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You Can't Change That!

by Russell Sipe

At the recent Computer Game Developer's Conference (CGDC), I ran into an old friend. She is one of the top computer game designers in the business. In 1981 she designed the classic CARTELS AND CUTTHROATS for the Apple II. In 1983 she became a regular writer in CGW with her column, Dispatches: Insights From the Strategy Game Design Front. In the same year she designed M.U.L.E. which to this day is still one of the very best computer games ever conceived. In fact, rumor had it that a redesign of the game was in the works.

M.U.L.E. was designed by Dani Bunte. She used to be named Dan Bunte. That's right, she made the Big Change. When Dani came to the CGDC in 1993 for the first time as a woman (she had been coming many years as a man), she was prepared to discuss the change. Dani spent several informal sessions with many of her friends and fellow designers describing why this was the right choice for her. In addition to discussing the emotional and chemical aspects of the change, she described how the conclusion of a 12 month process, an operation would be performed to complete the transformation.

A year later, when I ran into her in a hallway at the 1994 CGDC my first words were "Well, if I remember the schedule right, it must be finished now," commenting on the fact that the operation was to have been done. In her distinct Southern drawl she replied, "Well...I didn't do it."

"What? Why not?"

"Oh..." she said pensively, "they wanted to put in guns and bombs."

"Excuse me?"

"Electronic Arts wanted me to put guns and bombs in M.U.L.E. so I decided not to redo the game."

Dani saw the look of utter hilarity on my face and realized that we had been having two very different conversations. We both had a good laugh.

Changes are all around. Some are harder to understand than others. Dani went through with the operation and is now a woman; I think I'm learning to live with that. But guns and bombs in M.U.L.E.? That's unnatural! That's a change I can't accept. Perhaps Electronic Arts will reconsider. M.U.L.E. is a classic that the new generation of gamers is poorer for not having played. They should get a chance to enjoy it in its original, award-winning form.

Come on EA, give us M.U.L.E. with Smithore and Crystite as its creator intended, not with bombs and guns.
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Circle Reader Service #141
Rants & Raves

Old Journalists Can Learn New Tricks

by Johnny L. Wilson

At a recent awards banquet I attended, a respected journalist with a national newspaper won two awards. The first award was given early in the ceremony, and the journalist didn’t realize that, to keep up the pacing of the awards, recipients were supposed to enter on one side of the stage and exit on the other. So, immediately after he approached the stage from the wrong direction and slowed the awards process, the master of ceremonies asked all other recipients to enter one way and exit the other. When the second award was given, the journalist followed the instructions to the letter and, upon receiving his trophy, said, “Who says that journalists aren’t trainable?”

During our recent redesign, certain recurring requests from our readers began to weigh on me. As a result, I had the opportunity to shock and surprise some of my colleagues. I calmly announced that I had completely reversed myself on a long-held editorial position and asked the other CGW editors what they thought about the change. To my surprise, most of the editorial staff felt that it was “about time” we made the change and my publisher, who had attended the same awards ceremony, paraphrased the newspaper man by saying, “Who says old editors aren’t trainable?”

We made that change and others almost as radical during our redesign. As a result, early response to the redesign seems to be very favorable. So, we have once again decided to think heretical thoughts and consider changing the way we do things. Two articles in this issue make it particularly convenient to introduce these minor reforms. The first is this month’s Bogey’s Bar & Grill where Tom Basham presents a very convincing definition of a simulation. The second is this month’s Broadside & Grippeshot where Alan Emrich reprints some very funny observations on Warlords II vs. V for Victory in the race for Premier Wargame of the Year.

We have no intention of being like the comedy routine where Tommy Smothers responds to his brother’s admonition to “Think about it!” by sticking to a totally ridiculous assertion and saying, “I’ve thought about it. I’ve considered it, and you’re wrong!” Instead, we have decided to reconsider, reevaluate and make it right.

First, the X-Wing problem. When X-Wing was first released, several of the editors saw a marked distinction between the simulation aspects of the product and the product with which it was most compared, Wing Commander. We perceived Wing Commander as being, basically, an arcade shoot-'em-up using simulation-style technology and presenting a branching storyline. We were happy, Chris Roberts was happy (especially when the game was selected as the Overall Game of the Year), and none of you, our readers, seemed to have a problem with that classification. With the X-Wing game, however, we knew that Larry Holland was trying for more of a simulation feel. So, we saw no real problem with labeling one game an Action game and the other as a Simulation. We were happy and Larry Holland was happy (particularly when the game was selected as Simulation of the Year), but most of you weren’t happy. We received lots of cards and letters complaining about our decision, but we stuck with it.

After editing Tom Basham’s column for this month, we decided that we had made an error. Even the flight model in X-Wing is much more like an atmospheric flight model than anything you’d expect to experience in space. Like Tom, we think that simulations should model real-world experiences. So, we are going to change the classification on X-Wing and all its sequels to that of Action. There comes a time when you have to be consistent with your own rules and definitions. Now is that time.

Next, the Warlords problem. After we had awarded Warlords the honors as Wargame of the Year, we published new, tighter definitions of what we considered to be a wargame. Our more precise definition called them “command perspective strategy games which are usually based on historical events.” To be sure, we could appeal to the use of the adverb “usually,” but you knew what we meant. You wrote to us about how great Warlords was as a game, but complained that it wasn’t a wargame. We defended our position by pointing out that these fantasy battles used combined arms in almost exactly the same way as World War II battles. You didn’t buy it.

To be consistent, we compounded the problem by nominating Warlords II for Premier Wargame of the Year, this year. Several of you, Gregor’s hilarious contribution to the fray notwithstanding, called us on it, claiming that it was inconsistent with our usual position. You win. Though we will still refer to Warlords as a Wargame of the Year winner, we will immediately recategorize it as a strategy game. In the future, we will do our best to restrict the Wargame category to those games that have a historical basis.

So, to paraphrase the introductory question, “Who says old CGW editors aren’t teachable?” We not only listen to you, but we sometimes change our minds.
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Chuck Miller -- CGW, June '94

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A CONNECTICUT SENATOR IN CGW'S COURT

Mr. Wilson's editorial on the video game rating system being advocated by Senators Lieberman and Kohl shows shortsightedness as to likely future avenues in PC entertainment software. Sen. Lieberman questioned the basis for an implication that there was a distinction between PC and fixed platform interactive entertainment software. Mr. Wilson failed to adequately explain that distinction in his editorial. Mr. Wilson points out the distinction between production and manufacturing of PC software and fixed platform software. The rating system would not (and should not) be concerned with the process, only the entertainment software content. Therefore the "hardware" distinction is irrelevant.

A better point is the relative "game size" between PC and video games. But, while this may hold true now, it may not be valid a few years from now. What effect the "game size" has on the length of time for review is not a strong enough argument to justify that the rating system and review panel process is flawed.

That leaves only the audience distinction. The cry that "...there is a marketplace of mature gamers" does not justify that distinction. Obviously, the game rating system was conceived with the perception that gamers come in varying ages and maturity levels; hence, the need to rate game content accordingly. Although the PC market is a "largely adult audience," who can say how long that will be true?

Already, CGW carries advertisements for CD-ROM "ADULT" software. With such eloquent titles as "B. Babes 2," "High Volume Nudes," and "L.A. Strippers," I am sure no one expects (or would like to see) these titles be displayed alongside the next Mario Bros. cartridge in the local mall software store. As CD-ROM is becoming the industry standard for entertainment software, pornography will undoubtedly cash in on the video-quality interactive entertainment revolution. Additionally, the video content of interactive CD-ROM software will allow for the most realistic portrayal of violence and gore.

Sen. Lieberman is ahead of the game. Why not establish a rating system now, before the need for such a system is overdue? Rather than complain about the makeup of the companies advocating the plan, CGW should encourage more PC software companies to become involved in the game rating system's development. Prodding your readers to write to the Senators is misdirected.

Finally, as to the "price" to be paid (sic) of "limited subject matter, late game releases, and higher prices," we are seeing that already, without the influence of any rating system.

Mike Sullivan
Manchester, CT

Johnny Wilson responds:
We find it very offensive to think that encouraging our readers to participate in the democratic process is misdirected. We think it is very well-directed. Further, your letter underscores some basic misconceptions regarding the issues.

First, our campaign for informative labeling preceded that of Senator Lieberman by many years. The July/August 1990 issue espoused clear labeling of potentially offensive content for everyone—not just children. Prior to that, we introduced the issue at a Software Publishers Association Consumer Section meeting. The senator was not aware of us on anything. We want to offer information rather than regulation as the key to meeting some very real needs of parents and other consumers. You suggest that the Sena-

The 5th Wave By Rich Tennant

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VIRTUALLY RELEVANT

The other day, I was virtually resting (lying on the couch) and virtually listening to (reading) your magazine and I decided to use my virtual tongue (pen) and virtually speak (write) a virtual monologue (letter) about how the virtual noun (adjective) "virtual," as it is used by virtual salesmen (advertisers) is a completely meaningless word used to describe virtually anything (everything) to make it sound more interesting than it is.

Sean Dell
Washburn, IA

Today, we used our virtual ear (your CGW Full card) and virtually heard (read) your virtual monologue (letter). We decided to virtually speak (publish your letter) with you and open a virtual dialogue (respond). Sean, you are absolutely right. Unless we're talking about a full immersion experience, we try to refrain from using the term "virtual reality."

PLAY MYST FOR ME

I have been playing MYST on the PC recently, while comparing notes with my friends who have been playing it on the Mac. I have spotted a couple of possibly malicious anomalies (not bugs). Regard the "half-a-note" found in the StoneShip Age. On the screen capture from the Mac, the clue reads "on" from the screen capture from the PC, the clue reads "off." The clue provided for the PC is false; the game does not play out that way.

The second anomaly is also in the StoneShip Age. In the stair-wells into the rock, to the underground chambers, there are doors (one to each stairwell) which lead to a third chamber. On the Mac, those doors are
distinguished by a red square. On the PC, the palette has been adjusted so that the square is invisible. This is not a problem of monitor calibration; the difference between the PC and Mac versions of the shot are visible when you place both screen captures on the same screen.

I have tried to talk to Broderbund Customer Service, which transferred me to Technical Assistance. The tech said they were aware of the problem, but would not give me a name or address at Cyan to write to. A friend of mine got in touch with Broderbund via America Online and described the problem of the note; their answer was that it was a "typo."

I find that answer disinguishing. The game was put together properly on the Mac. A series of still shots were created, 2,500 in all, we are told; there should have been no reason why any of these would have had to have been done again. Someone had to do a little additional work to substitute "off" for "on" on the note. The adjustment of the palette, to make the red square invisible, is not so obviously a case of mischief; but given the clear evidence of mischief in the note, I have to suspect the palette switch was deliberate, as well. Both of these things are limited to the StoneShip Age; I would expect that someone with limited responsibility in creating the MPC version of the game thought this would be a cute joke.

I would guess that some happy Mac partisan was thumbing his nose at poor PC users. As a graphic artist working on the PC, in a field where there is a preeminence of Macs, it is an insult I am sensitive to. Why don't I use a Mac? Because when I started using a computer with my work, the Mac was not available. When it did come out, it was more expensive than a PC. If I made more money, maybe I'd have a Mac; maybe I'd have a car too. For a Mac user to be spitting on me for using a PC is like some motorist spitting on me for riding a bicycle.

Robert Rusick
Rochester, NY

It seems you've got an interesting case, Robert. Perhaps an explanation from Broderbund and a patch are in order? What say you Broderbund?

SOONER DONE THAN SAID

I think you need to do an in-depth look at Impressions Software. From European importer to computer game pact in the U.S. is a major achievement.

Lowell Denning
Silver Spring, MD

Our company report on Impressions Software appeared in the February, 1993 issue of CGW (#103). The issue should still be available as a back issue.
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Back To The Virtues
Origin System Recasts The Fate Of The Avatar

In response to early criticism of Ultima VIII: Pagan, Origin Systems has reconsidered the direction of their best-selling series. In a recent interview, Origin informed CGW that Ultima IX would be returning "back to the virtues that made Ultima as distinctive as it was originally."

As a first step in the return of virtue, Richard Garriott, the creator of Ultima who is known to his fans as Lord British, has given the Ultima IX helm to Warren Spector, Garriott's producer on both Ultima V and Ultima VI. Spector, a former paper game designer for Steve Jackson Games and science fiction novelist, told CGW that the first design session he chaired was begun by reading all of the gamer correspondence about Ultima VIII: Pagan. The design team discussed the fact that there were many longtime Ultima fans who felt like the latest game design had moved too close to action gaming and strayed too far from the strengths of the series: the virtues, story and character interaction.

Spector believes that Ultima IX will be able to build on the concept of avatarhood without being as obvious as in Ultima IV, the game many believe to be the high point in the series. Spector suggested that the Ultima IV was revolutionary in its time, but still reflected a series of unconnected quests (one for compassion, one for courage, etc.) rather than the pursuit of an avatar with an integrated character. Though he wasn't certain how they would implement the quest for virtue, he was emphatic that the virtues would be a key element in the next installment. "If," he stated candidly, "we can get some of our followers who were disappointed in Pagan to try Ultima IX, we don't think they'll be disappointed."

In affirming his confidence in Spector, Lord British reminded us that he considers Ultima V to be the high watermark of the series in terms of story. He confirmed that he would be working with Spector's design team on Ultima IX, but that he needed the kind of vision Spector had displayed in working on Ultima V and VI in order to make a success of Ultima IX.

For a detailed discussion of the virtues of virtue, see this issue's Scorpia's Sting on page 29.

We're All DOOMed To Meet On-Line

Here's your chance to confront the diabolical designers responsible for the collapse of your social life. From August 1st through the 5th, ZiffNet is hosting an on-line discussion of the sequel, Doom II, with the Doom design team, CGW editors, and CGW Forum SympRSS Lockwood. Let the designers know what you'd like to see in DOOM II, find out what they're been conjuring in hell's kitchen, and talk directly with the similarly afflicted, GO GAMEWORLD on CompuServe and post your messages in section 17, Doom.

As if that wasn't enough, you can also find lots of DOOM goodies—new levels, sound enhancements (Three Stooges sounds, nyuk, nyuk), editors, and hints in the CGW Forum. Plus you can get your questions answered and share brutally effective tactics with CGW's editors and other point-blank-firing, rocket-launching maniacs like yourself.

ZiffNet is an extended service of CompuServe and carries a membership fee of $2.95/month. CompuServe members should GO ZIFFMEM for details. If you are not a member of CompuServe, call 800-666-0380 to receive a sign-up kit, or have your modem call 800-346-3247 to find your local node. See you in hell!
PLAYING LATELY?

Here are the titles that gamers are spending the most "quality time" with. Let us know which game you've been playing lately, by writing the name of your current addiction in the "Playing Lately?" section of the CGW Top 100 poll card.

1. Doom (id Software)
2. Master of Orion (MicroProse)
3. Elder Scrolls: Arena (Bethesda)
4. SimCity 2000 (Maxis)
5. X-Wing (LucasArts)
7. Fleet Defender (MicroProse)
8. Privateer/Righteous Fire (Origin Systems)
9. Warlords II (Strategic Studies Group)
10. Betrayal at Krondor (Dynamix)

Notable Quotes

Wit, wisdom and caustic quips from gaming's harshest critics

I have never been much of a role-playing fan, but THE ELDER SCROLLS: ARENA has shown me the error of my ways. If there is such a thing as the perfect CRPG, this is it.

Daniel Hamlett, Omaha, NE

DOOM—the game of the year? I was bored after 20 minutes?

A.S. Fischer, Philadelphia, PA

Look at what MPS has done for flight sims. They have mainstreamed the closet flightjock with FLEET DEFENDER! And they have allowed a great looking program to run on an average size machine. Take note Origin!

Tim Verpoorten, Phoenix, WI

My wife wants to start a MOO widow's support group. Psions, semper venes!

J.D. Blume, Dallas, TX

While Media Vision's stock has taken a beating from exaggerated company valuations, its latest contender in the sound card arena may be a healthy one-two punch at the competition. The Media Vision PREMIUM 3D and PRO 3D sound cards use SRS 3D sound technology and are wave-table upgradable using a Korg-based daughter card. The first VESA-compliant audio cards, they come with either a single SCSI-2 or combined Mitsumi, Sony, and Panasonic CD-ROM interfaces.

The PREMIUM 3D's digital audio is handled with Media Vision's JAZZ 16 chip, which is compatible with SOUND BLASTER and SOUND BLASTER Pro digital audio. FM synthesis is handled with a genuine Yamaha OPL3 chip.

The most impressive feature, however, is the SRS Labs 3D audio. SRS (Sound Retrieval System) creates a field of sound from any two speakers that seems to come from every direction, eliminating the old "sweet spot." It can make mono music sound stereophonic and even enhances QSOUND (which places sounds at coordinates relative to the listener). Using SRS with a flight sim gives one a strong sensation of being in an actual cockpit.

The add-on daughter card, called the PROFESSIONAL WAVE TABLE UPGRADE, has a whopping 4 MBs of sound samples in ROM. The $199 upgrade to the PREMIUM 3-D will also work on any sound card with a feature connector for Creative Labs' WAVE BLASTER. The wave table chips used on the Korg-based upgrade are the same that Korg uses in its X-3, 12, and 13 professional synthesizers.

The PRO 3D sound card is Media Vision's answer to Creative Labs' AWE32, but it is aimed at gamers rather than musicians. It has a simple installation procedure and works with any General MIDI compatible game with a lot of driver overhead. In short, musicians who wish to upload their own patches to the sound card should look into Creative Lab's AWE32, but for the average gamer, Media Vision's PREMIUM 3-D may be the ticket.

The PREMIUM 3-D has a suggested retail price of $199; the $379 PRO 3-D combines a PREMIUM 3-D SCSI 2 sound card with the Professional Wave Table upgrade. For more information, contact Media Vision at (800) 845-5870.
Life Is Sweet In “Chicago”

Microsoft OS Promises Easier Game And Hardware Configuration

Deep within building 12 on the Microsoft Campus, the program which may fundamentally change computer gaming was finally unveiled in an exclusive preview to the computer press. Chicago is the next generation, 32-bit operating system from Microsoft. It will replace the slower, 16-bit, “Windows layered on DOS approach,” and it is designed to make Intel-based computers easier to use.

Boasting impressive built-in SCSI and network drivers, Chicago will end CD-ROM installation nightmares with its true “plug and play” SCSI-CD compatibility. And since drivers are built into Chicago, DOS sessions can have 600K+ free RAM without any tweaking, and could have more as the software is further refined.

The current Windows File Manager and Program Manager have been merged in Chicago into a new “Explorer” file management shell. DOS games are executed by issuing a "File/Run" command from Explorer. Microsoft demonstrated this by running Doom in Chicago at speeds approaching the DOS version. In the Windoom demo, the game ran in high resolution (640 x 480) with other Windows applications loaded.

Among Chicago’s more impressive features are those that encompass mobile computing and remote computing. With Remote Access, users engaged in a network game at one location can be joined on their network by a remote player over the phone. And modem users will no longer use arcane “AT” commands—Microsoft’s goal is for all modem manufacturers to ship their products with Chicago drivers to make configuration simple.

Modem connectivity promises to be simplified as well. Parties may first call one another and talk before clicking an icon to switch to a data connection. After clicking again when the game or file transfer is completed, the parties may resume their conversation.

As with modems, Microsoft expects that all hardware—especially sound cards—will ship with Chicago drivers. Audio installation will be in Windows. As for video, MPEG playback software is built into the operating system, and Chicago will also handle MPEG playback devices. Graphics are handled by WinG, a 32-bit Dynamic Link Library responsible for the port of Doom to a Windows application. Additionally, Intel has announced a 3D graphics API for Windows called 3GR.

Chicago may bring the computer gaming world one step closer to the “plug-and-play” dream. Certainly, anything that will end the nightmares of installation and hardware configuration will be welcomed with open arms.

Music To The Nth Degree

Top 10 Musicians Form Band To Score Games

Members of the bands Psykosonik and Information Society have joined to create Power of Seven Music & FX, a group dedicated to creating music and sound effects for games. The first game that will feature their music is a 3D action title from Raven Software, the group that developed Shadowcaster.

Power of Seven consists of Psykosonik bandmates Paul Sebastian, Daniel Lenz, Theocentric Universe, and Michael Mayhem. Information Society lead singer Kurt Harland, and former Paisley Park producer Michael Koppelman. Collectively, the new group has recording credits for eleven Top 10 pop and dance chart hits including Welcome To My Mind and Silicon Jesus by Psykosonik; What’s On Your Mind (Pure Energy), Walking Away and Peace and Love Inc. by Information Society; and Prince’s Gett Off and Diamonds and Pearls.

Although most of their chart success has come from techno club music, Power of Seven insists that they will not be limited musically to any genre. The group’s “interactivator,” Paul Sebastian, says, “Just because techno is our signature style doesn’t mean we don’t know how to do anything else. I’m trained classically, and Michael [Mayhem] is just as comfortable creating loud, distorted guitar stuff as Minneapolis-style funk.”

The as-yet-untitled Raven Software game isn’t the first foray into electronic gaming for the group’s musicians. Activation’s Excalibur 2097 features five instrumental tracks from
Psykosonik. "The Activision deal is really what got this whole thing started," says Power of Seven lead man Theocentric Universe. "It made us realize how natural it is for us to write music for this market, since we're hard-core gamers and all of our work is created via MIDI."

The Power of Seven can be reached on the Internet at pauls@bitstream.mpls.mn.

**BETABITS**

**LORDS OF MIDNIGHT**

Domark's latest project is shaping up to be a role-playing game of a different color. Walking through its free-scrolling 3D environment is a bit like playing an off-road simulator. The huge voxel generated landscape is colorful and dynamic; as a day progresses the sun will climb in the sky, and as the months pass the world will reflect the seasons. We weren't able to see much of the story at this point, but it sounds unique in that you will be able to jump into the skulls of 24 different characters, and when you leave a character, he or she will intelligently go about his or her business. If this non-linear, multi-character story shapes up as well as the graphics have, we might have another BETRAYAL AT KRONODOR on our hard drives. Projected release: September.

**STAR TRAIL**

The next chapter of Sir-Tech's Realms of Arkania series will open to find its heroes in a completely different graphical world. The simple movement system of the original has been replaced by a free-scrolling Ultima Underworld-style system that will allow you to look up at the ceiling and down at the floor. In addition, many changes have been made in response to criticism from players of the original. You can now hack and slash in two combat modes: a quick, automated system, and the detailed, turn-based system of the original. The auto-map has been improved graphically and functionally (it now has zoom and edit capabilities), and the outdoor, overhead travel system has been given a few positive tweaks. As in the original, your characters will have a detailed set of personal traits, including weaknesses and handicaps. This German design, based on the popular Das Schwarze Auge paper role-playing system, may offer much to RPGers bemoaning the decline of epic role-playing quests. Projected Release: Fall.
With The Fierce Beauty Of Super VGA Graphics And The Handling Characteristics Of An Ox, NASCAR RACING Will Be One Tough Game To Tame.

by Gordon Goble

It starts with a dull, flesh-crawling reverberation, and quickly escalates into thunder. As it tied to a centrifuge, the undulating snake begins to circle within its confines. Faster and faster it goes, the segmented serpent tossing aside chunks of itself, only to meld together again and speed ever onward.

NASCAR. Brutal and beautiful, it is host to some of the best drivers and arguably the tightest racing in the world, and it's coming soon to a computer near you.

It's going to look fantastic.

That Papyrus Design Group is the group of people responsible for bringing the world's premier stock car series to the PC is not a complete surprise. "First in a series from Team Papyrus Racing," it said on the packaging of IndyCar Racing, and we were all left speculating as to the next logical step. This is it, and if pre-season testing is any indication, NASCAR Racing is yet another breakthrough product from a company that's getting awfully used to podium finishes.

Although actual wheel-to-wheel competition was impossible at this early stage of the game, it can be safely said that Papyrus has once again raised at least the graphical stakes in this game of dueling racing programs, bettering the hand laid down by IndyCar Racing. Tomorrow is yesterday faster than you can say "multiple car collision" in the sphere of computer game technology, yet the word "ultimate" kept coming to mind as the early NASCAR Racing build flashed before my eyes.

Imagine a driver's perspective that mixes the depth, texture, and intricacies of IndyCar Racing with the clarity of World Circuit, and you're getting the picture. Logos, numbers and billboards are legible from distant vantage points, walls and barriers are rich with depth, yet suddenly smooth and flowing. Subtle track texture and crisply outlined cars are certainly easy on the eyes, and that is the high resolution (640 x 480 vs. 320 x 200 for IndyCar) environment of NASCAR Racing. Papyrus is shooting for a standard-setting screen refresh rate of 30 frames per second, doubling the capacity of IndyCar. If they even come close to their goal, this officially licensed NASCAR product will surely be one huge gaming step into the future.

Yet NASCAR Racing crew chief (and game producer) Adam Levesque is quick to inform us that the obvious striking visual achievements are not the end of the story. "We felt that with IndyCar we had a great game, but we've enhanced that experience...added some flash," says Levesque, who with IndyCar top gun David Kammer and Papyrus veteran John Wheeler make up the three man core behind NASCAR.

Levesque's "flash" is going to delight a grandstand full of digital racing fans. Pleasant appointments will include printer support from within the program (Levesque maintains his desire that race stats reflect real life newspaper and magazine summaries), modern and direct link capabilities (9600 baud and up only), a save game feature (probably accessible from the pit area only—in keeping with the realism that is a Papyrus staple), accelerated time, replays, and a high resolution car paint utility.

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But as digital racing devotees know, all that stuff is just window dressing. At any given time, 16 people have been toiling on NASCAR since its Christmas origins, and it won’t go unnoticed on the track.

**Two And Three-Quarter Tons Light**

Make no mistake, Papyrus wants you to know that you’ll be piloting a stock car. “It’s a 3500 lb. car with very little downforce...it’s going to be very tough to drive,” says Levesque, echoing my early opinion of the feel. In testing, the preview car was nothing short of treacherous, and racing addicts please note that a hot shot in an Indy machine won’t necessarily be a quick study in a NASCAR.

The tracks of Loudon, New Hampshire and Phoenix were at the ready, but it was the smooth banking of Michigan International Speedway that would serve for this test. Behind the wheel at Michigan’s pit lane, the buzz was at first set in motion with the deference of an IndyCar veteran. First reaction: “Why doesn’t this car accelerate any faster?” Second reaction: “Why am I nose first in the wall?” This pattern was repeated in a frustratingly similar fashion, until I smartly decided to convince myself that each crash would be money out of pocket on the real life circuit. Using a very light foot, this cheapskate finally managed to nurse the big moose around the track for a single lap with nary a scratch on the old paintjob. (Only later did I discover that driving an IndyCar would become quite a bit less strenuous after a few hours spent taming a NASCAR.)

But there grew a sense of confidence in knowing it could be done. Gradually the car was being brought up to speed, and while straight lines were no longer posing a serious threat, cornering was. An early pitch into a turn seemed to provide the best results, not dissimilar to driving a dirt-kicking sprint car. If the pitch was a little too severe, corrections could be made, but a wide line brought almost certain doom. Thankfully, the ghost-like vapor cars were there for aesthetic value only, and were not crunchable (but looked superb).

**No Slap Dash**

The cockpit of a NASCAR is just as one would expect from Papyrus. A stark metallic instrument panel with appropriate gauges and toggle switches fill the screen base, portions of the roll bar are visible to the side, and the front windshield is complete with supports. A wide rear-view mirror sat at the top, but as yet reflected no images. Levesque promises the eventual rear view will involve several cars and give some indication that faster vehicles are getting ready to pass. The up close and personal nature of this racing demands accuracy, and NASCAR should be ready to supply it.

For those who revel in carnage, the test version did not depict the visual results of accidents, but Levesque ensures that crashes will thrill even the morally bankrupt. “Depending how hard you hit, pieces will fall off. If the damage is not too severe, you can pit, and the crew will do their best to make repairs. Aerodynamics may be altered, but by the end of the race, cars will be in various states of disrepair. We really wanted to add 3D physics with tumbling and flipping, but we’ll save that for the future.” Crumpled back ends and missing hoods are just will expose some of the individual strengths and weaknesses of drivers. That drivers will act a little more hostile at the end of a race (and that a certain black #3 car will be, shall we say, “pushy”) is speculative at this time, but some drivers will act more aggressively than others. Papyrus also promises improved AI over IndyCar, and bumpdrafting, a common occurrence in the real thing, will be perfectly legal in NASCAR. Drivers accustomed to imminent destruction as open wheel contacts open wheel, take note: these wheels are covered.

Levesque hopes to eventually portray almost all the real NASCAR circuits in the new product, and specifically mentioned Bristol as “madness...it’s madness!” In all probability, some tracks will be available in add-on packs only, and licensing issues are being dealt with on a continual basis in this regard. The initial release should include Talladega (2.66 mile super speedway), Michigan (2 mile super-speedway), Atlanta (1.5 mile speedway), Darlington (1.37 mile oval—the track that’s “too tough to tame”), New Hampshire (1 mile short oval),

**PHANTOM OF THE OVAL** Although this car’s intentions are only rumored at press time, we suggest you watch black #3 in your rear-view mirror during the closing laps.

**TREACHEROUS TURNS** Straightaways are tough, but even IndyCar won’t prepare you for turning the corner at anything resembling high speed in NASCAR.
ZERO TO ONE-SIXTY From the driver's seat, your view of the world seems to move even faster than the 200 mph speeds of competition.

Phoenix (1 mile tri-oval), Bristol (1/2 mile oval of "madness...it's madness"), Martinsville (1/2 mile oval), and Watkins Glen (2 1/2 mile road course). Whether every car and team will be a digital representation of itself is also yet to be determined, but Levesque assures that "real drivers and teams will be in."

In audible developments, NASCAR will feature the vocal strains of someone (?!), supplying game introduction, track announcements, and the like. Music will be orchestrated by "Team Fat," the people responsible for the melodic structure of THE SEVENTH GUEST, among other games. But little of this matters when driving, and in the cockpit, drivers will find themselves serenaded by the Stock Car Orchestra—engine sounds, tire squeals, air wrenches and screaming fans—complete with that great INDYCAR-type Doppler effect. The engine rumble of the test car (pumped through a small amplifier) was both definitive and wall shaking.

The Price Of Admission

So, you think you've got what it takes, do you? Well...quick reflexes, natural skill, and a good attitude are just part of the package; there are certain other requirements that must be met to fully experience all that NASCAR has to offer. For openers, pleaseease make sure that you've got some form of top-notch linear steering/acceleration/braking device. A NASCAR can be a bit of a handling nightmare, and if INDYCAR wasn't the final nail in the coffin of keyboard/crummy joystick driving control, then NASCAR definitely is. But there's more criteria to be met...

NASCAR RACING is actually two games in one. As mentioned earlier, Papyrus is going High Res with the release of their new product, but they'll also ship a Low Res (INDYCAR equivalent) version. The Low Res release will do everything the High Res can, except it will look much less pretty and accurate while doing it. It will also take up a whole lot more hard drive room in the bargain, because High Res NASCAR will only be available on...hold on to your wallet...CD-ROM. Although each race will be loaded and run directly from memory, Levesque recommends a double-speed drive for top performance.

Both versions will require a 386-33 MHz unit with 8MB RAM as an absolute minimum, but if the High Res version seems at all tantalizing, be forewarned that anything below a 486-66 will result in a loss in graphic quality, manifesting itself in either a jumpy frame rate or, manually, in less detail. Also remember that the faster the frame rate, the more time you'll have to react to on-track incidents. An extra frame may mean just a millisecond difference, but in racing, that's often what it takes. Personally, I've witnessed the High Res version, last year's technology (which looked great beforehand) just didn't crack the old coconut any longer.

It is entirely possible that, just before Christmas, legions of PG racing fans will be trying to dig up the money necessary to upgrade their computers. NASCAR RACING is on its way, and Papyrus has unintentionally introduced the one realistic element lacking from all racing sims previ-

RED WHITE & BLUE From color schemes to cars spinning out of control, NASCAR captures the essence of this truly American sport.

Gordon Gable is one of the biggest auto racing fans in Canada. He has been a contributor to On Track and Formula magazines, in addition to being CGW's resident racing sim reviewer.
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Go for the Crown.
Even Interactresses Get The Blues

Behind The Green And Blue Screens On Computer Game Sets

by Johnny L. Wilson

It will come as no surprise to fans of the cinema that the urban scenery passing behind the car in On The Waterfront, as Marlon Brando’s character told his brother that he “coulda” been a contender,” wasn’t actually passing behind the two actors. Almost everyone knows that the movies use what is called a “process shot” to fool you into thinking that the actors are in moving vehicles. In reality, most cockpit shots in air combat movies and most driver close-ups in racing movies prior to the ’70s were filmed while a rear projection screen provided the action in the background.

In general, this technique has served the film industry well. Since the camera lens is only equivalent to looking at an image with one eye, and both eyes are required to provide accurate depth perception, the camera, and later the viewer, is fooled into thinking that both the foreground scene and background footage are in the same space. Occasionally, however, the background footage would be grainy, slightly out of focus or showed images at unrealistic angles. Almost all of us can remember watching a scene and saying, “That looks fake!”

With Hollywood’s growing involvement in the computer and video gaming industries, it’s interesting to see what is happening in the current state of the art of game production. Software publishers have noticed that putting more realistic looking characters on the screen of a computer or video game seems to broaden the appeal of the product to a wider audience. They speculate that, since most of the mass market is already used to seeing video images on television, they could have a potentially larger audience for their products if they could get the video to look enough like broadcast video.

**Invisible Hands**

One of the most common sights wherever video for games is being taped is a blue or green wall, floor and/or screen. Whenever you see one of these in front of a camera, you’ll know that one of two film processes is being used: Chromakey or Ultramatte. Both work essentially the same way and have been used for years as Hollywood special effects. The process is relatively simple. If the camera and film are set up to filter out blue or green, anything on the set that is blue or green will be invisible to both camera and viewer. Hence, if you are using the Chromakey technique and dress an actor up so that every square inch of his or her body is covered by a blue or green cloth that is exactly the hue you are filtering out, that actor will be “invisible” to the camera. If you happened to see Chevy Chase in The Invisible Man, you know how this technique works.

In the movies, this technique is often used to make things disappear or to have objects float around on screen without benefit of “wires.” In computer games, this technique is more often used to make things appear rather than disappear. Often, the actors in Activision’s Return To Zork sat or stood in front of a green screen and went through every conversational possibility for their lines.
This was a stretch for the actors because they were, in most cases, looking right at the camera and trying to react with you as the player. Though shooting the footage this way is analogous to the way close-ups are filmed in Hollywood, the actors rarely had the opportunity to react with each other, like the cast of a major film or television show would react with each other on the sound stage.

This process allowed Activision to merge art generated on the computer with the film footage of the actors at a later date. In this way, they could place the actors on non-existent sets. This obviously reduces the cost of building real sets and means that companies are less likely to have to reshoot a scene because of something wrong on the set. To be sure, the camera crews and directors must be careful about shadows, foreign objects and even scuff marks on the blue or green areas because they will show up unnaturally on the computer sets when they are processed, since they are not the blue or green color that turns invisible. Also, there is the occasional horror story like Trilobyte's experience during the filming for The 7th Guest. The blue on the screen was not exactly the right blue, so walls and areas that were supposed to be invisible turned out to be partially visible. Rather than reshooting all the footage, they decided that the resulting blur made a decent aura around the ghostly characters of their horror story. But, not everyone intends to have ghosts on the screen.

Despite painstaking efforts and costly special effects to create digitized video in The 7th Guest, Return to Zork, and Critical Path, the question I heard the most was, “Why doesn’t it look more natural?” With The 7th Guest, Trilobyte could artistically work every image into a ghostly apparition, and the company had spent extra time to render all of the environments as detailed 3-D rooms. In other games, there was a problem between the computer generated sets, which worked reasonably well with the limited palette of the computer, and the myriad of real-life hues that were captured and leveled out too much by the computer palette. This causes “hot” edges on the images of the actors so that the “alias” of the image edges look like they are insects buzzing around the actors’ shape and causing the images to stand out against the background like a cut-out.

Sierra tried to solve this problem by using a digital camera to capture backgrounds, then melding those digital backgrounds into the Chromakeyed area of the video for Police Quest: Open Season. The characters still stood out, but the art team was then able to reduce the “hot” edges by “dithering,” adding gray pixels in between the black pixels of the video outlines and the lighter pixels of the digitized sets. This technique is expected to enhance the video effect in Sierra’s next major project, Roberta Williams’ Phantasmagoria. This tale is set in a house once owned by an illusionist who, like Harry Houdini, wanted to find out if there was any validity to the supernatural. The gamer plays a character who has purchased the house and, as you would expect, discovers weird things happening within the house and the character’s mind. So, the gamer will have to explore the house in order to get to the bottom of the mystery. To make the house and the events depicted within it more realistic, the company has integrated the Chromakey process with complete 3-D environments rendered on Silicon Graphics workstations.

Visible Hands
Currently, there are several projects using the Chromakey or Ultramate process. In addition to The 11th Hour, the sequel to The 7th Guest, and Phantasmagoria, there are Rocket Science’s Loadstar, Access’ Under A Killing Moon, Media Vision’s The Daedalus Encounter, Origin’s Wing Com-

MAX HEADSHOT An actress in EA’s Shock Wave is filmed against a blue screen so that a digital backdrop can be added later.

THEY GET PAID FOR THIS? Tia Carrere and co-star take five on the set of Media Vision’s The Daedalus Encounter.
mander III, and Electronic Arts' Shock Wave, among others. Most of these products are using Hollywood talent with a certain amount of star appeal, and all of the design groups want to get composite video/settings that look as natural as possible—the "process" shots of the '90s.

Loadstar is a Brian Moriarty design from a Ron Cobb movie script. It features the outer space equivalent of a down-on-his-luck trucker who has to make one contraband delivery in order to earn his life's dream. The vehicles are called jump trucks and they carry cargo from the industrial zones of outer space to the residential zones of earth. In order to be able to launch the contraband-filled jump truck, you have to traverse a surface than you would in outer space, and the actual game play is more tied to flying in a definite area. Your character flies out of an orbital-based carrier and goes on missions to various earth landmarks. These landmarks have been besieged by more aliens than Erich von Daniken could imagine. Between game sequences, the story and motivation unfold.

Under a Killing Moon is the latest Tex Murphy mystery from Access. It has that hard-boiled Sam Spade feel to it, especially with the way Brian Keith coaches you in some of the video snippets. It also features Margot Kidder as the bartender.

Media Vision's The Daedalus Encounter is a science-fiction tale where Tia Carrere, the love interest in the Wayne's World movies, plays a member of an independent space salvage crew. They go into orbiting in search of drifting wrecks, and try to recoup everything that can be resold. In this adventure, however, they find that the ship they planned to salvage is inhabited. They also discover that they have to find a way to change the ship's course before it drifts into a nearby sun.

Loadstar, Under A Killing Moon and Shock Wave all use a mixed approach. They are not building elaborate sets, but they have done some set design. In Loadstar, Barry Primus sits in a cockpit with a familiar blue screen as the view screen for his cockpit. Digitized game scenes can be processed into the shot to make it look as if he is starring out into scenes from the action sequences in the game. Both Loadstar and Under A Killing Moon have bar scenes in which tables and a bar serve as props around which the artists can digitize more detailed sets at a later date. In Shock Wave, the company built a console for a control panel and painted it the correct hue in order to be able to project computer-generated dials, read-outs and computer screens onto it. In this way, they were able to get a hi-tech looking piece of equipment at a bargain basement price, but the actors were able to touch, lean on and look at something that was tangible.

In Media Vision's The Daedalus Encounter, all of the alien sets and aliens are created by computer artists and processed in at a later point, but the actors do get to use physical props like a round orb and certain weapons to enhance the illusion that they are in the scene. On this set, we observed filming delayed for up to 15 minutes because of a scuff mark on the blue surface of the floor, since it would have shown up incongruously on the computer art for the alien deck. We were also surprised to realize that the actors were willing to work longer hours for these shoots than they work on a typical Hollywood schedule.

Chris Roberts opted not to try to digitize the aliens for Wing Commander III. The Kilrathi are combination human/puppet characters that look like something of a cross between Planet of the Apes and The Dark Crystal. Since a lot of the action takes place on large sets like throne rooms and hangar decks, it is a lot cheaper to completely render computerized sets than to try to build costly sets on the sound stage. The Chromakey approach makes considerably more sense.

There is still considerable debate, however, over the value of digitized video in computer games. If the look and feel of the characters vs. the sets does not become more credible and satisfying, this may well turn into a trend that goes the way of 3-D movies. It will be particularly interesting to see how popular the cinematic sequences in Loadstar (90 minutes of live video footage), Shock Wave (25 minutes of full motion video) and Wing Commander III (90-100 as yet unedited minutes of video), which basically segue gamers between action sequences and provide motivation for those sequences, compared with the interactive movie style that uses digitized video in every scene.
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DOOM'S DAY
Monday, October 10th, 1994

The saga continues when
DOOM II: HELL ON EARTH
explodes into retail stores.
Scorpio The Avatar

Every once in a while, the role-playing world hits a lull. This provokes a mad scramble and desperate conversations with my editors in an effort to come up with something to write about. The long-awaited At-Qadim from SSI was slated for this month. As it turned out, I am one of the “lucky” few for whom the game will not run beyond a certain point. This matter is giving SSI fits, since there is no common denominator among us technologically troubled. Different DOS, different sound cards, different graphic cards, different memory managers...you get the idea. So At-Qadim went off my list, and there was nothing in the queue to take its place.

So, after a great deal of thought (while riding the thin edge of panic), I decided to answer a question that pops up in my mail every so often: “What’s the best game you’ve ever played?”

My answer is unqualified. The best game I’ve played so far is Origin’s Ultima IV. Now, that may surprise some people. After all, Ultima IV is an old CRPG, and while it has an honored place in CGW’s Hall of Fame, many players have as their favorites the “latest and greatest.” Yet, what do most of these “hot new games” have besides whizbang graphics, bollix sound, and slick interfaces? Not much depth or substance, in my opinion.

Let’s face it, about 98% of all CRPGs can be summed up as follows: “We go out and bash on critters until we’re strong enough to go bash on Foodle.” That’s the plot, and usually most of the supporting storyline, too.

Of course, there’s nothing wrong with hack and slash. A little monster mauling now and then is always good for releasing frustrations, and we all enjoy finding those treasure piles of neat items. However, hack and slash, even with plenty of frills, doesn’t make for a “best ever” game. To receive that label, a product must be far more substantial than mere critter chopping, and have unique aspects besides. Not many come up to those high standards, and of the ones that do, Ultima IV still leads the pack.

It was in the cards

Ultima IV began with what was, for the time, a novel method of character creation. Most of us, I think, recall with fondness the Gypsy woman and her quasi-Tarot cards.

CONJURING UP A GAME FROM THE PAST, SCORPIA PLEADS FOR THE FUTURE OF ROLE-PLAYING

by Scorpio

SCRY SIGHT

A figure is beginning to form in the vaporous mists of the crystal ball. The figure appears to be a computer dressed in sequins...no, wait...that’s sequoia. It appears that many “part twos” are in the future of role-players. Dungeon Master II, Dark Sun II, and the sequel to Realms of Arkania, Star Trail, may all be coming your way this Fall and Winter. Dungeon Master II is being developed by Interplay, and will offer improved graphics over the original, though many elements that made the original a Hall of Famer will remain unchanged. For Star Trail, Sir-Tech will also be snazzing up the look of the Arkania engine and addressing many of the gameplay problems players have pointed out. While the image of Darksun II is a little hazy, it’s quite clear that SSI will be using the same game engine with some minor tweaks.

In other visions, Spectrum Holobyte has finally signed the entire cast of Star Trek: TNG for their upcoming TNG game.
or spellslinger, concentrating entirely on developing physical or magical prowess. Combat is the means to this, and it is easy to see why other CRPGs have so much. It’s the main way to get ahead; in some cases, the only way.

Now, you certainly had plenty of fighting in Ultima IV; it was how you proved your Valor.

"Character development in Ultima IV depended on how you reacted to and treated other people. This, game fans, is what role-playing is all about."

This was new and different. No dice rolls, no point spreads. "Here is the situation; how do you react to it?" There were no right or wrong answers; the reading was designed to gauge your mental outlook, your morals and ethics, and give you the profession closest to them.

With many games, that’s as far as it would go. You’d have your mage or fighter or bard or whatever, and play on from there. In Ultima IV, this was only the beginning of a long journey of the soul, a journey that depended on building character.

No game, before or since, has had such an objective. All others have been concerned with making you a better warrior or spellcaster. But Valor was only one of eight virtues, and developing those other seven did not depend upon killing things. Character development in Ultima IV depended on how you reacted to and treated other people. This, game fans, is what role-playing is all about.

Those whose only experience with role-playing comes from the computer versions are likely to have a skewed vision. They see RPGing as "Well, we make up some characters, kill critters, and haul away treasure"—the hack and slash philosophy, which caters basically to aggregation and greed.

Those who have experience in people-and-paper role-playing know better. Hack and slash is a good way to get started in RPGing; it’s easy to understand and helps players learn the game mechanics quickly. After awhile, though, running around with nothing more to do than kill things and fill your pockets becomes boring.

That’s the time when the mature role-player (of whatever age) turns to thinking of character development, the relation of his or her alternate persona to the world and the people in it. The scenarios they participate in focus more on character interaction and growth rather than endless combat, although combat still has its place; role-playing without action can be just as dull as action without role-playing.

This is extremely difficult to pull off well in a CRPG; most products simply avoid it entirely. Yet there is hope; there has been a trend of late to get some more story, at least, into the games. Perhaps, in time, actual character development may edge its way in there, too.

In Ultima IV, aside from developing the virtues, the concept that gave people the most trouble was self-sacrifice. Invariably, letters came in saying, "Hawkswind keeps telling me I still have a long way to go, but I’ve been giving away all my money to the beggars every chance I get! What’s going on here?"

What was "going on there" was that people were forgetting that the virtue in question was self-sacrifice. Handing out gold is generous, but it isn’t giving of yourself, which is what self-sacrifice means. Donating blood is self-sacrifice. Guarding the retreat of your comrades from the battlefield is self-sacrifice. Did backing off cost you some Valor points?

---

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The creepiest sound effects, and your hair white faster than a career in accounting.

The hairiest experience, with an intense 3-D atmosphere so disturbingly real, you can almost smell the rotting corpse. Gross.

Your fingers are numb. You're choking on a wad of bile lurched up from your ulcerous gut. And your heart is beating so violently, those veins on your forehead are visibly pulsating. You are either, a) playing the best version of The 7th Guest ever, b) on your way to cardiac arrest, or c) both. No, my friend, you shan't recover from this one.
Disciples of Steel

The disappearance of your father has left Lanthor without a leader. Fractional infighting in the resulting power vacuum has left the realm in chaos!

In your heart, you've always known that you were the chosen one — now it's time to act! You've got to save your once-rich land by re-establishing the supremacy of the guilds.

Choose your disciples and your strategies, build vast armies to conquer or defend, heed the counsel of the lords or assassinate them — everything is under your control!

Disciples of Steel is the ultimate role playing game, with stunning graphics and hundreds of challenging quests. Heart pounding sound effects and original soundtrack make Disciples of Steel incredibly realistic. It'll amaze you with its fine attention to detail, powerful weapons, and huge array of magic spells!
That, too, is sacrifice on your part. A very different point of view was needed to get through this game.

**GIVE ME LIBERTY**

Aside from true character development there was **ULTIMA IV**'s open design. You could go almost anywhere you wanted, any time you wanted; the game was very much *un*-linear. There were many things that had to be done, and quite a few objects to be obtained, but for the most part, those could be done in any order.

If you got stuck in one place, you could leave it and do something else for awhile. Many gamers are annoyed by the “A before B, B before C” setup; if you become bogged down in an area, there is nowhere else to go, and frustration sets in. **ULTIMA IV** managed to avoid a lot of that. Eventually, of course, everything narrows down to the endgame, but until that time, the player has a lot of discretion as to where to go and what to do.

While combat was not the main focus of the game, there was plenty of it, as mentioned earlier. What set **ULTIMA IV** combat apart from the others was its balance. The opponents were carefully controlled, so you wouldn’t, especially at the start, be overwhelmed. You could explore the land without having to worry that a horde of orcs or a hevy of barrows would show up and wipe you out. Anything that came along was likely to be as much as you could handle, but not so much as to require frequent saves and restores to get through the fight.

Conversation has always been a staple of the Ultimas. It's nice to be able to walk around town and talk to people. For one thing, you know the world is populated. How many games have either empty streets or roadways crawling with monsters ready to pounce? It makes you wonder if the only inhabitants left are your characters and the shopkeepers.

Another important aspect of these conversations was that people gave you information because they liked you, trusted you, or respected you. This was trust or respect you had earned by your actions during play. The closer you were to the ideal of Avatarhood, the more likely people were to tell you things.

There was none of the *quid pro quo* that infects so many games. “So, you want the location of the +30 Sword of Instant Death, eh? Well, first you must travel to the lair of the Dread Funny Bunnies, and bring back to me the Drum of Ages (batteries included).”

Nowhere in **ULTIMA IV** were you ever someone's errand boy. People didn’t send you off to retrieve lost/stolen items as though you were some sort of pet dog. Many games today that have more than straight dungeoning foist exactly that on you.

Now, a little of this can be okay after all, part of a hero's job is helping people out. Unfortunately, too many products have taken this to extremes, and you end up going hither and yon, bringing this here, taking that there, and in general playing through the mid-game impersonating Federal Express. It pads the game out, and after awhile, it isn’t much fun.

**THE GOOD BOOK**

Beyond all the above, perhaps the most iconoclastic part of **ULTIMA IV** is the ending. As a friend of mine put it, “It's the only game where the goal is to read a book.” Not trashy Fozzie, not saving the world (again), but penetrating to the depths of a dungeon to read the Codex of Ultimate Wisdom. There have been other games with non-violent endings (Might & Magic I, Magic Candle I, to name a couple), but none quite so mind-boggling or original as that.

So now you know some of the reasons why this ten-year-old game is still #1 on my hit parade. Various aspects of **ULTIMA IV** have shown up in other games, but none as yet has been able to put it all together the way Quest of The Avatar did. Nothing has come along to equal or exceed it; maybe nothing ever will. I hope that’s not the case, though, because that would mean the CRPG has stagnated, and this is not something any of us wants to see. We want to see designers thinking seriously about the direction of their games, breaking the mold of eternal hack and slash, and giving us, someday, CRPGs that are really role-playing products. It can happen. It's been done once with **ULTIMA IV**. It can be done again.
All The Clues Fit To Hint

Lands of Lore ■ Eye of the Beholder II ■ Arena ■ Ultima VIII: Pagan
Ultima VII: Serpent Isle ■ Return To Zork ■ Sam & Max ■ Hand of Fate

SO HERE WE ARE IN MID-SUMMER ALREADY. The year certainly seems to be going by quickly; Fred’s got his eye (one of them, anyway) on the calendar, counting the days to the Annual Grues Convention in August. On the other hand, the year also seems to be going by rather slowly, as there sure haven’t been too many new games released lately, and time drags when there’s nothing new to play. Let’s hope that situation changes for the better soon.

Before we get to the mailbag, I have an update on the Daemonstone situation mentioned in the previous column. For those who didn’t read that article, I related the experiences of a reader who was trying to get tech support for the game, and how he ended up having to call England to get it.

Just recently, I heard from Harold Lehman, who advised me that tech support for the game was now available in the US, and provided me with a couple of numbers. I called one of them (the 800 number, of course) and verified that Imagitec is now doing support for the game. If you have Daemonstone and need help with it in any way, you can call 800-438-3566 for tech support (wow, an 800 line—ya don’t see that very often!), or 713-580-2148 for hints. Both lines are open 9AM-7PM central time weekdays. If you have Daemonstone, I suggest you get in touch with these folks, as there is a patch available for the game, and you’ll probably be needing it.

And now, on to the good stuff!

Lands of Lore: So ya made it through the infamous pit room without your map, and now you’re wondering how to get on to the next level of the castle. Well, if you left the pit room, you went the wrong way. Just because something isn’t obvious doesn’t mean nothing’s there. Go back in and look around a little more carefully this time.

Eye Of The Beholder II: Those game multi-packs sure are good for revivals. At least, that’s the only way I can explain the resurgence of questions about EOB II. Anyway, it seems that some adventurers are having a problem at the old “leave many things behind” sign, which was a pain back when this game first came out (some things never change). Remember, it says “many,” not “every.” In other words, you don’t have to put something on each plate, just some of them. I hope that explains the matter now.

The Elder Scrolls: Arena: Riddles, riddles—this game is (heh) riddled with them, and a few folks are staying up nights trying to figure them out. For instance, there’s the “dead men eat this, live men who eat it die slow” poser. Actually, that’s an easy one; you could say there’s nothing to it, in fact. Then we have the “a thief by my marks might be caught” puzzler, which is a little tricky. Many people think fingerprints, but hey, that’s a little too high-tech for this era. So keep in step with the times, and don’t put your foot in it.

Pagan: At the pentagram in the Void, some players can’t get anything to happen, even though all the blackrock fragments (including the obelisk tip) have been activated. That’s because position is everything here: all the pieces must be placed in exactly the right locations for the gate to open. That means putting each piece in the same relative spot on the pentagram as the path to the Titan you defeated with that piece. Once everything’s in place, the rest is automatic.

Serpent Isle: Everyone helps the Gwani, and then they can’t go any further. They’re sure that one of the Gwani can tell them something about the password to open the gates to Skullcrusher, but how to get that information is another matter. The answer to this one is by no means obvious. You need to start looking for Batlin again, once you do that, the Gwani’s memory will show an amazing improvement.

Return to Zork: So you rented a boat, but you can’t make it go, and Ben isn’t talking about it (he probably doesn’t rent many boats because of that). Rats! What a terrible predicament. Almost as bad as walking in on the Troll Chiefman and not being able to get the necklace from him. Hint: don’t have to say a word; just look the part, and you’ll get what you want.

Sam & Max Hit The Road: Okay, you’re at the end game, you have the snowglobe in one hand, and a corked bottle in the other. You’re pretty sure that cork would just fit into the bottom of the globe, but you can’t get the cork out of the bottle (arrgh!). Well, of course not; ice picks weren’t designed for that little job. This is where you have to get bent all out of shape, and you probably know someone somewhere who can help you with that.

Hand of Fate: Some adventurers have made it to town, and beyond. If they could just reach that rope, they could swing over to the other side of the chasm to see what’s there. So near, and yet so far! Ah, the frustrations of gaming. Y’know, thinking is thirsty work. Why not get yourself a cool drink while you consider the matter? I believe there’s a fountain located conveniently near the town entrance.

And that’s all for the mailbag for now. In the meantime, if you need help with an adventure game, you can reach me in the following ways:

On Delphi: Visit the GameSIG (under the Groups & Clubs menu).
On GEnie: Stop by the Games Round-Table (type: Scorpia to reach the Games RT).

By US mail (enclose a self-addressed, stamped envelope if you live in the United States): Scorpia, PO Box 338, Gracie Station, New York, NY 10028.

Until next time, happy adventuring!
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Adventures in Role Playing

Ai-Qadim Whisks Away Traditional Role Playing On Its Magic Carpet

by Petra Schlunk

At the Computer Game Developers' Conference this past April, adventure and role-playing game designers gathered in several sessions to discuss the state of their art. Under discussion were the ideas of emphasizing storytelling over traditional adventure game puzzles; having character development more dependent on accomplishing significant things rather than on killing a large number of creatures; and increasing the player's emotional involvement with the central character by limiting the number of characters in the party and increasing the player's interaction with other characters. All of these ideas seemed like good ones, and I went away from the sessions eager to see if they would actually be implemented in future games.

Just a few months later, I'm surprised to find that Strategic Simulations' latest game, Ai-Qadim, incorporates many of the evolutionary changes that the role-playing game designers had discussed. In Ai-Qadim, SSI has taken a decisive step away from their previous role-playing releases, like Ravenloft and Dark Sun. Many standard elements of role-playing games—character generation, extensive exploration, complex combat and magic systems—have been removed or de-emphasized, and elements from adventure games—greater emphasis on puzzle solving and increased object manipulation—have been added. The result is a new kind of role-playing game that may point toward the future of the genre.

I DREAM OF GENIE

In Ai-Qadim, a genie has been freed from the control of his master. A curse or a blessing? That is open to debate, but the forces that have freed him are working to emancipate more genies with the hope of placing the newly freed genies under the control of other masters, the Nameless Masters. There is only one being who can save the world from this threat: a young corsair, the son of Zuben Al-Hazrad of Zaratan. The boy is still green, just completing his training as the story begins.

He is on his way to be wed to the Caliph's daughter. After the corsair returns to his home, his family is blamed for a shipwreck involving the Caliph and his daughter. The young corsair must now find a way to restore honor to his family and find his betrothed who was lost when the hurricane that destroyed the ship swept her overboard.

INTRODUCING OUR HERO

Character generation and development are quite limited in Ai-Qadim. There is one hero who starts the game as a second level corsair with predetermined statistics. He gains experience points primarily by successfully solving puzzles, discovering things, and finishing quests. Some experience points are awarded for killing creatures, but combat is not really stressed in this game. Levels are gained after enough experience points are collected, and increases in levels are accompanied by increases in hitpoints and by the opportunity to learn new combat skills.

The interface is extremely easy to learn and to use. Movement and almost all object manipulations are mouse directed, although keyboard and joystick alternatives exist. All actions aside from movement and using projectile weapons (i.e., talking, fighting, picking up objects, breaking things, moving things, reading, etc.) occur by pressing the same key or mouse button. When you press the action key or mouse button you automatically do the "appropriate" thing with the object. In this way, the tedium of finding the right thing to do with objects—a tedium prevalent in adventure games—has been eliminated. Inventory management has also been thoughtfully designed. Important objects are either automatically picked up, or the option to
Enter the deep, dark realm of Hexx — a world of twisted paths and one very twisted mind. Guide four adventurers through a labyrinth of texture-mapped dungeons in an attempt to free the Gods of Magic from the grasp of an evil wizard. Where every move is from a first-person perspective. Where every step is action-packed, every graphic out of this world. "One of the best first player perspective RPG's I've ever played," says PC Action. Now at your local retailer. For a very small sacrifice.
Al-Qadim is a well-balanced, neither too difficult nor insultingly simplistic. The game is not a standard role-playing game and it is not a standard adventure game. Al-Qadim is a story in which we get to play the main character. While we may have choices in what to do or when to do it, the story is charming, graphically pleasing (less can be said of the music and sound effects), of reasonable length (about 20+ hours) and worth "playing." In this game, elements of both role-playing and adventure games are blended cleverly with one of the most unique interfaces to date. The game has eliminated much of the fuss that comes with role-playing games (the nitty-gritty details, statistics, endless fighting). It has also bypassed many of the things that I view as flaws in adventure games (improbable puzzles, overly simplistic plot lines, the endless tinkering to determine which action or verb is needed to associate two items). So, while I sit quivering in fear that my favorite type of role-playing games—the gigantic, number-crunching monsters—may soon be dinosaurs in this business, I still salute the positive accomplishments of this game. Borrowing heavily from the Arabian Nights, Al-Qadim has captured the charm and wonder of those tales.

**Al-Qadim: The Genie's Curse**

**Rating** ★★★ 1/2

**Pros**
- Ah, role playing without orcs and trolls! The charming setting, slick smoothing interface, and mid-level difficulty are like three blessings from Allah.

**Cons**
- Some might appreciate the attempt to lighten up role playing, but many hard-core fans won't be amused. The sound and music could be a bit more robust.
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Aesop's Quest

New World's Inherit The Earth Is An Adventure Bred In Tooth And Claw

by Allen L. Greenberg

In his landmark essay, *Beowulf: The Monsters and The Critics*, J.R.R. Tolkien challenged the notion that fairy-tale creatures belonged exclusively to stories for children. Nearly 60 years later, the appeal that fantasy characters have for adults is no longer a matter of question. Non-human races have been accepted and embraced in adult literature, just as there are also many adults who treasure and enjoy stories written by Hans Christian Anderson and the Brothers Grimm. *Inherit The Earth*, an adventure game from New World Computing, features an anthropomorphic cast of animals that might just as easily be found in a “Little Golden Book.” The game’s appearance is strikingly like that of a brightly colored children’s story, and nearly all of its puzzles are intended for the beginning player, but this is by no means a game geared for young children. As they solve its various puzzles, players will find themselves moving back and forth between fairy-tale and science-fiction in a post-apocalyptic quest to recover a sacred object.

The intelligent animals that populate *Inherit* are referred to as “morphs” as a result of their having undergone metamorphosis at the hands of human scientists. In a rather poetic introduction, a wisened morph lists the various gifts and qualities that were given to the animals, including speech and intelligence. Mystically, the humans have disappeared. This leads the abandoned morphs to speculate not only as to whereabouts, but also what other attributes the humans might have taught them had they remained on Earth. Ironically, the creatures imagine humans as almost god-like, despite leftover ruins which clearly suggest otherwise. The humans have, however, also left behind several valuable objects. Among these are “orbs” capable of vocalizing a great deal of scientific information. The “Orb Of Storms,” which predicts the weather and is therefore considered a most valuable object, has been stolen from its shrine and must be recovered.

**Running With The Riffraff**

You are a fox named Rif, and you have been unjustly accused of stealing the Orb of Storms. There are many clans of morphs in addition to the Foxes, including Rats, Boars, Wolves, Elks, Cats and Dogs. Each clan has apparently retained many of the attributes associated with them in their pre-morph days. Thus, Foxes are somewhat sly, while Elks are extremely noble, and Boars are somewhat...boorish. While under the distrustful eyes of Okk the Boar and Eeah the Elk, you must prove your innocence by recovering the Orb of Storms. Your prime motivation for putting up with this abuse is the capture of your mate, a fox named Rhene, by the Boar clan. If the orb is not returned, neither will she.

The land in which *Inherit* unfolds is a sprawling one, and there are many locations for the fox and his traveling companions to visit. While traveling in between these locations, you are able to determine Rif’s path by way of an overhead view of the continent. As the game progresses, it becomes necessary for Rif and his friends to move into the unexplored “Wild Lands.” At this point, you must procure a map from Tycho Northpaw, canine cartographer. His map, however, is useful for only a portion of the Wild Lands, beyond which you will need to explore on your own. While in towns or villages, there are several streets and pathways to scout out. This can take a while, because only a very small portion of the area surrounding the lead characters is shown on the screen at one time. Among the town and city streets are buildings that are outwardly undistinguished, yet contain important objects or information. Once you have visited these buildings, it is often necessary to find them again once you have been elsewhere.

**Mazed and Confused**

Much of the time you invest in *Inherit* will undoubtedly be spent moving back and forth between its many sites. An inordinate number of locations may only be reached by negotiating mazes of varying complexities. *Inherit* contains a number of different mazes through which Rif will find himself traveling at least a dozen different times. Mazes, of course, like any other gaming device, are a matter of personal preference. However, even the most wel-
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come gaming challenge deserves to be dealt out in moderation, and not every player would consider maze-travel their favorite type of challenge. Clearly, several of Inherit's mazes could have been sacrificed in favor of some other types of exercises.

Most of Inherit's puzzles are of the simple, object-manipulation variety. Some of the time, other characters in the story are shouting hints from the sidelines, telling Rif where to go next, what objects he must find, and where to put them. There are many conversations in the story in which you must select Rif's questions and answers from a list of four or five possible choices. For the most part, the object of these conversations is to gather as much background information as possible. However, there are also a number of guards and guardians who must be tricked into allowing Rif and his followers to continue on their way.

For instance, Rif must travel to the shrine from which the Orb was stolen and convince its priestess that he is worthy of entering the shrine, and then uncover several clues there as to the nature of the thief. Elsewhere, a wise mouse, carefully hidden behind a barrier of mazes, is the only one capable of interpreting those clues. There is the king of the boars, whose mud-entrenched dwelling hides a sign that he has been in conference with one of the earth's most dangerous clans. A dog named Tycho, the aforementioned cartographer, will assist Rif in his foray into the Wild Lands provided Rif is able to repair his ancient telescope. The science required to repair this device is hidden in one of the other orbs, currently owned by the industrious Ferret clan. Rif will need to prove his worthiness to the Ferrets before he begins to interpret the instructions given him by their orb.

There is an island beyond the Wild Lands, where Rif will uncover some leftover human technology, now under the misguided use of the game's villainous thief. Once the thief has been discovered, the game quickly plays itself out to an abrupt conclusion which whisks the lead character back to his fairy tale origins, and leaves several plot threads either forgotten or in limbo for a possible sequel.

BEAUTY AND BEASTS

While Inherit's puzzles and mazes may prove less than satisfying, there is no denying the beauty of its presentation. As already mentioned, the art and animation exude storybook charm. The background music is pleasant and the sound effects well crafted. The program's interface is well designed, and ideal for beginning gamers. Dialogue appears above whichever character is speaking, in character-specific colors. The bottom of the screen shows the face of any character with whom Rif is dealing. The bottom portion of the screen also lists familiar commands such as "talk to," "take" and "open" for dealing with objects and other characters on the screen. Finally, a visual list of objects in inventory is also displayed. The game requires a mouse, which is used in constructing all commands, as well as indicating in which direction the lead character should move.

The opening sequence features some talented actors speaking the lines of the main characters. Unfortunately, once the sequence is over, the voices are no longer present. However, the packaging promises that a CD-ROM version of Inherit will be released shortly, and will feature voice-acting throughout the game. The CD-ROM disk will also include additional material, including an extended, hopefully more satisfying, ending sequence.

There is no denying that Inherit boasts a thought-provoking story, and has been put together with a great deal of artistic flare and talent. It's ease of use and appealing presentation will make it a very seductive program for newcomers to adventure gaming. However, it is difficult to escape the conclusion that the game's puzzles were given the least amount of attention, and that some of its many mazes were tacked on in order to extend its limited game play. This is an odd mix of a program, whose many qualities and merits are as difficult to ignore as its flaws.

I'LL HUFF AND I'LL PUFF Ok, so Rif is a fox, not a wolf, but he'll still be making plenty of house calls.

THE FOX AS THE HOUND Rif and friends will criss-cross this map many times in sniffing out the trail that leads to the Orb of Storms.

INHERIT THE EARTH

RATING ★ ★ 1/2

PROS A cute and cuddly story that will share the beginning adventurer.

CONS Unfortunately, it seems the puzzle designer was a beginner, creating endless mazes (enough already!) and a puzzle structure that reduces you to a fantasy Federal Express courier (see Scorpia's Sting).
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The Toxic Humormonger

Steve Meretzky Returns With Legend's Superhero League of Hoboken

by Johnny L. Wilson

RoboPop pictured his weed whacker as a morning star as he brought it to bear on the animated piece of furniture before him. The whirring string of the garden tool ripped the cheap veneer off the Bureau-Crat, the red tape specking chest of drawers that looked vaguely like a Disney creation seduced by the dark side of the force. Tropical Oil Man, unable to use his superpower to increase the cholesterol level of his foes, opted to snap the Bureau-Crat’s golden days when Johnny Thunder (All Star Comics) would solve crimes and defeat villains by invoking a power he didn’t realize he had (he would wish something after saying some gibberish); the silver days when Plastic Man would contort himself into wild and wonderful shapes the like of which Reed Richards (Mr. Fantastic of the Fantastic Four) would only be able to envy; and Marvel’s more recent attempt to inject superhero insurance policies and legal liability into the Marvel Universe with Damage Control. It is colorful, silly and challenging. It is extremely well-written. It’s a Steve Meretzky game!

For the initiated, those who have met Floyd the Droid, foiled the famed Leather Goddesses, explored the Great Underground Empire, and graduated from Sorcerer’s U, it is both a familiar and an unfamiliar milieu. It is familiar because Meretzky knows how to craft stories with marvelous imagery and energy. It is unfamiliar because it is the world of the future with a darker, harder edge than most Meretzky games. It is filled with radioactivity, toxic waste, mutants and monsters, yet the stark and dark background stories are then twisted so that, rather than disturbing the player with chaos and anomie, the cataclysmic backdrop sets up the jokes. Like most of his games, the humor is compounded by encounters with weird, off-kilter characters like the Tuppers (monsters with air tight compartments in which to hold their prey, tending to group together into Tupper War Parties), the Terrible Twos (two-headed, infantile monsters who throw tantrums) and Marketeos (amoral creatures who attack with telemarketing). Unlike most of his games, there is a heavy duty dose of combat thrown in.

Legend Entertainment is becoming known for comedy adventures: Eric the Unready was a comic masterpiece and Companions of Xanth was somewhat weak as a game, but full of Piers Anthony-style humor. In The Superhero League of Hoboken, Legend has gone beyond the boundaries of graphic adventures and interbred their traditional fare with elements of computer role-playing. Role-players will enjoy creating a party of characters with

ZOUNDS! Steroid Man looks tough, but his arteries won’t stand a chance against Tropical Oil Man’s high cholesterol attack.

side with a big rubber band. Iron Tommy, the man for whom Tabasco sauce was a soothing bedtime drink, scraped the front of the villain with a rusty nail, and the nightmare wardrobe disintegrated into splinters. The good guys won! Rummaging through the wreckage, Crimson Tape discovered an asbestos yarmulke in a battered drawer, which he promptly plopped on his head. Satisfied, the group hurried off to dissemble Limburger Bombs or defeat rabid sheep. Another victorious day for THE SUPERHERO LEAGUE OF HOBOKEN!

The Superhero League of Hoboken should be entertaining to anyone who remembers when superheroes were fun: the

LEAPIN’ LAB RATS! The Superheroes visit a rival league, only to discover what they already know—they’re a bunch of rodents.
Combat is phased so that one party resolves all of its attacks, then the other party resolves their attacks. Typical of role-playing games, the first rank of party members may attack with hand-to-hand weapons or ranged weapons, while those in deeper ranks may only use ranged weapons or their superpowers (essentially, equivalent to thrown spells in a more traditional fantasy game).

Unlike typical role-playing games, superheroes can also kibitz with the other heroes instead of actively engaging in an attack. Although the concept sounds pretty useless, the combat system usually gives an attack bonus to whichever hero has been kibitzed. For example, if the Iron Tummy criticizes Robomop’s combat stance, Robomop’s chance to hit the nasties is improved for that turn. The party also has the opportunity to flee at the end of any round in which one hero is still conscious. Of course, there is always the chance that the party will lose a valuable weapon, artifact or piece of armor, but discretion is often times the greater part of valor.

If the party is successful in combat, each character gains experience points and there is a very good chance that they will find some treasure. Even though the treasure is often found in weird places like crusty, old pizza boxes, these repositories of goodies can be booby-trapped. So, as in most role-playing games, you’ll need someone to “detect traps” before opening those treasure chests. That’s where a party member like Mlle. Pepperoni (with the power to see into unopened pizza boxes) comes in.

Role-players will like the fact that characters improve their superpowers or gain secondary powers as they succeed in combat.

GO JOSEY! The Superheroes will wander the streets of a topologically correct New Jersey. Even the stench of the Hackensack River is authentically modeled.

four attributes (Brawn, Toughness, Brains and Health) plus a primary superpower and, potentially, several secondary superpowers. They may not like the fact that they cannot generate these characters themselves. They should also like the less linear construction of the game.

Like many CRPGs, the game is mission-based. Players get their missions from Matilda the Computer and gain experience points whenever they successfully complete a task. You start by creating a party of superheroes and moving across a tile-based map, exploring the terrain of the northeastern portion of the United States square-by-square. Interestingly enough, Mereczky did a detailed study of the topography of this region and, since the game’s introduction posts melting ice caps as part of the cataclysmic setup, figured out which areas of Newark, Paterson, Hoboken, and New York City were most likely to be flooded as a result.

As the party moves from square to square, the landscape is revealed from an overhead perspective, much like the exploration in Sid Meier’s CIVILIZATION. Many of the tiles feature familiar spots. One level has Shea Stadium and another has the Statue of Liberty. Each of these special locations allows you to enter one of the adventure game sequences.

ZAP! BIFF! POWIE!

Occasionally, the party will either surprise some urban nasties or be ambushed by some whenever they uncover a square. In these cases, combat is handled and resolved much like an updated WASTELAND. The main difference is that the nasties are absurd creations from the fertile mind of Mr. Infocom, Steve Meretzky, and the weapons are even goofier than some of those used in Harry Harrison’s hilarious STAINLESS STEEL RAT series of comic cosmic super spy novels.

The Crimson Tape has a knack for organizational charts.

Captain Excitement exudes an aura of lethargy that puts foes to sleep.

Mlle. Pepperoni able to see inside closed pizza boxes.

RoboMop can clean almost any mess.

Tropical Oil Man able to raise the cholesterol levels of foes.

Treader Man really good at treading water.

The Iron Tummy can eat spicy food without distress.

Oxide Man the power to induce rust.

King Midas his touch can turn anything into a muffler.

Princess Glovebox the incredible power to refold road maps.

The Mighty Magnitude the ability to raise any quantity by the power of 10.

Toast Buster can vanquish baked goods.

Zaniac has the power of confusion.
and that the league of superheroes can move up in levels, just like those in more traditional role-playing games. Though players may be unhappy at first that they cannot generate their own characters, they should enjoy the fact that as the league's reputation is enhanced and the heroes advance upward in levels, more and more characters want to join their particular league.

MISSION IMPOSSIBLE

Role-players may also find it frustrating that there aren't any conversational elements in the combat encounters. However, that may not be as much of a problem since the game is not strictly a CRPG. It also features adventure elements. Indeed, each mission is actually a mini-adventure. You travel across the map and discover a specific locale. When you enter that locale, you also enter the COMPANIONS OF XANTH interface. The locales are explored in the way you would explore a location in a graphic adventure puzzle. The major difference is that you can discover the locales in almost any order and that the puzzles are simpler than those in most of Legend's adventures. They are also more ridiculous than those in most—with the possible exception of XANTH. For example, Level 1 requires you to solve five different missions, including: the dismantling of a Limburger Bomb, dealing with a herd of rabid sheep, foiling the invention of an anti-commercial ray, fixing a computer that is treated as a holy oracle, and the removal of mass quantities of jalapeño peppers. Sometimes, the puzzles can be solved with something as simple as the use of a superpower, and sometimes they require the acquisition of an item from elsewhere.

As with the XANTH interface, clicking on a given object will often cause new verbs to appear in the verb list at the side of the action window. If only one new verb shows up, clicking again on the object will create the logical command with that verb. If several new verbs show up, you'll have to choose the best verb.

Within the adventure game locations, there are additional "rooms" to explore. In the various marketplaces, these may be hardware stores, pawnbrokers, shamans' tents or weapons shops. In old ruins like the SHL headquarters building, these may be additional rooms. At any rate, these other "rooms" will show up on the compass rose in the lower left-hand corner of the screen as new directions to travel. Clicking on the compass rose will cause a "Yes or No" dialogue box to appear on-screen which will enable the party to exercise or decline the option of entering these supplementary locations.

Within the supplementary locations are non-player characters. These characters are open to limited conversations and, particularly for merchants, these conversations can become repetitive and redundant. Nonetheless, there are some humorous conversational gambits to be tried with these and other characters, and such lines can be easily selected from short menus of possible phrases.

DOCTOR, DOCTOR

The goal of the game is to thwart the overall bad guy, Dr. Entropy, in his quest to prevent civilization from undergoing a rebirth. The Superhero League of Hoboken is a group of misfits who are considered to be incompetent. As the Crimson Tape, you are expected not only to assist civilization in becoming a phoenix, but to restore the reputation of these mutants who have grown beyond the power of mortal men. Accomplishing this task will require clever puzzle-solving, astute management and solid combat tactics.

Frankly, I think that adding the role-playing elements to THE SUPERHERO LEAGUE OF HOBOKEN helped improve the pace of the game, since you never know when you are going to be ambushed, and provides variety between the adventure-style puzzles. It is a unique and clever blend of adventure and role-playing that makes it ideal for beginners and veterans of both genres.
"Sum it up in three words: GO GET ARENA." — Zach Meston, Computer Player

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Four More For The Road

Tired Of All The Yapping About Superhighways And Information Roadkill? Check Out Four Racing Games Where Digital Rubber Really Meets The Road

by Gordon Goble


Why, it’s the hushed tone of computer game manufacturers nervously anticipating reaction to their latest fare! Yes, it’s late summer, and the race to get automobile racing games to market has, this year anyway, nicely coincided with the racing season. In this issue, we’ll be looking at no less than four new releases in the world of computerized, motorized competition.

Lotus: The Ultimate Challenge for Your PC, Lamborghini American Challenge, Nigel Mansell’s World Championship, and Formula One are the four new entries into this suddenly burgeoning realm of gaming, and although the latter pair are indeed based on the F1 circuit, there is not a World Circuit in the lot. That’s not to say there’s nothing here worthy of praise, just that those intent on serious “simming” should stick with World Circuit or IndyCar Racing. But if mountainous learning curves and absolute realism aren’t your thing, and fast action is...

we might have a game or two that will light up your life.

Nigel Mansell’s World Championship (Gremlin Graphics)

It won’t take long to discover the best thing going for Gremlin Graphics’ Nigel Mansell’s World Championship. It’s right there on the box—the name of former Formula One and reigning IndyCar champ. This product was able to do what other more notable racing programs could not, secure the Mansell name. Yet, as is too often the case, the use of a respected name for product endorsement ain’t worth a hill o’ tires when it comes to the worthiness of the product.

Nigel Mansell bills itself as “the definitive Grand Prix experience.” It is not. Instead, it is at best a mediocre attempt at a racing simulation, and most probably would have made some small waves had it been released about five years ago. Although it must be said that there have been worse racing games throughout the years, it is the fact that Nigel Mansell is far from what it pretends to be that has me somewhat perturbed.

The Nigel Mansell scenario is much the same as 1992’s World Circuit—competition in what is arguably the world’s top level of driving, Formula One. Players reside in the cockpit of Mansell’s Canon Williams Renault screamer and will contest events at any or all of the 16 circuits that were part of Nigel’s successful run for glory in 1992.

But small cracks in the armor are noticeable right away: a sparse, incomplete instruction booklet, virtually nothing in the way of car set-up (save predetermined tire, wing and gear ratio alterations), and limited options. Unfortunately yet bearable, such minor quibbles give way to more for-
midable obstacles as you get into the

Pick a track, any track—it just doesn't
matter—they're all the same! Well, not
identical, but certainly with little in the
way of individuality, and definitely a far
cry from their real life counterparts. I
would go so far as to say that corners
sometimes bend in the wrong direction,
and what little there is in the way of eleva-
tion changes is also usually incorrect.

Race distance is predetermined at five
meager laps, opponents are jittery with
nothing in the way of AI, slipstreaming
has been overlooked, and rear mirrors are
decorative only. The painted background
never changes, even after a 180-degree
drift-pin, and it took me quite some time to
realize that the PacMan power pill gob-
bling sound I was hearing was actually tire
squeal.

NIGEL MANSSELL comes with driver's
training course called "Improve with
Mansell," and is supposed to teach the
enthusiastic rookie a little of the correct
crashing technique. With Nigel's disembodied
head floating in the upper corner, like
some Monty Python sketch gone wrong,
and the "proper" racing line painted on
each track, the Great One will instruct
over and over again to "Don't Hit
Things." This exercise sounds easier than
it is in application, considering car han-
dling characteristics that successfully mim-
ic that of a garbage truck. "Keep on the
racing line," Nigel's head will utter pro-
foundly, but with NIGEL MANSSELL, there is
no reason to do so—trust

One gets the impres-
sion that a trifle more time was
spent on a quick sale with the Mansell
name than actual production of a quality
product. If it's good clean fast quick reflex
fun you want, do yourself a favor and
check out the second Gremlin product,
LOTUS - THE ULTIMATE CHALLENGE FOR
YOUR PC. If you're interested in a close
representation of the real thing, stick with
WORLD CIRCUIT.

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the law certainly adds to the entertainment value. For straight ahead thrills and spills, LAMBORGHINI AC might be the ticket.

Like most of the products in this racy review, LAMBORGHINI AC offers head-to-head competition with a human opponent via a top/bottom split screen, variable environments and road conditions, and there are no game saving, printing, or replay features. LAMBORGHINI AC is not an upscale test drive of one of the most desirable cars ever made, but if arcade staples such as OUT RUN ever held a personal appeal, LAMBORGHINI AMERICAN CHALLENGE might just satisfy that wacky urge to push other cars off the road while motoring along at 150 mph.

ROAD RATING: 4.0
For more information, contact Titus at (818) 709-3692.

LOTUS: THE ULTIMATE CHALLENGE FOR YOUR PC (GREMLIN GRAPHICS)

Well, it's not quite the ultimate challenge for my PC, but LOTUS does offer a barrel of fun in a surprisingly small package (its 1.35 MBs are accessible from diskette or hard drive). Again, this game is not exactly a realistic portrayal of life behind the wheel, but it isn't supposed to be. The smart, often humorous LOTUS manual is modest when it notes, "Okay, so LOTUS isn't the most complex simulation around, but the wealth of choices available could throw you a first.

LOTUS drivers will find themselves at the wheel (actually, with a chase helicopter view) of an Esprit S4, ELAN SE, or the conceptual M200. There will be a flock of similar cars at every event, each trying to be the first to the finish line. Pretty commonplace so far, but it's in the wealth of cool stuff, such as the wide range of racing courses, environmental conditions, audio enhancements, pretty graphics, and other assorted options (including a nifty track design system and top/bottom split screen for head-to-head play) where Lotus really stands apart from so many other like-minded efforts. One gets the feeling that LOTUS designers threw a lot of thought and care into this package.

Following close on the heels of the dreaded protection wheel is the Main Option interface, from which every facet of the game is but a few points and clicks away. Players One and/or Two have their choice of several set-up options, including type of car, automatic vs. manual shifting, linear vs. digital acceleration and braking, method of control, difficulty level, and even type of game (Arcade Mode, wherein the aim is to complete each stage within a preset time, picking up points along the way, or Championship Mode, featuring a set amount of laps). Just when the budding LOTUS pilot is ready to be thrust into the heat of battle, what should appear? No, not eight tiny reindeer, but a gigantic in-dash CD player! Several compelling Euro-synth numbers are at the ready, and after tailoring your musical accompaniment, or switching the tunes off, it's on to the track.

With a little practical experience, it will soon become apparent that LOTUS car control is surprisingly realistic and consistent. Too much speed will result in drifting turns and loss of momentum,
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appropriate gear selection is invaluable, and proper racing lines really do mean something. When a degree of proficiency is attained, championship points will soon begin to accumulate, and soon your name will be proudly displayed alongside other grand racing names from the past and present, such as Jackie Stewart, T. Hairy Booten, Nigel Mainsail, Demon Hill and Ayrton Sendup. Ah, yes, a little British humour.

But the star of the Lotus show is surely the racing environment. I, for one, was dazzled by the number of variables instituted into such a tiny package. Tracks vary from narrow dirt trails meandering through forested groves, to vertigo-inducing cliffside ribbons, from sizzling desert runways to six-lane super highways, and even a futuristic setting with roadside geodesic domes, laser beams and powerful car magnets.

Be prepared to navigate through well-rendered digital representations of fog, rain, high-velocity windstorms, snow and ice, and remember to take on fuel when the tank begins to empty. LOTUS won't confine its drivers to daytime affairs either, and battles may be fought in the darkest night.

Such divergent driving conditions calls for a variety of driving styles, from the flat-out, "THIS FRIGGING CAR HAS NO BRAKES!" style required in Futuro-world to the pick-and-choose method one will need to adopt when the road is obscured with fog and surrounded by trees. This Lotus won't fall apart when crashed, but making contact with obstacles will certainly detract from your effort.

And if a few less obstacles might make the ride a little easier, or the addition of a little more elevation would make things more interesting, then the Lotus track designer awaits. This track building feature won't allow you to put down specific pieces of track one at a time, but instead allows for modifications to an overall feel. More mud, more darkness, a wider track, a few traffic cones and barriers, or perhaps an overflowing marsh—whatever seems interesting at the time—can be quickly and painlessly programmed. Needless to say, you will never get bored with the same old track.

Movement though the various

LOTUS screens is tightening fast (if instaleed to the hard drive), there is nary a lock-up, and the game manual leaves nothing in the way of guesswork. Car setup options, replays, game saving and printing capabilities are, unfortunately, not part of the package, yet what LOTUS does do, it does in admirable fashion. For what it's worth, I found this a difficult program to review, as each time I went back to check on a specific detail, I ended up playing the thing for an hour.

ROAD RATING:

For more information, contact Suncom Technologies (U.S. distributor) at (708) 647-4040.

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Circle Reader Service #56
Know When To Fold 'Em

QQP's ORIGAMO Puzzler
Will Put Creases In Your Brow

by Paul Hyman

So, Little Grasshopper, you are anxious to learn the Meaning of Life? Better you should ask the Meaning of Frustration. It is called ORIGAMO—a puzzle game with allusions to both the ancient Japanese art of paper folding, origami, and tangrams, the Chinese puzzles made from cutting a piece of paper into five different geometrical shapes and assembling them into different figures.

ORIGAMO
Price: $49.95
System: IBM
Requirements: 386 or better, SVGA graphics, 6MB hard drive space, mouse; supports all major sound cards
Protection: None
Designers: Destiny Software Productions, Inc.
Publisher: Quantum Quality Productions
Flemington, NJ (908) 788-2799

As with many Asian pastimes, ORIGAMO appears simple, yet it is deceptively so, and it may eventually tempt you to fall on your sword. The goal is to dash through a maze in which you encounter rooms with three puzzles each. Attempt to solve all three if you wish, but only one solution is required to move on. Some puzzles award 50 points, while more difficult ones handing out 300 points and more.

And what puzzles! Each resembles an object that has been created by origami, such as a pig, a shoe, or a brontosaurus. The trick is to snatch different shaped tiles off a conveyor belt at the bottom of the screen and place them on top of the paper-like object to cover it completely. Unfortunately, once a tile is placed, it can't be removed. If you think you can sit and wait for just the right tile to come along, forget it. It's like waiting for the long, skinny piece to show up in TETRIS. As added pressure, the conveyor belt moves quickly, and once it fills up, the puzzle is over.

There is a tremendous sense of satisfaction that comes with solving each puzzle. Bells ring, points roll up, and you get to decide whether you want to move on or solve the rest of the puzzles in that room. But be warned...there's no practicing in this game. If you fail to solve the puzzle, points are subtracted from your cumulative score. New players will find themselves 1000 points in the hole in no time. Should you abandon a room in disgust, there's no turning back, as the door locks firmly behind you. While it is possible to escape the maze by choosing only the easiest puzzles, the manual correctly advises that cowardice will never earn you a high score.

There are enough puzzles here—113 in all—to keep even skilled puzzle fans going for quite some time. For in satiable puzzle-meisters, there are two more skill levels to conquer. The Master level allows bonuses for completing puzzles in better than average times, while the Adventure level gives only three lives to complete the game (plus a free life for each 500 points earned).

ORIGAMO is at its best when the game's difficulty is based on the puzzles' size and/or intricacy. But all too often, puzzles are tough because the conveyor belt has been sped up, or because there are already several tiles crowding the belt.

GETTING INTO SHAPES The conveyor belt cranks out shapes, which you can pluck and place on the "mask" design. Unwanted pieces can be tossed in the dump.
Harvester

coming fall '94

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when the puzzle begins. There’s no warning that the tiles will zip right by you, and when you lose—and the points come off your cumulative score—well, it’s time to grab that sword...

The journey through the ORIGAMO maze is filled with frustrations. Certain rooms cannot be entered until you gather necessary objects in other rooms. Try to sneak into the “Mound Of Evil” room, for example, and you are warned that “You will be blinded if you enter.” I chose not to risk it.

ORIGAMO is not only unusual as puzzle games go, but it features some striking SVGA graphics and a very hummable score (particularly one tune that I like to refer to as “The Love Theme From ORIGAMO”).

Despite the hectic pace of some levels, there is a tranquility to playing ORIGAMO that makes it enjoyable to sit alone and play for hours, much like Solitaire. One can practically meditate on some of the backdrops of snow-capped Mt. Fuji, of birds flying, and of trees dropping their leaves. On the other hand, ORIGAMO seems to have been designed to be played by an army—it will keep track of up to 300 different players and 1200 unfinished games; full statistics for each game are saved automatically. So go find 299 of your closest friends and master the ways of ORIGAMO, one piece at a time.

BUDDHA IN THE SKIES What is the sound of one hand smacking a forehead? The sound of an origamist player missing one last piece.

RACK’EM UP So you got a few points. But that was an easy one. If you screw up a hard puzzle, those points will vanish in a flash.

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CONS Some puzzles are ridiculously hard, some easy. The game lacks the slowly graduated difficulty that makes Tetris so possessing.
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Circle Reader Service #188
An Aging Casey At The Bat

The Revered Strat-O-Matic Baseball Has Thrilled Fans For Years, But It May Be Stepping Out Of Its Prime

by Jim Gindin

Quite often, reviewers criticize even the best in their field. I'm sure Babe Ruth in his heyday had his critics in the press, and those critics became more vocal as his superhuman powers waned with age.

Finding any fault with Strat-O-Matic Baseball Version 5.0 feels a bit like finding fault with Babe Ruth's batting stance. The release of Strat-O-Matic's latest version of their computer baseball game marks about a quarter-century of continued support of arguably the dominant game engine in the baseball simulation genre. The game system has served its fans well, but improvements in the statistical understanding of baseball and the enhancements allowed by computer technology have opened the door for competing products to produce a better simulation.

The computer version of the Strat-O-Matic board game is a text-based baseball simulator. The game can be installed with two interfaces, including a VGA interface with a mouse-driven menu system, unique for a text-based baseball game. Gameplay operates either through icon selection with the mouse or typing the key associated with each icon. Cartoonish renditions of every Major League ballpark are the backdrop for game simulation. Although the effects of individual parks are factored into the game, the ballparks are intended only as a background.

BOX SEAT VIEW

With full graphics enabled, an icon representing a pitcher throws the ball toward home plate. A hitter icon appears, swinging his bat. The ball then heads in the general direction of play resolution. But, on occasion, the ball can travel 10-15 rows into the stands and yet the play results in a fly-ball out. There are no iconic representations of the fielders, base runners, or the ball once its initial flight path is completed.

Strat-O-Matic also provides a text window for the outcome of each play, and this does represent game play more accurately than the icon displays. Strato-O-Matic resorts to a few irritating clichés and lacks the rare plays that have endear fans to some of its competitors' products. Nonetheless, the text interface is simple and sound.

Strat-O-Matic has improved its league simulation aspects by adding a computer draft module. Other than a refusal to draft designated hitters until the waning rounds and a tendency to draft bad right-handed starting pitchers in the early rounds, the computer can draft a competitive team. A new module also allows the computer to approve or deny a trade suggested by a human player. This module errors on the side of conservatism, but is very useful when you need to fill a specific need on your team and don’t want to affect the balance of your league by robbing a computer opponent.

Perhaps the biggest improvement in Strat-O-Matic is one that won't affect game play. Last year's release suffered from a copy protection system that was undeniably user-hostile. The master disk could only be installed once. For future use, an “uninstall” was required. Worse, if there was a hard disk crash, users had to call the company and request a “remote reset.”

News of this system traveled quickly and drove many potential buyers to purchase other products. In an attempt to better please customers while still retaining a degree of protection for their product, Strat-O-Matic now uses a key disk. A more convenient alternative allows installation of a key file which bypasses the floppy drive check.

ROLL THE DICE AND MOVE JIM RICE

Aside from the graphics and league functions, Strat-O-Matic is an exact computer replication of its board game. The board game is centered around a set of player cards Strat-O-Matic produces every year. Each major leaguer has an individual card, reflecting his statistical performance for the entire season. Players roll dice to start an at-bat, with half the die rolls resulting in play resolution on the hitter's card and the rest using information from the pitcher's card. One out of every seven outcomes on the pitcher's card leads to an individual's fielding rating, which is how the game incorporates individual defensive abilities.

The computer version rolls its own digital dice internally and follows the same algorithm as the board game. This means 50 percent of all plays are solely determined by the hitter, about 36 percent solely by the pitcher and 14 percent by the
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Circle Reader Service #168
fielder. It’s a mechanism that was state-of-the-art back when Reggie Jackson was facing Mickey Lolich, but it’s starting to show its age when compared to the accuracy of the new computer simulations.

For instance, STRAT-O-MATIC has no ability to faithfully recreate players like Ozzie Smith, who rarely strike out. But in order to simulate high-strikeout pitchers like Jose Rijo, several dice rolls on Rijo’s card result in a strikeout. Although Ozzie’s stats are devoid of the dreaded strikeout, he’ll still end up striking out about twice as often as he does in real life because of pitchers like Rijo.

In addition, the cards are separated into left and right-handed results, so that players have two completely independent sets of play results. STRAT-O-MATIC assumes that real-life performances fall in the center of the distribution of what that player is capable of attaining. While acceptable for full-time players, this can lead to abuse of the system when dealing with part-timers. In real life, Dave Gallagher, a right-handed outfielder, hit .310 in 58 at bats against right handers and .259 in 143 at bats against left handers. The computer

manager, knowing this, used Gallagher 239 times against right handers and only 48 against left handers in a season simulation. This made Gallagher much more productive than in real life.

In all fairness, veteran human players are just as aware of how to manipulate the player stats to their advantage. In many STRAT-O-MATIC leagues, you’ll see rosters of teams that include a number of right-handed hitters who had very small numbers of at bats. These hitters start exclusively against left-handed pitching and render top-notch left-handers average in league play.

STRAT-O-MATIC also falters when dealing with any statistics where extremes are frequent. This is because each hitting or pitching card is set up as half of the confrontation between that player and an average hitter or pitcher in the league. So a hitter who blasts a lot of home runs is a powerful hitter against every pitcher in the league.

When home-run champion Barry Bonds faces Rijo in Riverfront Stadium, which is very long-ball friendly, he hits homers in 9.5 percent of his at bats. Against Rijo’s teammate Bobby Ayala, who is much more homer-prone than the stingy Rijo, that number is 10.9 percent. These numbers represent a very tiny difference, despite the fact that the two pitchers are vastly different in their real-life abilities to keep opponents from hitting home runs.

As a result, Bonds’ home run production is higher than it should be because the best pitchers are lowered to a common denominator. In one of five test league simulations, Bonds nailed 67 home runs, six higher than the Major League record. Bonds had 46 homers in 1993.

Two more simulation problems leave the competition opportunity to surpass STRAT-O-MATIC. Pitchers who both start and relieve games perform equally well in both tasks. So a very good reliever who did not perform well in a couple of spot starts can be an excellent starting pitcher.

The fielding system is intricate to the point that Greg Maddux is more of a ground-ball pitcher against left-handed batters than right-handed batters. Still, the system is fatally flawed, since fielder ratings only apply during the specific 14 percent of play resolutions that occur on every single pitching card. Therefore, a lousy shortstop is just as valuable to Maddux as a top-notch shortstop. Ball-park effects, too, are independent of a fielder’s ratings. Even Dave Kingman would look like a gold Glover in the spacious Astrodome. In an unusual, yet conscious omission, STRAT-O-MATIC does not provide conventional fielding statistics.

STRAT-O-MATIC provides a flexible league interface, allowing up to 75 transactions per team during the season. You can also create new players using the Fringe Creation module. These players produce realistic statistics, but do not have a player card. STRAT-O-MATIC allows up to 40 players on a roster, and, if enabled, will automatically decide which 25 should be active for each game. Injuries are part of league play as well, but do not accurately simulate real-life injuries. Pitchers rarely miss a start and only once or twice a season is someone injured long enough to require a trip to the disabled list.

ONE LAST GREAT SEASON

Despite the above, STRAT-O-MATIC still provides one of the most complete baseball simulations available. It has fallen a little behind its top competitors in providing accuracy in replay, though it does provide realistic results overall. This is a category where excellence is the norm in the genre. The improved user interface is a plus, and league play is easy to learn and maintain. The computer manager makes good decisions most of the time and provides an AI on a par with the best games in the market.

Nonetheless, STRAT-O-MATIC has neared the limit of what a boardgame design can accomplish. If the game engine is to grow, like its competitors do every year, it needs to separate the computer game from the board game and provide the tiny adjustments that are only possible with computer-moderated play. These are small criticisms when you’re looking at a game that provides as much as STRAT-O-MATIC does. They may well grow more significant in the near future.

STRAT-O-MATIC BASEBALL 5.0

RATING ⭐⭐⭐⭐

PROS The great-grandaddy of baseball simulations is still great. Terrific league play options and competent manager AI will keep die-hard diamond nuts busy this fall.

CONS Some statistical oddities and limitations suggest that the system needs some revamping.

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What's In A Sim?

What exactly is a simulation? Why is one product raised to the illustrious status of simulation while a similar product gets blasted for being "just an arcade game?" How much reality can a simulation concede before it loses its status? I've devised four "checks" that I apply to simulations to answer popular questions about "realism."

CHECK 1: IS THE WORLD ROOTED IN FANTASY OR REALITY? To begin with, to be qualified as a simulation a product needs to have a basis in the real world; either it uses technology that exists, technology very near to entering service, or hard scientific facts. PAC MAN is not a simulation of a dot-eating semi-circle being chased through a two-dimensional universe by colored ghosts. To the best of our knowledge, there are no dot-eating semi-circles living in a two-dimensional universe. PAC MAN is clearly a game. The premise, eat dots and don't get eaten, does not disqualify PAC MAN, the definition of a two-dimensional, dot-eating semi-circle does.

This is an extreme example, but serves to illustrate the first point: there has to be clear cut definition between "game" and "simulation." You don't just create a fictional world and then "simulate" it. You either create a fictional world, or you simulate the real world.

Don't confuse that with the storyline, though. The storyline may be completely fictional (i.e., mercenary F-16 pilots fighting for world peace in the next century) but the world can still be reality-based. STRIKE COMMANDER clearly has a fictional story with fictional characters and fictional circumstances. But, that fictional world still abides by the same laws of physics as our own world. The world of STRIKE COMMANDER works basically the same as ours, but it's environment, the political and economic structure, and the attitudes of the inhabitants differ greatly from reality. You can't simulate a fictional world, but you can simulate a real object in a fictional environment.

Of course, there is a lot of gray between the two realms of simulation and game. Is SUBWAR 2050 a simulation or

THE TAVERN TALK

TURNS PHILOSOPHICAL

AS TOM BASHAM

RAISES THE AGE OLD QUESTION: WHEN IS A SIMULATION TRULY A SIMULATION?

by Tom "KC" Basham

ON THE RADAR

A large object on the radar has been identified as Domark's next big flight sim project, FLIGHT SIM TOOLKIT: DOGFIGHT! THE GREAT Aces OF AIR Combat. A very strong source (namely, Bryan Walker, former Apache pilot, former CGW reviewer, and now designer for Domark) says that the product will be a stand-alone program, but that FST users will be able to edit it much like any other FST file. The program will model a dozen of the best aircraft from WWI, WWII, and Korea, and will incorporate head-to-head play via serial and modem connections. Domark is experimenting with a V.FAST driver that can run at 28.8 baud, but even if this does not work out, they guarantee at least 14.4. For multi-pilot games, the program will include a variety of fun scenarios (like Capture the Flag) in addition to the classic dogfight match-ups. For solo flights, Domark is also hoping to incorporate potentially revolutionary artificial intelligence code that uses expert system and neural-net techniques. The AI may not only be smart, but it could learn from your tendencies. From all of us who've downed too many predictable AI pilots, we say "Good luck and good coding."
an action game? MicroProse advertises it as a simulation of submarine warfare in (another) mercenary-filled world. However, the submarine fighters and carriers featured in SW2050 do not exist in the real world, nor are they likely to exist by 2050 AD. The world of SW2050 operates with the same basic rules as our own (at least pertaining to an underwater environment), the story is purely fictional, and the "simulated" devices are purely fictional.

Simply recreating a few laws of physics does not earn a product the title "simulation." Suppose, for example, I write a program that models every aspect of the Earth's atmosphere and aerodynamics known to man. Then I program a mass-less, inertia-less, friction-less object that I can move through my complex world. I wouldn't consider that a simulation of a mass-less, inertia-less, friction-less object operating in the real world. Further, I wouldn't consider this product even an Earth simulation since there is no way for me to experience or interact with atmospheric and aerodynamic elements programmed therein. In like vein, I do not consider SW2050 a simulation. It does not either a) simulate a real world technology, nor b) allow you to interact with a realistic underwater environment. That doesn't mean SW2050 isn't fun, it simply means I consider it purely fictional and not a simulation.

CHECK #2: DOES IT FOLLOW THROUGH WITH REALITY?
Second, a simulation must approximate the functions of the simulated item by accepting the appropriate inputs and providing a reasonable facsimile of a response. This is a harder issue to deal with. Strike Commander, for instance, made it through the first check as a simulation of an F-16 in the future. Now, the second check gets down to the nuts and bolts: is it really a simulation of an F-16? The game takes many liberties with the flight and weapons models for the sake of game play. The on-screen aircraft does follow the joystick inputs, but doesn't follow them the way a real aircraft would. Falcon 3.0 may not conform to every detail of aerodynamics, but it does conform to more "real world" rules than Strike Commander. I therefore contend that Strike Commander is not a simulation.

When discussing a simulation, the question invariably arises: how realistic is it? How well does it approximate the responses of a real-world item? I believe that before questions like that can be answered, we have to examine the intent of the product, and the two "checks" I've described above do exactly that. DOOM, for example, fails these checks. Although you could argue that DOOM is a simulation of a Marine in a fictional environment, DOOM does not try to model a "real" human, primarily evidenced by the "health meter" and picking up "health packs." No human could take the abuse the DOOM hero takes, and there aren't any Stim-paks lying around on the sidewalks of the real world.

What about contested products such as Gunship 2000 and F-15 Strike Eagle III? Many debates have raged over whether these are games or simulations. I've been a fairly vocal critic of certain aspects of both GS2000 and F-15SEIII. But, before we dismiss them as "non-simulations," we have to apply the above two checks. Both GS2000 and F-15SEIII attempt to model a real-world object, and both do try to provide approximations of how the craft work in the real world. While I don't particularly like some of the "approximations" these products make, I accept that both of these products try to be a simulation.

CHECK 3: COMPARE THE NUTS AND BOLTS
That brings us to the third point. Once we've determined that the product does try to be a simulation then the question of "realism" comes in. Realism is invariably an emotion-filled, subjective debate. Why? Because this third check, "how realistic is it," has many subordinate questions to be answered. Checks #1 and #2 were each singular in nature; they looked at a single aspect of the product and compared it against my personal definitions. Classifying "realism" isn't nearly so neat.

For example, compare IndyCar Racing from Papyrus with World Circuit from MicroProse. Both model a real world vehicle. Both provide reasonable approximations of car handling. The key words, though, are reasonable approximations. Everything does not all conform to real-world specifications; corners were cut somewhere. For example, ever try driving backwards down the track? "Death Indy," or racing the wrong way around the track trying to cause wrecks, was a favorite among the original players of Indy 500. You can still do this in the new IndyCar Racing, but not in World Circuit.

OK, so what's that got to do with realism? You'd never go zooming around the track in the wrong direction in a real-world race. But think about the ramifications of not being able to go backwards. Ever lose control of your car and go spinning down the track? Have you ever gone "crashing" in IndyCar Racing, which direction are you pointed in? Who knows? The numbers are crunched, the bits are set and there you wind up. Try the same thing in World Circuit. Where do you wind up? Always pointed the correct direction down the track. A spin in World Circuit cannot stop in any other direction because you would have to travel in a disallowed direction to return to the track. So, is that a nit-pick? Maybe. Nonetheless, it indicates that spins in IndyCar at least give the appearance of being based upon speed, friction, force vectors, etc. while spins in World Circuit are "hard-coded." Every spin in IndyCar can be different; every spin in World Circuit feels and looks the same. Nit-pick or not, IndyCar is more realistic than World Circuit in this respect.

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Top Or Flop Gun?

THE ACE MAKER Air Combat Training Video

by Tom "KC" Basham

Check six. Pete Bonanni, there’s a new air combat video in town, Eric Bishop’s, THE ACE MAKER. Directly competing with Bonanni’s and Spectrum HoloByte’s ART OF THE KILL (AOTK), THE ACE MAKER video-tape illustrates various air combat maneuvers using footage from both real SNJ “Texan” trainers at North American Top Gun and from MicroProse’s new 1942 PACIFIC AIR WAR. The video tape is unique in that it illustrates combat maneuvers from the pilot’s perspective, rather than with the traditional three-dimensional diagrams used in most ACM schools, but in the end this approach is reminiscent of Amelia Earhart’s legendary last flight. It seemed like a good idea at the time but never makes it to the destination.

The ACE MAKER video is roughly 37 minutes long, with slightly less than 26 minutes devoted to air combat tactics, and over 11 minutes used for advertising various products. Interlaced with interesting WWII combat footage, the 25 minutes of training, unfortunately, provide little or no air combat maneuvering (ACM) background. To understand the maneuvers illustrated, the viewer must already be familiar with most ACM jargon and the basics of energy management. The video spends ten minutes with a short discussion on situational awareness and the three phases of air combat (detection, closure, and attack), then moves into air combat maneuvers.

Unfortunately, the remaining 16 minutes are not sufficient to provide any significant discussion of the 14 different ACM topics covered. Maneuvers are discussed rapidly with little more than a cursory examination of their air combat use. Novices unfamiliar with the jargon will find this brief discussion confusing and difficult to follow. Veterans well versed in ACM-speak will undoubtedly find themselves advanced well beyond ACE MAKER. The information provided in ACE MAKER is accurate, but many details and qualifications surrounding each maneuver are not discussed.

For example, take the brief discussion on lead pursuit, or pointing your aircraft’s nose ahead of the target. It is accurately defined as a method for increasing closure on a target and providing lead for gun shots. The narrator accurately states that pulling lead requires an increase in turn rate, which results in a loss of speed. The video fails to mention the ramifications of speed loss. The entire topic of instantaneous and sustained turn rates is totally ignored.

Significant details of other maneuvers are also omitted. The high yo-yo, primarily used to reduce angle-off-tail (AOT) by using the vertical, and secondarily to slow closure rate, is accurately described. However, no indication of “angle off tail” is given, or the ramifications of a high or low AOT. The video states that the high yo-yo converts speed into a good firing position. This is technically true, but requires careful implementation for success. A single, large yo-yo is rarely as effective as numerous, sequential, small yo-yos, a fact not mentioned in ACE MAKER.

In summary, ACE MAKER covers ACM topics too briefly to benefit inexperienced flight simulation pilots and provides too little information to attract veterans. ACE MAKER would be better served by dumping the advertising and lengthening the tactical discussions. Perhaps it will do so in the forthcoming THE ACE MAKER II: WINGMAN.

THE ACE MAKER, $19.95, VHS. For more information, contact Keyboard Commander Corps (800) 262-6066.  

Tom Basham’s mailbox is open to comments, questions, or complaints. You can reach him on CompuServe at 73760,1251.
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Zeroed In On The Pacific

MicroProse's 1942: THE PACIFIC AIR WAR Has A New Standard In Its Crosshairs

by Doug Fick

With the release of MicroProse's 1942: The Pacific Air War, the air war over the seas and islands of the Southwest Pacific easily become the most heavily portrayed theater of operations in flight sims. This title represents at least the fourth simulation dealing with the conflict between the Americans and Japanese. With such a fierce host of opponents, MicroProse was forced to pull out all the stops in order to maintain their reputation as a sim builder of the first order.

1942 covers the most intense period of aerial fighting during the war, starting in May of 1942 at the Battle of the Coral Sea and running until June 1944 at the Battle of the Philippine Sea. In the Japanese corner, wearing the distinctive Rising Sun, are the A6M2 Zero, B5N Kate and D3A Val. Flying for the Red, White and Blue team are the F4F Wildcat, F6F Hellcat, F4U Corsair, SB2 Helldiver, SB2D Dauntless, TBD1 Devastator and TBF Avenger. 1942 is strictly a naval simulation, and while such fighters as the P-40, P-39 and P-38 play a role in its world, they can't be flown by the player.

NEW TWISTS AND TURNS
Along with the standard features present in most flight sims, MicroProse has thrown in a few twists to keep the gamers on their toes. For one, you can run a carrier battle from an admiral's point of view, controlling ship movements, setting carrier and land based combat air patrols, and sending out search planes. Once the enemy is located, you can form and launch strikes from both carriers and island airfields. As the battle is joined, you can then jump into the middle of the action as one of the pilots involved.

What's more, if luck or skill deserts you and that once vivid blue Corsair is nothing but charred rubble heading for a quick swim, you can jump into any of the other aircraft involved in the battle and seek instant revenge. Both features add a lot to the overall appeal of the game, lending it both strategic and tactical depth of play unmatched by any other simulation.

At the highest level of detail, 1942 presents a visual image that surpasses any simulation I've seen. The detailing and Gouraud shading blend to create aircraft that could only have been displayed as static art two years ago. It's a testament to how far and fast both computers and programming have come to allow such complex shapes to be redrawn at 20+ frames per second.

All of this detail doesn't come at too great a cost, at least on a 486-66MHz system. Even with 16 aircraft in the same piece of sky, the frame rate is usable with only a slight bit of frame chop. After turning down the graphic detail, the frame rate increases to a very smooth level, and makes flight control much better. Even at the lower detail levels, the graphics are still equal to or better than most other simulations, so the trade off of detail for frame rate is hardly a bum deal.

As for the audio performance, it is terrific with a Roland or other MIDI processor. With a Sound Blaster, it's awful! I find it surprising that so much attention was given to the Roland, which has such a small market share, while the multitude of Sound Blaster owners in the gaming community were ignored. MicroProse must fix this with one of their add-on disks, and soon. Digital sound is planned as a free upgrade, so let's hope this is an empty complaint by the time this article hits the street.

A MODEL MODEL
1942 pushes hard to deliver some of the most realistic flight modeling yet seen in a World War II simulation. Having never flown a Corsair or Zero, this comment does not come out of personal experience, but out of a simple test I apply to all sims: If a flight simulation forces you to fly an aircraft in the same manner that it was flown historically, then the designers did their job.
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Sure enough, I found myself flying the same tactics that proved themselves time and again over the Pacific. At the same time, the game seems to have a much better balance than the Other Pacific War simulation, *ACES OF THE PACIFIC*. In *ACES* the Japanese Zero was outgunned and underpowered. To have scored many kills in one would seem a miracle, yet the great Japanese aces all got the majority of their kills while flying the venerable A6M. In 1942, I discovered that getting into a large furball with my nimble Zero would let me take lots of quick shots at targets of opportunity. Because of the Americans' speed advantage (except with the Wildcat), shots tended to be fleeting and dynamic, requiring a lot of practice to gain any level of proficiency.

At the same time, flying one of the two American juggernauts, the Hellcat or Corsair, I was comfortable with blasting through the fight at high speed, then once well clear, turning around for more. If the Japanese plane saw me coming, at best I'd get a quick high aspect shot on each pass, so once again, scoring kills is no easy task.

All in all, I was very impressed with the flight model feel, and, more importantly, the overall balance that came with it. Of the games that I've spent time with, only on-line *AIR WARRIOR* has a more realistic flavor, and that due mostly to the human adversaries.

Next to the flight model, perhaps the most important aspect of a flight simulation is adversary artificial intelligence. Blasting legions of bad guys out of the sky can be fun, but that isn't what a simulation is all about.

In 1942, the adversaries fly a solid plane, but nothing to challenge David McCampbell (34 kills) or Tetsuzo Iwamoto (100 kills). In large furballs, this deficiency isn't too noticeable, as the adversaries seem to take advantage of mistakes, but...
don't fly with a lot of imagination. It's in a one-on-one fight that it becomes obvious there's a little confusion within the computer. I've deliberately entered a big bogey-gathering turn to see what would happen and have been surprised at how long it takes for the computer to decide that enough is enough. At best it can be described as hesitant behavior. I don't want to mislead; my quibbles aren't huge, and I find the bigger fights very challenging and fun, but I hope MicroProse will continue to refine the AI code as the series progresses. [MicroProse has an Army Air Force and a European theatre game on their drawing board. —Ed.]

THE VIRTUAL VIEW

There is only one thing to say about a feature MicroProse calls "the virtual cockpit": it's the New Standard. Every simulation from now until virtual reality will be compared to 1942 in this area. The virtual cockpit allows you to "slew" their eyes around within the cockpit and, once an adversary is spotted, lock onto it for continuous tracking. FALCON 3.0 had something "virtually" identical, but the improved graphics and close-in nature of World War II simulations make 1942's version seem far superior.

My only real gripe with the view is that it's hard to keep track of pitch and roll attitude in a dynamic fight. I wouldn't mind seeing a small indicator in the corner of the display that represents the airplane's attitude. Some might consider it a cheat, but remember, a flat screen monitor can't portray what is intuitively obvious through body awareness in an aircraft. When I fly an F-16, if I know that I'll be performing a very high-G maneuver I'll lock my head into place. This allows me to track a bandit all the way through the initial 9G part of the turn by merely moving my eyes. It also helps prevent neck injuries or even getting my head stuck backward against the headrest or forward against my chest (most unpleasant).

Even though I can't move my head around for seconds at a time, I'm still acutely aware of what my plane is doing and can make fine adjustments accordingly because of body awareness. This is why I've always been a big fan of the external track mode. It most closely represents the feedback that comes natural in an aircraft. I'd love to see 1942 add an external track, but the virtual cockpit is so good that if I had some indication of attitude, I'd be happy.

I wasn't so impressed with the other view modes provided. The external view options are fine and very similar to any of

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the Dynamix games (Red Baron or either of the Aces games). The view modes within the aircraft are of limited value, so you’d better get good at the virtual cockpit or suffer.

With a set of rudder pedals and a Thrustmaster Mark II WCS, I was set to fly with style. Once I disabled these great add-ons, the game became much more demanding. Keystrokes and control layout didn’t receive the attention they deserve, and play suffers for it. The best example is in the virtual cockpit. Locking the view to the adversary requires hitting the ‘J’ key. If you want to re-center the view you must hit ‘J’ again to unlock the bandit and then hit the ‘C’ key. Ever try finding ‘J’ and ‘C’ quickly? This is one area that needs to be rethought and reworked. It’s cumbersome enough to turn off some potential fans of the game.

When seen from the larger perspective, it is apparent that MicroProse was aiming at the serious flight sim fan with 1942. While it might be fun for the more casual pilots, there is a good chance that the difficulty level might turn off some. Those willing to work through some of the small annoyances will be rewarded by the game. With most sims, my interest wanes fairly quickly, but 1942 has staying power to spare.

With its great graphics, frame rate, virtual cockpit, and overall feel, 1942: The Pacific Air War is a winner, especially when played with the right support equipment. There are a few weak spots, most notably the poor control layout, but if the READ.ME file is any indication, MicroProse wants to go all out to support this series of programs, and may yet address most complaints. (To start, MicroProse has promised a free modem-play upgrade). With these minor refinements, 1942 may well become the date on every simulation fan’s lips.

Doug Fick’s other car is an F-16. He has logged over 1500 hours in the craft as an instructor pilot in the National Guard.

1942: The Pacific Air War
Rating: ★★★★☆
PROS Great graphics, frame rate, the virtual cockpit, and the admiral’s-eye strategic game make this one a contender for flight leader in the WWII sim squadron.
CONS Sound Blaster support is terrible. Enemy AI certainly isn’t Einstein on wings. Beyond that, there are small flaws that may be corrected in updates.

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*Origin's PACIFIC STRIKE* Sputters After Take Off. Can It Recover?

by Tom “KC” Basham

THIS SUMMER, 50 YEARS AFTER THE D-DAY INVASION WHICH ULTIMATELY LED TO THE ALLIES’ EUROPEAN VICTORY, THE AIR BATTLES OF WORLD WAR II AGAIN RAGE. BULLETS HAVE BEEN TRADED FOR BITS AS *Origin's PACIFIC STRIKE* brings 30MBs of airborne combat to your hard drive. This time, the war isn’t just between the Axis and the Allies. While PACIFIC STRIKE players fight computer generated pilots, Origin fights its own war for market share against the recently released 1942: PACIFIC AIR WAR and the already-established *ACES OVER THE PACIFIC, ACES OVER EUROPE, AND AIR WARRIOR.*

Like Origin’s *WING COMMANDER* series and *STRIKE COMMANDER,* PACIFIC STRIKE focuses on action, role-playing, and storyline rather than hard-core flight simulation and realism. Like *STRIKE COMMANDER* before it, PACIFIC STRIKE includes just enough general effects to present a feel of flight, but fails to survive any serious flight model scrutiny. Different aircraft do fly differently—an F4F Wildcat will never outturn a Zeke (A6M Zero)—but serious effects like accelerated stalls, angle-of-attack spins, compressibility at high speed, and rudder-induced roll are absent. If you’re looking for gritty realism, turn the page now. If you’re looking for action and a storyline with an air combat backdrop, PACIFIC STRIKE delivers. How well it delivers is another matter....

*GOOD MORNING, PEARL HARBOR*

PACIFIC STRIKE loosely follows the history of World War II in the South Pacific. The game opens one early Sunday morn, December 7, 1941, just as the Japanese sneak attack jolts Pearl Harbor out of bed. The first mission scrambles the player and a wingman in F4F Wildcats against waves of incoming Japanese aircraft. You must first down enemy aircraft covering your runway, then proceed to Battleship Row and protect the battleship *Nevada.* If you survive, you and your wingman are transferred to the aircraft carrier *Enterprise* and head out to sea.

From there, the progress of the war depends on your success or failure. Major events, like the Doolittle Raid on Tokyo, the Japanese expansion into the South Pacific, and the Battle of Coral Sea, introduce you to war. Your carrier and your forces form the cornerstone of US battle plans every step of the way. If you fail your missions, World War II goes down hill in a hurry.

Although PACIFIC STRIKE takes some liberties with history, it includes most basic details such as the design differences between US and Japanese aircraft, dates of major events in the war, and the technological breakthroughs (like self-sealing tanks) that pushed US forces toward Japan. Although clearly no history documentary, PACIFIC STRIKE provides enough of an overview to introduce younger players to the war.

PACIFIC STRIKE’s storyline follows the same format as *Origin’s* other products. Two-dimensional faces and blank eyes stare directly at you and quote often-corny dialogue. You are, naturally, the hero of the World War II saga, a newly graduated pilot with no combat experience but an heroic serving of responsibility. The aircraft carrier you now call home contains the standard array of characters used in other *Origin* products, including a rough-and-gruff wing commander; a cocky, fresh-off-the-farm wingman full of spunk; a battle weary and shell shocked Flying Tiger who has a strange insight into the Japanese; an ordnance officer full of technical wisdom; and, of course, an aged cook who comes filled with opinions on almost everything.

Gameplay also follows the standard *Origin* mold. An autopilot cinematically teleports you and your flight between “action points.” Each action point requires you to complete some specific task. Tasks vary from torpedo runs, dive bombing, and dogfighting. As with *STRIKE COMMANDER,* the main objective of the mission may not always be clear, and you may have to replay missions several times to discover what the “success secret” is. Most missions seem rather long and drawn out, throwing lots of small challenges at you. Obviously, with such a mix of objectives, you must fly a variety of aircraft. Undocumented, you
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can eventually fly a Japanese aircraft, although appropriate graphics are not included and the aircraft looks like a standard US airplane from the outside.

Functionally, PACIFIC STRIKE is a clone of STRIKE COMMANDER using a similar menu system, identical gameplay, identical camera system, and identical view control. Any Strike veteran should find PACIFIC STRIKE extremely familiar.

SLOW GOINGS
PACIFIC STRIKE, despite using a time-tested engine and concept, has quite a few problems. Enough problems, in fact, to warrant Origin reps posting a public apology on CompuServe. As with virtually all other PC games these days, there are a few bugs, but they are not the primary reason for discontent. The main problem is that the game is extremely slow. On the tested 486DX50 local bus system, 8 MBs of RAM, a 256K cache, and a 1 MB disk cache (the recommended size), the program has more herks and jerks than a fuel deprived engine. After starting the program, it displays a black screen for nearly a minute before beginning the introduction. I thought the program had locked up until I noticed the hard disk light flickering madly.

After preparing for a mission and selecting "Fly," the program sits for nearly two minutes with a message, "loading terrain." Using <SHFT>-F to display frame rate inside the program, the testbed machine topped out at an underwhelming 13 frames-per-second with all detail options disabled, and dropped to an unplayable four frames-per-second during combat with detail levels maximized. Anything less than a Pentium simply will not provide a decent frame rate with any significant detail level, and a fast 486 is required to play even with detail options minimized. Further, even with the disk cache, the program often halts for four to six seconds during combat. After shooting a bandit the program freezes, then the disk spins madly, and finally the bandit explodes. The program will also freeze when a wounded bandit crashes, even if not currently visible on the screen. I quickly learned that when the game stopped for a few seconds some had guy had just died.

Why is the game so slow? Is it because of earth-shattering, sensational new graphics? Hardly. PACIFIC STRIKE uses standard 640x480 VGA graphics in 256 colors. At extremely close range PACIFIC STRIKE aircraft are wonderfully detailed. At typical combat ranges they look blocky, choppy, and difficult to resolve. Compared side-by-side, PACIFIC STRIKE graphics pale against 1942: PACIFIC AIR WAR's which has a significantly smoother frame rate at maximum detail settings. Origin's apology explained that their leading-edge designs simply push the limits of existing hardware. One must wonder, though, why other programs can offer similar or superior graphics with superior frame rates.

Worse than frame rate, though, PACIFIC STRIKE's sound is extremely weak. Individual sounds are not bad but seem to be a series of short, fixed-length "sound bursts." For example, the gunfire sound resembles "brrrt" and lasts about two seconds. If you hold the trigger less than two seconds, you still get the same amount of sound. If you hold the trigger longer, instead of getting one long, continuous "brrrrrrrrrrrrrr" you hear an annoying series of short blasts ("brrrt, brrrt, brrrt"). Worse, the program can only handle a single sound at a time. When you fire the gun, all other sounds stop. When you drop a bomb, all other sounds stop. When you get hit, all other sounds stop. Combat becomes a discordant array of interrupting and jumbled sounds. Under such conditions many sounds, like a bomb release, simply never come out. As with previous Origin products, the SPEECH ACCESSORY PACK adds limited sounds to specific dramatic sequences.

This combination of lethargic frame rate and crummy sounds seriously inhibits one's immersion into the fantasy world PACIFIC STRIKE tries to build. Origin has said that they're looking into the problems and intend to release patches to address them. One patch has been released at the time of this writing, but it made negligible gains in speed, sound, or graphics. Unless deep and fundamental changes are made to address these problems, this is one game that could end up with the U.S. warships at the bottom of Pearl Harbor.

FRAMED FOR THE KILL Just when things start to heat up in PACIFIC STRIKE, the frame rate can cool things down.

ROUGH LANDING Our hero comes in for a perfect landing, but the carrier looks like it's in serious trouble.

PACIFIC STRIKE

RATING ⋆ 1/2

PROS If you can bear the corny dialogue, the cinematics are up to Origin's standards.

CONS Slow, slow, slow! And the sound implementation is far from sound. If patches can't improve things, this game might go into a tailspin.
BASEBALL SEASON STARTS TODAY!

COLORADO ADMITS TEAM MANAGED BY COMPUTER

With no manager in sight, the team was forced to admit that they've been managed for the last year by a very powerful computer program: Front Page Sports Baseball. The program's Manage-only mode is great for trying out your own strategy, playing head-to-head with other players or against the computer. Switch to Arcade play and take as much control as you want over pitching, batting, fielding and base running—at Basic, Standard or Advanced skill levels. During the season you can play all the games you want, switching from Manage-only to joystick jockey at will.

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Wind turns game into home run derby See page 3
NEW YORK SWITCHES LEAGUES

Surprise Move Stuns Fans, Mayor To Investigate

In a surprise move, New York switched leagues today. The change of allegiance was perceived by many as an obvious attempt to capitalize on the fan appeal of a direct rivalry with the city's other team. Fans already were speculating what it would be like watching a player like Bobby Bonilla face the other league's pitchers. According to sources, Front Page Sports Baseball made the team's move easy.

League play can be configured for up to 48 teams in one to three leagues. Talk around the league centered on what it would be like to have Toronto and Atlanta in the same league and division. The move might be completed as early as next week.

OAKLAND CALLS UP TWO PLAYERS FROM MINORS

Looking for extra offense after eight losses in their last 10 games, Oakland has called up two .300 plus hitters from their AAA team. Key in the decision was the fact that Front Page Sports Baseball lets you have extra players on the injured list, in AAA, or in the low minors. You can also make player trades between the end of post season play and the August 31 trading deadline. Take over all the roster decisions for your team or delegate some or all of them to the computer.

HOME RUN KING IN SLUMP?
CHECK LAST SEASON'S AVERAGE

Coaches and teammates alike were unanimous in their support of Barry Bonds, saying he's always been a streak hitter and will probably start connecting in his next couple of at-bats. The team's batting coach backed up his statement by saying that a player's performance in Baseball is determined by ratings based on actual statistics. Performance factors include situational ratings, including left-handed and right-handed batters and pitchers, home and away games, clutch situations, and monthly performance records.

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Develop your own team dynasties using Major League Baseball Players, making trades, managing your team roster and the careers of all your players.

DUAL SPORTS STAR LOOKS AHEAD TO FOOTBALL SEASON

As exciting as Front Page Sports Baseball is, it's no wonder coaches are saying two-sport sensation Deion Sanders is itching for the football season to begin. After all, the same folks who have translated all the excitement of Football Pro into Front Page Sports Baseball are busy working on the next release of the pigskin's best rendition. It will include new rules such as the 2-point conversion and 30-yard line kickoffs, plus the 1994 NFLPA players and team rosters. Be sure to look for all the details in your box of Baseball.

CHICAGO TO HOST BASEBALL'S BIGGEST STARS

League officials promised today to release the site of this year's mid-season showcase. All 12 of Baseball's realistic, 3-D stadium models are contenders. Officials admitted the stadium choice is really up to the user. The computer chooses teams based on actual player performance. With all the stars in baseball, the action is sure to be felt all the way into the upper deck.

WIND 10, PITCHERS 0

In an amazing game showing the effects of high winds, Toronto and Oakland traded home runs, combining for a total of ten. Mark McGwire, Ruben Sierra, Terry Steinbach, Rickey Henderson, John Olerud, Paul Molitor, Roberto Alomar and Joe Carter all contributed round trippers. It could only happen in a game like Front Page Sports Baseball where temperature, humidity, wind and rain are all part of the game. So you get all the unpredictability of Mother Nature—as well as the chance to display your own skills. In fact, ball flight is based on a real physics model. Where and how far balls are hit is a true combination of pitch speed and the swing of the bat. The better you are, the better your team does.
VCR-like controls for instant replays make sure you catch every bit of the action. Watch from virtually every angle in the stadium.

LEAGUE CALENDARS TO COME OUT TODAY

Fans all over the country are clamoring for their season schedules to start planning the games they'll personally attend. Fortunately, Front Page Sports Baseball makes it easy to generate calendars for all regularly scheduled games. What's more, detailed box scores are provided for simulated games so you can find out what happened and how every player did. A special one-pitch mode lets you view just the critical pitch for every at-bat. In minutes you can review the key plays of an entire game.

WHO'S ON FIRST?

Get the baseball game with all the strategy and action of the big leagues. It's a round tripper for anyone who loves baseball. To get the complete score, call 1-800-757-7707 and ask for D840.

Futurists predict baseball will one day be played by robots

Pointing to advances in cybernetics, several futurists have predicted the game will one day be played by robots. Until then, Baseball can be played on a 386/33 MHz or higher IBM-compatible computer with 4MB RAM with EMS, MS-DOS 5.0 or higher, VGA, hard drive, and a 1.44MB 3.5" HD floppy drive or CD-ROM player. A mouse, joystick, and sound card (most supported) are recommended.
When Illuria, Do As The Warlords Do

Now that this combined war and strategy gaming section of the magazine has emerged, it has made my life much easier. Gone is the headache of deciding if a particular game was "wargamey" enough to make the Wargaming World section of old. One item of debate, however, always seems to linger: are non-historical genre games, such as Warlords II, war or strategy games?

Editors and gamers aren't the only people who quibble about such matters. Witness a recent on-line discussion between Keith Zabalaoui of Atomic Games and Gregor Whiley of SSG over the status of Warlords II. Keith was trying to convince Gregor that Warlords II was a strategy game, not a wargame and, therefore, Atomic's Velikiye Luki deserved the #1 slot on CGW's Wargame Top 10. Allow us to share with you Gregor's response:

"To be read with a thick Australian accent and sense of humor, or rather, humour."

"Here are 10 good reasons why Warlords II is a bona fide wargame and a better game than Velikiye Luki, and therefore should maintain its rightful position above Velikiye Luki in the CGW lists."

1. Nomenclature: Warlords II clearly has "war" in the title, whereas Velikiye Luki is just the name of some dinky part of Russia that even the inhabitants have been trying to leave since 1917.

2. Body Count: Given that the units in Warlords II represent legions, and that these legions are killed in vast numbers throughout the course of a game, we clearly have a higher body count and, hence, more war.

3. Family Values: One doesn't like to dredge up the recent past, but the parents of Velikiye Luki have just endured a messy divorce, and the parties are now not speaking to each other. On the other hand, Warlords II was delivered and nurtured in a true family spirit of serenity and harmony. Clearly this is a better role model, and should be rewarded.

4. Gender Equality. Heroines are given equal billing by Alan Emrich

G-2

* Look for New World Computing to release an Empire Deluxe Master's Edition on CD, including both the DOS and Windows versions of Empire Deluxe, "classic" Empire, plus excerpts from the strategy guide. It will be playable from the CD-ROM with minimal space taken up on your hard disk.

* Rumors abound on Mark Baldwin and Bob Rakosky's follow up game. While likely to include "Empire" in the title, it will be on a more operational scale (i.e., players will manage campaigns and battles, as opposed to entire wars with economics driving gameplay).

* SSI's Great Naval Battles series will have one and probably two more games added to the series. Volume III is rumored to increase the intensity of Pacific Theater operations, while Volume IV will delve deeply with submarines.

* Those seeking a more glorious age of naval warfare will be glad to know that Avalon Hill has begun working on a computer version of Wooden Ships & Iron Men. This one is not a rehash of their older version, but a new program being done by the 5th Fleet team.

* Along this line, Impressions will be setting sail with a strategic level, high seas trading empire game. Players become the Han Solos of the 16th and 17th centuries. Action will focus on trading and detailed, 3-D, first person perspec-
and abilities in WARLORDS II, and get their own picture. Women in VELIKIE LUKI are shamefully oppressed by patriarchal notions of history, and their heroic efforts for victory are disregarded.

5. Patriotism. A simple equation. WARLORDS II is English, the universal language of the Western Alliance, of which Australia is such an integral part. VELIKIE LUKI is Russian, which is the language of the bad guys.

6. Realism. VELIKIE LUKI has some pretensions to realism, but only WARLORDS II conveys the true essence of generalship. The noted WWI historian Captain Edmund Blackadder stated that the secret British war plan on the Western Front was "to continue until everyone was dead except Field Marshall Haig, Lady Haig and their tortoise Alan."

This is exactly the style of warfare that only WARLORDS II can deliver, although there must be some doubt over any general exemption for tortoises.

7. Nomenclature II: What could a company called "Strategic Studies Group" do except produce wargames, probably under the auspices of the CIA or Pentagon? On the other hand, what could a company called "Atomic" produce? I'm afraid that I have insufficient evidence to clearly state that Keith hasn't made clandestine trips to North Korea or that a special room in his house isn't lined with lead.

8. Examination: When the combat graphic comes up in WARLORDS II, it says 'War!', not 'Strategy!' Pretty obvious, I would have thought.

9. Realism II. A game of VELIKIE LUKI leaves one with a realistic appreciation of WWII combat on the Russian Front. A game of WARLORDS II leaves you feeling that you'd like to annex your neighbors' house, raze his garden shed, and conscript his children, before he does the same to you. Obviously, WARLORDS II is a much more realistic experience, and a much better guide to urban survival.

10. Seniority: SSG has been here much longer than Atomic. Show some respect.

Gregor Whiteley, SSG"

And so these little debates rage. In the meantime, we should all laugh, play war and strategy games, and be glad that our hobby is thriving. Remember, it's more important to know "What's in a game?" than "What's in a name?"
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JUST ADD SLAUGHTER

BUILD YOUR OWN BATTLES WITH SSG'S
WARLORDS II SCENARIO BUILDER

by Robert L. Hayes, Jr.

I don't know quite what to make of Strategic Studies Group. When the original Warlords came out in the late 80s, it garnered a large following of wargamers, and those gamers politely requested some enhancements and alterations to the game's engine.

A few years later, SSG released Warlords II, implementing the wishes of their players and reflecting improvements in the state of the art. Warlords II also was well-received, and after thanking SSG for updating the game, those same players politely requested a scenario builder so they could add their own worlds to the game. SSG promptly started work, and the result is the Warlords II Scenario Builder.

What's going on here? A game company that listens to what its players ask for and provides it in a reasonable time? What is SSG trying to do, maintain customer loyalty and user satisfaction? Evidently they're on the right track.

IF YOU BUILD IT...
The Scenario Builder is really two enhancements in one. The scenario editor itself, accompanied by a suite of handy utilities for compressing and installing user-created scenarios, enables the budding designer to generate entirely new scenarios for the basic Warlords II engine. Along with the package, however, comes a bonus of 24 new scenarios, presumably created to show off the power of the scenario generator. Thus, gamers uninterested in creating their own worlds can still expand the horizons of their conquests.

The scenario editor is a bit idiosyncratic, as one might expect of a product originally intended as an in-house development tool. It works just fine, however, and even novice world creators will soon find themselves sketching out new killing fields for themselves and their friends.

The Scenario Builder uses the concept of "sets" to simplify the task of creating an entirely new world. There are Army Sets, City Sets, Terrain Sets, and Shield Sets. Each set contains the basic information used by that class of object. An Army Set contains all the artwork, unit names, and unit attributes for the military forces found in a scenario; a City Set contains the artwork for each empire's cities and fortifications; Terrain Sets contain all the map data of the Grasslands, Mud, and Ice terrain types; and a Shield Set contains the eight small shield icons used on the strategic map.

Sets can be used interchangeably from one scenario to the next; if you think catapults should have a higher attack value, for example, you can create a custom Army Set based on the default set with your changes and integrate it into the scenario you want to play. More typically, you can create an Army Set that has all the units you plan to use in any number of scenarios, thus saving an immense amount of work. Sets can be copied, so that minor changes don't require entering an entire set from scratch. The user can affect only the Army and City Sets; the Shield Sets and Terrain Sets are limited to those included in the Scenario Builder package. This seems a petty restriction,

but it should not make any difference to anyone but a perfectionist. You have complete control over practically every aspect of unit design; all types of bonuses are included, and you can set unit values to practically any setting you like. Of course, there are a few restrictions. You cannot change the special powers of heroes, for example, though you can change their default movement and combat values. Temple allies and allies have their own restrictions, but these flow naturally from the game design and should not stymie anyone. City Sets are less flexible; all you can really change is the appearance of the icons. Each city's production and income is set independently in each scenario, however, so this is not a major concern.

There are several customizable controls for your scenario's presentation. You can import a .PCX or .BMP graphics file for the introductory scenario picture, name the scenario, and type a brief description of the scenario.

LANDSCAPE PAINTING

Painting the map for your scenario is a simple process. The first thing to do is draw the broad outlines of your landmasses. You are able to paint with a remarkable degree of control. All the familiar terrain of Warlords II is at your disposal, as well as the more unusual terrain of the Mud and Ice terrain sets. Once the broad outlines of your land are in place, it is time to use the "Smooth" function. This creates realistic shoreline, modifies terrain slightly (i.e., your mountain range may be ringed by hills), and in general causes the map to look right. Perfectionists can change the map details after smoothing to make things look perfect, or to create terrain that the smoothing function disallows (like mountain ranges in the middle of the ocean). There is only one missing piece in the terrain generation process: there is no command to random-
Every scowling kabuki soldier could be made to laugh with the army editor.

You must build each tile by hand, which can be very tiresome on a map the size of the ones found in Warlords II. Aside from this flaw, the terrain editor works very well and is quite straightforward in function. The manual does a good job of explaining the basics, and the on-line help is adequate.

Having built your terrain, it is time to put cities and ruins on it. You can name each city, set its production and income, and type its description, or you can let the computer automatically do it. A nice feature here is the ability to partially define your cities; you can do the work for the important cities, then let the computer "fill in the blanks" for the cities that aren't so crucial. The same procedure is used for ruins, temples, and signposts; one flaw here is that you cannot pre-assign a given treasure to a given ruin. This makes it more difficult to assign treasures to a "proper" place in the game and enforces the randomness found in the original Warlords II game. You may define all the treasures, however, with all the normal magic item attributes found in the original game.

Saving your new universe takes a considerable amount of time; the Scenario Builder packs all your sets, compresses your maps, and redraws the strategic map whenever you save, a process that takes about 10 seconds on a 486-66. Frequent savers will be driven to distraction by the time this will eat up, but it should be pointed out that I have yet to crash the program in some 30+ hours of use. Saving the scenario two or three times per session should suffice for most users.

The only problems with the Scenario Builder are control issues. I would ideally like to be able to control every aspect of the game, from the way the AI functions to the exact shading of the rocks in the mountain ranges. That's simply not practical, and the Scenario Builder seems to have struck a reasonable medium between ease of use and user control over the final product. On balance, the Scenario Builder is an excellent software tool, and any dedicated Warlords player will find it a mandatory addition to their software library.

PRE-FAB EMPIRES

The new scenarios are a mixed bag, as is usual for compilations of this sort. Most are good, a few are great, and a few stink on ice. Fans of the original scenarios will find similar enjoyment in the Arthurian Britain, Elemental Problems, Esessee Island, Jungle Valley, Knight's Isle, Scentilla, and Spectremania scenarios. The Chessboard, Hand of Fate, Isle of the Wheel, Minotaur Maze, Spindle Isle, Star, and The Well scenarios all play with the topography of the map, with mixed results; the AI is easily confused by such geographical peculiarities, but human players will relish the odd strategies these topologies generate.

The Elemental Crux, Flooded Halls, and Glacial Islands scenarios are all pretty much wastes of disk space; the maps of Flooded Halls and Glacial Islands are simply too hard to figure out, while Elemental Crux is grossly unbalanced. SSG has boosted the "universal wargame construction kit" aspect of Warlords with the inclusion of America, Europa, Invasion, Roman, and Rule Britannia scenarios. Each of these is set in historical or futuristic milieu, again with mixed results; with the exception of the Invasion scenario, the artwork used for these historical simulations is so terrible that play enjoyment is hampered even for a visually unacquainted player such as myself. Additionally, the unit choices are irritatingly cutey; one grows tired of building stacks of Jesse James or King Poseidon units. The Europa scenario has the most potential, but is not well play-balanced; the Italian player, ironically enough, is in a commanding lead from the very beginning. The Landlords (the class struggle meets the fantasy wargame, complete with motorcycle-riding security cops and briefcase-equipped lawyers) and Warthogs II (battle for control of the pigpen) are both hysterically funny and enjoyable to play. All in all, about half of these scenarios are doomed to a "play it once, then delete it from the hard disk" reception on the part of most gamers, but the other 12 are an excellent addition to the scenario library and will see a lot of replay.

WARLORDS II SCENARIO BUILDER

RATING ★★★★★

PROS So you want to be a game designer? This is a terrific way to dabble in world creation.

CONS The interface has a few quirks, and we would like to tweak with the enemy AI. Are we ever satisfied?

FORECAST CALLS FOR MUSHROOM CLOUDS This carefully crafted pixel-city gets radiated in VGA verisimilitude.
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It Came From Britain

MicroProse UK’s X-COM
Will Kill Your Cattle, Eat Your Brain, And Have You Coming Back For More

by Chris Lombardi

X-COM: UFO Defense is a patchwork of the worst science fiction films and the best science fiction games you’ve ever seen. This MicroProse UK creation draws its xenophobic themes from the kitchiest of popular UFO lore, and its various game elements borrow from many successful titles of days past. But X-COM is far from another rehash of tired ideas; it is a hybrid game that binds together its many facets so tightly that you can’t see the seams. It’s one of those rare and dangerous games capable of drilling into your brain, putting a vice-grip on your imagination, and only releasing you when it has had enough.

As the plot goes, aliens from the starry beyond have shown up on Earth’s doorstep, and they aren’t playing very nice. The typical almond-eyed beings straight off the cover of the Weekly World News, along with their other, nastier pals, are abducting decent citizens for protoco logic probes, mutilating upstanding cattle, terrorizing major cities and taking over governments. The response from the free nations of the world is X-COM, a multinational organization whose sole reason for being is counter-xenocide.

Your job, which you accept in the name of God and species, is to lead this organization. It’s a big job, for not only must you manage the logistics, plan a grand strategy, and give direction to research for this enterprise, but you must command small groups of soldiers in tactical, turn-by-turn, man-by-man, shot-by-shot, bead of sweat-by-bead of bleeding sweat missions. In fact, sweating the details of tactical combat—deciding if Soldier X should face to the right or to the left this turn—is how you will spend a lot of your time. And there is a lot of time to be spent here—well over 40 hours for a single game. If you have any intention of trying out sibility for a little role-playing with your soldiers, as these men and women have abilities that improve with time, and can, with a little player-injected imagination, acquire short, heroic histories.

WAR OF THE WORLDS
Since this is a war of the worlds, X-COM has a whole-Earth perspective. The highest level interface is a stunning globe that can be spun on two axes and magnified to reveal major political boundaries and cities. Time passes in spurts from five-seconds on up to a complete day, and as it does, sunlight moves beautifully across the planet’s face.

Your first order of business is to open the X-COM shop and place your first base. Since the funding for the X-COM project comes from the countries of the world, and since a country’s financial contribution differs depending on its wealth, base location isn’t a trivial decision. If the aliens harass China and China lies outside your protective reach, the Chinese may

ALIEN PLAGUE It seems Mother Nature has caught a virus, as alien bases (pink) pock mark her lovely face.
express their dissatisfaction by reducing their financial contribution at the end of the month. North America, Europe and the Far East are key base locations since together these regions make up a huge percentage of the project's funding.

As you set up your first base, building radar systems, hiring scientists, recruiting soldiers and creating houses and workspace for your people, you'll probably have your first close encounter. If the radar system picks up an unidentified blip on the radar, and if you've built an intercepter fighter, you can send out the fighter for an air-to-air battle. These battles are simple tactical affairs where you can either choose one of three combat dispositions for your fighter, or retreat if the going gets too tough. If you've got superior weaponry (which you do, somewhat unrealistically, at the outset), the alien ships will drop like flies. If a UFO crash lands on dry land, it's time to load your crack team of commandos into a transport and investigate the crash site.

ALIENS, TOO

When the team arrives at the crash site, it arrives at the heart and soul of X-COM—the tactical battles. Here, from the time your first soldier sticks his nose out of the landing vehicle until the last alien corpse has been zip-locked into mess-free bags, you direct every step your soldiers make. The control system is sophisticated and rich with variety. Each soldier has an allotment of movement points based upon his or her individual traits. With these points, a soldier can move, crouch down, fire his or her weapon, throw an object, or use special equipment like medikits, alien mind probes, illuminating flares, or special weapons. The system makes use of a realistic hidden movement system that adds tremendously to the tactical feel. Once all of your soldiers have moved, the aliens have their turn. At that point the screen goes black and you might hear the aliens shuffling around, opening doors, or using elevators. If an unseen alien steps into your soldiers' line of sight, you'll catch a quick glimpse of that alien's movements. If a soldier has movement points remaining from the previous turn, he or she might take opportunity fire. The system has an authentic tone of small arms firefights, and actual small arms combat tactics can be used with success.

The fabulous thing about the combat system is that it lends itself to a variety of tactics. Don't want to approach the alien infested farm house from the front door? Blow a hole through a wall and enter that way. Having trouble spotting an alien sniper in a wheat field at night? Shoot a few incendiary rounds into the field and set the wheat on fire. Feel a bout of Schwartz Fraggins coming on? Find a hole in the ceiling of a UFO and drop your bundle of bravado into the midst of the aliens. Grenades can be lobbed through windows and over hills, and smoke grenades can be used to cover your movement. There's also a huge variety of settings for the battles: desert environments, jungles, polar wastelands, mountains, among others, not to mention that there are a half dozen UFO types, and they can be in different states of destruction after crashing. Then, there are more missions beyond the simple UFO crash. If the aliens terrorize a city, you can send the troops in to protect the citizens from slaughter. You can attempt a raid on an alien base, or you might have to protect your own, fighting within the actual halls of a base you designed. The possible permutations of mission types is incredible. And we haven't even touched on the eight different alien types, the joys of alien mind control, the arsenal of exotic weaponry, or the fact that soldiers can improve their skills and rise in rank if they make it back alive from a mission.

AMAZING STORIES

Variety is one key element of X-COM; another is discovery. As you fight the aliens, as you capture and interrogate live specimens, and recover and research their technology, a story begins to unfold. The intentions of the aliens are slowly laid bare bit by bit until, in the end, you are poised for a final, climactic confrontation. That there is a story in the game is both a blessing and a curse for the design: a blessing in that there is always a tantalizing carrot hanging in front of the player's nose leading him to a cathartic conclusion; a curse in that the carrot isn't so compelling the second time around. For this reason, X-COM may not be a game that most people will be playing this time next year. Certainly, at the end of my third game, I'll probably be ready to move on, but that will be after 100+ hours of entertainment, which is surely more than I've come to expect from the average game.

Discovery is also a part of simply learning the mechanics of the game. Partly due to the complexity of the game, and partly to a game manual that is long on the obvious and short on detailed information, X-COM can take a while to learn. You should ex-

**HANGAR 18** The top secret “Hookah” base in Nevada is beginning to run out of developable real estate.

**DEFENSE** A lone soldier protects his base from an alien attack. The aliens often pour in through the hangar areas.

**KNOCK, KNOCK!** The commando response team makes another house call, but the alien of the house won't be getting Avon.
pect to restart the game two or three times before you take on a game in earnest, just to get a feel for the interface and the mechanics of play. Many soldiers will be sacrificed to the aliens, and several live grenades will be dropped on toes before you get the swing of things. Even then, it is very easy to make simple interface mistakes that leave a soldiers' butt hanging in the breeze—one of the few frustrating events of the game.

The precipitous learning curve shouldn't scare away the interested player. Those with a yen for tactical combat will find that any invested time cast upon X-COM's waters will come back tenfold in great gameplay. They will also be treated to hip, comic book style art that runs counter to its "B" movie story, and they'll thrill to terrific mood music and sound effects. They will also be pleased to hear that only one technical problem ever cropped up (after a few hours, the sound effect can decay into loud, static-filled noise. A quick save and restart takes care of the problem for another few hours.)

In the end, too much remains unsaid about X-COM, but then there is much more to uncover for yourself. Simply know this: It comes from Britain. It comes in peace. Its only demands are on your free time. Resistance is futile.

THE DEAD POETS SQUAD Each soldier has combat statistics that improve with experience. They can also be renamed to add your own personalizing touch.

X-COM: UFO DEFENSE

RATING ★★★★★

PRO Terrific tactical, squad-level wargame under an interesting strategic umbrella. Richly varied and intense.

CON Takes a while to wade through the game's complexity and get a feel for its inner workings. Games can be extremely long—perhaps not a "con," but a warning.

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QQP's THE GRANDEST FLEET 
Is A Big Little Strategy Game

by M. Evan Brooks

THE GRANDEST FLEET (TGF) IS THE LATEST GAME OF NAVAL COMBAT FROM A BIG LITTLE COMPANY CALLED QQP. Notice that I use the word “game.” TGF is a game, and not a simulation; any resemblance between TGF and historical naval engagements is purely coincidental. However, this is factual and not critical. TGF is a fun game, and one that should live a good long life on many gamer’s hard drives.

Some have characterized TGF as LOST ADMIRAL II. QQP has a problem with this, and since LOST ADMIRAL II is due for release this holiday season, they would seem to be on secure ground. Nevertheless, TGF does have many similar features to LOST ADMIRAL; it also has elements of EMPIRE DELUXE and SimCity. If TGF isn’t a direct descendant of LOST ADMIRAL, then it’s a closely-related nephew.

Like LOST ADMIRAL, TGF is easy to learn, but challenging to play and difficult to win. With nine historically-based scenarios, each capable of at least ten variations, plus a random scenario option, you won’t exhaust this product in a quick play, yet the individual scenarios themselves are all playable within a few hours. There are 21 levels of computer opponent, and the AI can be tough.

BUILD POINTS ARE FleETING

Each scenario begins when you purchase the ships that will comprise your fleet, using “build points” from a starting pool. Thereafter, gameplay flows from movement, combat and construction. While much of the structure is similar to LOST ADMIRAL, the construction phase includes not only naval, but port/city improvements. You can add a downtown, shipyard, repair yard, refinery and suburbs to your growing metropolis. In the campaigns and longer scenarios, such improvements enable you to construct new super ships, which add considerably to your fleet’s offensive punch.

You begin as a seaman, and with success, you can move up to the rank of fleet admiral. You also have a political rank which starts at “citizen” and increases to “governor.” You must attain the highest naval rank before political rank increases, so you must undertake a long series of games to attain the pinnacle of success. But even after a single promotion, you are awarded a super ship at no additional cost. This allows you to get a taste of what more advanced levels can offer in terms of naval warfare.

As far as I know, TGF is the first wargame to include opera houses as an instrument of victory. City improvements such as “opera” increases culture and, thus, victory points. Universities have a similar function and are required for certain research items. However, the university actually decreases a city’s victory points. I suppose having those “radical commie pinkos” on campus is not conducive to supporting the war effort.

The university is essential to building missile bases, which are a city’s strongest defense. In the shorter scenarios, you will be unable to quickly improve the R&D capabilities and will have to rely on coastal forts. Their cost is affordable, although their placement can often be troublesome. While they can be placed in a land hex within four hexes of “downtown,” it is often a matter of trial-and-error to determine which hex will in fact support a fort, and an incorrect placement will force one to begin the acquisition process from the beginning.

Cultural improvements are best left to longer scenarios. In a limited turn-based game, victory must be achieved too soon to effect any major changes, and the optimal strategy seems to be the rapid deployment of new capital ships. A strength of TGF is that the different options require different playing strategies, and the longer scenarios do in fact give victory to the “Most Cultured” conqueror.

ROCK BEATS Scissors

Simply put, TGF is a “rock/paper/scissors” wargame. There are eight classes of ships, including carriers, battleships, cruisers, destroyers, PT boats, submarines, transports and minelayers. Like a myopic American admiral of the 1990s, the game crowns the battleship as king, and it is clearly the most effective unit. However, its high cost and extreme vulnerability to submarines requires that you develop a more balanced mix.
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SON OF TSUSHIMA If you decide to relight the Russo-Japanese War, the cities and ships of the participants sport a more modern look than in the 1993 original.

Optimum performance involves employment of weapons platforms that degrade the opponent's strength at the least expense to your own. For example, use of submarines in a forward picket against an enemy battleship will be effective. But any credible opponent will only absorb such an attack for one turn before destroying the submarine line with a formation heavy in destroyers or PT boats. Then, you should be ready to respond with air support and cruisers and battleships to destroy those pesky submarine-destroying assets. And so it goes...assault responded to counter-assault, until the final casualty is tallied.

While normal combat offers a fixed fire/damage rate, you can randomize the damage. This will +/ - the damage results by two for larger ships, with a 10% chance of a critical hit. Smaller ships will have a +/ - 1, but no chance of an outright kill.

Invasion of enemy cities is a key component of success. An enemy city must be beaten into submission until the invading warship has sufficient "invasion points." Until such time, any ship within range may bombard the enemy city, but the ship occupying the invasion port will generate a reduction of one point per turn.

Unlike LOST ADMIRAL, TGF offers more cases of ranged fire—in the case of cruise missiles and aircraft, even across land masses. Part of the challenge is to play scenarios with different ship mixes; what works in one scenario is completely ineffective in another. Sadly, mine operations are only functional in two-player games; like the U.S. Navy, the AI can't figure out how to use or remove mines effectively.

Actual tactics are scenario dependent, particularly with the enemy's fleet mix.

The winning player's force will be characterized by optimum force structure combined with proper use at the proper time.

Careful attention must be paid to victory conditions. A campaign encourages careful conservation of assets, since those assets saved today can be used in tomorrow's scenario. A quick scenario does not encourage preservation of assets; instead, quick victory points are the arbiter of success.

ALL EYES AND EARS

The general presentation of TGF is pleasing and informative. As a battleship brings its guns to bear, you can see the turrets swaying to suddenly erupting in a skull-rattling belch of flame. When a ship is sunk, it either sinks slowly to the bottom, or more ignominiously carwheels across the screen into oblivion. While occasionally crossing into the overly cutesy corridor, the graphics are colorful, interesting and more than sufficient for a game of this type.

The sound support has been roundly criticized by a number of users. While there is no problem with the 8-bit Sound Blaster cards (aside from a volume and speed overly reminiscent of television commercials), both Sound Blaster-16 and ProAudio cards cause occasional lock-up. QQP is working on a patch for this deficiency.

The patch that they are not working on concerns the basic documentation and manual. Aside from the chart with incorrect statistics and lack of an index, the information is all there, but presented in a less than orderly format. Attempting to learn the game from the documentation is an effort that has been rendered unduly difficult.

Finally, saved games are not propositions. With super-ship options, the saved games seem to reset switches, and in campaigns, it is difficult to get a successful save between scenarios. Hopefully, this will also be corrected in a future patch.

THIS IS NOT YOUR XT'S TONTO

In the prehistoric days of computers, SIDEKICK offered an array of interesting add-on programs to a hard drive user. But the expanded version became a large and often cumbersome program with little of the simplicity that one had admired in the initial release. I was concerned that TGF would be a SIDEKICK to LOST ADMIRAL. To

THE GRANDEST FLEET

RATING 

PROS The short scenarios and the challenging tactical game make this one a fun and fast play. A variety of tactics required to win.

CONS Details of gameplay are hidden within poor documentation. Interface has its awkward moments. Lack of historicity will be drawback for some.

THE GREAT GRAY FLEET While Battleships are the most powerful, you'll need a balanced flotilla to rule the waves.

CAMPAIGN SCREEN

ADMIRAL FOR A DAY While the short battles are fun, it is the campaign option that lends the GRANDEST FLEET its character.

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Mongols In Steppe

Genghis Khan II Conquers The Plains of Asia And A Wargamer’s Hard Drive

by Terry Lee Coleman

When considering the Great Captains of History, Genghis Khan was to the Orient what Napoleon or Alexander the Great was to the Western World. A reflection of the harsh conditions which molded his nomadic people, he used his fierce charisma and military talents to make the Mongol horde synonymous with irresistible force. Fearless, determined and innovative, he brought empires to their knees with bold tactics and new weaponry. His dreams of world empire were too much for one man to achieve, and he never lived to see his descendants rule over lands from Korea to eastern Europe. Genghis Khan II (GK2) from Koei allows you to attempt to succeed where even the great Khan himself failed.

At first glance, GK2 looks like “Risk Goes Eurasia,” complete with map divided into colored regions. Still, the graphics show the great strides that Koei has made in the past year, and compare favorably to other strategic wargames. What most gamers will enjoy is the simple interface, which allows you to jump right into the action. Basically, you pick one of three scenarios, trying to either Unite Mongolia, achieve Genghis Khan’s Great Ambition of conquering all Asia, or effect the Birth of the Yuan Dynasty, where Kublai Khan leads the Mongols from Korea to the gates of Western Europe. A fourth World Conquest scenario is included for those generals who can successfully complete the Conquest of Mongolia.

For those who would rather try and best Genghis at his own game, each scenario has a variety of leaders from which to choose. Twenty-one historical personalities are rated in politics, war, leadership and charm from A (world-class) to E (incredibly inept). As one might expect, Genghis only earns a C in politics (being an uncompromising negotiator), but his report card is impeccable in all other subjects. For a real challenge, you can take the field as John I of England, whose average grades would put him on academic probation at any respectable war college.

Each turn, leaders expend body points to perform actions, the idea being that even the best of rulers can accomplish only so much in a given season. For instance, Genghis has 15 body points each turn, so he could recruit troops (4 points), train them (5), and go to war (6, for a total of 15). Most leaders must spend more on each action, or have less body points, so that the design realistically reflects Genghis’ superior empire-building skills.

The player’s decisions are hardly limited to the military sphere, with economics taking on major importance. Trade occurs when a merchant visits one of your territories, and is one of the easiest ways to build your empire. Some merchants travel from as far away as Venice, and offer many opportunities to sell silks or porcelain at great profit. Arms can be purchased to strengthen your military forces, or you may simply wish to buy and sell various goods in an attempt to corner the market. Still, merchants tend to hit the wealthier states more often, so a ruler who lingers in Lower Mongolia is likely to find himself stuck there with a penniless purse.

Inexorably linked to your fortune is the happiness of the populace, expressed as a support rating. To keep the natives from rebelling, you must allocate the labor so that enough food is produced through herding and harvesting. Construction is a must to improve the economy, provide shelter from disasters, and defend against ill-tempered neighbors. Taxes are a last resort, as they drive support down, while a few gifts of food or furs go a long way toward ensuring loyalty. While not exactly “Merchant Prince Khan,” the economic module provides plenty to juggle, as there are never enough body points or gold pieces to cover every eventuality.

As if a ruler didn’t have enough headaches, conquered lands must have governors appointed from a pool of generals. Problem is, a general loyal in war may soon fall prey to ambition as the glory and grandeur of governing puff’s up his pride. Even if loyalty is not in question, great warriors do not always make good bureaucrats. Thus, the game system allows you to appoint an advisor to address the balance, but with the trade-off of lost time and body points.

Diplomatic options allow you to extort
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tribute from weak neighbors or bully them into submission if your reputation and timing allow. Alliances offer the opportunity to secure your flanks for up to eight years, assuming enough time and effort are invested, as neither allied party may attack the other for the period of the agreement. Unrealistic? Perhaps, but perfectly in keeping with the Mongol tradition of honor. Besides, it adds a degree of depth to the game, and by itself justifies the diplomatic rules.

In his spare time(), a ruler must spend a few hours with his wife in order to produce heirs. Heirs are crucial, as they allow a player's dynasty to continue should he die. Also, a male child aged 10 or older may become a general or governor, while a female of the same age may be married to a general, assuring the son-in-law's loyalty forever.

**TO YOUR SCATTERED BODIES GO**

If this were all G2 accomplished, it would be a good game. That the strategic aspects of the game are combined with a fun tactical system for resolving battles is a treat for the wargamer. Each province has native forces indigenous to that region for levying purposes, such as Nomads and Mongols in Mongolia, Knights in most areas of Europe, Samurai in Japan, and so on, comprising 16 different types of units in all. All units are rated for Close Combat, ability to Charge, and Defense, with ranged units also rated for their ability to fight from a distance.

When a war is declared, the forces are organized into legions of one to four units each, with no more than five legions (20 units max) being able to invade an enemy province. All units must be maintained, at a cost of 10 gold per turn, but the invader must also allocate at least 50 gold minimum per unit to entice the forces to leave their homeland. Food must be stockpiled or the units will suffer casualties more easily. While the problems faced by would-be Khans are quite historical, the surprise is that the game system presents logistics, training, arms, and the like so elegantly that this part of the game is fun rather than frustrating.

Once the invasion begins, the defender and the attacker place forces on an operational map, similar to those found in Koei's ROMANCE OF THE THREE KINGDOMS. The avenues of approach differ with each combat, because each of these maps corresponds exactly to the strategic relationship between the two provinces on the strategic map! Thus, an invasion of Japan must land ambissiously, attackers from southeast Asia to India must come from the east, and so on, with hundreds of combinations possible. Complicating the invader's task are natural defenses of hills, streams, forests—some eight terrain types in all—to slow his advance and create rallying points for the defense.

Getting around on the operational map is a matter of issuing commands to your legions, with each leader having one to three commands per day-turn, again depending on his war rating. Subordinate generals will perform independently, but are subject to brilliance or disaster, as their individual ratings and random factors go. In addition to maneuvering troops, you may attempt to bribe enemy legions, set ambushes, "blitz" for an all-out assault, or gather information on the disposition of the forces arrayed against you.

Battle ensues, legion on single legion, as combat moves to the tactical board. While having a miniatures feel, G2's tactical system differs from more recent games like KINGMAKER by mixing abstractions and realism in uncommon ways. The "edge of the world" syndrome is reminiscent of a boardgame, but is less of a problem because there are only four units or less on each side in a given combat. Generally speaking, a full-strength unit is comprised of 200 soldiers, and takes up four "mini-spaces" on the tactical board. For instance, a Nomad unit would have four cavalry pieces making up the unit, which moves and fights together. As the unit takes losses, it loses one of its "horses." Tactically, this means that even depleted units may be used to advantage, as they fit into smaller spaces than their full-strength counterparts. The flip side is that units which survive with any fraction of their forces return to normal in the next seasonal strategic turn, so what forces to risk and when to risk them is a big decision during play.

Natural defenses such as trees block movement and help shield against missile fire, while constructed defenses are represented as moats and fortified walls. Each unit type has a mobility rating which it uses, in standard movement point fashion, to move through terrain. The game even allows for different movement rates based on weather patterns and time of year. As units close
with the enemy, they may expend mobility to attack with ranged fire, or in close combat. Arms and training limit the number of times missile units may fire in a battle, so deciding when to loose that volley of arrows makes for many tense moments. Deciding when to charge, withdraw, close with the enemy, or personally lead troops in battle, are only a few of the numerous decisions sure to make any armchair general happy for hours on end.

Units also have morale ratings and may become shaken, leaving them open to a charge from the enemy, complete with crushing sounds. The elephants are a delight, trampling and trumpeting, and Norman Knights crash with cacophony right out of a King Arthur film. The only improvement would be if the exhortations from the generals to “Move forward with strength. Crush the enemy,” and the like were spoken rather than mere text upon the screen. Perhaps in GENGHIS KHAN CD...

The best thing about the tactical system is that the player learns some of the finer points of combined arms, as he must properly use a myriad of units in a variety of different tactical situations. As with the strategic game, there is no one sure path to victory, with the opportunity for every gamer to develop his own discernible style. The AI opponents, especially when set to hostile, will provide a strong challenge to any human general on both the strategic and tactical levels. Ready to pounce at any sign of weakness, they are very good teachers, especially when you find yourself on the wrong side of an ambush. Best of all, the computer seems to play by the same rules as human participants, a rarity indeed.

Ultimately, GK2 is a classic computer wargame in the truest sense. Amazingly easy to learn and bug-free, it is difficult to master. Although the game system is strong, it also has a charm and elegance missing from many games these days. If the folks at Koei aren’t directly descended from the Gray Wolf clan, you couldn’t prove it by me.

GENGHIS KHAN II: CLAN OF THE GRAY WOLF

RATING ★★★★☆

PROS A very solid wargame with lots of panache. The scenarios and tough AI will keep gamers riding the Asian plains for many moons.

CONS The tactical battles are a bit too abstract for some tastes. The game cries out for modern play.

Q.Q.P.'s Strategies of the Month

Playing above difficulty levels 12-13(of 21)can be tough, yet interesting. I(Bruce Williams) enjoy level 16. Sometimes at that level I can't buy a win and other times(with enough thinking) I can kick butt. When you first get Grandest Fleet, start at levels 1-5 until you get used to the mechanics of the game. In the short games forget super-ships. In the medium to long games, create the economy to build these super-ships. Almost inevitably, your opponent will be doing the same. A string of super battleships and/or super carriers, aiming down the channel at your basic conventional fleet, will make you want to melt in your shoes. My favorite ways of playing Grandest Fleet is in either the random map or the balanced historical maps. In the random you pretty much set your own balance by your choice of cities at the start. In the historical, the balance is set by playing both sides in tandem(ala Perfect General). In the shorter historical maps 10-12 turns, playing both games against the computer shouldn't take longer than 1.5 to 2 hours.

Look out for the Great Origami Sweepstakes posted in this magazine! Prizes include cash, and games from the QQP library.

The computer opponent is most challenging. If you are a novice, try switching around your opponents to get the mix that works well with your playing style. Also if you're having trouble winning don't be afraid to go back to the practice room for some very good tutorial advice. I think you'll play this game for the rest of your life. Our Solitaire's Journey has that same long lasting appeal.

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120 COMPUTER GAMING WORLD • AUGUST 1994
You are the Ace squadron leader. Your mission is to attack and destroy the battleship "MUSASHI" off the coast of Leyte, The Philippines, during WWII. Choose between the F6F Hellcat (fighter), the SB2C Helldiver (dive bomber) or the TBM Avenger (torpedo bomber).

Sensational RAYTRACING animation

Actual screen photographs as they appear in the game

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"What's Good for GM is Good for America"

But is DETROIT Good for Impressions Software?

by Alan Emrich with Petra Schlunk

WHEN POPULAR SINGING GROUPS IN DETROIT BEGAN TO BE KNOWN FOR A DISTINCTIVE sound, it was called Motown in honor of their city's moniker as the Motor City. When you talk about the automobile industry, you talk about Detroit. In spite of the fact that both domestic and international auto makers have assembly lines all over the continental U.S., we tend to think of Detroit as a synonym for the auto industry. Now, Impressions Software has provided a simulation that lets you attempt to become the next Ford, Buick, Olds, Shelby or Tucker. DETROIT allows you to build an automotive manufacturing empire.

DETROIT is a natural sequel to Impressions' previous business simulation, AIRBUCS. Like its predecessor, it is a game for spreadsheet warriors only. Unlike MicroProse's RAILROAD TYCOON in which trains have to run on schedule, there is no real time pressure in this game, nor are there pretty graphics of a growing business empire. DETROIT is purely a game of resource allocation in which you respond to a mysterious "market" using the limited information provided by profit/loss statements, graphs and other data. This is a game for people who enjoy playing by, and with, the numbers.

ROLL OUT THE CHASSIS

The game begins in January 1908 with each player starting a competing car company. DETROIT is always a four-sided contest, with one player against three computer controlled companies, multiple human players sharing a computer or, if they have the game's patch, by modem. Each turn represents one month and the game is 100 years long. That's 1200 turns of mathematical assembly line aerobics!

As the game begins, there are few viable markets among the world's "territories." The Northeastern U.S. is clearly the place to start your company, with all of the U.S., Northern Europe and Canada ready to consume these newfangled contraptions at the game's outset. The demand for automobiles in other territories around the world is generated on a predetermined schedule, which you must discover by trial and error. To start selling cars, you must "open" a territory, which involves building at least one sales office there, supported by a bit of advertising that can include a monthly dollop of dollars for billboards, print media and sponsored sports events.

Since each player begins with a single, viable family sedan car design, the next step is to set up a profitable business. Generally, this means hiring workers so that each of the assembly lines (there are six per factory) has an optimal number of workers building successful models. Since starting salaries and benefits are randomly generated at the beginning of each game, it is critical to adjust these numbers so that researchers and assembly line workers are making a decent wage (i.e., one that creates a few new prospective hires in the employment pool each turn) while your company is making a healthy profit.

Henry Ford once said, "People can have our cars in any color they want, as long as it's black." But once your company is running in the black, your cars no longer have to. At that point, you can create your own designs of various model cars, painting them in any color you want. Through a scrolling variety of fronts, middles and rears, various car sections can be combined to make sports cars, sedans, luxury models, trucks and a variety of other car types. The body design, choose from a variety of painstakingly researched features such as engine types, braking systems, and luxury options, is the next order of car design. While each feature adds to the quality and value of a particular car, it also increases the cost to produce it. With a design completed, the prototype can be taken to a test track for evaluation to help you determine the car's potential success in the marketplace.

As the game progresses, you merely try to keep up with events and stay profitable. New technologies are discovered, new cars get designed, new markets open up...the world changes, and you must tweak the numbers to change with it. Obsolete car models will not sell, so you
must keep up with the competition by spending money on research and upgrading or redesigning cars when new technology is discovered. When demand increases, you put more workers on each assembly line or open up a new factory to pick up the slack. When new territories open up, you must plant your corporate flag in the sand with a new sales office and marketing campaign. When war looms, global demand for cars will fall, so you get to be the cruel, tightlipped comptroller and lay off dozens of workers and charge outrageous prices for cars in order to keep your company viable.

**SHOWROOM BEAUTY**

Among DETROIT's better features are its intuitively designed interface, good tutorial, and the ability to print out the myriad of reports available each turn (for those who want to archive their titanic business struggles). Additionally, a booklet included with the game entitled "The Open Road: A History of the Popular Car" by Jennifer Hawthorne was a particularly good read, adding considerable atmosphere to one's situation in the game.

Impressions was also wise to include a "Cheat Card" to help players focus on initially optimal adjustment numbers, thus preventing new players from getting too frustrated at having to replay the beginning of the game repeatedly until discovering values that work. Finally, although we are not enamored with the blocky, low-res graphic look of DETROIT, Impressions certainly has done a commendable job of making this game look good—adding some animation here, painting nice backgrounds there.

**I'VE SEEN THIS WORLD BEFORE**

While an interesting concept and an initially absorbing game for number crunchers at heart, DETROIT has a fatal flaw. It is a puzzle game rather than a true strategy game. What we mean is that much of the world is "fixed" in every game, and thus predictable. The markets open up at the same time, with virtually identical demand, in every game. The demand for sedans will always be high at the beginning of the game as a fixed percentage of overall car demand (75%), with a 10% demand each for sports and luxury cars, with the remaining bit primarily for trucks—there's an early game hint for you! We've seen the game's car demand spreadsheet that shows more of this predictable pattern, putting the game squarely into the nature of a puzzle to be solved.

Replayability in a strategy game is strongly dependent on randomness, making the discovery of demand and markets an important element in each game, rather than arote task acquired from experience and memorization.

Another irksome feature is the limited impact of marketing on the preset demand values. No matter how many showrooms you open, how much you advertise, or how cheap your cars are (yes, we have tried selling the $1 car), prior to the fixed game turn that a market opens, no one will buy a single car. C'mon! While the game simulates marketing as a struggle for claiming more of the existing market share, it does nothing to simulate using marketing to increase the overall demand for a product.

And what of troubled times? Demand for family cars, naturally, plummets during both The Great War and The Big One (World Wars I and II). Still, didn't Detroit produce military vehicles? While a whole module could have been included for designing and improving tanks, half-tracks, jeeps, etc., to have massive layoffs and cutbacks on consumer car production as the only impacts on the automobile industry during the wars just doesn't feel right. This one-sided gimmick would only make a corporate president say, "Hey, where's my government contracts?"

Besides an unrealistic simulation of the impact of war on the automobile industry, other interesting events that affected this business were neglected. For example, it might have been nice to include scenarios exploring the economic situations of the Post War Boom of the '50s and the Energy Crisis of the '70s—anything to cut down on those 1200 turns would be welcome.

Finally, there are no AI differences between the various game difficulty levels. In fact, the only difference is the amount of money a player starts with—a non-issue once you learn how to fiddle the starting numbers so that your company is producing a profit right from the start.

**CRASH TEST**

The initially released version of DETROIT had a lot of bugs, but the patch file has gone a long way toward addressing these, and we found no problems after installing the file. Our criticisms remain focused on the game's lack of variation. A good strategy game is played over and over so that you can experiment to find different paths to success. DETROIT, once "cracked," offers little to inspire another go. Sadly, unless Impressions follows up this release with an interesting series of scenario disks that would offer new eras and new demand algorithms, DETROIT is a game to take for a spin around the block and park in the garage.

**DETROIT**

**RATING**

**PROS** Another original and potentially fascinating concept from Impressions. There's a great tutorial, clean interface, and lots of reports that can be sent to your printer.

**CONS** The implementation doesn't match the concept. There's no variability in the game, so once a few key variables are figured out, it's trivially easy to win.
The Reign Of Same...

...Lies Mainly In ULTIMATE DOMAIN

by Tim Carter

To hear Software Toolworks tell it, ULTIMATE DOMAIN is every game to every player. The packaging claims that this "ultimate" experience combines "sophisticated simulation, role playing adventure and wargaming fun," all under one gaming roof. Need it be said that the product inside the box fails to match the lofty claims of the packaging?

A more critical take on ULTIMATE DOMAIN reveals a lackluster strategy game with very little of what most gamers refer to as adventure, role playing, or simulation elements. Even the advertised fun is difficult to find. What one does find after a few minutes of play is that this game seems to be a marketing-inspired attempt to distill the vital essences of two successful strategy games, POPULOUS and CIVILIZATION, and combine them into one potent gaming brew. Unfortunately, it seems the designers failed to recognize that quality is not simply a matter of using the best ingredients, but in the careful blending of those ingredients.

STRAT O' GEMS

The object of the game is to retrieve seven jewels scattered randomly across one of five possible maps. A map is seen from the top-down, angled view reminiscent of POPULOUS, although with much better graphics and detail. In order to support the search for the jewels, as well as protect the jewels once they have been found, you must build and maintain a medieval empire. The infrastructure of this empire consists of buildings and people, which are dynamically displayed on the map. Individual characters move about at their assigned tasks, while new buildings are raised, forests are hacked down for lumber, and the seasons pass with the appropriate transformation of the landscape.

Members of the populace are employed in a number of different trades, from farmers through architects, inventors, woodcutters and a variety of soldier types. Empire building involves generating enough people and resources to fully exploit your initial plot of acreage, and then sending out soldiers to attack the enemy.

DEVIL IN THE DETAILS

As you delve into the finer points of the game, you may find several areas where awkward game mechanics can lead to tedious play. For instance, architects who are not specifically assigned to construct a particular building will build houses for other members of your empire. This is fine, except that you are totally at the mercy of the whims of your architects regarding the location of these houses. Otherwise-friendly architects have a nasty habit of constructing houses in the path of uncompleted roads, defensive walls or other important projects. Combine these inefficient city layouts with the fact that military and civilian units cannot move through a space that contains a building, and you've got considerable defensive and economic liabilities, along with hair-pulling frustration.

What's worse, because the view of the playing area is at an angle, units can disappear behind buildings or trees. With no overhead view, it is often very difficult to move a military force through a densely developed or forested area. On more than one occasion I deliberately deforested my empire—despite the economic consequences—so that I could simply see where my army was going.

As a strategic exercise, the game flops, largely due to a lack of strategic decisions during play. After growing as fast as possible (tedious enough in itself), you send out as many troops as you can spare in the hopes of capturing enough jewels to win. Better technology will aid all aspects of ex-
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Faux Populous Veterans of Bullfrog's Pervulous will find the environs of Ultimate Domain to be very familiar.

Exploration and conquest, but since there is no general description of the effects of each technological advance, long-range planning in technological development is difficult.

Ultimate Domain also suffers from the "feast or famine" problem prevalent in many strategy games. Often, you have too little of a particular commodity, or far too much. In more carefully designed games, the overflow of goods occurs late in the game, at which point the resources are applied towards winning. In Ultimate Domain, some resources are so easy to get that a considerable amount of time could be spent simply building storage facilities for the excess. Once a store is constructed, it is possible to sell stored raw materials as well as purchased goods, provided that you've built wagons to transport the goods from the warehouse to the store. As any halfway intelligent planner will locate their store next to their warehouses, it is all too easy to turn excess materials into cash. This removes the need for taxation, making the control of your population quite easy.

MEDIEVAL MUDLE

Ultimate Domain seems to suffer severely from a muddled design and a lack of play balance. The designers appear to have gathered all of the successful elements from past games (quests, empires, city planning, balancing economic growth with military campaigns, technological development) and shoveled them into this title without consideration for how the elements interact to make a whole. The situation is akin to an unoriginal composer who, in the attempt to create the "ultimate" piece of music, takes the themes of the greatest classical music pieces, alters them enough to avoid claims of plagiarism, and strings them together into a single piece, without thought of pacing, contrast, or internal consistency. In Ultimate Domain the result of this misdirected design is that the game is totally lacking in the qualities of the games it tries to emulate: there is no thrill of growth or discovery as in Civilization, and the scenarios do not crescendo to a thrilling climax as in Populous. Indeed, the structure of the design is so poorly engineered that it is quite possible to win this game without ever expanding out on the starting position. If that doesn't sound a death knell for a game of empire building, I don't know what does.

ULTIMATE DOMAIN

RATING ★

PROS Familiar game elements.

CONS A clumsy, wholly uninspired imitation of previous strategy game successes.

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Circle Reader Service #128
Setting Traps For Desert Rats

Strategy and Tactics for Avalon Hill’s Operation Crusader

by Robert R. Mayer

Field Marshal Erwin Rommel: dashing and decisive, the perfect exponent of the Blitzkrieg style of warfare. General Bernard Montgomery: deliberative and determined, the personification of the indomitable fighting spirit of the British army. In 1941, these two men, and the forces they commanded, would clash in the deserts of North Africa. While often bitterly fought, the campaign the Allies called Operation Crusader was not the decisive engagement that either side desired. However, with Avalon Hill’s Operation Crusader and the insights into game mechanics provided in this article, you can change all that.

THE RULES THEY ARE A-CHANGIN’
With scads of new rules, veteran gamers of Atomic’s V For Victory series (of which Crusader is a descendent) will have to adjust their thinking if they want to succeed in Crusader. While there are numerous small changes, the major new rules affect three general areas: combat, headquarters and supply.

 Tanks in Crusader are much more decisive than they were in any of the V4V games, and players must plan accordingly. Armor shifts are still determined by dividing the larger value by the smaller and assigning a negative or positive sign as necessary. If total attacking armor values are greater than total defending anti-tank values, the attacker receives up to +10 odds shifts. What’s new is the prospect for negative odds shifts. If the defender’s total anti-tank value is greater than the attacker’s total armor value, the attacker can incur up to -3 odds shifts. As a result, strong anti-tank defenses can wreak havoc on ill-considered armored assaults. Armored infantry units incur no negative shifts to odds due to armor/anti-tank matchups. Negative shifts only apply to pure tank or recon units.

In another new twist, Crusader also allows defending armor units to create negative odds shifts. A non-armored stack attacking an armored or recon unit can incur up to -10 odds shifts in this way. Anti-tank companies are now very valuable additions to an attacking stack because they can limit the negative shifts from defending armored units. Tanks in the open desert truly do reign supreme, as Table 1 shows.

<table>
<thead>
<tr>
<th>TABLE 1: Maximum Odds Shifts (+/-) for Armor vs. Anti-tank Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attacker</td>
</tr>
<tr>
<td>Armor/Recon</td>
</tr>
<tr>
<td>Armored Infantry</td>
</tr>
<tr>
<td>Infantry</td>
</tr>
</tbody>
</table>

OVERRUNS: RUN AWAY! RUN AWAY!
As in many boardgames, overruns in Crusader occur during movement, not combat. Crusader, however, allows any unit to participate in an overrun, provided there is at least one armor unit in the stack conducting the overrun. Yes, even leg infantry units can overrun a hex if they are stacked with an armored unit and can generate the required odds. Overruns occur when an eligible stack plots tactical movement into an enemy occupied hex and can generate at least 10:1 odds. All modifiers except air and artillery support count, and each overrunning stack calculates its odds separately. A successful overrun usually eliminates the enemy and any enemy zones of control (ZOCs) exercised into the overrun hex. Overruns can occur before or after combat, in effect allowing multiple attacks on a single hex.

You cannot overrun stacks that contain any unit with an armor value greater than zero. Nonetheless, overruns add enormous flexibility to the game, and open up many possibilities. On the defensive, tanks can do wonders in stiffening a line, but they are better employed as a mobile counterattack force. On the attack, tanks can turn mediocre assaults into important breakthroughs.

NIGHT OPERATIONS: LULLABY AND GOODNIGHT...
In V4V, night turns were only marginal-
ly less useful for operation than daytime. In Crusader, the penalties for night operations are severe. Anything beyond simple adjustments of position should wait until morning. Tactical movement and combat in particular take huge fatigue and disorganization hits at night, though strategic movement for motorized units is less affected. Two turns of night operations will render even the best formation ineffective, so go ahead and rest. If your opponent doesn't, you will be able to regain any lost ground with your fresh troops in the morning.

HEADQUARTERS:
GO FORTH AND MULTIPLY
One of the most visible changes in Crusader is the addition of brigade and regimental HQs. Well trained, mobile divisions now usually have one or more subordinate HQs, making them much more flexible in combat. You can now detach whole brigades or task forces to accomplish specific tasks without having to worry about positioning the division HQ to keep everyone in supply. There is no set, permanent organization for any of the HQs in the game, so you can mix and match units with HQs as much as you want. You will probably want to keep battalions of the same regiment together, however, for the integrity bonus if nothing else. Brigade HQs can also significantly extend the operating radii of units by extending their supply net.

SUPPLY:
YOU CAN TAKE IT WITH YOU
Speaking of supply, in Crusader supply now arrives at individual units only during the 0600 turn. Units have to make do for the entire day with what they collect then. Now, continuous combat even for units on attack supply will rapidly deplete stocks of fuel and ammunition. A unit can have a perfectly valid supply line to its HQ, yet still be completely out of supplies due to over-consumption. On the up side, you can now send whole formations on deep penetration raids knowing they will have enough supplies to fight if intercepted.

Headquarters draw supply from depots, which draw supply from an overall supply source. Depots vary from scenario to scenario. Units must trace a supply line free of enemy units' ZOCs and prohibited terrain to their parent HQ, which then must trace to a depot. The various supply line and length requirements are given in Table 2.

Remember, except for brigades and regiments attached directly to divisions, HQs can trace supply lines of unlimited length. This gives you free rein to galivant across the desert as long as you can secure your lines of communication. The farther you go, however, the easier it is for the enemy to cut you off. Depots are now prime objectives—taking one helps your supply and hurts your opponent badly. Finally, don't forget terrain. You can't trace supply anywhere a motorized unit can't; this turns gaps in escarpments and roads across wads into vital arteries and deadly chokepoints. Table 3 shows how unit combat values are modified for supply as follows:

<table>
<thead>
<tr>
<th>Supply State</th>
<th>ATK</th>
<th>DEF</th>
<th>ARMOR</th>
<th>AT</th>
<th>QUALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attack</td>
<td>+50%</td>
<td>+50%</td>
<td>+50%</td>
<td>+50%</td>
<td>+50%</td>
</tr>
<tr>
<td>General</td>
<td>base</td>
<td>base</td>
<td>base</td>
<td>base</td>
<td>base</td>
</tr>
<tr>
<td>Defensive</td>
<td>*-50%</td>
<td>base</td>
<td>-50%</td>
<td>base</td>
<td>base</td>
</tr>
<tr>
<td>Minimal</td>
<td>**-75%</td>
<td>-50%</td>
<td>-50%</td>
<td>-50%</td>
<td>-50%</td>
</tr>
<tr>
<td>No Supply</td>
<td>***-75%</td>
<td>-50%</td>
<td>-75%</td>
<td>-50%</td>
<td>-50%</td>
</tr>
</tbody>
</table>

ON THE ROAD TO TOBRUK
The campaign scenario in the heart of Crusader, and the following discussion assumes that you are playing the full game against another human. These tips should work against the computer opponent as well, but be warned: the computer plays a pretty good game in most cases.

Allied: Why waste your energy going straight into the teeth of the Axis? The key here is mobility. You've got a wide open desert in front of you, and your HQs can generally roam all over it. With the new supply rules, there are few places you can't go and still get beans and bullets delivered to your door. It makes sense to disappear into the trackless wilds of Cyrenaica for a time, with the intention of reappearing unexpectedly on the enemy's rear. While you should always garrison victory point hexes and depots, use lower quality units and higher HQs to do so; just remember to dig in deep!

You still need victory points, so you will have to take the enemy-held objectives as well as hold on to your own. Victory points can also be had by killing enemy units. As tough as they are, German units are especially lucrative targets. One of the best ways to win is to concentrate on cutting off and surrounding Axis formations. You can do this by surrounding them with units and ZOCs or by capturing depots. First, you have to consolidate your armor and be prepared to live a vagabond lifestyle. Don't send the Desert Rats into Sidi Rezegh; after all, the place is a tomb, and you don't really like the sound of that, do you?

Concentrate with the 4th Armoured Brigade around Bir el Essem or Gabr Saleh, and watch where the panzers go. Use dummy's to scout out those panzers. You can then turn the hammer and anvil against the Germans in a form of military judo. Let the Germans slice down into what they think is your vulnerable flank, then cut in behind them, take Gambut, and trap them against the escarpment. You still have to advance with 4th Indian, and drive the 2nd New Zealand north, but do so with an eye to funneling the Germans into a trap.

You can't ignore the Italians, but you
in the center. You could also pull back into the desert south of el Essem and Gibr Saleh, and draw the Axis mobile forces into the interior. Yes, you will lose points temporarily, but you should gain them back with interest as you isolate and destroy enemy units. Objectives are worth more points each game turn, so you can make up for early losses with late counterattacks. Naturally, while you are raising havoc, the enemy will be trying to do the same; be sure to patrol the open areas between your formations. You don't have to react to enemy movements immediately, but you have to keep an eye on them; nothing is quite as horrible as suddenly finding a panzer division where you expected only sand. In short: don't get surrounded, stay out of frontal assaults, and hope Rommel has a bad day.

**Axis:** The Axis starts the campaign with powerful mobile formations. You have to use your advantages or watch them slip away, however. As the Axis, you too can choose whether to wait for the Allied attack to develop, or strike swiftly and make Auchinleck dance to your tune. The Axis position resembles a dumbbell, with one bulge of troops in the east around Bardia and Halfaya Pass and another around Tobruk, connected by a thin neck of German block the DAK's supply lines. As long as you can prevent that, the possibilities are nearly endless.

The most important Axis formations are 15th and 21st Panzer. These are your hammer. Swing west, and you can trap the Desert Rats; swing east, and you can derail the drive on Bardia. You will probably have to use the 90th Afrika to screen your right against Allied armor, rather than to assault Tobruk. You can swing east and west, towards el Guettat and Libyan Omar both, but beware of losing Gambut and being trapped in the east without supply. Don't get pinned down in a *sitzkrieg* with Allied infantry. Historically, the panzers got caught around Bardia where they faced strangulation. Get some units, even dummies, into the enemy rear and start overrun-
RAIN DOWN ON ME Stuka dive-bombers interdict supply lines to slow the British forces.

ning Allied depots to cause distractions and disruption.

Remember, if the Allies can't take and hold the initial Axis VP hexes, they can't win. Making the Allies spend their time holding what they already have is one path to victory. Don't ignore the Italians. Use their mobile divisions wisely. The 152nd Ariete starts in a good position to

Alternatively, the 101st can take off southeast to try to outflank the Allied left by circling around the large rock and wadi barrier that runs south from el Gubi. Be prepared to run into a reception committee at the wadi near the southern map edge.

The 102nd Trento, on the other hand, starts in the Tobruk perimeter, and can conveniently leave. If you can replace it with less mobile troops, do so; it can hold its own in the open. The 25th Bologna, 27th Brescia, and 55th Savona leg divisions should have defensive roles.

The 17th Pavia should take over the responsibility of guarding and holding Sidi Rezegh, freeing up the 90th Africa to join its brethren in a concerted hammer blow against the Allied armor. The Italians, with their extensive corps support, should do fine on the defensive. The exception is the Savona, a pathetic division which should fall back as soon as the Allies turn its flanks. As always, dig in if you get the chance; in the desert, everyone can hear you scream when unentrenched infantry meets advancing armor. Above all, remember that if you can keep the Allies from destroying your supply net, you have an excellent chance of winning.

Robert R. Mayer was a beta tester for the Macintosh version of OPERATION CRUSADER, and he contributed player's notes and advice for the game's manual.

He welcomes all questions and comments via e-mail at CompuServe: 72020,706.

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Circle Reader Service #67
This Is My Hammer,
This Is My Wand

by Chuck Miller

There's an old craftsman's adage: don't use the right tool for the wrong job. That means if you need to nail a varmint with a hammer, don't try it with something like a magic wand. I've been having trouble with this lately, perhaps because I've been perplexed by the many puzzles in the latest action/adventure shareware games I've discovered. The games in question are HOCUS FOCUS and GOD OF THUNDER, a devious duo that are as fun to play as they are difficult to solve. Let's throw down some lighting bolts and I'll spell out what I mean.

AIMING FOR A THOR SPOT

Here's your big chance to hang with a major deity. CES Games' GOD OF THUNDER lets you assume the mantle of Thor. It seems that your father, Odin, must fall into a deep sleep every few hundred centuries to restore his godly powers. But this time your half-brother Loki, the God of Mischief, has seized the opportunity to wrest control of Midgard (earth). Loki has conspired with two of his most powerful allies, Jormangund, the Midgard Serpent, and Nognir, the Prince of the Underworld. Each has subjugated a third of the populace and is reigning over Spegville, Milgrund and Blechton like Leona Helmsley on PCP. As Odin's eldest son, the task of whacking these guys falls squarely on your hammer-toning shoulders. So get ready to nail their wicked carcasses!

If you're familiar with Nintendo's LEGEND OF ZELDA you'll find yourself right at home in GOD OF THUNDER (GOT), which is based on the earlier cartridge game. It resembles Zelda, from its overhead scrolling screens to the NPC conversations, which might make it nostalgic if you were weaned on Nintendo games.

In the shareware version you'll start out as Thor in episode one (the registered version allows selecting either of three episodes). The game supports both keyboard and joystick, but I found the joystick to offer more control of Thor's ramblings from screen to screen.

Your objective is to fight the evil creatures which have taken over the land, while solving puzzles and investigating everything as you go. These creatures are dispatched by throwing your hammer at them. You have to be somewhat careful, however, as you can easily nail an innocent bystander. The penalty, while not severe (the "temporarily demised" are restored the next time you leave the screen and return), will cost you some points.

Puzzles come into the picture when you have to push rocks and logs around to block the deadly attacks of enemies. Only by doing so can you retrieve bonuses, including those ever important keys. Levers must also be tripped to open certain "gateways" from one location to another. There are even a few "object retrieval missions" included for good measure. For example, bringing a hermit a special object will elicit his help in rebuilding a bridge crucial to completing your quest. Most puzzles aren't that difficult, but a few will have your neurons in a knot for a good long time.

As with Zelda, GOT offers lots of nifty things to collect: jewels, keys, magic potions, golden apples and several defensive weapons. There are even a few fairies flitting around to fill up your health and magic levels.

Visually and aurally, GOT is nothing to wave your wand about. The music and graphics don't break any new ground, but what's here is decent. As it stands, the game's presentation conveys the feel of the title it was modeled after. That's an advantage, but high-res graphics and more graphical coolness would have iced the cake.

Still, play is the thing, and it's what makes GOT rise above the herd. A "few minutes" playing this little number can quickly devour several hours of an evening or Saturday afternoon before you wonder where the time went.

Those who like action-adventures with a strong emphasis on puzzle solving will have an ungodly good time with this title. Try it out for free, or get your Asgard in gear and order the registered version for $29.95 plus $2 shipping and handling. It requires a 286 or better PC with VGA graphics and a minimum of 510K RAM. AdLib, Sound Blaster and compatible sound cards are supported. To place your order, contact: Software Creations, 26 Harris Street, Clinton MA 01510, (508) 368-8654.

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Requiring a 386SX or better with 256-color VGA graphics and 567K free RAM (all major sound cards are supported), HOCUS POCUS has astonishingly smooth 360 degree scrolling parallax backgrounds and some excellent animated sprites. It looks like an attractive cross between DUK NUKEM and SHADOW OF THE BEAST. With Apogee’s new sound engine mixing up multi-channel sound effects, it’s also a real pleasure to listen to.

As we join our story, Terexin, leader of the Council of Wizards in the Land of Lat-

tice, is sending young Hocus, an apprentice sorcerer, on a special mission to test his mettle. He, meaning you, will have to cross 16 different realms—each with unique dangers and opponents—to defeat the vile Trolodon and deliver a lovely princess from a horrible fate to just a commonplace disaster: marriage with you. In the course of this quest, Hocus will encounter dragons, goblins, ghosts, and a vast array of evil creatures. You’ll need to survive all of them to become a full-fledged, card-carrying sorcerer.

Each of the four episodes and 36 individual levels offer a different mix of action and puzzle-solving play, with backgrounds and enemies changing every two levels to keep the experience fresh. Armed with just a magic spell, Hocus must “zap” his opponents into oblivion and make use of every health potion he can find to stay alive until he reaches the next maze. Succeeding at any point during a level requires Hocus to start that level over. So far, I haven’t fallen victim to any of the evil meanies; my progress has been thwarted by the insidious puzzles. How do I spell relief Registration? Not only does it provide you with all 36 levels of game play (nine are granted in the shareware version), but you also receive 56 wonderfully helpful cheat codes.

To make HOCUS POCUS magically appear on your computer, wave your magic wallet and send $24.95, plus $5 shipping and handling to Apogee Software Ltd., P.O. Box 496389, Garland TX 75049 or call (800) GAME-123.

ZiffNet

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My daughter (9 1/2 years old) and I have become "Oxyd" addicts. We cannot wait to begin exploring the many other levels. Thanks for creating such an excellent product. R.S., Germantown

This is, without question, the most impressive game I have ever seen. I am amazed at the audio, visual and action. George L. Tomly

Wow! That's all I can say about Oxyd. What an incredible game! One of the nicest games I have seen in a long time. Thanks for creating such a challenging piece of software. I'm completely hooked! The game is really slick, well designed. Those first 10 levels alone were worth paying for! It is rare to find such a visually appealing, addictive and playable game.

One of the most elegant games I've played. Jeffrey Jordan, San Diego

I enjoy this game a great deal and so do my children and their friends. It is just what I have been looking for. H. Jerome Wascom, Minneapolis

Oxyd has to be the most artistically superb piece of programming that I have seen. From my position of having completed about one third of the single-player levels, the landscapes have been continuously varied with a marvelous attention to graphic and audible detail that makes each new one a continuing delight. I especially appreciate how the malleable objects are so realistic but different ways when rolling over or bouncing against different "natural" (or unnatural) substances like stone, wood, swamp, firewood etc. At this point, I'm already wondering that I'll run out of levels. Jeffrey R. Harrow

Even our 3yr old enjoys the game.

I just had to write to tell you how much fun I've had playing Oxyd. The attention to detail - the sounds, the textures of the surfaces - really adds to the fun of the game. It invites the imagination for a ride. Thanks also for making all of the landscapes challenging but not impossible. Tom Phoenix, Portland

I'm really impressed with your game, Oxyd. Congratulations on a unique and fun product, and best luck to you all. John D. Dadd

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Circle Reader Service #63
The Lighter Side Of Doom

CGW Peeks Behind The Gloom Of DOOM To Shed Light On The Program's Lighting Techniques

by Paul C. Schuytema

Shake off this downy sleep, deaths counterfeit, And look on death itself? Up, up, and see The great doom's image!

- Shakespeare, Macbeth, Act II, Scene III

JUST WHAT IS IT ABOUT ID SOFTWARE's DOOM THAT MAKES IT SO FRIGHTFULY REAL? AS FAR AS HIGH-CONCEPT, there really isn't any. In the words of DOOM's level designer, Sandy Petersen, "DOOM is nothing more than the computer equivalent of Whack-A-Mole." Even so, when you're immersed in an adventure, surrounded by a maze of charred and eroded support columns, growls heard from all directions, corpses littering the flagstones, and suddenly, the fluorescent lights which line the ceiling flicker on and off, what do you feel? Perhaps you feel like running? If only you could see your way out; if only the lights would illuminate the room for long enough to get off one clean shot at that...

Anyone who has played DOOM knows that the atmosphere, the visceral feel of a dark and dangerous world, is the key component to the game's success. Undoubtedly, one of the most dramatic components of DOOM's environment is the use of lighting. Some lights are dim, others cast a blue pall over the room, while still others are malfunctioning, flickering incessantly, or burning out at the most awkward moment. How do they do it? How is this dramatic lighting created? Why play around with so many lighting effects at all?

I asked John Romero, one of id's wunderkind programmers, and the answer rolled off his tongue quite easily, "The lighting helps the game seem more doomy, it adds life to the environment." I sat down with John in his morosely dark office (the lighting was strangely familiar to that found in level E1M6) as he talked me through level creation and the placement of lighting effects in a level he was working on for DOOM II.

WELCOME TO THE NEXT LEVEL

The designers at id create levels much as role playing game masters create dungeons: by drawing them on graph paper. For Romero, though, this graph paper appears in a window on his 486 PC configured to run the NeXT computer's operating system, NeXTStep. Drawing with a mouse, he creates the game's levels, which are wholly divided into sectors when seen from a bird's-eye view. Within any given room, the walls will create the borders to a sector, yet there may be other, invisible sectors within the room. He might create an area where, if stepped in, a wall would open up and a horde of hungry imps would descend (ever see a room like that?). Or he could create a dramatic lighting effect, perhaps a bright light illuminating a still twitching corpse. In actuality, every group of lines that define a space is considered a sector, so each individual stair is its own discrete sector, for example. When working with the level design program, Romero, or Petersen, or whomever is creating a level, has the option to select many different qualities for each sector, such as the look of the walls, floor or ceiling. Will a severed limb be hanging from a meat-hook? What will the lighting be like?

As an example, consider a barren room with a skylight in the ceiling (you've run across several rooms like this in DOOM, I'm sure). The light pouring in from the skylight illuminates the floor under it, creating a patch of bright flooring in an otherwise dimly-lit room. While a 3D rendering program will actually place a light source above the skylight and calculate the path the light takes (a technique known as ray tracing), the DOOM team took a different approach. Everything in DOOM has been optimized for manic speed, and calculating the light rays emitting from
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every light source would bog the computer down to a crawl. In the words of Romero, "The only way to get an engine as fast as DOOM's is to fake a lot of stuff."

Instead of being created by a rendering algorithm, the rectangle of light on the floor is actually a sector, assigned its own light value in the level-design program. When designing the room, a pattern is selected for the floor, a moldy, lichen-encrusted array of flagstones. This pattern, in and of itself, has its own brightness (if you were examining it in a graphics program). In DOOM, though, each texture can have a light level imposed upon it. For the sector under the skylight, the light level is relatively higher than normal while the rest of the room is dark and gloomy. When the DOOM engine calculates how to draw the room, it fetches the pattern for the floor, and then the light level for the portion it is drawing. If it is dim, then a subroutine looks to a translation table for the pixel in question, to shift the color to a more muted tone. If it is lighter, then a color from a more energized section of the palette is assigned. Then the floor is drawn, and presto, light seems to pour down from the skylight.

Initially, this color-shifting of the game's 256-color palette was calculated during the rendering loop, as a routine utilizing Red-Green-Blue mixture levels to calculate what color in the game's palette was the closest match to the dimmed color. This ate up valuable rendering time, so id employed a program that worked through their entire palette and precalculated what color was the best match, building a translation table that could be referred to very quickly.

**DIMINISHING RETURNS**

There are two types of lighting in DOOM: diminished lighting (which is always brightest where your character is standing and diminishes across distance), and strobe lighting (synchronized strobes, unsynchronized strobes with flashes just a little off, and broken fluorescent lighting).

A sector has an initial light level, which can be any one of 16 levels, from totally dark to full-bright. In addition, each sector can have a special capability, such as applying damage to your character or performing one of the active lighting functions. An area may also be assigned a glow value, which means that the light will be of a more ethereal, pulsing quality. The area begins at an initial light level, and through time, the light level will lower to that of the immediately surrounding sectors (which are often assigned lower initial light levels), then brighten up to the initial light level.

With any of the flickering or strobing lighting effects, the individual sector always takes stock of the light levels that surround it. In a dark corridor, a strobe light just wouldn't look right if it diminished entirely to black. Instead, it diminishes to the dim light levels surrounding it, creating a very natural, very real illusion of light.

Diminishing light (which is any light source that is less than full-bright) always darkens away from your location in the game. If you load up DOOM and move into a relatively bright room and begin walking slowly down a dark corridor (after you have dispatched that annoying Cacodemon, of course), you can see the light diminish in clearly defined bands. Each band represents the next dimmer (or brighter) light-level.

Lighting effects are all interpolated mathematically during the vertical texture mapping routine (one of the few routines coded in assembly code by programmer John Carmack; the bulk of DOOM's code is written in straight ANSI C). With other point-of-view engines (WOLFENSTEIN included), floors and ceilings are drawn first, meeting at the horizon point, then walls are drawn over the fields of color to create the image. In DOOM, there is no over-drawing. The vertical and horizontal texture mapping routines draw exactly what is needed, and nothing more. The drawing actually takes place in an off-screen buffer (actually, three off-screen page buffers) and is then blitted to the screen (blit is the term which refers to transferring the memory contents of a page buffer to the video memory area).

In DOOM, the game world and the drawing engine live as two totally different beasts. The game world, where your Space Marine is dispatching a Cyberdemon with a dozen or so rockets, lives at a time rate of 35 frames per second (handled through the use of an interrupt clock), no matter what kind of machine you have (that is why you can play Net DOOM between a 386 and a 486 and things all mesh together nicely). The graphics engine, which actually draws the image to the screen, runs as fast as your computer can, so a 486-66 has a much higher visual frame rate than a 386-25. The strobe lights flash in sync to the world clock, which means that the strobes will all flash at the same moment on any computer involved in a net DOOM game.

After talking with the programmers at id, I could understand the need to streamline the program to make the most efficient use of the computer. It was natural that faking the light levels, along with other tricks used to create a 3D world, were mandatory concessions to keep the simulation as fluid as possible. Yet, in a dark room, the volume cranked up, and sitting on the edge of my seat, the flickering fluorescent lights don't look faked to me at all. As I hear the growls of some approaching daemon, nearly catching a glimpse of movement as the light flickers to blackness, it all feels very real indeed. ☀
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<td>(800) 324-6447</td>
<td>34</td>
</tr>
<tr>
<td>199</td>
<td>Warner Music Enterprises, Inc.</td>
<td>(800) 800-GAME</td>
<td>106</td>
</tr>
</tbody>
</table>

* Please see advertisement for contact information.
Talk Shop With A Tech Jock
CGW's Technical Editor Locates CPU Upgrades And Finds Homes For Wayward Peripherals
by Mike Wexler

Does DOS leave you feeling as if you're wandered into a cold, dark and mysterious dungeon? Do memory monsters wear you down? Do you dare use RAMless in a RAM-demanding world? Look here for answers to your technical dilemmas, delivered by our resident digital dragon-slayer.

SNAP-ON HIGH PERFORMANCE
Greetings! I own a 486SX-33. After purchasing TERMINATOR RAMPAGE, I found it to run too slow. I'm now paranoid to buy software rated for DX2, DX4 and Pentiums! Is this an isolated case? Please help.

Colin Pestinger, Shawnee Mission, KS

No, it's hardly an isolated case. The hardware demands for high-end games, particularly fast action and simulation games, continue to creep up. Many developers have established the 486DX-33 as their target minimum machine for the rest of 1994.

One economical upgrade solution is the new Intel i486 DX2 OverDrive Processor. Depending on your motherboard configuration, it will either drop into the OverDrive socket, or replace your existing 486SX CPU. With the bit-crunching power of a 486DX2-66, this chip will undoubtedly get your games running as fast as can be expected. The processor is sold as a complete upgrade kit. You get the DX2 OverDrive Processor (with heat sink already attached), a chip puller, a utilities disk, concise documentation, and technical support. The chip is very easy to install, even for a novice. The suggested retail price is $399, but you can probably hunt down a much lower street price. Beyond that, it's Pentium time.

SOUND BLASTER INSANITY
I recently bought a 486 and I'm thinking of buying a Sound Blaster. What differences are there between the Sound Blaster Pro, Sound Blaster 16, Sound Blaster MCD, Sound Blaster SCSI, and the others? I plan on adding a CD-ROM too, by the way.

Jorge Asch, Miami, FL

Let's start with the Sound Blaster Pro Deluxe. With this package you get an OPL3 FM synthesis chip, 8-bit stereo digital audio, and a UART MIDI port. Creative Labs' even throws in a Panasonic (Matsushita) 40-pin CD-ROM adapter. If you want to add one for upgrading your FM music to wave table at a later date (you'd have to add a separate synthesis-only card), and you don't mind listening to 8-bit digital audio on an 8-bit card (most games use 8-bit audio sampled at those rates and 22KHz), you could stop here.

If you get a Sound Blaster 16 Basic, you get an MPU-401 MIDI port (so you can jack in your MPU-401 compatible keyboard or Wave Table synthesis module), 16-bit digital audio CODEC, the same OPL3 FM chip, the Panasonic CD-ROM adapter, and a feature connector which lets you snap-on Creative Labs' Wave Blaster daughter card for a wave table synthesis upgrade. This year will be the year of the Wave Blaster compatible daughter card with offerings from Aztech (Wave Power), Roland (Sound Canvas DB), Turtle Beach (Rio) and Media Vision (Wave Table Professional Upgrade). One slot, one source for all your music needs, period. The Panasonic CD-ROM adapter is fine if your CD is compatible, otherwise, Creative Labs offers the Sound Blaster 16 SCSI with an Adapter 50 pin SCSI-2 host and the Sound Blaster MCD (Multi-CD), which sports three different CD-ROM adapters—Mitsumi, Panasonic and Sony. The Sound Blaster 16 cards can be purchased with or upgraded to use the Advanced Signal Processing chip.

This is useful if you want to mess with Qsound, reverb, chorus and other exotic like audio MPEG compression. For more info, contact Creative Labs at (408) 428-6600.

PUT THE JOY INTO JOYSTICKS
Many of our readers own several joystick-type devices for playing a variety of games. For instance, they might use a Gravis Gamepad for action games like Doom, a CH Flightstick or Thrustmaster for serious flight sims, or even a driving wheel for racing simulations. For many, switching joystick cables is a major hassle. If you're tired of the back of your computer looking like a telephone operator's nightmare, then you should get to know a company called Lead Pursuit.

The Lead Pursuit folks have just introduced a clever solution for joystick management—the Joyswitch. This baby can handle up to four different joysticks, including your Gravis Gamepad, CH Flightstick, Thrustmaster FCS Pro and driving wheel—all at the same time! Also, you can jack in two different foot controllers so you can have your driving pedals on Footswich 1 and your rudder controls on Footswich 2. It even supports the Thrustmaster WCS Mark II. No cheap stuff here, as both cables have thumb screws to secure your rig for combat. The list price is $49.95. For more information contact: Lead Pursuit, Inc. (714) 362-8986, or the Check Six BBS (714) 362-8299 (8N1, 1200-28.8kb).

Why don't you share your technical adventures with your fellow CGW readers who may have the same problems? Send your questions, cool hacks, and tips to Under The Hood, c/o Computer Gaming World, 130 Chappell Rd. Suite 260, Anaheim Hills, CA 92808, or at any of our email addresses (Internet: 76703.622@compuserve.com).
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FM SYNTHESIS OF SOUND BLASTER 16

WAVE TABLE TECHNOLOGY OF SOUNDMAN WAVE

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*See PC Magazine, 12/21/93, p 95. ™® - properties of registered owners.

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Roam the NeuroNET by hacking into
the forbidden worlds of dark mysteries,
danger. Use your computer and
Vulcan to obtain enough credits to
view the exotic Neurodancers who roam
the computer networks in search of will-
ing viewers. Featuring 3D animation,
interative game play, and live motion
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URUTSUKI DOJI
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the Legend of the Overfield become
reality? From the animation genius
who created Space Cruiser Yamato,
this is the astounding and controver-
sial theatrical masterpiece which sin-
glehandedly launched a whole new
genre of Japanese animation.
Definitely not for children.
CD ROM $49.

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These Just In

Here are our quick takes on games that arrived just before press time.
You can be sure that the more prominent titles will be given a full review in the next issue.

CASTLES: SIEGE & CONQUEST

Lest there be confusion in the ranks, this game is actually CASTLES II for the Macintosh, with the full-motion video of the DOS game rendered in Quicktime. Featuring film clips from Sergei Eisenstein's classic Alexander Nevsky and the BBC documentary The Private Lives of Henry VIII, the game is rich in the atmosphere of the period. Although much more of a wargame than the original CASTLES, there are plenty of castles to build and many administrative duties for a ruler to busy himself with. Diplomatic options vary with the personalities chosen for play, but all characters will nibble on such juicy tidbits as spies, saboteurs and black market trading. Crank up those siege engines, but beware—the computer opponent is a good one, and much guile will be needed to claim the throne. Mac, $59.95. Circle Reader Service # 1.

INTERPLAY PRODUCTIONS, Inc., 17922 Fitch Ave., Irvine, CA 92714, (714) 553-6655.

COMEDY CENTRAL—DATING & MATING

In yet another attempt to turn existing video content into a "multimedia" product, Time Warner has gathered various video vignettes related to life, love, passion and unrequited romance, and shoveled them onto a CD. Taken mostly from stand-up comedy routines, the 50-odd video clips are sorted into joke categories. Among the comedy talent are some heavyweights, the most prominent being Brett Butler in her pre-Grace Under Fire days. Other features include film clips from romantic comedies and a fun live-action screen saver. Although the material is well-packaged in multimedia wrappers, the fact that the comedy is "interactive" adds nothing to the experience, and you'd probably get more yucks for the bucks at a comedy club. IBM, Mac CD-ROM, $89.95. Circle Reader Service # 2.

TIME WARNER INTERACTIVE GROUP, 2210 Olive Ave., Burbank CA, 91506, (800) 482-3766.

DEFEND THE ALAMO!

Submitted Victory or Death, this is a quaint little strategy game reminiscent of the old SPI ALAMO board game from the 1980s. Don't be put off by the scant rule book; there's a lot of fighting for those gamers hankering to brandish their Bowie knives. Basically, your role is that of Colonel Travis, commander of the beleaguered Alamo garrison. You must send off messengers to enlist help from Goliad and other nearby towns, hoping to stave off defeat longer than the garrison did historically. The artwork blends well enough with the digitized photos of charging and wounded Mexican soldiers to make you believe for a moment that you are watching a good Mexican War re-enactment. No arcade stuff here—this one demands sound tactics, including when to sortie, where to place cannon, and how to stop Santa Ana's massive forces before running out of precious gunpowder. Perhaps the biggest complaint to be leveled against this game is that you can only play the Texan side, which is always a losing proposition. IBM, $29.95 (plus $3 S&H). Circle Reader Service # 3.


EMPIRE SOCCER 94

This UK import is the latest entry into the computer World Cup competition (for other choices, see the roundup in CGW #119). Although sporting better graphics than a typical cartridge game, the emphasis here is action, action, action. After a few games using mouse or keyboard, your reflexes will eventually hone to the point where overhead kicks and sliding tackles become almost second nature. A modicum of managerial control keeps this game from being just another thumb exercise, but those expecting the soccer equivalent of EARL WEAVER BASEBALL are advised to look elsewhere. IBM, Amiga, $59.95. Circle Reader Service # 4.

EMPIRE SOFTWARE, #4 Professional Drive, Suite 123, Gaithersburg MD, 20879, (301) 216-9706.
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54 Pirates of the Caribbean
55 Privateer
56 Quantum Gate
57 QuickDraw
58 Ravenheart
59 Rebel Assault
60 Return of the Phantom
61 Return to Zork
62 Return to Zork MPE
63 Under a Killing Moon
64 Video Cube
65 Video Cube Space MPE
66 VideoCubeSports
67 Video Game Solution CD
68 Who Shot Johnny
69 Who Shot Johnny II
70 Who Shot Johnny III

No surcharge on credit cards. CODs accepted with $5 charge. Shipping charges: Shipping $5/order. Canada $5/order. Hardware shipping is 5%. Personal and company orders are accepted. Call for further information. "$19.95 or less is Canada price. Additional shipping charges apply. 1 year warranty!"
FULL COUNT BASEBALL 6.0
The fastball pitcher of sports simulation, Lance Haffner, has once again refined his baseball game, and—hold on to your VGA monitor—he has included graphics this time around. While retaining its easy-to-learn game system, the latest version in-}
cludes enhanced modeling for fielding range, better computer managers, and ratings for some 70 different ballparks. Sparky Anderson wannabes may input their own players via a three-dozen part checklist. Auto-schedules, middle relief pitchers, defensive replacements in the bottom of the ninth, it’s all here...though the digital hotdogs could use some relish. IBM, $39.95. Circle Reader Service # 5.
LANCE HAFFNER GAMES, P.O. BOX 100594, NASHVILLE TN, 37224, (615) 366-8088.

INCA II
Erich von Daniken would feel right at home in this bizarre universe where the ancient Incas fly starships throughout the galaxy. Part puzzle game, part adventure, with a lot of high-velocity space combat action, this French game at times will appeal to all genre aficionados, at most other times to no one. The schizophrenic gameplay is aggravated by the voice acting, which is so bad in spots that you have to think it’s a joke. Beautiful artwork, good action sequences, and a solid soundtrack may be enough for fans of the first INCA, but other potential gaming anthropologists are advised to excavate carefully before putting this title in their museum. IBM, $34.95. Circle Reader Service # 6.
SIERRA ON-LINE, P.O. BOX 978, OAKHURST CA, 93644, (800) 757-7707.

HARPOON II
This magnum opus of modern naval warfare has sailed in vapor land so long, we expected it to emerge laden with seaweed. No one seriously doubted project leader Carl Norman’s sincerity, but the big surprise is that the long wait has significantly helped the product, despite the complications surrounding its difficult birth. One of the designers’ intentions was to create a DOS environment that would run like Windows, without the time lag—and generally, they have succeeded. The game is complex, even intimidating, but the new toolbar interface and thorough manual, combined with solid tutorials, should make admirals out of landlubbers in no time. Those concerned about the slippage of our crew are in natural G.I. jargon. Similar to Rene Vindler’s other designs, U-BOAT and BOMBER, this game is best played in seclusion; too many interruptions will find you missing important messages, and looking down the business end of an ’88. Don’t be fooled by the plain brown packaging, because M4 has a lot of wear in its treads for the gamer who doesn’t need a complex simulation. Windows, $44.95. Circle Reader Service # 8.
DEADLY GAMES, 312 E 23, NY, NY 10010, (212) 475-2377.

MONOPOLY
MONOPOLY is less a game; it seems, than an American institution. How many other board games keep normal families up until the wee hours, haggling over the relative worth of a railroad deed? Luck-dependent and patterned, the game’s great success stems largely from its simplicity, which has been largely captured in this painstakingly faithful version. The interface uses color and familiar MONOPOLY icons in such a way that anyone will feel right at home. While the AI is OK, the best thing about this product it that it allows you to play more home-brewed versions of MONOPOLY—

M4 SHERMAN TANK SIMULATOR
Dubbed by CGW’s Alan Enrich as a “simulator lite” when first released for the Macintosh, this game allows tank enthusiasts to button down in Windows comfort. Although you view the WWII battlefield through the eyes of the driver, gunner and commander, the game is played largely through audio input using the official “Deadly Games headphones” that are included. Radio messages are appropriately static-filled, and conversations with the since virtually no one plays the game with the rules as written. By all means, do not pass GO, don’t expect to collect $200, but do expect to stroll right to Boardwalk with this title. Mac, $29.95. Circle Reader Service # 9.
INTERPLAY PRODUCTIONS, INC., 17922 FITCH AVE., IRVINE, CA 92714, (714) 533-6655.

SEAWORTHY
Some salty old simulators have set sail again, thanks to the nostalgic admirals at Alliance Interactive. PT BOAT sports the famous quote by JFK, along with a reproduction of a comic-style US Navy Issue Know Your PT Boat, to go along with the instruction manual. Nonetheless, the play sometimes seems as shallow as the waters in which PTs often operated. SUB BATTLE SIMULATOR, on the other hand, won several awards in its initial release, and is certainly a better simulator than some submarine
games of the past year. While the two games have been re-released separately on disk, this version is the better buy, especially as it includes the fun little P-51 Mustang as a secret bonus. The big question is whether VGA drivers and CD convenience are enough reason to dive into a 7-year old design, especially when the graphics are straight out of the old C-64 days. IBM CD-ROM, $29.99. Circle Reader Service # 10.

Alliance Interactive Software, 1895 N. Pine Island Road #103, Plantation, FL 33322, (305) 423-4289.

**SHANGHAI II: DRAGON'S EYE**

Perhaps it is the winds of Chicago or Windows NT blowing on the industry, but the number of Windows conversions has definitely increased. This offshoot of Mah-Jongg has tiles painted to represent different years in the Chinese calendar, making a worthy gift for those born in the Year of the Bear. In addition to the usual puzzle-style game, there is a competitive two-player contest, where one player tries to build a “dragon” of tiles, while the opponent tries to slay the dragon by removing tiles. Simple in concept yet quite challenging, the eight different tile sets alone offer enough variety to keep this on the hard drive, at least until the next Year of the Dragon comes around. Windows, $39.95. Circle Reader Service #11.

Activision, P.O. Box 67713, Los Angeles, CA, 90067, (800) 477-3650.

**WARGAME CONSTRUCTION SET II: TANKS**

Even if Norm Koger hasn't been designing games since the Battle of the Marne, it still seems as though he's been around quite a while. His latest creation allows you to return to the days when tanks were overblown machine guns with treads, following them through a gangly armored adolescence, up to the fast and deadly masters of the battlefield that they are today. As the title implies, this product is tailor-made for designing your own scenarios, where not only tanks, but helicopters, cavalry, infantry and even bicycle units are available. Although the turret here points more toward "game" than exacting historical analysis, most wargamers will find plenty to keep them occupied, especially in the longer campaigns. IBM, $69.95. Circle Reader Service #12.

Strategic Simulations Inc., 675 Almanor Ave., Suite 201, Sunnyvale CA, 94086, (408) 737-6890.

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**CGW HALL OF FAME**

**The Bard's Tale** (Electronic Arts, 1985)
**Battle Chess** (Interplay Productions, Inc., 1988)
**Chessmaster** (The Software Toolworks, 1986)
**Civilization** (MicroProse, Inc., 1991)
**Dungeon Master** (FTL Software, 1987)
**Earl Weaver Baseball** (Electronic Arts, 1986)
**Empire** (Interstel, 1978)
**F-19 Stealth Fighter** (MicroProse, Inc., 1988)
**Gettysburg: The Turning Point** (SSI, 1986)
**Gunship** (MicroProse, Inc., 1989)
**Harpoon** (Three-Sixty Pacific, 1989)
**Kampfgruppe** (Strategic Simulations, Inc., 1985)
**King's Quest V** (Sierra On-Line, Inc., 1990)
**M-1 Tank Platoon** (MicroProse, Inc., 1989)
**Mech Brigade** (Strategic Simulations, Inc., 1985)
**Might & Magic** (New World Computing, 1986)
**M.U.L.E.** (Electronic Arts, 1983)
**Pirates** (MicroProse, Inc., 1987)
**Railroad Tycoon** (MicroProse, Inc., 1990)
**Red Baron** (Dynamix, 1990)
**SimCity** (Maxis, 1987)
**Starflight** (Electronic Arts, 1986)
**The Secret of Monkey Island** (LucasArts, 1990)
**Their Finest Hour** (LucasArts, 1989)
**Ultima III** (Origin Systems, Inc., 1983)
**Ultima IV** (Origin Systems, Inc., 1985)
**Ultima VI** (Origin Systems, Inc., 1990)
**War in Russia** (Strategic Simulations, Inc., 1984)
**Wasteland** (Interplay Productions, Inc., 1986)
**Wing Commander** (Origin Systems, Inc., 1991)
**Wizardry** (Sir-Tech Software, 1981)
**Zork** (Infocom, 1981)

**H.O.F. HIGHLIGHTS**

**BATTLECHESS INTERPLAY, 1988**

When Interplay's BATTLECHESS was released on the Amiga in 1989, it shot straight to the top of the CGW Poll. Its beautiful slapstick animations showcased the Amiga's sound and graphic capabilities, and put an interesting new spin on an ancient game. BATTLECHESS became not only a perennial in the CGW Poll ratings, but also a showcase product for the first level of multimedia standards. It sold hundreds of thousands of copies covering just about every game platform imaginable, and spawned an entire genre of animated chess products. By introducing BATTLECHESS, Interplay became the Franklin Mint of computer chess publishers. Interplay's improvements to the chess engine and animations have taken many forms, perhaps the most successful being their use of claymation techniques in BATTLECHESS 4000. Sparked by a keen attention to detail, the sequels to BATTLECHESS are a fine example of the Interplay formula for success.

**CHESSMASTER SOFTWARE TOOLWORKS, 1986**

When CHESSMASTER 2000 was introduced, it provided a variety of levels of computer opponents, as well as an easy-to-use interface. When introduced into the CGW Hall of Fame, it was generally accepted as the strongest chess engine around.

Although the competition among chess simulations is much tougher these days, CHESSMASTER continues to develop. Recent additions include advice given in digitized speech, SVGA graphics, and improved sound support. For the chess enthusiast, the myriad of classic games and chess problems provide entertainment for players of all skill levels. The current version, CHESSMASTER 4000 (see CGW #114), offers over two dozen opponents based on great chess grandmasters throughout the ages. Defined by 17 different attributes, these computer players each have a unique style, and add not only challenge, but endless variety to this most consistent and prestigious line of chess games.
### Top Adventure Games

<table>
<thead>
<tr>
<th>Game</th>
<th>Company</th>
<th>Score</th>
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<tbody>
<tr>
<td>Day of the Tentacle</td>
<td>LucasArts</td>
<td>10.01</td>
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<td>Monkey Island 2</td>
<td>LucasArts</td>
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<td>Indiana Jones: Fate of Atlantis</td>
<td>LucasArts</td>
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<td>Gabriel Knight</td>
<td>Sierra</td>
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<td>Quest for Glory III</td>
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<tr>
<td>Sherlock Holmes CD I</td>
<td>Vicom</td>
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<tr>
<td>Star Control II</td>
<td>Accolade</td>
<td>9.33</td>
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<tr>
<td>The Seventh Guest</td>
<td>Virgin</td>
<td>9.32</td>
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<tr>
<td>Sam &amp; Max Hit the Road</td>
<td>LucasArts</td>
<td>9.28</td>
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<td>Last Files of Sherlock Holmes</td>
<td>Electronic Arts</td>
<td>9.20</td>
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### Top Role Playing Games

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<td>Origin</td>
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<td>Betrayal of Kain</td>
<td>Origin</td>
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<td>Ultima Underworld II</td>
<td>Origin</td>
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<tr>
<td>Might &amp; Magic III</td>
<td>New World Computing</td>
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<tr>
<td>Lands of Lore</td>
<td>Virgin</td>
<td>9.38</td>
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<tr>
<td>Might &amp; Magic: Darkside of Xan</td>
<td>New World Computing</td>
<td>9.37</td>
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<tr>
<td>Eye of the Beholder II</td>
<td>SSI</td>
<td>9.34</td>
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<tr>
<td>Might &amp; Magic: Clouds of Xan</td>
<td>New World Computing</td>
<td>9.34</td>
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<td>Ultima VII</td>
<td>Origin</td>
<td>9.25</td>
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<td>Eye of the Beholder</td>
<td>SSI</td>
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### Top Simulation Games

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<td>Falcon 3.0</td>
<td>Spectrum Holobyte</td>
<td>9.59</td>
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<tr>
<td>Fleet Defender</td>
<td>MicroProse</td>
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<td>Aces of the Pacific</td>
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<td>Comanche: Maximum Overkill</td>
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<td>Sacred Weapons of the Luftwaffe</td>
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<td>Indy Car Racing</td>
<td>Virgin/Papyrus</td>
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<td>Harvard</td>
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<td>Stunt Island</td>
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<td>Gunship 2000</td>
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### Top Strategy Games

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<tr>
<td>Master of Orion</td>
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<tr>
<td>Warlords II</td>
<td>SSG</td>
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<tr>
<td>Sim City 2000</td>
<td>Maxis</td>
<td>10.01</td>
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<tr>
<td>Solitaire's Journey</td>
<td>QQP</td>
<td>9.97</td>
</tr>
<tr>
<td>Duke II</td>
<td>Virgin</td>
<td>9.86</td>
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<tr>
<td>Merchant Prince</td>
<td>QQP</td>
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<tr>
<td>Chessmaster 3000</td>
<td>Software Toolworks</td>
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<tr>
<td>Hong Kong Mahjong Pro</td>
<td>Electronic Arts</td>
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<td>Syndicate</td>
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<td>The Lost Admiral</td>
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### Top 100 Games

<table>
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<tr>
<th>Game</th>
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<td>Links 386 Pro</td>
<td>Access</td>
<td>SP</td>
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<td>RP</td>
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<tr>
<td>Warlords II</td>
<td>SSG</td>
<td>ST</td>
<td>10.04</td>
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<td>Maxis</td>
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<td>Indiana Jones: Fate of Atlantis</td>
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<td>Three-Sixty Pacific</td>
<td>WG</td>
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<tr>
<td>Carriers at War Construction Kit</td>
<td>SSG</td>
<td>WG</td>
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<tr>
<td>The Perfect General</td>
<td>QQP</td>
<td>WG</td>
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<td>X-Wing</td>
<td>LucasArts</td>
<td>AC</td>
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<td>V for Victory: Utah Beach</td>
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<td>Quest for Glory III</td>
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<tr>
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<td>NHLPA Hockey</td>
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<td>SP/ST</td>
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<td>World Circuit</td>
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<td>Ultima Underworld II</td>
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<td>Might &amp; Magic III</td>
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<td>Lands of Lore</td>
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<td>Aces of the Pacific</td>
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<td>Might &amp; Magic: Darkside of Xan</td>
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<td>Pacific War</td>
<td>SSG</td>
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<td>Might &amp; Magic: Clouds of Xan</td>
<td>New World Computing</td>
<td>RP</td>
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<td>Eye of the Beholder II</td>
<td>SSI</td>
<td>RP</td>
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<td>Star Control II</td>
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<td>AD/AC</td>
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<td>Novologic</td>
<td>SI</td>
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<td>Jack Nicklaus Signature Golf</td>
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<td>Ultima VII</td>
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<td>V for Victory: Gold Jade Sword</td>
<td>Three-Sixty Pacific</td>
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<td>Privater</td>
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<td>Psygenesis</td>
<td>AG/ST</td>
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<tr>
<td>Last Files of Sherlock Holmes</td>
<td>Electronic Arts</td>
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### TOP WARGAMES

<table>
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<th>Game</th>
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<tr>
<td>V for Victory: Velikya Luki</td>
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<td>Carriers at War Construction Kit</td>
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<td>Conquered Kingdoms</td>
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<td>V for Victory: Gold June Sword</td>
<td>Three-Sixty Pacific</td>
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<tr>
<td>Empire Deluxe</td>
<td>New World Computing</td>
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### TOP ACTION GAMES

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<tr>
<td>Doom</td>
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<tr>
<td>Wing Commander II</td>
<td>Origin</td>
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<tr>
<td>X-Wing</td>
<td>Lucas Arts</td>
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<tr>
<td>Wolfenstein 3-D</td>
<td>id Software</td>
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<tr>
<td>Privateer</td>
<td>Origin</td>
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<tr>
<td>Lemmings</td>
<td>Psygnosis</td>
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<td>Tetris Classic</td>
<td>Spectrum HoloByte</td>
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<td>Oh, No! More Lemmings</td>
<td>Psygnosis</td>
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<td>The Harde</td>
<td>Crystal Dynamics</td>
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<tr>
<td>Prince of Persia 2</td>
<td>Broderbund</td>
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### TOP SPORTS GAMES

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<tr>
<td>Front Page Sports Football Pro</td>
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<td>NHLPA Hockey</td>
<td>Electronic Arts</td>
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<td>Jack Nicklaus Signature Golf</td>
<td>Accele lade</td>
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<td>Hardball III</td>
<td>Accele lade</td>
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<td>Tony La Russa Baseball II</td>
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<td>NFL Pro League Football</td>
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<td>The Games: Winter Challenge</td>
<td>Accele lade</td>
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<td>4-D Boxing</td>
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<td>Wayne Gretzky Hockey III</td>
<td>Bethesda</td>
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The Poll is based on reader survey cards from two issues prior to publication. Data is archived from more than 100 games, so the Top 100 is likely to contain titles which were not listed on the active reader survey card, and the Top 10 lists may contain games which scored below the Top 100. Also, every title listed on the survey card may not appear in the Top 100, either because they did not score high enough or because of an insufficient number of responses on a particular game (usually due to a title's distribution delays or low initial retail penetration).

**The Computer Gaming World Poll**

A MONTHLY SURVEY OF THE READERS OF COMPUTER GAMING WORLD

Games on unnumbered lines have scores equal to the line above. **R** = Role Playing, **S** = Simulation, **St** = Strategy, **W** = Wargame, **AC** = Action, **SP** = Sports
AEGIS Patch: Eliminates the Electronic Book crash. 4/28/94.

Air Warrior V1.13 Update: New .EXE files that fix several problems. 3/1/94

Arena V1.04 Update: Fixes several map, music, scrolling and magic problems. Provides new hot keys and allows you to sell magic items and delete spells. Particularly helpful for 386 machine users. 3/1/94

Bane of the Cosmic Forge Patch: Replacement file for players who get a divide overflow when starting the game. 3/23/94

Battles of the South Pacific Upgrade: Latest patch for QQP's WWII naval strategy game. 5/24/94

Bethesda Sound Blaster Patch: Allows both sound effects and music for all Bethesda games, 5/6/94.

Comanche Joystick Drivers: Adds Flightstick Pro support. 5/24/94

Command Adventures Starship Patch: The latest fixes for Merit Software's space game. 5/19/94

Companions of Xanth Points List: Complete point totals for Legend's adventure game. 5/25/94

Detroit Upgrade: Fixes include finances, the December crash, and the 255-worker bug. 5/31/94

Diamond Dreams Upgrade: Fixes all known bugs, and features greatly improved AI for computer manager strategies. 3/20/94

Empire Deluxe V1.1 Mac: Latest version of New World's strategy game for Mac gamers, fixes include cleaning up PBM files. 6/1/94

Falcon 1.02 Mac Update: Fixes sound problems on Mac AVs. 3/20/94

Fleet Defender V1.2 Upgrade: Latest version of MicroProse flight sim, with 41 new features. 5/17/94

Goblins CD-ROM Patch: Fixes sound card and CD-ROM driver problems. 3/1/94

The Hered V1.1 Revision: Now supports Media Vision Pro Audio sound cards. Fixes lockups on some Sony drives, dead knights not disappearing after snowball hits, and also slows down the end credits. 4/28/94

IndyCar Racing V1.04 International: Different patches for owners of IndyCar Spanish, Italian, German or French language versions. 5/19/94

IndyCar Racing Patch: Allows use of the Gravis Ultrasound Card. 3/20/94

IndyCar Racing Modem Patch: Cleans up difficulties with modem play, and fixes scrolling menus for steering devices with no y-axis. 4/7/94

Jutland V1.1 Upgrade: Allows non-penetrating shells, adds more graphics, runs smoother, and most significantly, includes time compression. 5/30/94

Jutland Patch: The game will now recognize different sound card addresses, rather than just the default 220 address. 5/3/94

Kingmaker V1.51 Upgrade: Latest version of Avalon Hill's strategy game with many fixes. 5/25/94

Lands Of Lore CD-ROM V1.22 Upgrade: Fixes lockup problems on fast machines, allows retrieval of Dawn's key, and allows use of Waveblaster/Soundblaster 16 combo. 3/7/94

Lands Of Lore Floppy V1.23 Upgrade: Fixes "Dawn's Key" problem and Pentium lockups when choosing a character. 4/28/94

Liver's Casino Update: Latest version of QQP game. 5/19/94

Merchant Prince Update: Newest version of QQP's strategy game. 3/11/94

MicroProse Sound Drivers: New AdLib sound drivers for many older games which had problems running with 486 and Pentium machines. 4/7/94

Pacific Air Warrior: Better ADV and MDF files than those on the PAW disk 5/31/94.

Pacific Strike V1.19: Contains 14 fixes for Origin's new flight sim. 5/27/94

Police Quest 4 Patch: Fixes all known problems and speeds up restoration of saved games. Disk version only. 4/5/94

Rally V1.1 Upgrade: Fixes joystick calibration and other problems. 3/24/94

Ravenloft 1.1 Upgrade: Latest version from SSI, floppy and CD-ROM. 4/29/94

Red Baron Patch: Configuration fix for IBM only. 3/29/94

Seawell Patch: Allows 16-bit Sound Blaster sound effects and music. 3/30/94

Shanghai II V1.05 Update (Mac): Fixes tournament crash bug. 3/24/94

Sierra Sound Patches: A variety of fixes and drivers for Sound Blaster, Gravis Ultra Sound and General MIDI users, for a number of older Sierra games. 5/19/94

SimCity2000 V1.1 Update (Mac): Latest version it fixes the budget problem, among others. 3/1/94

Subway 2050 V2.02 Update: Corrects cursor drift, time and date problem. 4/28/94

Tigers On The Prowl V1.1: Fixes the mortar problem, among others. 5/28/94

Tony La Russa Baseball 2 Patch: Fixes stadium lock-ups. 5/3/94

Ultima 8 Patch: Fixes AdLib problem with some machines. 4/15/94

Unnecessary Roughness Revision: Changes graphics, avoids lock-ups, and allows use of Sound Blaster. Team stats are actually used, hand-offs work correctly, and players do not vanish when tackling. CD-ROM versions will now load without error. 3/8/94

Victory At Sea V1.01 Upgrade: Corrects numerous problems with the initial release. 3/14/94

X-Wing Enhancement: This TSR allows use of extra Thrustmaster buttons. 6/2/94
The Rumor Bag

He Axed For It...

by Thomas Quincy Washington

Mount Vernon may seem like a strange place to gather information about computer games, but that's exactly where I found myself when I tried to get information on Sid Meier's Colonization. As I walked past George Washington's bowling green, I realized that there have been very few games based on the American Revolutionary War and that I couldn't think of a one that was still in print. Those who are interested in the colonial period, however, may find two upcoming computer games to be of interest.

I was just peaking into the crude slave quarters when I became aware of a perfume more sensuous than the bouquet wafting from the magnolia trees that lined the path. My contact had arrived. Brushing against my ear with a warm breathy whisper that rivaled the humid afternoon, I heard her comment, "It's hard to believe that slavery played such an integral part in building our country, isn't it?"

We both admitted that it was a shame that our ancestors had depended upon slavery to build this country. Then, she continued. "Of course you know that neither Sid Meier's Colonization nor Impressions' High Seas Trader (working title) will have slavery. Both design teams know that slavery was an important part of the economic model, but neither wants to reward players for building empires on the backs of slaves."

Sid Meier's Colonization lets you build up colonies in both historical worlds or random worlds in much the same way you built global empires in Sid Meier's Civilization, but I didn't know anything about High Seas Trader. When I asked, my lovely font of wisdom explained that it's sort of a Pirates Gold meets Wolfenstein 3D in that you go to play a 17th or 18th century privateer using a new interface that allows you to steer and sail in a first person perspective. The VGA graphics are very nice and the world has a dynamic economic model to provide for plenty of replayability. It will even allow boarding actions which will require some combat tactics. She told me to expect it in the first quarter of '95.

We went on to the main house and listened to a guide's rap about how George Washington would add sand to the white paint used on the exterior of the house in order to get both extra durability and achieve a stone-like appearance. He said it wasn't unlike the way computer game publishers currently use 3-D techniques to fool the eye and draw you into games. The guide was talking about games like Bethesda Softworks' Delta V and Psygnosis' Novastorm. Both are games that have players flying through 3-D trenches at very high speeds, surrounded by very detailed rendered backgrounds. What the guide didn't know was that I had just played Delta V with a head-mounted display on the bag on my head and experienced the 90 degrees of real movement to each side. I mentioned to my source that it was even closer to virtual reality than the experience in Virtual World Entertainment's location-based Red Planet game.

My source wanted to know how I knew so much. She didn't say, "I have my ways..." I said, but she wasn't satisfied.

I finally told her that she wasn't the only beautiful woman in the industry, and she walked away from the tour group in a huff, seating herself on Washington's front porch and looking off toward the Potomac. I went through the rest of the house, but my mind clearly wasn't on my work. I thought about following up our 3-D discussion by talking about Looking Glass Technologies' Flight Unlimited. I thought that I might be able to tell her how the game presents photo-realistic terrain at all times and how the physics is modeled more realistically than any flight sim. I could have told her that real flying requires you to feel the atmosphere and react to it. So, in Flight Unlimited, you'll be able to do snap rolls and combat maneuvers more realistically because the flight dynamics will feature the first true aerobatic flight model. Also, like Washington's house paint, I could tell her that the ships would not look texture-mapped because they use a voxel technology as opposed to a typical texture map.

But, when I sat down beside her, she wasn't in a good mood. I joked that George's expansive view of the river would make an ideal spot for a beachfront landing and she smiled patronizingly at me. I told her about a new wargame company called Frontal Assaultware that is supposed to announce Onslaught, a '50s era historical wargame at MacWorld. The game is supposed to cover land and air warfare over a single continent as you lead your divisions of men through multiple battles. Like SSI's Panzer General, the divisions will be named and will show losses in such a way as to give you a built-in emotional attachment to your troops.

Her eyes brightened somewhat, but even telling her about Impressions' upcoming hex-based wargame with its built-in construction set couldn't pull her out of the mood. I went through my list of rumors and reminded her of DeathGate, Legend's upcoming graphic adventure using the Xanthen engine and based on the Weis & Hickman novels. She looked at me with a stony expression worthy of a bust of General Washington himself. I told her that Legend's Mission Critical would combine elements of the adventure and strategy genres in much the same way as their super hero game would combine elements of adventure and role-playing. She was not amused.

I tried telling her about Dongleware's Bolo, a working title for their Breakout-style game with upgraded graphics and puzzle-solving challenges. The look could have turned me into a pillar of ice. So, I finally told her that she was really my only beautiful source. She slapped me right across the bag.

"Thomas Quincy Washington," she upbraided me on Mount Vernon's front porch, "How can you stand in the footsteps of George Washington and tell a lie like that?"

"Frankly, my dear," I quickly responded, "I never really cared much for cherries."

"You're impossible," she snickered and we continued our exploration of American History. Of course, as true computer gamers, we ignored the tough truth about slavery. ☹

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