Scott's then girlfriend and now wife, Stephanie Wukovitz, to the company for her musical and mathematics talents. We also brought onboard a guy who was to manage our business and provide outside funding and work but he later quietly left the company when things looked bleak as far as getting rich off this project were concerned. But at the time we had 4 people working together we decided to change our name to 4Play because there were 4 of us working on video games that are played, hence the name 4Play.

JWC: *Before 4Play did you guys do any complete games?*

T-Bird: Both Scott and I wrote a lot of our own little games and shared them with other programmers at school. Scott wrote a number of net-
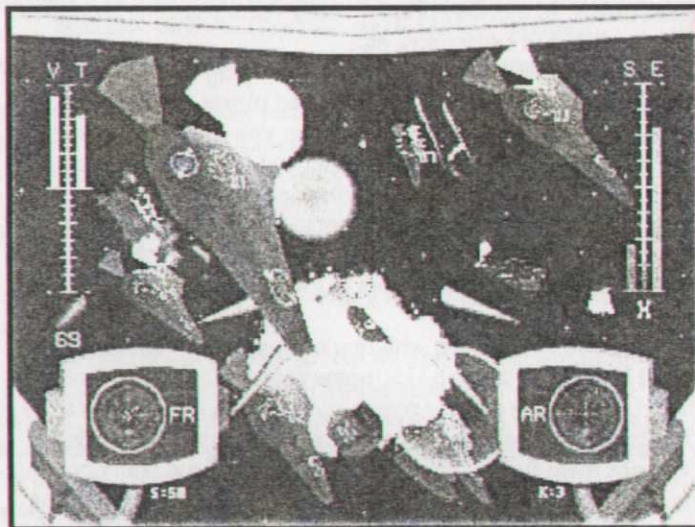
BattleSphere: extreme, furious space combat action!

worked games on mainframe computers in the 70's and early 80's in addition to that. I wrote a game called **Rocks!** for the 8-bit Atari Computers and it was actually published in a magazine called "Analog" (my first paid game project) back in 1985, and I followed up with a game for the 16-bit Atari ST/TT/Falcon called **Mecha-Naught** which I completed but never released. My intention was to release it after **BattleSphere** was done, never expecting the delays that we encountered.

JWC: *When Atari pulled the plug on the Jag, and Battlesphere wasn't finished, did you ever consider dropping it and moving on?*

T-Bird: With the game in an almost finished state, it didn't make any sense to quit work on it. It was funded by ourselves and by not finishing it, we were really throwing away our own efforts. Also, the game had achieved a fairly large following because of the internet and our online presence. Atari has a large group of very loyal and dedicated fans, and many of them supported and encouraged us throughout the entire development of BattleSphere. When Atari closed down the Jaguar operations, a great number of finished or nearly finished titles were lost forever, and it's a shame that so much great work never made it to the hands of the people who supported Atari for years.

At some point we made a conscious decision to follow through and finish and release **BattleSphere**, as our way of showing thanks for the support we've received from the Atari community. We strongly believe that with a solid title released to the gen-

eral public that a publisher or developer will take notice and make us an offer to port this wonderful game to a current console. Even now that the performance of the Jaguar has been surpassed by newer and more advanced systems, the graphics and sound and gameplay of **BattleSphere** on the older system is still impressive. What we were able to accomplish with so little and no backing is pretty amazing. Someone is bound to take notice.

JWC: *Who did what...with respect to programming, sound, art, etc.?*

T-Bird: Well all three of us, myself, Scott and Stephanie, contributed to the actual game design, but specifically: Scott worked on the 3D engine, the AI, and gameplay. Stephanie did all the music. I did the sound engine, music engine, network engine, Artwork, 3D models, sound effects.

JWC: *What are you guys doing now...more game development?*

T-Bird: We're all still working day-jobs to pay our bills, but in the background we are working on a few game ideas as well as slowly porting **BattleSphere** to the PC. When we have made sufficient pro-
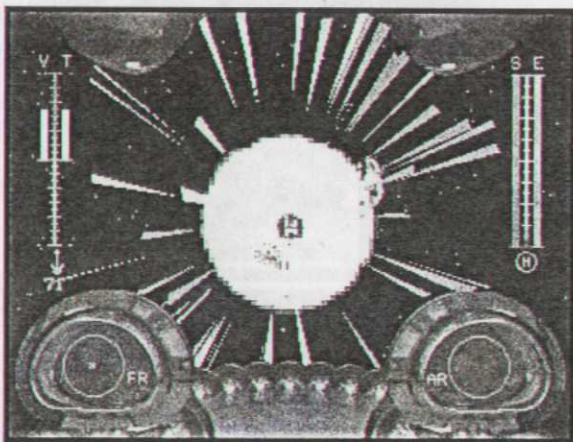
The player is treated to wonderful detail, with wonderful explosions and hyperspace effects.

gress with that, we hope to demonstrate it and get a publisher to fund our development full-time. With all of the positive reviews of the Jaguar version, getting funded should be a piece of cake.

JWC: *I've heard talk about the proceeds from BattleSphere being donated to charity...is this true?*

T-Bird: Yes, we plan on donating all of the profits from **BattleSphere** sales to Diabetes research . And we're not kidding. Take the price of the game and subtract the cost it takes to manufacture one and the remaining money is going to go to the Juvenile Diabetes Foundation.

JWC: *That's really is great to hear. What led you to choose the Juvenile Diabetes Foundation?*

T-Bird: Well, Stephanie has grown up with Juvenile Diabetes, and a lot of what they've accomplished and the advancements they have made have really benefited Stephanie. So it really seemed like the appropriate charity for us to donate to.
It's not clear how much the final donation will be, because we have no idea how many people will buy our game and so we may have to absorb the cost of leftovers or perhaps if things go really well we'll have to have more cartridges manufactured to fill demands. We're counting on sales to be higher than the average Jaguar title these days because of the high quality of the game and the high

The big companies actually did do a lot of work to keep the Jag from becoming a success...
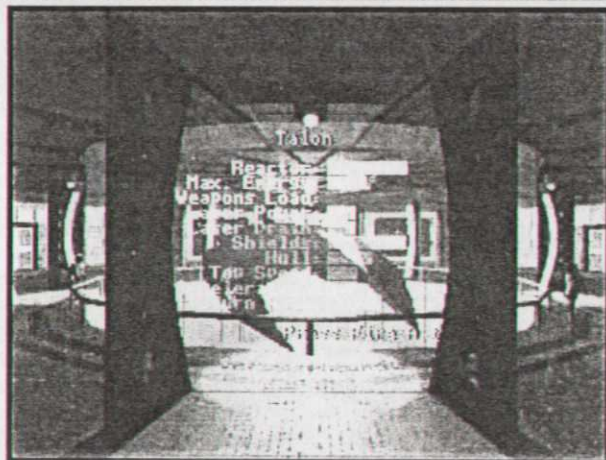
There are 7 different races, and 3 ships per race, which means (if you Do+The+Math) players can choose between 21 different spacecraft!

praise it's been getting for playability and fun factor. Also, there's a good chance that a
lot of people will buy an extra copy or convince a friend to buy one so that they may hook their Jaguars together and play some of the networked play modes. Of course, there are some kind people who will buy the game because they know the money is going to a good cause.

JWC: *I know how some of the Jag's games are reviewed through rose-colored glasses by a lot of fans, but this game really is wonderfully smooth and graphically very nice... what is your opinion as to why there were not more high-quality games like this for the Jaguar? You showed it was capable of great things...*

T-Bird: Probably the biggest reason is that Atari wasn't big enough to compete in that market. They did a wonderful job designing the Jaguar, but because of their limited resources, they didn't get the system de-bugged and to the market quickly enough. The Jaguar chipsets are all copyrighted 1992, yet the Jaguar didn't come out until the end of 1993. Had they come out a year earlier they would have had a whole year head-start on competing systems like the 3DO and the PSX which came out later. But since they were so small at the time, they didn't have the manpower to put together the Jaguar and all the tools needed for development in a timely manner. They came out too late and the tools for developers were not very good. Most developers chose to make simple games because they wouldn't have to "reinvent the wheel" just to get it going. The tools for making advanced polygon based games never really amounted to much, so just about all 3D games on the Jaguar had their own custom-built 3D engine. When the Jaguar came out, it could have done very well if Atari had been big enough to really push it and make strong developer relations.

JWC: *As we've said, the Jag had plenty of problems of its own, but there have also been rumors that other companies really went to some lengths to keep it down. We've all heard the rumor about the bribed Rayman delay...*

T-Bird: The big companies actually did do a lot of work to keep the Jaguar from becoming a success. Take the game **Phear**, for example. Nintendo paid the developers of this game a huge sum of money to make it an exclusive for the N64...back when the N64 itself was still

at the time, and it looked to be a potential huge hit. Atari didn't have the resources to outbid Nintendo, so this nearly complete title was lost. There are many other rumored situations like this one where Atari just couldn't compete and lost potential "killer apps."

JWC: *If BattleSphere had come out in 95 or even early 96... it would have demanded quite a bit of attention from PSX and Saturn fans...as well as a multitude of TIE Fighter fans at the time...*

T-Bird: The credits for BattleSphere actually list TIE Fighter as one of the inspirations we looked to when we started work. That game got a lot of things right, and really impressed us. We wanted to do something along those lines, but getting rid of all the things that did wrong...like being mission based. And the game draws heavily on themes made popular in very early computer games...like that old text-based Star Trek game that was all the rage in the on mainframe computers...but with arcade-style 3D graphics and special effects.

JWC: *What was the biggest technical challenge you all faced in developing the game?*

T-Bird: I would have to say that working with the multiple processors proved to be very challenging and also very exciting at the same time. As any Saturn developer will tell you... multiple processors a huge boon and also a huge burden. It requires a lot more effort the developer's part to get all the power from a multiple-processor system. It takes a certain type of developer to put in that kind of all-out effort in this day of cross-platform development.

The networking code of BattleSphere was also a huge challenge, but that's mainly the bugs in the network hardware in the Jaguar itself. I do network programming for a living and the network code in the Jaguar would have been a week-long effort if everything worked. However, because of the hardware bugs, the network dragged out to 6 months of programming and even then it doesn't work as perfectly as I would have liked. It's merely adequate.

Making every code module fit in the 4K caches of the CPU's was also a real pain, not to mention the fact that there are some bugs in the hardware which made inter-processor communications a real tricky situation. The code has to do handstands and backflips to run on the buggy hardware. But it does indeed run. I ran a copy in "Attract Mode" for over a month without crashing. Attract mode not only displays the title screens, but also plays a round of the game repeatedly.

JWC: *And some networking...it claims to be able to support 32 simultaneous players at once...*

T-Bird: 32-players is derived from the fact that each console can support 2 controllers...1 pilot and 1 gunner...and the network code supports up to 16 simultaneous consoles connected at one time using CatBoxes.

JWC: *Do you know of an instance where 32 players have actually competed at once successfully?*

T-Bird: The most hardware we were ever able to assemble at one
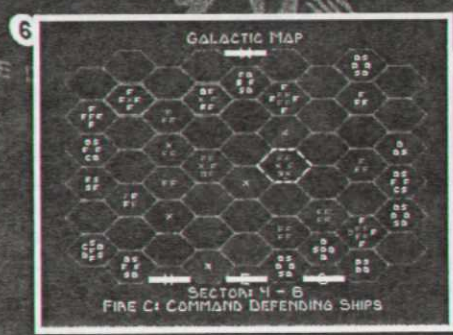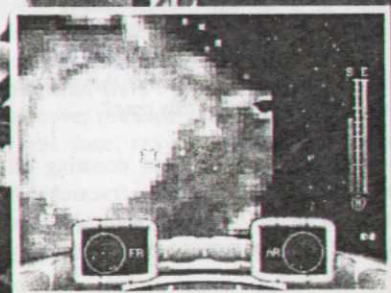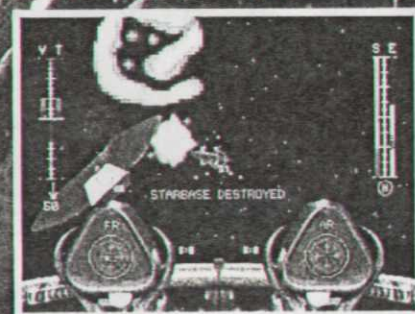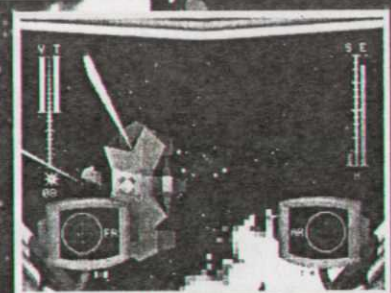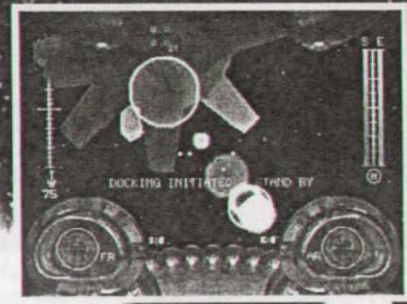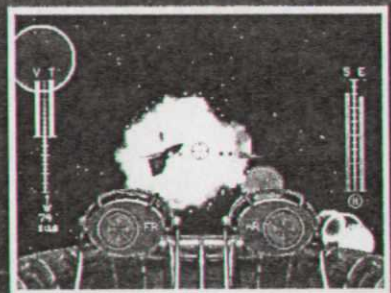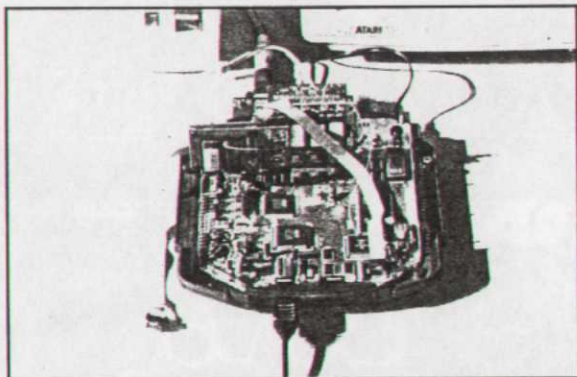
Above: Jaguar modded for testing all the encryption combinations for the initial binary.

time is 10 consoles, but we believe it would have worked with all 16. It would be interesting to see if anyone ever tries it!

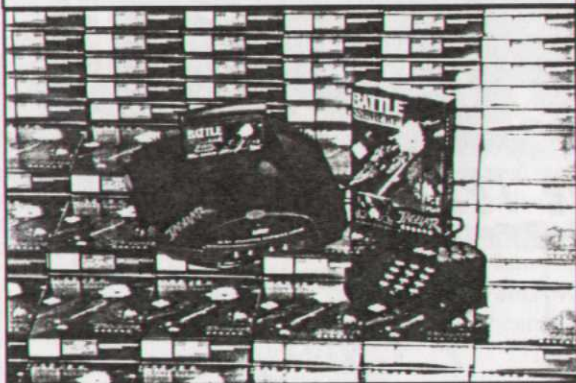**JWC:** *If this project was started when you say, then this would have been some of the first real networking available for a home system...*

T-Bird: Absolutely. We pioneered networked multiplayer games with this title. When we started work on this project, we knew that internet and networked multi-player games would become very popular and so from the outset we intended for **BattleSphere** to function as both a single-player and networked game. Unfortunately, the delays in getting the game out make it not as pioneering as we would have liked, but we were among the very first developers making networking games. We also did all of the work in our spare time, while working day-jobs. That was a killer at times, but we really pulled it off. The downside of that is that we were never given serious support from Atari.

JWC: *Why do you think that was?*

T-Bird: Well, first because we seemed like a "garage developer" and weren't taken seriously, then later there was some resentment and animosity towards us because **BattleSphere** fared extremely well in a focus group comparing it to their in-house "Space War" project...which the focus groups panned.

JWC: *Several items of detail impressed me when I first played it... having your ship actually be knocked around by the other ships blasting you, which affects your own aim, and the way the blasted apart remains of the enemy ships keep their momentum and even run into you and cause damage if you don't avoid them...really as good at realism as anyone will see in this genre. Tell us about this adherence to realism and how it became part of the game...*

T-Bird: Most of these little details came about through brainstorming sessions between Scott and myself. Some of them were just ideas that Scott had himself and just coded into the game as he built the engine. Some others were ideas we had before we even started coding. The fly-

ing debris that did damage was something we planned from the start. It just seemed like an obvious thing to put in the game. Even after playing the game so much in development, I'm still impressed with some of the action that I see. For example, an enemy ship destroys one of my wingmen but flies into the exploding debris and blows himself up. When something like that happens, it still impresses me with how real it looks. The look is very reminiscent of *Star Wars™*.

We believe in refining our software as we develop it. That's pretty much how we came up with all the little touches that make us stand out in the crowd of space-battle games. We would keep coming up with little improvements or ideas along the way. The sort of "Wouldn't it be cool if...?" scenarios that you've probably heard of.

JWC: *I remember talk of this game back in '96...how does it feel for it to finally be released and get all the great feedback from loyal Jag fans? All I hear is praise from the Jaguar fanzines and websites...*

T-Bird: Obviously, it's great to hear all of the positive feedback we have received! We're all really proud of the work we did on this game.

JWC: *What about a PC port in the future? Or even a supped-up Dreamcast version?*

T-Bird: Definitely. We really want to finish a version of the game which will be available on a more mainstream system so that more people can enjoy the game—PC version, Dreamcast, the Playstation 2. As many people noticed, there's something truly fun about the game. It's not like the *niche* space games that are currently coming out. It's just a blast to play, and you don't have to be an engineer to understand it. It's just the right level of complexity and simplicity to be really fun. Hearing the people notice this and love it is very rewarding!

JWC: *I already know the answer but for the benefit of certain nay-sayers out there whose names I could, but won't mention...and you can elaborate on it better than me. Was the Jaguar the first 64-bit system?*

T-Bird: Yes, the Jaguar is *really* 64-bits! The data moves around in the system in 64-bit wide busses. There are instructions to load and store 64-bit values in the RISC GPU. The blitter and object processor both move pixels in 64-bit chunks and can perform 64-bit wide Boolean math on them. The RAM itself is 64-bits wide. I've seen many people attempt to deny the Jaguar is 64-bits by citing one of these areas and claiming it was the area that made a system 64-bit or not. Most of the RISC instructions don't operate on 64-bit values, but there are instructions which do use 64-bit data. But how can anyone deny it is 64-bit when every area is truly 64-bit? 64-bit wide RAM. Uh...64-bit wide object processor ...with 64-bit math operations. 64-bit wide blitter...with 64-bit wide math operations. 64-bit wide object processor. What else can one say?

One can say, "Thanks!" to Doug, for taking the time to be interviewed, and to 4Play/Scatologic (www.battlesphere.com) for making one of the best games not only for the Jaguar, but one of the best space combat games of all time. Songbird Productions (songbird.atari.net) is also releasing new Jaguar games: Protector, Skyhammer, and more. Go to their website and check it out!   *•JWC*

A Wells-Gardner color XY monitor. Technicians around the world shudder at this sight.

In 1981, the video game BOOM was in full swing, with every corner store, ice cream parlor, and amusement center greedy to make their share of the plethora of quarters they were reading about in the *Wall Street Journal* and other media sources at the time. Video arcade games, with the help of the unprecedented **Pac-man** phenomenon, were infiltrating television sitcoms, nightly news programs, Saturday morning cartoons, and major motion pictures at a record pace. *Newsweek* ran an article, in February of 1981, reporting **Asteroids** machines, which cost $3500.00 each, to be paying for themselves in "a few days." Indeed, along with raster games like **Defender** and **Pac-man**, **Asteroids** was consistently filling up with quarters at a rate of $800 or more per week. So, with this mainstream appeal and success of **Asteroids**, where did vector graphics go for an encore? The answer was **Tempest**.

**Tempest** added color vectors to arcades. Sega's **Space Fury** was actually the first vector game to have a color monitor, released a few months before **Tempest**, but was not a big hit and was crippled by a monitor that was even less reliable than the Atari Quadrascan, if that was possible.

Color wasn't the only thing **Tempest** added, but speed and furious gameplay, which engulfed and mesmerized arcade dwellers all over the country. Dave Theurer, who had just finished creating the memorable raster hit **Missile Command**, gave players an incredibly addictive game in **Tempest**, with very responsive and intuitive game controls.

The only thing that kept **Tempest** from reaching the same heights as **Asteroids** was the very thing that gave it such beauty and appeal, its monitor.

The Wells-Gardner color vector monitor was very prone to breaking down. As the months wore on after **Tempest**'s release, encountering an "Out of Order" sign posted on a **Tempest** machine in your local arcade was becoming more and more common.

Atari began frantically circulating trouble-shooting guides and issuing display repair flow charts for technicians all over the country. As it turned out, the deflection board on the monitor was prone to over-heating and causing resistors, transistors, and diodes to fail or burn up. The general consensus is that the cause was the intensity of the vector display of **Tempest**, the way the vector blast lines were drawn all the way past the boarders of the tube during a "Superzapper Recharge," and the scorching bright whites that resonated in the attract mode didn't help either. Either which way, **Tempest** was a huge hit in arcades all over the country, and fast filling up with quarters...when they were in working order. And keeping them working was a full time job. This was the beginning of the love-hate relationship game operators and arcade owners had with vector games. For many operators who got caught up in the AMOA and *Replay* hype and went into debt buying multiple **Tempests** only to be stuck with several machines that constantly were down from monitor problems, well, as we will see, they never forgave or forgot.

Warp between webs in Tempest. Listen… can you hear the transistors frying?
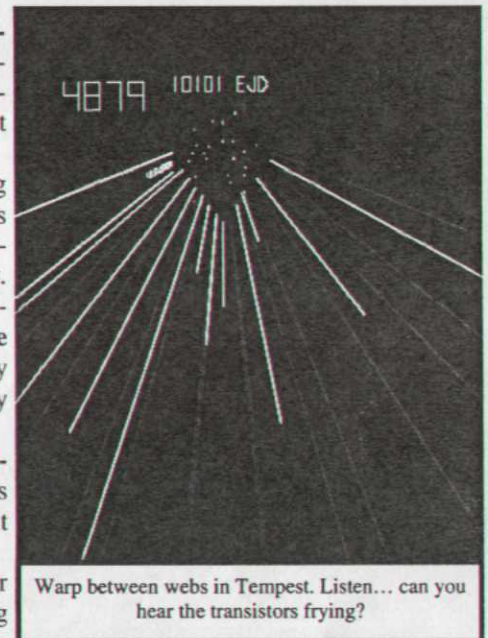
In late 1981 and into 1982, Sega followed **Space Fury** with **Eliminator** and **Tac-scan**. Both achieved solid yet unspectacular production and earnings. **Zektor** was produced only in test quantities. Only the name of **Star Trek**™ was a large success, and of the five Sega vector games, it was the only one to license a household name (did Atari notice this?). Sega soon gave up vectors and looked to raster style games like **Pengo** and **Frogger** for their hits.

Space Duel, largely created by Owen Rubin, was the next vector game from Atari after **Tempest**. It was popular in arcades, and did not have the level of vector intensity or quite as many monitor problems as **Tempest** (it *did*, however, have them). It sold fairly well, mostly billed as a color **Asteroids** and **Space War** in one game. It also added cooperative play into the **Space War** mix, with two ships attached together, rotating and thrusting independently. Their fates were linked as well; if one ship was hit, then the disintegration would, in seconds, cross to the other player's ship, destroying it. Additionally, wonderful geometric design and object rotation set the visuals of **Space Duel** apart from other games of the time.

Ad from the launch of Tempest,, which had an unusually large number of pre-orders, mainly due to this ad campaign.

With all that **Space Duel** had going for it, the production run was nevertheless in the quantity of around 10,000. Certainly a respective, profitable run, but this was in the middle of the video game BOOM, from the biggest video game manufacturer on the planet, and **Space Duel**'s production run was approximately one-third that of **Tempest**. Hmm...

Gravitar followed as Atari's next vector game and shipped less than 5,000 units, half that of **Space Duel**. It was received so poorly (slagged in *Re-Play* magazine as the 'worst game of the year') that production was stopped and remaining **Gravitar** cabinets were made into a game called **Black Widow**, which didn't do much better than **Gravitar**, by Atari standards. The operators and arcade owners had spoken. Their move away from vector graphics had begun. Something had to be done if Atari was to attempt production and sales of vector games in the future, if not they risked losing hardware and software they had banked on with R&D dollars and years of research. Enter the biggest merchandising name on planet Earth at the time: Star Wars™.

Mike Hally, designer of the creative but unsuccessful **Gravitar**, redeemed himself in a big way by creating one of the best video games of all time, a 3-D spaceship battle based on the ever-popular Star Wars™ motion picture. Star Wars™ the arcade game, released May 1983 in conjunction with the release of the *Return of the Jedi* motion picture in theatres, was a color vector game with speech samples and wonderful gameplay that put the player in control of the X-Wing fighter, attacking the TIE Fighters and navigating the ventilator shaft in an attempt to the destroy the Death Star.

If you walked into an arcade in 1983, chances are you would encounter this game. Why did it achieve vast production rivaling that of **Tempest**, where the other vectors failed? The license of the Star Wars™ name is only half the answer. The monitor is the other half. It was changed to an Amplifone model, which was tried in the short run of **Quantum** by Atari just before the release of Star Wars™. It was hailed as the answer to the vector monitor breakdowns in an attempt to comfort operators and distributors.

The Amplifone alleged to have the answer to the deflection malfunction problem that plagued the Wells-Gardner's of **Tempests** and **Space Duels**. And it ultimately lived up to the hype in that regard. The Amplifone's deflection circuitry was very solid and rarely broke down; however, the high voltage system in the monitor, which in the Wells-Gardner was fairly reliable, turned out to be the weak link. Rumor has it a small fire at Atari caused the sprinklers to soak

these flybacks, and they would all eventually rust on the inside. This led to the high voltage units in these new Amplifone monitors often failing after a short while on location in the arcades. For many operators, it was the last straw. And for the others? Well, the whole arcade industry around the end of 1983 was preparing for hard times in 1984, where production numbers would hit abysmal lows, companies would file Chapter 11, and the move towards the home market for video games could no longer be denied.

It was unfortunate that at this time, possibly the most intriguing vector game ever, with the most involved gameplay seen on a such a display, would be released...and apart from an **Empire Strikes Back** kit designed to upgrade Star Wars™ games existing in arcades already, it would turn out to be the last vector game released. This game was Atari's **The Adventures of Major Havoc**.

Originally released as a dedicated unit, Atari capitalized on the remaining **Tempests** that were still hanging around arcades, and released a kit for upgrading it and **Space Duel** to play **Major Havoc**. This was the beginning of the "kit" era, mainly due to operators already having enough "boxes" for games, just wanting something new to put in them to make more money. The **Major Havoc**'s that were kited into Tempests and **Space Duels** were subject to monitor difficulty, mainly based on monitors that were a few years old by then which had been repaired and hacked many times. However the dedicated unit had an upgraded high voltage unit which, coupled with the solid deflection circuitry, succeeded in virtually bullet-proofing the monitor. Of course, this accomplishment would be lost to most of the industry, as the dedicated unit was produced only in the neighborhood of 1,000 units (believed by some to be as low as 300).

The game itself is truly a wonder. A game which transforms the player into the small, bright blue figure known as Major 'Rex' Havoc. Gameplay that trades between floating navigation of enemy bases and 3-D space combat, so wonderfully entertaining that if you do not truly understand the story of vector games thus far, you will wonder why you never saw this game in the arcades of yesteryear.

So without further adieu, now is the point in the story where we turn to an expert, the creator and mastermind behind **Major Havoc**, and many other Atari hits, Owen Rubin.

•JWC
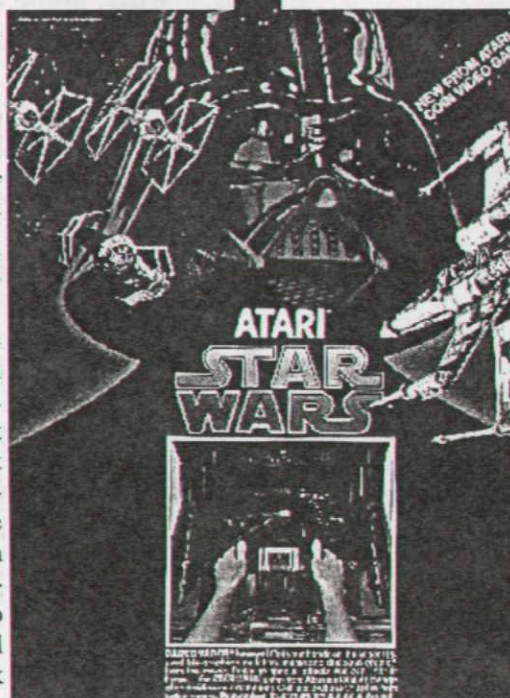
Above: Ad for **Space Duel** *contest.*
Left: Star Wars™ advertising flyer.

INTERVIEW: Owen Rubin

Recently relaxing at the office. Courtesy Owen Rubin.

JWC: *OK, jumping right in, Major Havoc was the final dedicated vector that Atari made. Why was it chosen to be vector and not raster?*

Owen Rubin: Actually, **Major Havoc** took almost 2 years to complete. Originally slated to have 3 processors on the board, it was a very complex hardware system. The 3D was going to be done by processor originally. As the game developed, we realized that 3 6502 CPUs was not enough to do all the 3D we wanted, so I faked it and dropped a processor. I have been quoted as saying that had I to do it over again with today's knowledge, it would have been raster. However, on the other hand, our raster systems in those days...1982...would not have given us as good a 3D perspective as we got in vector, including the ability to scale on the fly, necessary for the game. We didn't have that in raster.

JWC: *Well, putting on a hindsight cap, how much more would it have sold if it had been raster...remembering sales figures at the time, and operators apathy towards buying new equipment?*

OR: Who knows? Remember that Major Havoc was the last game to sell even a decent amount of games for some years because of the video game down turn in 1984. I would guess 3 to 4 times the games, assuming we could have made it look as good in raster!

JWC: *These days, the dedicated Major Havoc seems to bring more money per sale than almost any other classic video.....what do you think about this Major Havoc cult and the fact that some selling prices now are almost as much as that of the new machine in the 80's?*

OR: I am amazed and amused at the same time. But not surprised. We worked *very* hard to make this game lots of fun, but still a challenge as you got better and better at it. The tuning of this game taught you something new at each level when making what you learned on the previous just a bit harder and harder. Had we sold more of these games, it would have had even more fans I am sure!

JWC: *What was the word from the field when it was first out?*

OR: When the original game hit the arcades, there were lines of people waiting to play, and it earned very strong numbers for quite some time. We received quite a bit of mail from fans. My favorite was the person who played a *very long* time, spending thousands of dollars looking for the "Home World." Seems I left an early development message in the game that said "Keep playing, the home world is near." We originally planned to have a home world, but it was removed at the end because of time and space issues. This person sent a photo of being at level 75, still looking for the home world. Getting to level 75 was almost impossible. Seems this person sued Atari for the amount of

money he spent trying to find the home world. Now that is dedication!

JWC: *[laughter] That is hardcore! Is level 75 then "The End" for all practical purposes?*

OR: Actually we never did an end to the game—we ran out of time. There was no end. And actually, the last wave was number 16. After that, the last 4 waves keep repeating over and over but get harder and harder. There may be some color changes too. I do not recall if we left that in or not.

By the way, I think it was level 75. It was something very high anyway. What is so interesting about this is that you cannot earn extra lives except by score at the high end, and you can only restart at level 12 or 13 if the game ends... I can't recall which. Unlike **Tempest**, you cannot restart very high. So for this person to get to that level he had to play from 12 all the way up there without losing. Impressive.

JWC: *Very. OK, moving over the ever-present monitor problems, any ideas on why no XY monitor could be developed that could last and be reliable...or would it have been if not for the video game crash and R&D cutbacks? It seems about the time they found a winning combination it was too late.*

OR: Well, we added code to Major Havoc to protect the monitor, as well as better deflection amps, so it turns out that this vector game did not have the problems of Space Duel and Tempest, but it was too late to get the trust of the operators. The design of the XY monitor was
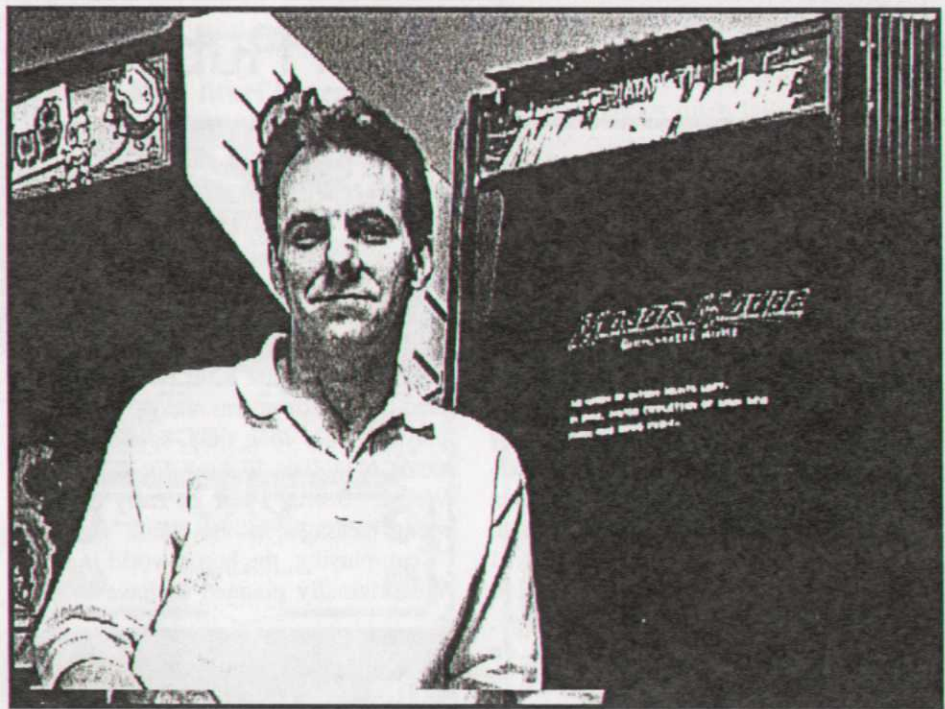
Owen posing out with his prototype Major Havoc machine. Courtesy Owen Rubin.

that the drawing areas *had* to be bigger than the screen so clipping would take place properly at the edges. Unfortunately, the transistors that controlled the deflection could not take items that were drawn too far off the screen, and *blam*, they blew. Earlier games did not worry about clipping items that were way off the screen, which caused some of the problems as well.

JWC: *Tell us about settling on Major Havoc as the final name, as opposed to Tollian Web, Alpha 1, and others. Were these management decisions? Marketing?*

OR: Actually, I do not recall the name "Alpha 1," although I have seen the pictures on the Web. That must have been a marketing decision as the game went to test. I never saw it.

JWC: *It is not that pleasing to the eye. I would say it was a call not to use it! What was it originally?*

OR: The original game was "Tollian Web," named after

the Star Trek™ episode. Because the first wave designed and completed was the web spinner wave. It was supposed to be the "Tollian Webs" of the Star Trek™ episode with the same name. But it was not enough of a game and I was working on the maze section as well, so the game expanded beyond that name. We then picked the name "Major Rex Havoc" as a play on words. That was the final name until we found an underground comic book titled "Major Rex Havoc and the Ass Kickers from Space." Atari decided that was a bit too close for comfort! We switched it to simply **Major Havoc**.

But a small note on that: The design team really wanted "Rex," so on the original art work on the front top of the original cabinet, you will note that the name Rex appears on the glove of the character. One of the team members—who shall remain nameless—went into the graphics lab after hours one night and added the word Rex to the final art.

JWC: *All of us anal vector fans on the net have noticed that! Now we know how it got there. OK, what about bugs and tricks? I've heard rumor of a few.*

OR: Yes, if one has the earlier version of the ROM's, there are a few bugs to try and find. On the wave that has the hand that resets the reactor, you can get the game into a mode where you can play the wave forever. Here is how it works: After you set the reactor off, as you are
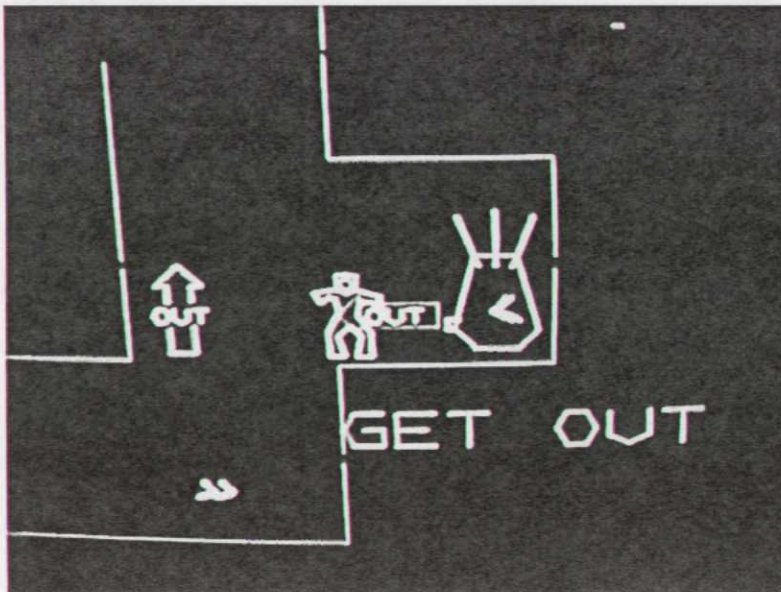
getting ready to leave the maze, hit the switch that turns the hand back on. Before the hand can reset the reactor, exit the maze before the doors close again. Havoc will blast off in his ship and the wave will end, *but* you will come right back to the same level. When you return to the maze, any items that you eliminated will still be eliminated. You can do the reactor trick over and over and earn an unlimited number of lives. An update to the ROM's actually cause the door to close if the switch is thrown, even if the reactor is still counting down.

The prevents one from leaving the maze.

Also, there is a small chance that if you jump just right on the earlier version, you can escape the maze. If you do this, while you still have oxygen time, you can "fall" into the code of the game. The game will try and use code as maze pieces and objects, and a very strange map is displayed. The error occurs if you hit *exactly* in a concave corner piece. I have done it once, but never again. You should actually see my initials, ORR, if you fall far enough into the code.

JWC: *I bet the Level 75 guy could do it. What about an update? Ever considered* **Major Havoc 2K**?

OR: Well, myself, no. But there is an update for MAME that I helped...gads, I forgot his name...the guy who has that Atari website...

JWC: *Jess Askey?*

OR: Yes, that's him. I had long talks and email exchanges with him about the end game that never was. His 'Return to Vax' MAME version is based on this discussion.

I also talked at CES to the guy who did **Tempest 2000** for the Jaguar about doing a **Havoc** update. We had talked before about this but never decided where. He is now doing NUON games, and that market is so small, I am not really interested. But who knows, it may happen one day on the PC! But I would have to find someone who would be willing to do the code. I have no interest in programming any more.

JWC: *Since you bring up the Yak, I'm really looking forward to seeing* **Tempest 3000**. *What do you think of NUON? Seems to me that this is the final vestige of what was once Atari, since almost everyone involved in NUON has ties to Atari or worked on the Jaguar or something.*

OR: I have to be very careful here as part of my job is to evaluate Media Processors. I am interested in the NUON, but I believe there are other better parts with much more power. However, the NUON system is an interesting idea. I wish the VM Labs and Motorola people luck. But would I design for it now? Not a chance! As you say, the group that designed it are a bunch of ex-Atari people, so perhaps this is a good way to describe it.

My problem is this: why would I buy a NUON system when I can get a system like a Sony Playstation or Nin-

tendo or Sega system with lots more games, and much better hardware for less money? Some might say because I am buying a DVD player anyway. Well, maybe. But I think the market is small.

JWC: *Interesting. Well, either which way I have my fingers crossed for* **T3K** *at the very least. Oh yeah, do you have any arcade cabinets at home?*

OR: Yes, I have several still around. When I got married about 11 years ago, 12 of the 15 or so games I had "left" the house. I had one of each of my prototype games. For example: **Cannonball**, **Skydiver**, **Tube Chase** (which is **Tunnel Hunt**) and some others. What I have left now is an original prototype of **Major Havoc** in the cabinet we shared with **I, Robot**, a sit down cocktail cabinet **Space Duel**, and a **Dig Dug** game which Atari helped localize to this market...and a game I always liked!

JWC: *Owen, thanks for taking the time to revive some old* **Major Havoc** *moments. Anything else you'd like to add?*

OR: Not much more to add, other than I still think Vector games look better than raster, even today.

JWC: *You mean* **Tempest** *and* **Major Havoc** *look better than* **Pac-man** *and* **Joust**? *Or better than ...***Tekken** *and* **Soul Blade**?

OR: Right...both, actually. I must say the latest versions of 3D hardware are amazing and look really good. But there is something very cool about the sharpness of vector drawing. Too bad we can't have a cool XY system for the home today.

And taking Owen's cue and running with it like an operator away from a **Gravitar** *2-for-1 sale, your not-so-humble editor directs you to flip ahead, where the only home vector system ever, GCE's Vectrex, is discussed with the Multi-cart Master himself, Sean Kelly.*

□   □   □

We would like to thank Owen for taking the time to talk with us. If you have a computer and the ability to run MAME, see if you can do the "Fall through" trick. Your not-so-humble editor has been continuously humbled in his attempts. Also, we'd love to get hold of the drugstore cowboy that made it to "Level 75" and sued Atari. Put the word out, fellow lady-killers.

Oh yeah, and if for one understandable reason or another you are having trouble picking up women of late, try this line: "Hey dame, your eyes shine as wonderfully as a Amplifone monitor with a NOS Wintron flyback." Curiously, this has failed in every reported use, but your not-so-humble editor is certain with the right mood, suave delivery, and amount of sedation, success is eventually certain.

•*JWC*

The E3 Experience

By Scott Jacobi

The games, the sights, the sounds…the women. How do you sum up a unique experience like your first E3 in to words that do it any justice? If you're a life long video game fanatic, you can't. But I'm going to try. Everyone has heard of it. It has the mystical "not open to the public" quality to it that makes it all the more alluring. It is a three day non-stop tour-de-force of the newest, latest and greatest that the video game industry has to offer. Four huge convention rooms, at least a thousand monitors employed, and all of them offering new gaming experiences for you to try right then and there. So where do you possibly begin?

Quick. See if you can pick out the video game nerd from **Duke Nukem** and his babes. *Hint*: he is wearing a **Pac-man** shirt which reads "Eat Me."

If you were like me, you would have been drawn, almost without choice, to the primary hall which housed Nintendo, Sony, and Sega. In this mammoth arena, the Big Three stood side by side hoping to attract the lion share of your time and attention. Would you be persuaded to enter Sony's Playstation 2 preview theater? Or would you be more distracted by Sega's never ending stage show? Perhaps Nintendo had the most surprising tactic of all by resorting to fraternity rush methods and offered free beer to those who would wander over and take a look at **Conker's Bad Fur Day**. It was at these locations that you could see, all at once, the trails that the console wars were going to blaze.

Little needs to be said about Sony's plans to dominate the world with their new console. And all around the front of their area, PS2s were fired up with nearly the entire collection of software that the Japanese market had to offer. **Tekken Tag Tournament** went head to head with **Street Fighter EX 3** for attention and play time. Sega, of course, had a sensory overload of Dreamcast software as far as the eye could see. **Space Channel 5** was Sega's flagship title of the show this year, and a worthy entry at that. And aside from the incredible entries to the Nin-

tendo 64 line up that Rare had to offer, everything in the Nintendo booth was **Pokemon, Pokemon, Pokemon**.

You wouldn't hear a word of amazement or praise directed towards these machines and games. Only quiet awe signaled remarkable reactions on the faces of those who considered themselves console veterans. After all, everyone here was part of the industry in one way or another, right? To display amazement would be a betrayal of the professionalism inherent in the industry.

Deep down inside, however, I was sure that every person attending the show with me, shared the awe and wonder that I had. I went from aisle to aisle, watching and sampling every game that I could, as though I were a child with a pocket full of quarters in the biggest arcade I've ever seen in my life. And the experience didn't end in the main hall, to be sure. The next goal was the third party company hall, and it was no less disappointing.

So, how come I've never seen a real archaeologist look like this?
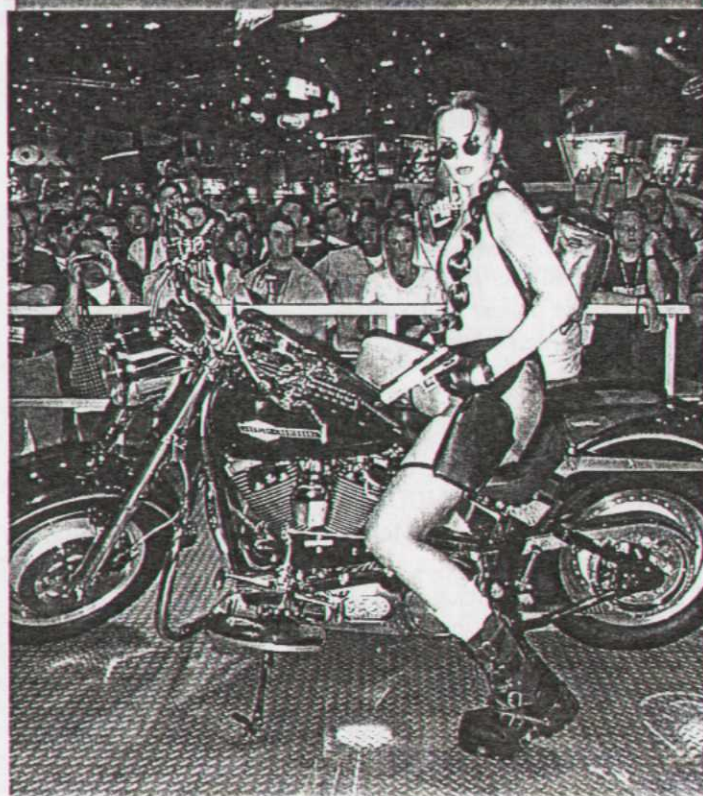
Every company that has or is making a name for itself in the video game industry was represented here. Mentioning names like Capcom, Midway, and Squaresoft would be to only scratch the surface of the list of companies that were in attendance. One could not make it through the E3 2000 experience without noticing the hourly gathering in front of Konami's booth to watch the **Metal Gear Solid 2** preview that left onlookers with their jaws on the floor. Or each company's colorful and imaginative booths that attempted to rival Disneyland in mascot appeal. Everywhere that you went, a showgirl was on hand to flash a smile to let you know you were invited to play as they introduced you to a game. I witnessed a very serious Japanese attendee proceed to trounce a showgirl at a round of Ubisoft's new dance game based on *The Jungle Book*. She obviously had no idea how serious the Japanese take dancing games since Konami's success with **Dance Dance Revolution**.

In a hall that dwarfed a football field, it would take hours to make it from one end to the other and capture every game that each booth had to offer. Of course a lot of it was old news, and some games were not fully complete and enjoyable, but a few sights stood out. Bleem's entry in to the Dreamcast market was nothing less than remarkable. **Gran Turismo 2** being played on the Dreamcast not only looked better than the same game being played on the PS2 using its built in reverse compatibility, it looked better than **Gran Turismo 2000** which was specifically programmed for the PS2. Right across the aisle from Bleem was Squaresoft's presentation of a movie depicting how on-line console gaming will change the way we currently play games. Namco's booth was complete with a costumed Pac-Man and Ms. Pac-Man wandering about.

After being blown away with what I had seen there, the only two halls left were the smaller industry booths, and other third party companies. Time was taken to examine each and every area, and they were no less impressive than the previous halls. However, by this time, attendance at E3 had taken on a whole new meaning for myself... Slowly I realized that my backpack, nearly empty upon arrival, was now nearly bursting with items, such a literature, keychains, stickers, and most coveted of all: T-Shirts. I had begun to amass a whole new wardrobe of video game related shirts. Eventually, something took me over, as it takes over every E3 newbie. E3 swag greed. By the middle of the second day, I was possessed with the notion of coming back with as much junk as I possibly could. Most difficult of all to obtain were Capcom's shirts. If any company has the formula for success in keeping attendees at their booth, it was Capcom. An MC stood on a stage advertising Capcom's software for minutes at a time, and would eventually throw out a shirt or two to the audience. People stood listening to the MC for hours, just trying to be one of the lucky ones to grab a shirt. Desperate listeners began to shout out praise for Capcom, and eventually to the MC himself. Needless to say, after thinking up a few quick compliments, I got my shirts.

In the end, after three days of sensory overload, I was so overjoyed at finally making it to an E3 show after all these years of growing up and reading about previous E3s and the CES, the ancestor of the E3. The flight back from LA to NYC was full of great memories and excitement for the year to come in this, the greatest entertainment industry on the face of the earth.

Scott Jacobi is a graduate from the University of Pennsylvania, and from the Digipen Applied Computer Graphics school. He is an artificial intelligence programmer, currently working at Game Loft in New York City. He has been playing video games ever since his hands were big enough to hold his joystick.

Photos courtesy of MPOG.com Thanks!

Warcraft 3. Will it be the computer game of the year in 2001?

Unreal Tournament helped lure many gamers into the PS2 booth.

Gratuitous chic pic. The Eidos Interactive babes. God bless spandex.

Frank relaxing in California. Courtesy the artist.

COVER ARTIST:
Frank Brunner

$\mathcal{I}$ grew up not only addicted to video games, but comic books as well. So when I look at the **Warrior** sideart, well...it just looks right to me. The best of both worlds. It looks like a new, savage comic book that you can interact with!

Although a huge comic fan in my youth (and still I suppose, but addicted to the same old stories I've already read), I never paid attention to who wrote or drew those comics. I simply enjoyed being told wonderful fantasy stories in the form of monthly installments. So I had, as most of you have, unknowingly seen Frank's art many, many times in the past.

After his very public resignation from Marvel Comics, over character control and royalty disputes,
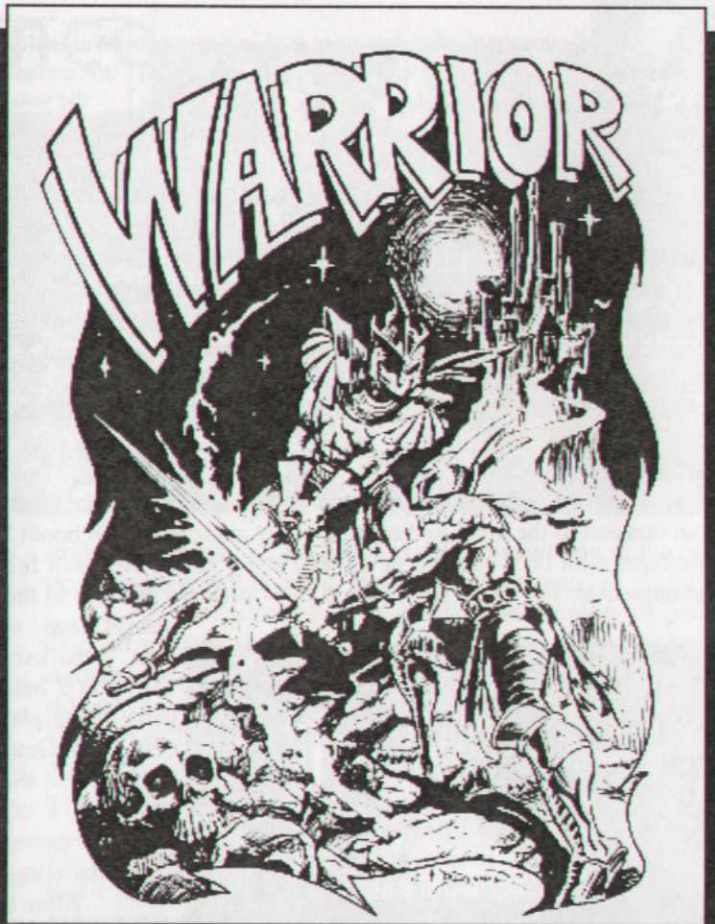
One of many Marvel titles by Brunner, he is known as the definitive *Dr. Strange* artist.
© 2000 Marvel Characters Inc.

Brunner began looking for another direction to direct his talent.

"Marvel and I were over by [the time of **Warrior**]," Brunner told me. "So I was definitely looking for new markets for my art, and the arcade scene was exploding all over the world."

Brunner did the art for **Rip-Off** from creator Tim Skelly's instructions. However, this type of sci-fi is not where Brunner seems to feel at home. And it shows with art that, while nice, is not the Brunner-esque art we see elsewhere.

So that leaves **Warrior** as the only true example of a video game truly embossed with comic– book décor....

Until now.
While talking with

Frank about the **Warrior** project, he casually revealed he had long ago done side-art for Cinematronic's **Tailgunner** which was never used. I was immediately intrigued and got him to send me the original large panel art (partially seen on the cover and complete on the next page) which never got any further than pen and ink.

Before Skelly's Tijuana **Tailgunner** story [seen earlier this issue in the Tim Skelly interview] was known to me, Frank and I discussed why it wasn't used.

"I guess they decided they didn't want an organic-symbolic treatment, although that is what I was commissioned to do!" he said. "The guy I was working with [Tommy Stroud] told me he wanted a warrior on the back of a Pterodactyl. So that's what I did. I didn't go off on my own or anything."

Of course, I knew Skelly had worked on Tailgunner at Cinematronics, putting finishing touches on Dan Sunday and Larry Rosenthal's game. So once I asked him about it, and he related the whole sordid tale to me, I immediately called Frank back up.

It was all news to Frank. Laughing, he says "No, none of that was ever explained to me. I didn't know I was doing bomber art."

When I asked why the warrior was a dude, and not a chic, he doesn't recall.

So thus ends a story about the first uncovered, unused sideart that I can recall ever hearing about. I'm sure there is more out there. And in most cases the artwork left at the drawing table probably deserved its fate. **Tailgunner** is, I'm sure you'll agree, an exception.

What I want to know is what happened to the Tijuana **Tailgunner**? That would be one heck of an interesting find, fuzzy pink dinosaurs and all.

As far as Frank is concerned, you all will enjoy far more of his art, as you have in the past, whether you even know it or not. He is most famous for his comic book work, but has also done animation work, like *Jonny Quest*, and more recently the Fox *X-men* series in the 90's. Look for more animation soon, a cartoon called *Dinoforce* is in the works.

•JWC

Below: **Tailgunner** artwork which was eventually used for ads and side panels. Artist: Rick Bryant.
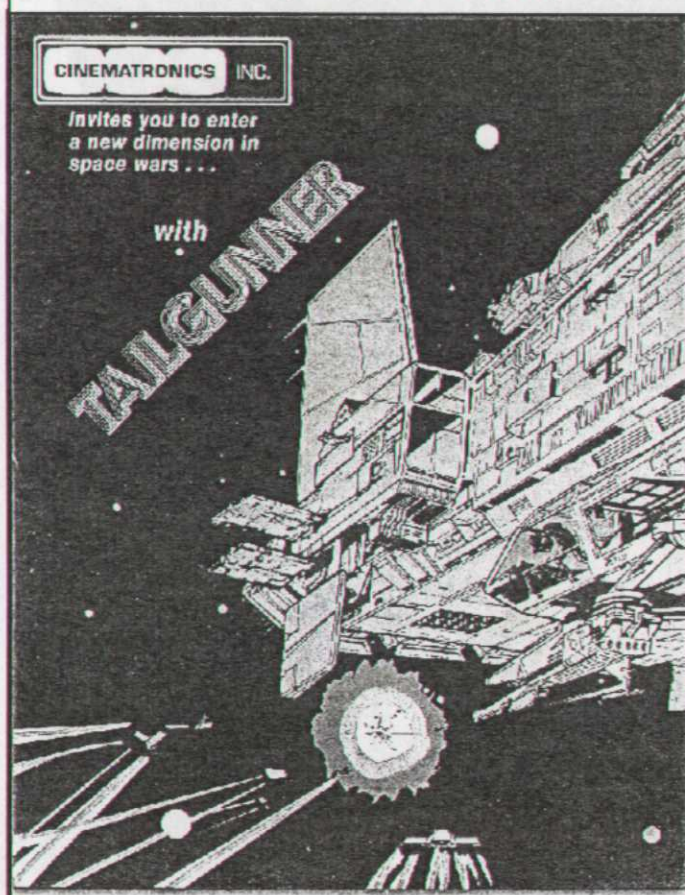
Below: Brunner's artwork used for **Rip-Off** upright flyers and side panels.

TAILGUNNER

© BRUNNER 1979

Tech Tips

TAITO POWER SUPPLY CONVERSION

Here is the wiring diagram for a Taito Power Supply. I find the original power supply to be very weak and not very dependable. The power supply seems to be the weakest point for these old video games.

Basically you need to remove the entire power supply and wire the new switcher. 2 molex plugs are what's used in the wiring of the new power supply.

Wiring	Number of wires	Voltage
Red	(4 wires)	+5v
White	(2 wires)	+5v
Brown	(2 wires)	-5v
Yellow	(2 wires)	+12v
Black	(8 wires)	Ground
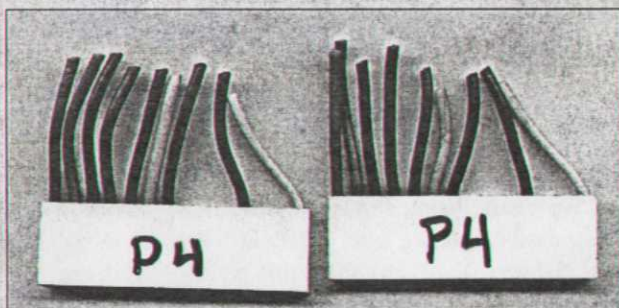
Taito Molex Plugs (left)

These were removed from a Jungle King upright video game.

+5V/11A
+12V/2A
-5V/1A

+12V2A
-5V1A
GND
GND
+5V11A
FG
AC
AC
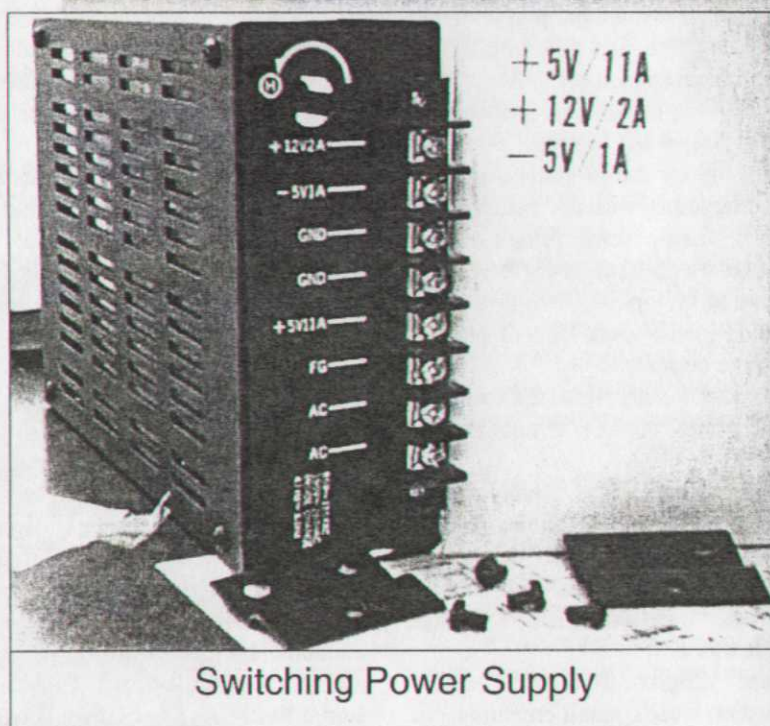
Switching Power Supply

This power supply conversion works for the following TAITO games:

- *Alpine Ski*
- *Bubble Bobble*
- *Elevator Action*
- *Fairyland Story*
- *Front Line*
- *Jungle Hunt*
- *Jungle King*
- *Kram*
- *Legend of Kage*
- *LSA Squad*
- *Return of the Invaders*
- *Wild Western*

•*Exidy*

In Search of... «TEMPEST» cocktail

Here's an operator-type story. It was a cold and dreary night in the tiny town of Boonesville. Nah. Just kidding.

One day I went to the local auction looking for any games that had great sentimental value to me. I had been going to this monthly auction for a year or more, and occasionally I would walk away with something I liked—at a relatively low cost.

But this time, I had reached a cusp.

There was this Robotron: 2084 machine sitting there in all its glory. It was the only one I had seen in over 10 years, and I

By Kevin Phillips

was very excited. Of course, it did not work properly: RAM problems. (Gee, what a surprise that was).

I managed to beat out the operator (who was bidding against me) and win the game for $80 or so, and I considered that to be a very good deal. I was happy.

But what happened next really blew my mind.

The operator, who basically *sold* it to me for $80, patted me on the back in his sarcastic way and thanked me for being stupid and naive enough to buy the useless hulk off him for that *outrageous* price.

But what happened next really blew *his* mind!

I turned around and thanked him for letting me have it for such a low price, and I told him that I collected old equipment. This made him hesitate, as if he had to quickly, in the span of only a few seconds, rethink his angle.

He then informed me that he had "tons of boards" and "a bunch of old games" that he needed to get rid of. Now, this being so easy (and me being new to this type of haggling), I was very skeptical. I had immediate flashes of standing in the used car lot with a clown suit and dunce cap on.

"What all you got??", I asked with a semi-interested expression.

"I've got Stargates, Battlezones, Asteroids, Defenders, Star Castles, etc, etc," he said. But what he said next caused a physical reaction in me that I probably should not explain further in this PG-rated story (grin).

"I have a lot of those old X-Y games...and I know I have a cocktail Tempest."

I had a very hard time maintaining my composure, and I think he noticed some of my emotional rush being ever-so-slightly vented, primarily through my pores in the form of sweat. So we exchanged numbers and he promised he would call me.

And he did, two days later. He had compiled a list of what he had to get rid of. He claimed to have two warehouses both full of games and parts.

So, I decided that I needed guidance from a guru. As I said before, this was my first time in making a deal of this type, and I wanted to know what all I was possibly getting into. I talked with Rick Schieve (the guru) about this potential gold mine I had discovered totally by chance, and he was very supportive, yet cautious. He gave me a ballpark estimate of what *he might* spend based on the list of games I had rambled off to him.

With this valuable information in mind, I called the operator back and we set a time for me to come down. Of course, everything was not peachy, and one of the "least-peachy" things was the fact that he was 5 hours away in Louisiana. (I am in Memphis). And guess what really adds to the great lack of peachyness? I have no truck.

Immediately, I started formulating possibilities on how I could get a truck.

A friend and I finally pulled into the small town of (damn, I've already forgotten the name of that miserable hick-town) Louisiana. We met the guy at one warehouse and I looked around. It was a warehouse alright—from the 1800's. Full of water, weeds, small creatures, etc.

But, more importantly, it was full of *dreams* that were encased like bottled genies inside of 75 or more video arcade games. I nearly cried with excitement.

I now know that the operator was initially annoyed, because instead of acting like a fellow operator (with all the smugness and chewed, soggy cigars), I had my head stuck up inside an Asteroids Deluxe machine and hands buried in the wiring of a Star Wars game. (At the same time, I might add).

We drove 38 miles further west to the next location, which turned out to be a badly rotten barn behind someone's house. Almost the same story here, but there were a few sad sights, a few of which I will list here.

There was the cocktail Omega Race that was sitting half-in a puddle of water with rain from the roof of the barn pouring steadily into the game. It was a total loss.. nothing at all was salvageable from it, and I was furious, almost to the point of insanity. I quickly thought of a few ways to "punish" the operator for this horrific deed, but I decided not to when I saw the Star Castle game sitting happily nearby collecting moss. Another let-down was a Tempest with a shattered monitor tube and rusted monitor deflection boards. The machine was, once again, exposed to the rain and to the vandals.

Thinking dirty thoughts again, I leaned up against a large table sitting outside (probing with my hands for any sharp object) and quickly noticed a hoard of Williams boards on their usual sheet metal mounting. Sinistar (with speech), Stargate, Joust, a lot of the good ones, and one stupid one (in my opinion): Bubbles.

So I was quickly relieved again. I learned to ignore the carcasses that were once Tempest and Omega Race, and worked around them. This location mainly contained miscellaneous parts: marquees, control panels, whole boxes of manuals, buttons, etc. But under piles and piles of other junk (someone had stored living supplies there) were at least

25 more games, bringing the total to over a hundred. Now, mind you, no one ever guaranteed to me that any of this "junk" worked.

But, know what? It turns out that most if it did!

Anyway, we finally agreed on a price for all this junk: $2,700 with $700 down. (This was a little better than his initial starting price: $4,500!). I also was able to get him to let me pay the rest in installments.

So, weekend after weekend, I made the 5 hour trip down to Louisiana in whatever I could get a hold of to drive: a rented piece-of-crap truck that seemed to run on 3 of its 8 cylinders, my company truck (I was nervous the whole time), a friend's Ford Explorer, or whatever else. One weekend, I spent the night in the dilapidated only warehouse surrounded my Gauntlets, Defenders, etc. It was the best night sleep I have ever had...I truly believe that.

And the next morning, off I was to stripping games...one after the other. Over and over and over. But it never got monotonous. The act of stripping the machines down and leaving the empty, mostly rotten, hulls was always fun and fulfilling (if a bit tragic). Week after week I had a truckload of "junk" on its way back to Memphis and into my tiny apartment. Eventually, the place of mine became a wasteland of game parts, with only 1 or 2 clearly defined paths to get around to the toilet, bedroom, etc. Forget ever seeing the carpet again. Selling the junk on the net was fun as well, and the payback was good, as well... I now have several games that I basically got for free. And (thank goodness) the place of mine is finally beginning to look like a civilized person's home again.

But, but..."what about the cocktail Tempest?" you ask?

Well, I was trying to avoid a traumatic, sad ending to the epic, but I suppose I must anyway. It never turned up. It's just that simple. I asked the guy about it, and he always said "Gee, it should be there somewhere." Somewhere, in the dark recesses of my noodle (that means 'brain', you dirty-minded dolt), I always held hope of finding the promised Tempest cocktail table that was so much of an incentive to finalize the deal. And the operator always "absent-mindedly" brought it up in conversation (and still does today) like someone dangling a carrot in front of the proverbial mule. And, of course, I always *absent mindedly* contemplated different methods of violent death and maiming each time he beat his gums together about it.

But, like anything else, I got over it. There were no less than 2 full-size Tempest machines there to reassure me (and my psyche) that 'good can indeed come out of this deal'—even when I was forking over the $700 down payment. I watched as his eyes feasted upon the beautiful portrait of Franklin, and I knew the thoughts going through his head:

- This kid doesn't know what he's getting himself into here.
- Ah, hundred-dollar bills! And crisp, too!
- What's he going to do with all this crap?
- Who cares?
- Ah, hundred-dollar bills! And crisp, too!
- Wonder if I should trust him in these warehouses while I'm not here?
- Will he take my Ms. Pac-mans and Galagas even after I told him not to?
- Ah, hundred-dollar bills! And crisp, too!

The operator's mind is actually a very simple machine that's easy to understand and read. Part used-car salesman, part philosopher (they all know the answer to the meaning of life), part strategist/statistician, and part bullsh**ter and con-artist (wait, that's the same as used-car salesman).

Anyway! Fortunately, I was able to pay the guy on time, and now he promises me a new warehouse with 50 or so more games. This time, he dangles more carrots in the form of Space Fury, Robotrons and Defenders (*plural*), Gauntlets, Asteroids, etc. Also, I am looking forward to an added bonus: Pinball's! (at least 1 or 2). I am itching to lay my hands upon a Xenon, Black Knight or Pinbot.

But, to this day, he still reminds me every now-and-then of two troubling things: 1) The possibility that I deliberately sabotaged the Robotron I bought from him at the auction. (I didn't) 2) The fact that the Tempest cocktail "must be around here somewhere." And you must understand that his use of the phrase 'around here somewhere' actually means somewhere in Louisiana, Mississippi, or Tennessee.

Somehow I feel that I'll never find it, and I think that's bad.

Kevin Phillips is a long time arcade collector and is sicker than yours truly when it comes to Tempest fanaticism. Way sicker. At press time, Kevin had last been seen near a bus station in downtown New Orleans mumbling something about "finding my precious" and "oh , how lovely it will be." Also, if you encounter him, do not be alarmed if he yells "Superzapper Recharge," for no apparent reason. And remain calm and motionless if he tries to use your nose for a spinner.
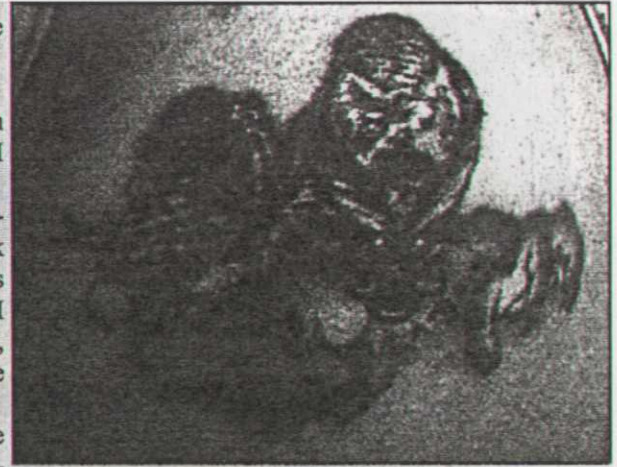
Chatting with Sean Kelly

Vectrex

By Evil Exidy

Hello Sean... Can you tell us why you are interested/devoted to classic game consoles?

The games were made to be fun and because of the hardware limitations in the 80's, they're all fairly simple. For example, if I have a couple of hours to kill, I'm right there with the rest of the world playing something like Tiberian Sun or The Sims on my PC. The problem with games like these is that I rarely have a couple of hours to kill. A few minutes here and there is far more common and getting my butt kicked in a quick game of Atari 2600 Kaboom or Defender only takes about six minutes. Mattel always boasted more sophisticated games on Intellivision and even those don't take a whole hell of a lot of time to play. If a second player is available to play Sea Battle with, it only takes about a half-hour to play a complete game. So much time and money is spent on today's games making them flashy or "pretty". Entire teams of sound programmers compose new music, professional artists render the characters, models are digitized to be used as characters, and hundreds upon hundreds of megabytes of storage are required. When Howard Scott Warshaw wrote Yar's Revenge for the 2600, he did every aspect of the game himself. He didn't have to be worried about the sound or the graphics because the 2600 is only capable of the type of artwork virtually anyone could come up with. Howard's only objective was to make sure the game was fun to play and in most cases, he and his fellow programmers accomplished that goal. That's not to say there isn't a time and place for Resident Evil 3, I'm a big fan just like many other people are, but as our generation grows older, it becomes increasingly difficult to find time to spend on games such as Resident Evil or Metal Gear Solid or the like.

Why did you decide to work on the multi cart for the vectrex?

Well, many games for classic video game systems can be tough to find and there are many people that would just like to be able to play the classics without paying collector prices for them. Something like Polar-Rescue for the Vectrex can fetch as much as $70-$100 for an original cartridge and it's only a mediocre title. If you're a collector, you're going to want the original, but if you just want to be able to play the game, the multi-cart is a very cost effective way of doing that.

I am also curious to know what kind of technical background you have that would give you the ability to work on a multi cart?

Virtually none. I received a Vectrex multi-cart many years ago that someone had likely made back in the 80's when the Vectrex was still being sold. I was fascinated by it and began to educate myself as to how it worked. It was quite archaic comparing it to what my multi-carts have evolved into, but it gave me the idea that something like that was possible. I have friends who know much more about electronics than I do and I picked their brains for info, bought some books, and started to work.

Do you know how to program? if so, what systems have you programmed in?

To a certain extent. I wrote the menu software for the Vectrex multi-cart until I got stuck at which point I asked a friend of mine, Fred Taft, for help in completing it. I've also had help from Kevin Horton and Harry Dodgson over the years.

So while I do know how to program, I don't enjoy it in the least and therefore have never had any desire to get good at it. I've written simple software for several classic systems. The menu software on the Vectrex multi-cart, a couple of graphic demos on the 2600, a bit of just screwing around on ColecoVision, and I wrote a small program that displays a friend of mine's son's birthday on his 5200 console.

**Have you written any games... etc.. That have showed up on any multi carts?**

Nope. As I said, I don't enjoy programming in assembly language enough to be able to stomach it long enough to write an entire game. I've written several programs in C and Visual Basic for my own personal use on the PC, but assembly is something I just don't have the patience for. I guess I'm a very results-orientated person meaning I have to be able to see the results of what I've been writing many times over to keep myself motivated to complete the program. For example, in C or Visual Basic, I'll compile a program I'm writing dozens of times throughout it's development to see what it looks like "so far". In both of those languages you are rewarded with fairly immediate results even of the program isn't working correctly, you can see it running. In assembly programming, you can enter code for 45 minutes and only have a solid colored background onscreen when you try to test your program. It takes a lot of patience which is something I don't have.

Are there any plans on releasing any other games for the vectrex?

Not by me, but I believe John Dondzilla has plans for future games as do several others

I've recently seen some new carts floating around with new vectrex games (like a tempest clone, etc), have you seen this? What do you think of it?

I think it's great! In fact, at least year's Classic Gaming Expo in Las Vegas, it was very cool to be able to show Todd Frye (who wrote the Atari 2600 version of Pac-Man) a new version of Pac-Man written by Eric Bacher. Todd was very impressed with what Eric had done and wished he had more time to do Pac-Man the way he would have liked to. Todd was only allowed six weeks to complete Pac-Man for the Atari 2600 - all by himself.
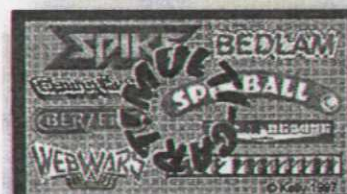
SEAN KELLY'S MULTI CART

Sega Dreamcast

*****
Empire Strikes Back

****
Star Wars

***
ROTJ

**
*The Phantom Menace*

*
Hardware Wars

ZOMBIE
FUN

ON
THE

DREAMCAST
(DC)

House of the Dead 2 by Sega

Staying true to its arcade counterpart, House of the Dead 2 plays and feels like the real game. I can actually tell you that in many ways, its much better. You can play the game in several different and challenging modes, which would include Arcade, Classic and Boss modes. Basically this a zombie bashing shoot'em up! Travel through a maze shooting and destroying everything in sight, but be careful! Among the undead you'll find (living) people trying to flee from the zombies.. Make sure you don't kill them! There is almost nothing more fun than just pure violence and destruction when it comes to video games, so if that's what you're into.. Then this game is for you! ***½

System Requirements
1-2 Players, Memory Card, 1-2 Guns.
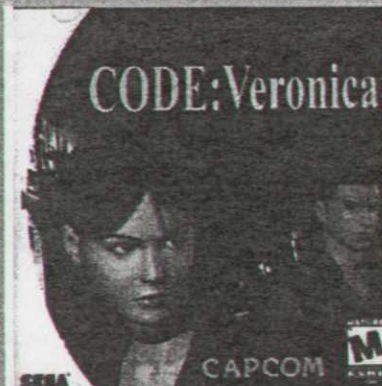
Resident Evil – Code Veronica
By Capcom

Ahhhhh!!! Finally! The latest and ultimate Resident Evil release. This game has phenomenal graphics with unbelievable graphics (both on the characters and backgrounds) and chilling music and sound effects. I have never played a more horrifying game!.. Hands down, Code Veronica is the most in-depth/realistic Resident Evil release with more zombies, ghouls and death than any of its previous releases. The DC makes the game look almost like you are controlling a serious cartoon.

The only problem I had with this game was getting used to the controls. For some reason I kept hitting the wrong buttons, which made the game very frustrating for me.. Until I got used to it.

I can probably say this is the best DC adventure game to date and hope other companies take the time and effort Capcom put into this game as a lesson in designing video games. ****½

System Requirements
1 Player, Memory Card, Joystick.

Zombie Revenge
By Sega

Yet another zombie/ghoul based game. This is a 3rd person game based more on arcade play than actual adventure (like Resident Evil). You basically go from screen to screen shooting, hacking, dismembering undead creatures. Quite fun actually, except for the controls!!! It is very difficult to properly aim at the creatures and the camera angels are frustrating as well as just plain annoying.

I don't want you to think that this game blows.. Actually, its very fun.. Just running around slaughtering zombies is my kind of fun. Some of the weapons are so intense that they actually blow off the zombies heads, arms, upper torso.. Etc.. If you're into senseless violence, then look no longer!! ZOMBIE REVENGE is the game for you. This game looks and plays just like its arcade counterpart, and gives you extra options!! ***

**System Requirements**
1-2 Players, Memory Card, Joystick(s)

By Evil Exidy

Legacy of Kain – Soul Reaver by Eidos

Pushing the Dreamcast to the limits with its brilliant graphics and smooth game play and elegantly detailed terrain comes Eidos' Legacy of Kain – Soul Reaver. As Raziel you must seek and destroy your blood thirsty creator Kain. This game has changed drastically from the original Legacy of Kain ('98). This 3D/3rd person shooter almost feels like you playing a cartoon. The graphics and controls are amazing. Game play is comparable to that of Castlevania 64 but with superior graphics and game design. Venture through dark caverns, impaling and decapitating the undead. ****

System Requirements: 1 Player, controller, memory/Vmu.
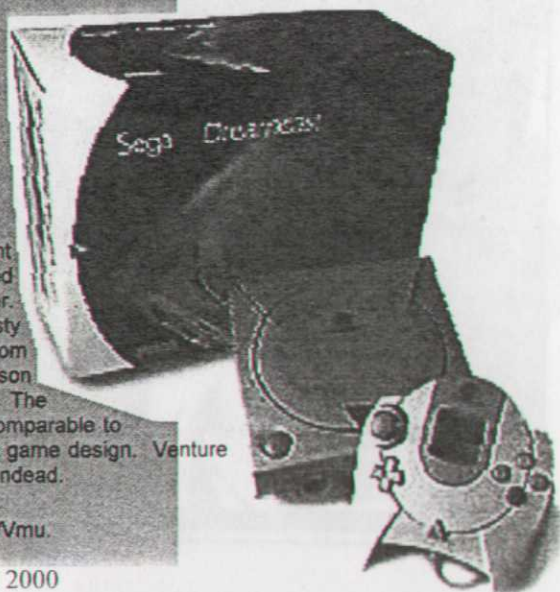
Video games have always, and will always, be about a cruel joke played upon man. (This is a kind of editorial thing, so I can say 'man' and 'he' and mean 'all people' and not be a misogynist, you ...you troublemaker). Given a wild imagination and adventurous spirit, and yet was he cursed with very ordinary proportional leaping ability, not to mention unacceptable Space exploration realities. 'Hey...you're talking about comic books, B!' says Scarface. Well, not really. Video games offered more than raw vicarious enchantment. With the memorable games, the world 'vicarious' itself is meaningless.

As were myths and astrology, campfire stories and folklore, books and films, video games became the *detachment* of man, the very facet of life where he can be *not* as he has always known (or 'should' know) but in an alternate world of much greater intrigue, and far less worry and disappointment. And when these disappointments arise, they are taken in stride, as a challenge to excel, to beat your enemy, to beat the program, to learn from that mistake which led to the failure. 'Man versus machine,' some have said.

No.

Man versus reality.

Often, the game is only as challenging, entertaining, or disappointing as you choose to make it. And the result of that inner challenge can be a found peace in either besting the game...or becoming so embedded in doing so you forget that a *game* is all it is.

Be merry. Live boldly. Play detached.

—JWC

This will be an ongoing discussion forum for whatever you like. And not always written by me, I hope. So please submit you discussion topics and relevant (or irrelevant) views at will.

For poise, I took the gaudy, philosophical approach, but just as surely as I may the next time, you may take the **Resident Evil** approach, and discuss how stabbing a Zombie made you approach buying a car differently (or better prepare you for the APR negotiations!).

I have been affected by video games in many different ways my entire life. I, like so many, are spoiled by having never known a world without them. I was born the year **Quadrapong** was released. Would I have it any other way?

What do you think?

•JWC

"Why you always have to make me feel inferior cause I'm on the grill, B?"

—Scarface

"This is for a little boy named Joey!"

—Mr. T

Medieval II by Sony

Take an eerie travel on the dark side with the undead hero, Sir Daniel Fortesque as he returns to battle the evil occultist Palethorn in a gothic, twisted version of Victorian London. This is one of my favorite game series on the PSX This game a modified 3d version of the arcade classic Ghouls and Ghosts, you must fight zombies, ghouls, ghosts, scarecrows, demons, while searching a dark and spooky landscape. The bosses on MEDIEVAL II are quite stunning and very original and extremely strenuous, which makes the game challenging and addicting .. In MEDIEVAL II they take what the already great MEDIEVAL had to offer and enhance it greatly. If you cant get into lame monotonous 3d shooter on PSX, then definitely give these series a chance! I think you'll be pleasantly surprised.
***

System Requirements:
1-player; 1 Memory Card Block; Analog Controller Compatible; Vibration Function Compatible

Mr. Driller by Namco

Wow! One of the most impressive newer PSX games....and so simple graphically that it could be ported on the GameBoy. Very straightforward and wonderfully classic gameplay make this one you definitely want to pick up.

A little bit Tetris and a little bit Dig Dug, this games gives you hope for the future, that it just might offer more than simple rehashes of the same old games.

You have to drill through blocks, deeper and deeper, always watching your O_2 supply. And you also have to watch the way the blocks are going to fall back into place once you have drilled them, so you won't be crushed.

For the low price PSX games are now, this is one buy that's a no-brainer.
****

System Requirements:
1 Player, Memory Card 1 Block, Vibration Function Compatible

Konami Arcade Classics

For the first time ever, Konami has decided to re-release the arcade perfect collection of their classic arcade games. This PSX game features ten of their hottest titles; Pooyan, Circus Charlie, Shao-Lin's Road, Roc 'N Rope, Yie Ar Kung-Fu, Scramble, Road Fighter, Super Cobra, Gyruss and Time Pilot.
The only draw back here is playing the game on your TV with the Playstation joysticks. This takes away a lot of the fun. Konami has also decided to add Vibration to the game play, which really stinks. Instead of enhancing the game play, its distracting and extremely annoying. I just turned it off and played the games like crazy. This is definitely a great collection! Pooyan forever!
****

System Requirements:
1-2 Players, Memory Card 1 Block, Analog Control Compatible, Vibration Function Compatible

Raystorm by Spaz

Ahhh!! Finally Spaz releases a great arcade shooter for the PSX. This is a vertical shooter in the vein of Raiden/1943, the main difference is the graphics and the detailed 3d imagery. There are so many explosions, totally extreme fire power and complete and utter destruction on the screen at all times. It reminds me of DO DON PACHI but with much better graphics. If you are into shooters, don't let this game pass you. The stunning graphics and game play will keep you hooked for hours, if not days!
***

System Requirements:
1-2 Players, Memory Card 1 Block, 2 play simultaneous play.
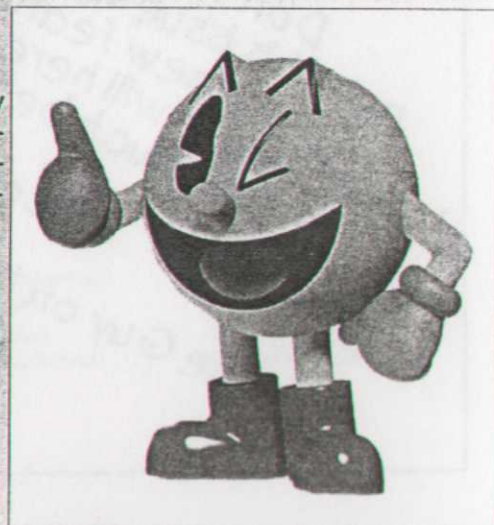
PSX

www.syzygy-magazine.com
Next Issue!

Thanks for hanging there and making it to the end! Hope you enjoyed it. Lots more next issue, new, old and in between, We hope to make it even better! *Even better?* you ask in disbelief. Oh, indeed.

Now I know a lot of you vector fans are asking the question "Where was **Battlezone** in the vector features, gosh darnit?" Well, next issue will feature an interview with the designer of not only **Battlezone** but many Atari hits, like **Stun Runner** and **Blasteroids:** Ed Rotberg. So fear not, **Battlezone** will be covered in excruciating detail then, I assure you.

Also, Eugene Jarvis, designer of **Defender, Robotron:2084, Cruis'n USA** and many more, sat down for an extensive interview which I know you will all enjoy. From talk of the early days before **Defender** to the days of **Defender 2000** and beyond, we'll cover it all.

Also, lots more next generation and classic console coverage. More sick, new computer games full of gore and splendor, I'm sure. And who knows what other surprises are in store!

So until then, this is your lovable, faithful publisher-editor-renaissance man saying so long, gamers. Stay fit. Remember to shower occasionally. And watch out for the evil delusions of eBay. Treachery is everywhere. And you know what that white stuff is in bird doo-doo? It's more bird doo-doo. *Ouch.* Is this thing on? Ok, I'm outta here.

—JWC

Don't miss next month's issue with lots of great new features. Uncle Eugene will be here. It doesn't get much better.

Sincerely,

The Guy on the Couch

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