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Circle Reader Service #44.
Rants & Raves

White Rabbit Syndrome

Why Too Many Computer Games Are Ripped From The Womb

by Johnny L. Wilson

Lots of computer gamers would like to paraphrase the White Rabbit's refrain from Alice in Wonderland to read, "It's late! It's late for some very important play. No time to beta test, let's fly—it's late, it's late, it's late!" They wonder how a game can be delayed many months overdue and still be incomplete and with major bugs. How can it be both late and premature at the same time?

The Late, Great Hit

An industry leader once put the issue in an enigmatic phrase that sounded vaguely like doggerel, "Software travels at the speed of software." Ernest Adams, one of the directors of the Computer Game Developers Conference, put it a little more logically when he explained last conference that software engineering is about "solving problems in new ways." He went on to say that no one knows how long it will take to solve these problems because "no one knows how long it will take." No one knows how long it will take to get better graphic compression. No one knows how long it will take to integrate the physics model of a simulation with the game's player interface. In fact, the more game designers and programmers try to make things better, stronger, faster, the less anyone can tell when it is going to be done.

Meanwhile, it takes months of lead time to interest distributors, the large retail chains, and consumers. So the marketers bug the game design/programming team for a delivery date, who in turn make a guess. Each guesstimate is off by a random factor based on how many new problems the programmers are trying to solve. The more neat stuff they try to put in a product, the less accurate the delivery date.

The date is further stretched by unanticipated technical problems and the late addition of new features. The first set of problems can be as complex as changing in mid-project to a true 32-bit C compiler (it cost one company over three months of project time), discovering that the addition of modern play disrupts the AI for solitaire play (more than one company opted to ship a game without promised modern play because they couldn't solve the problem efficiently); or having a programmer who didn't comment the code leave in the middle of a project.

Such technical problems can be exacerbated by the second set of problems. The marketers determine that the game must be reworked to take advantage of a new video card or that a game must have this or that "Gee Whiz" factor in order to compete in the marketplace. Such retooling always takes longer than anticipated.

BUCK FIXES

But, of course, you want to know why the products ship too soon, not why they're late. The products are largely shipped too soon for financial reasons. These financial reasons apply to small private companies and large public companies alike. The first reason is cash flow—pure and simple. Small developers are paid on the basis of milestones, reaching certain previously agreed upon performance points before they are paid. In many cases, the developer depends upon the milestone payment in order to survive. So, they cadge together enough code to do the task under certain optimal conditions, even if they don't have time to test all of the conditions. They eventually have to go back and fix the problems (causing further delay), but they get the quick cash.

Small and large publishers alike have to sell games into the retail channel in order to pay their bills. They can't collect advances for games in beta testing, so economic reality forces them to release their babies as premature infants—hoping that the intensive care of aggressive patching can see the new lives through.

Even cash-rich companies have to release games prematurely in order to hit the End of Quarter (EOQ). Public companies need as much revenue as possible in a given quarter because most investors judge them on their current earnings versus those of a year ago. If you can get your product on the market and receive promise of income before the EOQ, you may be able to enhance your balance sheet and make your investors happy.

Even private companies who do not have their earnings reported in public forums may feel forced to hit the EOQ in order to build up their earnings and make their vulture...er...venture capitalists happy. Venture capitalists expect a relatively quick and generous return on investment. Bad quarters make these people nervous, so even private companies may occasionally rush a game to avoid the EOQ blues.

Finally, there is the retail pressure. Retailers like to move merchandise swiftly. So, they want to know when the game is going to be on the shelf. The marketers tell them that the Virtual Sprocket's Dance Club will ship on December 7th and the retailers set aside X number of dollars to buy the game during that quarter. If the product doesn't ship during that quarter, the publisher has three choices: 1) ship it prematurely, 2) find another product (usually European) to take its place (assuming the buyers are willing to accept the substitution), or 3) allow a competitor to earn those...
detailed dollars by not shipping anything. In either of the last two cases, the publisher will have to resell the buyer on stocking the game in a later quarter. Considering what that can do to cash flow, patching a premature disk is lots more economical than missing the boat.

In fact, dollars to buy are so important that one major consumer retailer is reported to have run out of dollars to buy for this holiday season. Yet, so many titles had slipped into the holiday quarter that the buyer invited software publishers to place their products in his stores, basically on consignment with the promise of reorders if they did well. So, timing is extremely important for the publisher who expects to be able to get the games in the stores.

It's easy to see why publishers have gotten into the habit of publishing now and paying the price of fixing games later. Competitive pressures, business pressures, technological challenges and the desire to create the latest (pun intended) and greatest all add to the vicious cycle. Unfortunately, the lack of dependability may well end up leading to another vicious circle—the one where gamers won't buy the games because they can't be sure of value. The fact is that such publishers are virtually mortgaging the future on a misbegotten present of buggy games. Some day, some of them are going to have to pay the piper. In fact, one could reasonably argue that they are gambling an entire industry on the consumer's money.

While you may not like the answers to the "late and buggy" questions, we hope you understand the issues better. "Late" games are a fact of software life, and we'll have to deal with that. Yet exceptionally buggy and/or incomplete software, while understandable from a short-term business perspective, is not healthy for our hobby in the long run. We truly hope that publishers will focus on long-term value and a trustworthy relationship with their customers. That would make for some well-deserved celebration on both sides.

**HOW DO WE RATE?**

The Guide to CGW's Review Rating System

**Outstanding:** That rare game that gets it all right. The graphics, sound, interface, and, of course, the gameplay come together to form a Transcendent Gaming Experience.

**Very Good:** A quality game that succeeds in many areas. May have minor problems, but is still worth your time and money, especially if you're interested in the subject matter/genre.

**Average:** A mixed bag. Can often be a game that reaches for the stars, but falls short in significant areas. Can also just be a game that does what it does well, but lacks flair or originality.

**Weak:** A game with serious problems. May be buggy, may not have much play value, may be ill-conceived—and you may want to think twice about buying it.

**Abysmal:** That rare game that gets it all wrong. Usually a buggy, incomplete, and/or valueless product.
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DIGITAL DODGECITY

We at TSR are concerned with the misinformation presented in "Showdown On The Electronic Frontier," by Johnny L. Wilson. In Wilson's column, he stated that TSR has claimed that playing the DUNGEONS & DRAGONS (Registered) game over the Internet infringes on TSR's trademarks and copyrights.

TSR has made no such overture regarding gaming.

In fact, we encourage and support play-by-play chat and play-by-email gaming. We are only concerned when unlicensed people or companies use TSR properties (names, rules, etc.) in their own published works.

Mr. Wilson refers to an upcoming showdown regarding "excessive diligence." I hope he is aware that what he refers to as a "showdown" may be in fact an "airing." The real showdown is brewing in Washington, D.C. Last July, representatives of the American Association of Publishers (AAP) spoke of the "appalling lack of respect for intellectual property" on the Internet, and declared that "universal service and access are not an invitation to undermine the rights of intellectual property owners." Mark Morrill, general counsel of Simon & Schuster, said on behalf of the CIC, "copyright...is a critical security issue. These extraordinary new communications networks should cause the market for copyrighted works to explode. But if the networks are not secure, the opportunities for unauthorized use will explode as well." Morrill urged the administration to "support and encourage the private sector to develop encryption techniques, systems for encoding and identifying works."

Like software designers, movie makers, singers, writers—TSR has protected its games, art, characters, systems and properties through national trademarks and copyrights which protect their publication—electronically or on paper. We're committed to providing creative outlets for our fans on the Internet and other nets. There's an FTP site (ftp.mpgni.com) that carries and distributes works which incorporate TSR's trademarks and copyrights under special license. Writers can send their work to this public access site for distribution to the net at NO charge. When writers do send their works, we ask them to include a small block of legal text acknowledging TSR's copyrights and trademarks.

And there are ways to continue gaming until Congress catches up. Try the MPGNet site or AOL:TSR (coming soon). TSR has been on Genie since 1990, long before the term "info superhighway" was invented. We're exploring new connections even now. We view the Internet as a key to future global gaming.

Robert Repp
Manager, Digital Products Group
TSR, Inc.

The editorial in question did not take TSR to task for protecting its existing property. TSR's letter to sysops warned them not to post rule variants or unofficial character classes, particularly if they used such terms as "Hit Die" and "Armor Class." We do not advocate the reprinting of existing published charts and tables on the Internet. However, we strongly affirm the right of the owner of a TSR rule set to protect his or her variant rules or unofficial character classes. Further, we don't see any problem with posting original fiction based on a TSR world if the author is not charging for the story. Finally, the TSR policy statement allows material to ONLY be uploaded to MPGNet and AOL. It strictly forbids other uploads to other sites. We stand by the editorial. The following letter takes an even stronger stand than Johnny Wilson's.

I am a long time reader/subscriber of CGW and also a long time resident of Wisconsin. I read with great interest your "Rants & Raves" article in the latest issue. Your statements about TSR's intent to oversee the use of its trademarks on the net alarms me to the point of breaking out in a cold sweat. I've been in the Wisconsin game scene before D&D made it big, and have been closer than most at watching the mutation of the entity known as TSR.

Do you know what TSR stands for?

a) Tactical Studies Rules
b) They Sue Regularly
c) They Suck Royally
d) All of the above (the correct answer, of course)

The above joke is at least 15 years old, but its implications are as valid today as they were then. TSR has a legal department whose devotion to duty borders on the manicually obsessive. Something of a laughing stock within the game industry for the outrageous things they do (You ARE aware that TSR obtained a copyright on the word "Nazis" because of its use in their Indiana Jones RPG game?), they are deadly serious when it comes to money. When they tell you that they will "make an earnest attempt to prevent this infringement of (their)
Ride like a maniac. Without becoming a kidney donor.

Talk about insane. We packed Cyclemania with over 400MB of treacherous road footage, put it on a CD-ROM and threw you in the middle of it all. You've got six screaming bikes to choose from and tons of obstacles like rocks, oncoming traffic, road pylons and guardrails to contend with. There are even different race and opposition levels to choose from. And when it comes to graphics, Cyclemania is about as advanced as it gets. We have technology that can actually scroll real road footage and synchronize it to the speed of your bike. Which, by the way, can reach 160 MPH. (Watch out for cows.) As Computer Game Review puts it: "From a technical standpoint, this game is a winner. The digitized road footage looks stunning." In other words, it's as real as racing gets. Without that annoying death part.
trademarks and copyrights", they aren’t kidding around.

I am afraid that the net is in for a real legal battle, and it’s the little guys (those sys admins overseeing TSR-type games who will soon be finding themselves in court if they don’t pay those “licensing fees” referred to in your article. I applaud your attempt to get TSR into the October discussion, but, knowing them as I do, I would not be surprised to learn that the only response you get is a legal letter informing you that, without their express written permission, you will not be able to use or make reference to any of TSR’s “valuable assets.”

Also, be very careful what you say in that discussion. I will also bet that the TSR legal beagles will be monitoring that session to watch for any infringements regarding said “assets”. (I once attended a seminar at GenCon in which the presenter had some serious criticisms concerning TSR board games. He made a very strange request. He asked us to shout out in unison the name of some court case (someone versus somebody else - can’t remember which) every time he performed a visual cue. This clue was given after every comment that was derogatory to TSR. After the seminar, we asked him exactly what was going on. He told us he had been informed that TSR would be recording his seminar as a basis for possible legal action! The court case being cited throughout the seminar was one in which it had been decided that attempts to use legal action to silence someone’s criticisms was an infringement of free speech. Just maybe, Johnnny, you should get that reference and keep it handy, just in case!

Oh yes, before I forget to cover my own ass, “TSR”, “D&D”, “Nazis”, “Indiana Jones RPG” and “GenCon” are all copyrighted by TSR, Inc. and are used here without their permission.

Sad, isn’t it?

Bill Tricomi
Madison, WI

We actually thought it was Lucasfilm that tried to trademark Nazi and Ark of the Covenant. Either way, we guess they haven’t heard about the infringement upon the Original Copyright Holder.

AMERICA OFF-LINE

In the front of your magazines, I notice that you’re on AOL. However, whenever I try a “Goto CGW,” I get a message saying it doesn’t exist.

K. Davis
Grand Prairie, TX

We don’t exist. In fact, the magazine you’re holding doesn’t exist. You don’t even exist. Actually, the only CGW that exists on America On-Line is an electronic mail address. You can send e-mail to us at “CGW,” but there is no electronic magazine on AOL. We publish on-line reviews on the PRODIGY service and we have an interactive forum on ZifNet. Current plans call for an electronic magazine on the new Interchange network when it is available.

TUMOR BAG

How about releasing the results of questions/grades for “The Rumor Bag”? I mean, is this guy really PAID for his column?! A trick for us readers is to look for highlighted names in the story, read the actual rumor, and skip the lame story. Keep up the rumors, but pop the bag.

D. Hart
Traverse City, MI

Actually, about half our readers love the inside references and off-the-wall fiction that connects the rumors, but the other half absolutely hate the format. We tried printing the rumors by themselves in a half-page format, but that wasn’t popular, either. Think of it as the computer game equivalent of writing an original story each month using your spelling words. Seriously, the reason for the emboldened company names in “The Rumor Bag” is to enable people like you to skip the fiction and get straight to the rumors.

GETTING TO KNOW YOU

November was not just the biggest issue ever, but the best issue ever! Did that sound kinky? Would I actually get anything for being kinky? Check Six.

Spider
Wheaton, IL

Get anything for being kinky? Yes, if you hadn’t signed your letter anonymously, you’d have won a brand new car.

I am a recent “addict” to Computer Gaming World and began buying your magazine in June. I enjoy your magazine and consider it to be valuable for game comparisons and keeping readers up to date with what is going on in general.

Your Top 100 Games, Best Games By Category, Readers’ Top 10 and Premier Awards provide me with excellent information. However, it also provides confusion.

1. What are the definitions for your categories of games?
2. The Top 100 Games seem to have little direct correlation to your Hall of Fame games or what people are playing.
3. Another confusing thing is how a game’s rating changes so dramatically.

Ed Medley
Midland, MI

Here’s the straight scoop.

1. Our category definitions have evolved over the years, but the working definitions follow:

- Action/Arcade: Computer games that emphasize hand-eye-coordination and reflexes.
- Adventure: Games that allow you to take an alter ego through a storyline or series of events.
- Role-Playing: Adventure games based on character development (usually involving attribute improvement and/or promotion).
- Simulation: Games that usually model real world vehicles in real world environments, from the first-person perspective.
- Sports: Games that present either a strategic, action or hybrid approach to sports on the computer.
- Strategy: Games that emphasize strategic planning, resource management and problem-solving.
- Wargames: Strategy games that present historical warfare from a command perspective.

We know these categories aren’t perfect, and that many games don’t fit neatly into a single category, but we think the system is useful for our Top 100 list and yearly awards; and besides, the arguments here in the CGW offices over which games go where keep our lives interesting.

2. Every six months, we remove games that are more than two years old from the Top 100. At the same time, we consider which of these “retired” games are worthy to be placed in the Hall of Fame. The ratings of the Top 100 games are cumulative averages based on reader votes.

The Playing Lately list comes from the write-in votes from Question #61 on the CGW Poll Card, and is a general indication of which games are hot and/or have a lot of replay value. It’s odd, but sometimes a game will appear on the Playing Lately list, but not get a high enough rating to make the Top 100. Apparently, just because gamers are playing a game doesn’t necessarily mean they think it’s terrific.

3. Since the Top 100 is based on a cumulative average of ratings, the results are volatile early on in a game’s history, but the ratings tend to settle down after a game is rated a few times.

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Circle Reader Service #353
A recent trip to MicroProse offered some new information on upcoming enhanced and new titles. The CD-version of Master of Magic will feature version 1.2 and will be playable from the CD. In the new version, the heroes will actually raid instead of sitting outside towns and cities; fewer heroes will appear than in the earlier version; special abilities are play-balanced better; spirits can travel over water without ships; the artificial opponent's ship logic is handled better; exceptional spellcasters start with more spells; and diplomacy is better implemented.

The scenario disk for 1942: Pacific Air War will add: modern play; a mission builder which includes New Guinea and the Philippines; the option of flying P-38s and P-40s on the U.S. side, as well as missions and 200 modern-play missions are expected to be released on the disc.

The multimedia division is hard at work, as well. New multimedia products will incorporate instructional and historical modules accessed by photo-realistic metaphors, such as a carrier for 1942 and a deserted army camp for 1944: Across The Rhine. The former will emphasize training and strategic planning, while the latter will offer authentic recollections from actual veterans.

Mr. Roper wanna-be's can raise and lower rent (but keep an eye on the books), and even program the elevators to keep tenants' stress levels low. You can even name individual inhabitants and track them as they move around the building. Unlike some other Maxis games, there is a little more built-in "game" to SimTower. As more tenants move in to the building, the "star rating" of the tower increases from one to five stars, and finally to conventional wisdom, is a good thing, unless you happen to be the spouse or roommate of someone who purchases the game. Available on Macintosh and IBM PC. Projected release: January/February.

X-COM TAKES THE PLUNGE Slimy new aliens attack underwater in X-COM: Terror From The Deep.

From the looks of their latest "computer toy," Maxis will once be responsible for many sleepless nights. After managing cities, the Earth, farms, and the nation's health care (whew!), it is time for gamers to build and run their very own skyscrapers. "Sim-toy" fans will be in heaven as they grow their customizable high rise from a regular old corporate plaza into a mammoth self-contained structure. SimTower has much of the look and feel that made the original SimCity a classic, including demanding inhabitants, human traffic jams, and quality of life additions like movie theaters. There is also some neat micro management, as
own business acumen in order to succeed at the game.

X-COM: TERROR FROM THE DEEP is currently under development in the U.K. In this sequel to the best-selling X-COM, the aliens attack under the sea. The game itself will use an underwater mapping system which features plenty of topographic detail, some intriguing undersea buildings to explore/capture, new alien sea creatures to serve as foes, and a new mutagen technology with which to experiment.

Finally, those who are fans of the phenomenal MAGIC: THE GATHERING card game may wonder what MicroProse is going to do with their MAGIC: THE GATHERING computer game. The computer game will feature both a solo game, where players can earn new cards and practice developing their own decks, and an online game, where players will be able to compete via modem or on a commercial network in order to become the supreme duelist. The computer game uses beautiful backgrounds for the campaign game, as well as dueling training screens, that are based on the artwork on the cards themselves. The art looks great on-screen thanks to both the original stunning paintings and their conversion to 256 color SVGA graphics in high resolution. The game will use almost all of the 950 original cards and about 120 cards from the FALLEN EMPIRES expansion set.

Finally, the U.K. branch of MicroProse is currently working on one of the most unique god-game concepts we've ever seen. As yet unnamed, this effort could be the company's real sleeper for 1995 and could well breathe new life into the god-game genre.

### PLAYING LATELY?

Here are the games that your fellow players are blowing the most time with. Let us know which game you've been playing the most by writing the name of your current addiction in the "Playing Lately?" blank of the CGW Top 100 ballot (page 240).

<table>
<thead>
<tr>
<th>Rank</th>
<th>Title</th>
<th>Developer</th>
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<tbody>
<tr>
<td>1.</td>
<td>Doom II</td>
<td>id Software</td>
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<tr>
<td>2.</td>
<td>X-COM: UFO Defense</td>
<td>MicroProse</td>
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<td>3.</td>
<td>TIE Fighter</td>
<td>LucasArts</td>
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<td>4.</td>
<td>Master of Magic</td>
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<td>Colonization</td>
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<td>6.</td>
<td>Master of Orion</td>
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<td>7.</td>
<td>Front Page Sports Baseball</td>
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<td>Doom</td>
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<td>9.</td>
<td>System Shock</td>
<td>Origin</td>
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<tr>
<td>10.</td>
<td>Aces of the Deep</td>
<td>Dynamix</td>
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### Notable Quotes

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

"With X-COM, MOO, and MOM, MicroProse is single-handedly responsible for destroying any remnant of a life I might have had."

-Chris Hyde, Fremont, CA

"ACES OF THE DEEP is great—the best WWII sub sim of all time! If you thought SILENT SERVICE II was good, you ain't seen nothin' until you've played AOD."

-Ray Kelly, Omaha, NE

"So I go to the local computer store and say to the guy, 'How about that X-COM, isn't it the greatest?' And he says, 'Yeah, it's alright, but the graphics are lousy.' I laughed so hard I almost got into an accident on the way home."

-Amused In Canada

"Frankly, I'm sick of DOOM-type games... except for SYSTEM SHOCK. The incredibly immersive graphics have made me late for several engagements."

-Joe Justice, Hampton, VA

"I would have given MASTER OF ORION an "A+" if only it had a multi-player mode, especially modem or even an e-mail option. I don't see why they weren't included; it's a turn-based game."

-Missing Multi-play In North Bay, CA
The last installment of SSI's naval war simulation (GNB2) left gamers with a somewhat salty aftertaste. The sumptuous graphics were undercut by a design which placed too heavy an emphasis on micro-management—
to the point where it simply wasn't much fun. The good news for armchair admirals is that the latest version of Great Naval Battles keeps the newfound graphic flavor while trimming the fat. Not only are the visuals of the 3D-rendered ships improved, but the SVGA graphics also offer much-needed feedback with better explosions and gun flashes. A significantly improved interface allows for easy adjustments to ship speeds, loading and unloading vessels, statistics and navigational controls.

Damage control is one area where the micro-management of details remains interesting. Players can find out first-hand why U.S. ships held up better than Japanese, as they frantically attempt to put out fires and seal hull breaches in the heat of battle, on each separate deck. The damage model extends to ship-to-ship battles, where performance of damaged ships seems much more realistic during combat.

Another of GNB3's improvements deals with aircraft operations. In GNB2, they seemed almost an afterthought to what is essentially a capital ship design. The latest version integrates air units much more into the overall flow of the game. The search patterns, which previously resembled a spirograph display gone mad, are now much simpler to use and yet seem a real battleship free-for-all, though, it's hard to ignore the hypothetical Plan Orange scenario, which features WWI-style surface ship action...with nary an aircraft carrier in sight.

If the various battles lose their luster over time, you can always add some spice through the random scenario editor. A customizer screen allows you to adjust weapon data and effectiveness (just how would the U.S. forces have fared with Long Lance torpedoes?). Finally, the random battle generator creates a variety of engagements, based on historically plausible alternatives. The replay value of GNB3 is certainly enhanced over that of its predecessors, and the overall design is shaping up to be both more historical, and certainly more entertaining.

Projected release: February.

High Seas Trader

Impressions Software's first foray into first-person perspective games is primarily a cross between a simulation and a strategy game. The simulation aspects are pretty, but relatively simple. You only decide when to furl or unfurl the mainsail on your 17th Century ship, and courses are easily set via waypoints. You have little responsibility for the helm. In battle, you determine the type of ammunition for the cannon and when the batteries must fire. The strategic aspects are reminiscent of other Impressions' games. That is, they are essentially spreadsheets disguised by graphic menus. To be sure, many of the menus in use here are attractive paintings which are "hot-spotted" for menu choices, but they are menus just the same, whether you are recruiting sailors, hiring helmsmen, outfitting your ship, or investing in cargo.

What makes High Seas Trader more interesting than a mere hybrid simulation and strategy game is the role-playing aspect. You begin as the captain of a 17th century sailing vessel and must use your business acumen and seamanship in order to reclaim the title which was stripped from your ancestors in an earlier generation. If you can build up your ratings in four areas (nobility, daring, honor and loyalty), you can regain the title. Naturally, you'll need plenty of influence to make this happen and influence does not come cheaply, so you'll have to make advantageous trades, fight off pirates, and build up your estate into one fitting a member of the gentler class. Expected Release: January/February.
Bring Out Your Dead

Novastar Resurrects SSI Wargames

Long, long ago, when gamers were gamers and VGA was not yet part of the lexicon, SSI dominated the computer wargaming battlefield. Recently, David Landrey and the folks at Novastar Games have spurred interest in many older SSI titles through a series of new scenario disks. Realizing that there was still a market for wargames with focused designs and good AI opponents, Novastar acquired the rights from SSI to publish 18 titles, many of which have been out of print for some time. A Civil War smorgasbord includes such gems as Battle of Antietam, Shiloh: Grant's Trial, Rebel Charge at Chickamauga and CGW Hall of Fame member Gettysburg: The Turning Point (see page 267 in this issue). Esteemed designer Gary Grigsby is represented by Hall of Famers Mech Brigade and Kampfgruppe, along with Second Front, Warship and Western Front. Norm Koger’s Red Lightning and Conflict: Middle East offer modern and WWII-era variety, while his Stellar Crusade allows a sci-fi break from the historical stuff. Still, it’s Landrey’s classic Battles of Napoleon that may make the biggest splash of all these venerable titles, given the scarcity of good Napoleonic games of late (see the April ‘94 CGW for our coverage of several Battles of Napoleon add-on disks). All the games are available for $15 each, or with bulk discounts (groups of 5 games are $60). Those interested should contact Novastar at 3505 Midas Avenue, Rocklin, CA 95677, (916) 624-7113.

Game Developers Find A Place To Call Their Own;
Help Finding That Perfect Machine To Call Your Own

The burgeoning game development community now has an online hangout of its own. The new Game Developers Forum on CompuServe (GO GAMEDEV) beckons like a clearing in the woods for game designers, programmers and others interested in electronic entertainment. Current Forum topics include game ratings, distribution, virtual reality, writing, graphic art, music, video games, coin-op games, and even advice for programming students. There is an available jobs listing, and a special topic on design theory hosted by game designer Chris Crawford. Those interested in becoming members of the Computer Game Developers Association can post messages to the CGDA and find out about upcoming conferences. The Game Developers Forum is an extended service, but one that is open to everyone.

Meanwhile, if you’re on a quest to meet that special computer, check out the online version of our Ultimate Game Machine feature from December. This WinHelp file is designed to help you choose the best machine for your needs. The file is called UGM94.ZIP and can be found in Library 13. The Hardware Zone of the Computer Gaming World Forum on ZiffNet (GO GAMEWORLD). Happy New Year!
Circuits Maximus

Comdex Explodes With MPEG, 3D Video

The Sands Convention Center in Las Vegas looked more like a showcase for music and digital video than one of the sights for the world’s largest computer show. There were pro keyboard demos all around, and you couldn’t walk ten feet without seeing MPEG hardware in action. **Orchid’s Kelvin MPEG** **included Sigma’s Reel Magic MPEG playback chipset** right on the video card, which allows the user to run Windows up to 24-bit (16.7 million colors) while also playing back MPEG files (as opposed to the 8-bit (256 colors) with a stand-alone **Reel Magic** card). Sigma itself was out in full force with an MPEG version of **Tsunami**’s **Flash Traffic**, along with rumors of an MPEG version of **Wing Commander III**.

For 3D graphics, **Matrox** had their new **MGA Impression Plus** and the **MGA Impression Lite** 3D graphic accelerating cards with bundled 3D demos and games on a CD. The **3D Labs** **Glint** chip will be featured in a **Creative Labs** 3D acceleration product sometime next year. **Yamaha** had the only demo which did 3D acceleration with texture mapping. Yet only a few games, such as **47 Tek’s Sento**, have even begun to tap the enormous potential of these high-tech graphics products. By next summer, 3D graphic acceleration products should be available as either add-in cards, daughtercards, or included on popular video cards.

A number of third-party developers have begun to crash the 3D party with APIs—essentially tool kits designed to take much of the work out of 3D programming. The **Rendermorphics Reality Labs** demo was the most impressive of the APIs we saw, but **Argonauts B-Render**, **Criterion’s Renderware**, and **Intel’s 3DR** were also displayed.

For the audio amigos, **Roland** held a developers conference to talk about GS. The **GS format augments General MIDI**, can address more sounds, and has more controls for the developer to tweak those sounds. Roland has indicated that they will cooperate with developers so that more games will be compatible with GS, in addition to General MIDI. **GS devices include Roland’s Sound Canvas line of synthesizers and the new chipset from Crystal.**

For games, the most exciting thing we saw was a voice/data **Doom** demo. **Media Vision**’s new modem has the capability to handle voice and data at the same time, in **DOS!** **CGW** editors played a modern game of **Doom** and talked to each other via a headset simultaneously, with no reduction in performance!

Sure, there were other high-profile products at the show. Windows 95 was very visible running business software; and there were dual **Pentium motherboards**, **Power PC chips on PCI motherboards**, and even **DEC Alpha chips on PCI motherboards** all running in Windows NT. But none of these could run any of the current crop of compelling games!

**Bottom line**, by the end of 1995, we should have games that are written to utilize a new generation of video cards that combine **SVGAs**, full-motion MPEG video playback, and hardware 3D graphics acceleration (with texture mapping). Additionally, with **desktop PCMCIA readers and PCMCIA modems and sound devices**, notebook users should be able to get more utility out of their portable devices. As **Intel-based computers move into the mass market**, PCMCIA could become a welcome alternative to cranking the case and messing with circuit boards.
Welcome to the 22nd century! The future is here in the form of Dr. Goldfire, a brilliant bio-scientist whose ghoulish genetic research has spawned a battle-thirsty horde of military mutants. Poised for attack, they await his command to unravel the universe! Only you, as Blake Stone, the galaxy’s most intrepid agent, can infiltrate Goldfire’s secret fortress on a remote planet and kick these creeps out of the cosmos!

Powered by an advanced, fast version of the 3D engine originally used in Wolfenstein 3D™, this game has the fast, fluid graphics you love and ultra-realism that will keep you spellbound!

The reviewers are already in orbit over Blake Stone:

"Did you like Wolfenstein 3-D™? If you did, you’ll love Blake Stone." —PCM Magazine

"There’s more of just about everything... Plenty to keep you on the edge of your seat!" —Electronic Entertainment

"The first-person viewpoint and smooth movement will have you peering sideways into the monitor to see if there’s another monster around the corner." —PC Magazine

Get ready to launch the new galactic mission that will make or break Blake ...

Planet Strike!
Play it the Love.

The love of humiliating any sucker who challenges your title.

You're takin' shots at twilight and the legs feel like rubber. Old rubber. Tryin' to keep the cool through all the fouls and the trash talk, 'cause the rent's on the line. And so is your name. But you can take these guys. You think.

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When You Absolutely, Positively Must Save The World Overnight

Bethesda's THE ELDER SCROLLS: DAGGERFALL Leaves ARENA's Medieval Fed-Ex Image Behind

SNEAK PREVIEW
Game Still In Development

by Johnny L. Wilson

The axe-or broadsword-wielding medieval Fed-Ex person of THE ELDER SCROLLS: ARENA seems to have found a Dark Ages equivalent of the phone booth (the garderobe, perhaps) and transformed herself into the chivalrous equivalent of a CHAMPIONS-style superhero in THE ELDER SCROLLS: DAGGERFALL. I say medieval Fed-Ex person because the original game featured a lot of mini-quests where your character would deliver a package or person to a certain character by a certain time, and these mini-quests didn't really cohere into a solid plot. I say "CHAMPIONS-style" because the new character generation procedure allows players the luxury of obtaining additional talents by accepting certain disadvantages. Further, the selec-
tion of certain disadvantages—whether they be phobias, physical limitations, or unfortunate social ties and obligations—will set certain flags within the game that can call certain encounters and plot twists at various points within the game.

A MATTER OF CHARACTER
For example, a player might decide to become a vampire character. Such a seductress would immediately receive a strength and magical bonus by night, but would find it very difficult to operate in the daylight because she would lose strength by constantly taking damage and would find her powers impaired.

Unlike CHAMPIONS, however, advancement would depend on how the character was structured. Primary skills cost more, but are the easiest skills to improve within the game. Major skills cost slightly less, but aren’t as easy to improve. Minor skills help the character at a reduced poten
cy, but are extremely difficult areas in which to advance.

To add to the role-playing experience, DAGGERFALL will also emphasize language skills, reputations among specific groups, and social affiliations. Every character will have some ability with the common tongue, but depending upon the locale within the world, some of the non-player characters may both the conversations by using their native language or take offense at “Ugly American”-style characters who travel at length without bothering to learn any indigenous tongues. On the other hand, use of indigenous terms and phrases can enhance reaction rolls.

Reputation is not a generic fame or karma rating as in some pen and paper games or MicroProse’s DARKLANDS, but it is a separate rating for various social groups. Each character will have a changing reputation depending upon her actions and relationships to merchants, peasants, scholars, nobility and members of the underworld. Such reputations will determine some of the mini-quests that will be offered to the characters and how well the members of those social groups will respond to them.

Also, characters will be able to join guilds, temples and knightly orders. Since characters can have multiple affiliations, this adds to player motivation because characters can advance in the ranks of each social group, as well as use their networking skills to glean information from all of their affiliations.

But that’s not all! Bethesda’s design team wants to give characters a reason for earning all the gold to be earned, as well even be a toggle so that those who don’t want to risk having their abodes burglarized can opt for a Panglossian world where no thief has gone before.

The objects in the world have weight as part of their definition and can not only be purchased, but can be shoved off ledges, pushed around to be placed as obstacles and more. Further, there is an ItemMaker routine within the game which allows you to enhance items by using them on each other. So, a character could put poison on a sword in order to cause continuing damage after an initial wound, and a character with magical ability could use magic to enhance an object’s potency. Further, as with character creation, you can make objects more powerful by allowing certain side effects to be bound into the object’s description. Your character might be able to turn undead creatures with a magic weapon, but she might discover that her reputation takes a hit in some areas and social circles because of it.

Another new feature deals with paying for objects. In DAGGERFALL, banks not only allow a character to deposit gold in a protected environment, but allow her to finance large purchases like houses, castles and boats. They also grant the important letters of credit that were so important in a pre-ATM world.

CAN WE TALK?
Conversation is still handled via a menu-driven, branching strategy. However, the new conversational interface allows you to set-up your conversational goals in different columns, determine the character’s basic conversational stance (whether aggressive or polite mode), and select an entire line of questioning at once (for quick reading and case-of-use). Further, your character’s language ability, clothing choices, social affiliations and reputation will affect the way that non-player characters react to her.

Alert gamers will also notice some new icons at the bottom of the main action
of the game's mechanics, a player can choose which postage stamp icon she wishes to associate with which spells. New spells in Daggerfall include: Identify (you no longer have to go to a guild to identify magic), Polymorph (ability to transform into other creatures), Shadow (the poor man's invisibility), Slowfall (essentially, a Featherfall spell), Telekinesis, Teleportation, Water Breathing, and Water Walking. Along with most of the spells from Arena, these should make characters much more powerful.

**WALK THIS WAY**

As you would expect with new spells, there are also new special effects. One effect deals with polymorphing from nubile nymphs into gnarled crones (see previous page) and others involve the transformation from human to lupine and back. These were handled by an experienced Hanna-Barbera animator, Louise Sandowal, who drew the extreme frames of the moves and let the computer morph the transitions.

In addition to Sandowal's work, Mark Jones and Mark Jackson worked on character design and the texture maps for the buildings. The texture maps are considerably more complex and detailed than those in Arena, not only giving the world a more realistic look, but allowing for multi-story buildings and larger temple and palace buildings, as well. To these have been added sound cues which offer appropriate footfalls to match the texture of the flooring.

Also impressive are the "walking" sequences for various character classes and non-player characters. The basic archetypes for each character are rendered in 3-D on Silicon Graphics machines. Then, the animations are reduced somewhat and placed in an animation language where the frames can be repurposed and cut to reflect any potential movement.

Speaking of movement, the new software engine for handling 3-D movement is much more intelligent than that in Arena. The new engine is able to choose textures and swap buildings into and out of memory extremely efficiently as the player's character walks along. The more RAM you have, the more the new engine will use it efficiently. The bad news is that the game will require a minimum of 8 MB of RAM in order to run well.

**ABSOLUTELY, POSITIVELY**

With improved technology, then, what is improved about the storyline? Arena required your character to put together a wand of power by assembling the collected artifacts of a near-cosmic scavenger hunt. Daggerfall promises to have more connected situations and permutations to drive gamers through the full-blown story. Suffice it to say that the basic story is something like H. Rider Haggard meets George Lucas in a plot where your characters must obtain artifacts before rival groups can obtain those same artifacts and use them for nefarious purposes. Hint: These rival groups have a lot in common with the "bad guys" in Darklands.

So, when the heroes of Bethesda's The Elder Scrolls series of computer role-playing games need to absolutely, positively save the world overnight, they'll have new spells, new weapons, new clothes and new reasons for doing so. And, if it all comes together like it was looking at press time, Daggerfall's heroes will deliver a lot more satisfaction than those medieval Fed-Ex couriers in Arena.
Never Lose Sight Of How Pinball Should Be Played.

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WINDOWS: 386 or faster processor, Windows 3.1, 256 SVGA monitor, 4MB RAM. Supports SoundBlaster® and other Windows compatible sound cards.

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Fist Fighting TOW To TOW

How To Achieve Battlefield Supremacy In NovaLogic's ARMORED FIST

by Tom "KC" Basham

Commanding a platoon of tanks, especially in the face of overwhelming odds, takes more than charging headlong into the ranks of the enemy. Running valiantly into fortified enemy positions may be dramatic but will most likely end your simulated life rather quickly. All ARMORED FIST (FIST) scenarios place you at a severe numerical disadvantage and often start with your forces surrounded, and many begin with your troops already taking fire. Here's what I do to break through the missions, especially the tougher ones in the later campaigns.

If You Ain't Cheatin' You Ain't Tryin'

As the old saying goes: when all else fails, cheat! Many missions begin from unrealistic positions. Your forces have made serious tactical errors, they're surrounded, taking fire, and suddenly you inherit command. Yeah, right. The mission editor lets you change many things, but the "locked" campaign missions can't be edited, right? Well, they can be edited after a little bit of hacking. For those of you handy with a hex editor, such as Norton's DISKEDIT, "unlocking" a mission is a relatively simple task. Be advised, NovaLogic does not endorse unlocking missions in this manner, and making a mistake hex editing the mission files could result in serious data loss. Be sure to backup your files before attempting any unlocks.

Now that I've gotten the lawyers off my back, unlocking a mission requires only a one-byte change in a single file. Cam-
The campaign data resides in the FISTDATA subdirectory. All campaign missions are stored based on their geographical location. For example, the Certain Fury campaign takes place in Syria with the relevant missions entitled SYRIA1.*, SYRIA1.FSW, SYRIA1.FSE, and SYRIA1.FSG. Each mission requires three files. For example, the first Certain Fury mission, “Two Tribes,” requires SYRIA1.FSW, SYRIA1.FSE, and SYRIA1.FSG. Files with an “.FSW” extension contain briefings for players commanding Western forces. Likewise, “.FSE” files contain briefings for players commanding Russian hardware. “.FSG” files contain the map of the mission and the “lock” status. The ninth byte of the file (offset 08h) is always set to 00h for an unlocked mission and 01h for a locked mission. Changing this byte from 01h to 00h in any FSG file always unlocks the mission, allowing you free editing rein. Locate enemy positions, move your forces to better starting positions, identify targets, increase artillery posts and delete enemy elements at will. Is this cheating? Probably, but as they say, if you ain’t cheatin’ you ain’t tryin’ hard enough.

Fire From The Sky
Unless you simply delete all enemy units, you still have to fight the mission even after you unlock the scenario and spy on the bad guys. Always remember two rules: fight on your terms and use your support forces. As the first rule implies, you must choose when and where the fight occurs. The enemy will try to attack from favorable positions which are difficult for you to defend, or try to defend positions which are difficult for you to attack. Following the default waypoints programmed for your forces guarantees an expeditious engagement but almost always at a severe disadvantage. Most default courses lead you into an ambush, expose your units on mountain tops, or lead you into the heart of enemy defensive positions. As a general guideline: do not follow the pre-programmed waypoints. If you’re not under attack when the mission begins, try following along the pre-defined waypoints until you come to the first ridge. Carefully peek over the rim, check for enemy targets, then alter your course to bypass those units or attack them from their weak side. In most missions, your two platoons receive separate orders and targets. Ignore these orders. Re-plot paths for both platoons so that all available units converge on a single target at the same time. If you find yourself under attack from the onset, immediately withdraw all forces and re-group. Above all else, get away from the enemy and call for help.

This brings us to the second rule: use your support forces. What kind of help is available? You have two assets: air support and artillery. Air support, consisting of attack helicopters (AH-64 Apache for the Blue and Hinds for Red), is virtually useless in ARMORED FIST. Despite the goals achieved by both of these helicopter types in Afghanistan and Iraq, the gunships in FIST are basically cowards. They’ll quickly charge to your rescue, scout the region, then run for base at the first sign of trouble. It’s quite irritating to be pinned under a hillside with a thrown track, dug in BMPs on the ridge above you waiting for you, artillery fire raining down, and you hear over your radio, “Apache 196, taking fire, returning to base.” Gee, it must be nice to have that option. I’ve tried calling several helicopters in at once, but they simply won’t stick around.

The helicopters, therefore, provide little combat value but are excellent recon assets. Of course, they run like reptiles when the enemy starts shooting, but they generally do locate enemy positions. Since the target data on your in-vehicle overhead map is generated from visual contacts, it is very useful to send a chopper over the next ridge to ferret out enemy positions in the valley before proceeding.

Fire From The Ground
Artillery is your friend. Well-aimed artillery is deadly. Dug-in vehicles are nearly impossible to hit without a suicidal charge toward them, helicopters run in panic like frightened sheep when confronted, but artillery knows no fear. It plunges from the sky like fire-breathing commandos exacting a terrible retribution from the enemy for even pondering the possibility of engaging your platoons. Nothing is immune. From tanks to bunkers, from fuel tanks to satellite dishes, nothing can withstand a well-aimed burst of artillery.

How do you use artillery? The simplest, most obvious method requires direct visual contact with the enemy target. Use the Enter key to lock a particular target, then call for fire support. The specified target will receive a fatal blast nearly every time. Be advised, though, if you can see the enemy, he can see you. While you’re directing fire onto his position he’s probably doing the same to you. The secret of artillery cannot be found in the manual: manually point your crosshairs over the top of an impending ridge and the artillery falls on the other side. The lower your crosshairs are to the ridge, the farther away the shells fall. Raising the crosshairs drops the
shells closer to your current position. If you know, for example, that an enemy platoon rests in the next valley, then point your gun over the relevant hill and call for fire support. Watch where the shells hit on your overhead map. If the shells miss, adjust the position of your turret horizontally and vertically as required and call a second volley. With continued adjustments you can expertly walk the artillery fire right onto the enemy. I've found myself outnumbered four-to-one at the end of a difficult mission facing a well-defended enemy camp in the next valley. Rather than facing certain doom, I call in artillery and wait. Many times, the artillery finishes off the remaining targets and the mission ends in victory! Be careful, though: artillery is limited. Call on it too often and you may find it unavailable when you need it most. The manual indicates artillery may return on-line after some waiting period, but I have yet to see that.

Artillery also provides excellent cover for a fighting withdrawal. When forced to withdraw from an advancing enemy, target the ground very near your current position and request artillery. You'll have advanced well clear by the time the shells fall, and hopefully the enemy will have moved directly into the danger zone. In the worst case, enemy armor may think twice about chasing you with shells raining down.

**Automatic Controls Are For Dead Men**

I generally use manual turret controls instead of automatic controls. Under the automatic system, pressing Enter would lock on to the first available target, but pressing Enter again (for whatever reason) causes the lock to break and the turret to align with the hull. I programmed the Thrustmaster FLCS first trigger position as Enter and the second trigger position as “fire.” I found myself often releasing tension enough that Enter would be repeated, thus breaking the lock when I needed it most. With manual control the turret still locks on targets when I press Enter, but remains locked on the same target until I manually move the gun. By programming turret controls to one of the FLCS’ hat switches I can work both the hull and the turret simultaneously while using the two-stage trigger to acquire targets.

If your tank throws a track or takes engine damage don’t immediately despair. Depending upon your position there may yet be hope. If you find yourself stuck in the middle of flatlands with dug-in T-80s in the surrounding hills you’re going to die. But, if you cross a minefield and throw a track, or another of your units kills the badguy after he wounds you, your crew will attempt repairs. Usually after a minute or two the crew can repair a thrown track or a damaged engine and have you underway again. Therefore, you should endeavor to protect vehicles which find themselves similarly stranded. Unless time is running out on you these vehicles can yet participate in the next battle.

I’ve found playing “peek-a-boo” a highly successful tactic. Move just beyond a hillside or just over a ridge, catch the enemy’s attention, then immediately reverse behind or below the hill and wait. If the enemy platoon is reasonably close it will advance toward you. Kill the tanks as they pop over the ridge or peek around the hill. Despite somewhat strict time limits in most of the missions, I usually had enough time for reasonably cautious, move-then-wait advances.

Overall, ARMORED FIST is a challenging, enjoyable simulation of modern armored warfare. Generally, the computer wins missions not through clever artificial intelligence but through vastly superior numbers. If you can reduce his numbers and even the odds through combined-arms usage, then the computer player stands little chance. Good luck and good hunting!
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Circle Reader Service #327
Exercises In Feudality

The Key to Winning at SSI's SERF CITY Lies in Urban Planning, Not in Dreams of Conquest

by Michael Rymaszewski

SERF CITY is a complex and potentially entertaining game. I say "potentially" because the manual that comes with this SSI title is a bit muddled. While some things are explained well (in fact, explained several times in different sections), in most cases the information given is not only extremely confusing, but simply wrong.

Part of the reason why the SERF CITY manual is so bad might be that it has been translated rather poorly from German. It is peppered with phrases such as "zone hatched in red and yellow," a foundry is called both a foundry and a forge (and a Blacksmith's Shop a forge), and an important menu icon is referred to as "another icon." It all means lots of trial and error before you get things right. Making things even worse, some of the manual's strategy tips offer losing advice.

The Pre-Game Show

Before you start playing, you'll be asked to choose your opponents and the size of the world. You can also adjust the intelligence level of the computer opponents, level of initial supplies, and the growth rate, which simply means how quickly additional serfs become available.

After you've played a few games, you'll want to choose the maximum difficulty levels across the board. Give your opponents maximum growth rates, initial supplies, and especially intelligence—they'll need it. As far as the personalities of your opponents are concerned, there does not seem to be much of a difference, regardless of what the manual claims. The supposedly inoffensive Lady Amalie was the only opponent who attacked my kingdom before I either attacked her or encroached on her territory, while the reputedly dangerous Count Aldaba and Homen Doublehorn turned out to be bumbling incompetents. The rule of the thumb seems to be the bigger the enemy kingdom, the more likely it is to start trouble.

The other consideration is the size of the world you want to play with. I would recommend size 5 at the highest. It'll take you a week of evenings to complete the game in a size 5 world. A size 8 world, on the other hand, could take up to a month!

What Makes Johnny Grow

The key to winning at SERF CITY is fast growth. It may sound simple, but it isn't. Fast growth involves a steady supply of building materials, a road network that is free of traffic jams, and enough highly trained knights to expand your frontiers. You have to meet all three of those conditions to win. You can have tons of wood and stones, and plenty of soldiers, but it will do you no good if you suffer traffic jams. I have managed to score brilliant military victories against much stronger opponents simply because their relief forces stood by helplessly, waiting for the roads to clear.

Let's start with the traffic problem. There are two considerations here. One is building a good road network, something that's exhaustively explained in the manual. The other one, which is just as important yet isn't mentioned in the manual at all, is good urban planning. Ideally, if your buildings are in the right places, the items or merchandise they produce
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Strategies

should not have to be transported very far to be put to use.

The first rule here is to group related buildings. The sawmill should be right next to the lumberjack’s hut. The foundry should be at the convergence of the roads from the mines, and as close to them as possible. The mill should be right next to the farm, and the bakery right next to the mill. The building that produces your “raw” materials should be the one farthest away from the storage spaces (castles or warehouses); the

one that delivers the finished product (planks, bread, tools, etc.) should be the closest. This involves quite a bit of careful planning, not unlike Sim City, and is essential not only to winning, but to really enjoying the game. Otherwise, you’ll find yourself pulling your hair in frustration.

Find an area that will accommodate all of the buildings belonging to a single group. Let’s say you want food for your miners, and plan to build a farm, a mill, and a bakery. Try to select sites so that all three buildings are connected by a branch road, but the bakery is the only building connected to the main road. That way, the only serf to use the main road will be the serf carrying the bread.

Your mines will, of necessity, be located on a mountain. Build a functional network of connecting roads, and don’t worry about building extra roads to facilitate construction; you can always destroy them later. Ideally, you should connect iron ore and gold mines with roads carrying coal, and make them converge en route to the foundry. A little farther down the road, construct a blacksmith’s shop and, if you’ve got gold on that route, a gold foundry. The next step down the road connecting those satellite towns are the main roads—the highways, if you like.

If you build in all the optimum places and get the roads right, not only will you win the game, but you’ll also be rewarded with fast, interesting play. You’ll also discover a new side to the game, as your super-efficient road network enables you to change transportation and supply priorities on the fly. It’s possible to keep each mine operating at maximum capacity while at the same time keeping new buildings popping up all the while. And it’s addictive fun, too.

Rebuilding Roads

The mines are the one area where you will find yourself rebuilding the road network again and again. Sooner or later, every mine will cease producing, no matter how rich the source—that’s life. Demolish it right away. Then send a geologist to the burning mine’s flag to do his thing. In most cases, he’ll find a fresh deposit of what you need. If he doesn’t, tell him to look around all the neighboring flags before sending him off to another mountain. Which leads us to another point: quite often, the geologist will put up the signs indicating rich deposits in places where you can’t build a mine. Sometimes, you’ll get a mineral deposit sign stuck right on the road. The only thing left to do in this situation is to rearrange the roads so that building a mine is possible. Sometimes, you’ll even have to demolish other mines. In that event, check the nearby mines’ production levels and decide for yourself whether the whole thing is worth it.

By the way, when you open your first Demolition menu, you’ll find it’s spelled “Demolishen.” A warehouse is called a “Stock,” and a fort a “Garrison.” Don’t let it confuse you (ah, those Germans).

Arming the Forces

The biggest single piece of bad advice the manual contains is this: send out your weaker soldiers to combat enemy forces, keeping the strong ones in defense.

This is the silliest thing you can do for two important reasons. The first is that your first wave of green and slightly yellow lance corporals will probably not accomplish anything. Unless the enemy guard hut has but a single soldier, chances are your guys will simply get killed, which leads to the second reason. When they get killed, you lose all their weapons and will have to manufacture a new sword and shield for each replacement.

I say “the enemy guard hut” because most of the military buildings the computer opponents construct are of this variety.

Driving Details

Controlling the traffic in SERF CITY is extremely important. What do you do if the serfs keep taking routes you don’t want them to take?

The logic behind the transporter serfs’ route choices is simple. They always choose the shortest route between two points, and in their peasant minds the shortest route is the one that has the fewest flags. In other words, you can have two stretches of road, one twice as long as the other, but as long as the shorter route has more flags, they’ll think it’s longer.

You can get rid of the flags you’ve put up the same way you demolish buildings. If you can’t improve matters by fiddling around with the number of flags, don’t be afraid to rearrange the road network. If you’ve planned carefully, and have built warehouses in all the strategic spots, new porters will be there quickly.

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The manual indirectly advises you to build guard huts, especially when the enemy is near, because they take much less time to build than the more elaborate watchtowers or "garrisons." Well, sometimes that's okay, but generally guard huts are a misguided move. The manual casually mentions that the soldiers in these huts do not improve their skills; this should have been in bold type, for you'll discover it extre-

mely important. Soldiers on duty in watchtowers and garrisons do improve with time, although they advance through the ranks rather slowly when compared to the ones in your castle or warehouses. However, they do get better, so you can maintain a strong defense at all times while simultaneously improving the quality of your army. Also, by choosing watchtowers you'll have at least twice as many soldiers available for defense and attack (a watchtower can hold six men, a guard hut only three).

The manual recommends weakening the guard huts even further, by sending part of their garrisons back to the castle or warehouse for fast, efficient training. Unfortunately, even the innocent, peaceful, and presumably virginal Lady Amelia instantly attacked my guard huts as soon as I withdrew a single soldier from it.

In order to ensure that your army wins every fight that it starts, build watchtowers and forts wherever and whenever you can. Build a guard hut only when pressed for time, but immediately construct a watchtower alongside. When these two structures are no longer a part of the first-line defenses, demolish the hut, leaving the watchtower, which will also yield three soldiers for intensive training or attack. Construct a fort wherever you plan to attack.

**Military Menu Matters**

The column of babble on page 40 in the military matters section is hopeless. It is basically trying to say that if you open the recruiting menu, appropriately represented by a shouting, running soldier icon, you can do three things: set the percentage of new serfs eligible for military service, choose the quality of your attack troops, or change the size of your castle's resident forces.

The horizontal bar on top indicates the percentage of new serfs eligible for military service; I like to keep it at 50% in the beginning, and will switch to 75% later in the game.

The second icon in this menu allows you to choose between "green" recruits, represented by the soldier with battle-ax, or battle-hardy veterans, represented by a knight flexing his muscles. This is where you choose the quality of your attack troops, and you should instantly switch to the best by clicking beside the muscular knight.

Finally, at the bottom of this particular menu you have two numbers forming a fraction. Clicking on the plus/minus sign to the side of these two structures will change the size of your castle's garrison. Hint: immediately raise the number of castle defenders to at least a dozen. After you've built a couple of lines of defense, and the

**ATTACK ADVICE**

Always attack with your best soldiers. Of course, being the grizzled veteran of a thousand battles, you'll only attack when you're ready. That, in SERF CITY, means attacking and capturing several enemy guard huts at the same time (like I told you, they build all those guard huts with nary a watchtower). This move is particularly advisable if you've discovered you've got no gold in the vicinity, and someone is pushing back your borders. When you capture an enemy hut you automatically capture whatever gold it contains, and increase your hoard while depleting your opponents'.

If you've got gold, and your roads are brightened by a steady procession of glistening yellow globes, hide your time. Push forward as far as you can with your guard huts and watchtowers. Build a fort or two where you intend to attack. Then attack all three opponents either at the same time, or in very quick succession. Otherwise, any reasonably strong opponent you've left untouched will attack you first, causing at least some economic damage.

Follow up immediately with a second wave of attacks. The targets for the first wave should be chosen solely for strategic reasons, with the objective being to move as many of your buildings as possible out of reach of enemy forces. The second wave should be directed where it hurts the most—where the capturing of a guard hut will destroy the maximum number of other enemy buildings. If you have any more targets and soldiers available, especially from way behind the front lines, launch a third attack even before the second wave hits home.

Capturing enemy castles is the toughest challenge of all, but it's well worth it. Before making an attempt, check the graphics and the position of flags on enemy huts for some idea of enemy strength. This time send your best knights first, but then switch to green recruits, and then back again—there are dozens of soldiers in there, many of them knights, and they aren't sent into combat in order of rank. You'll have the best odds when you alternate...
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Circle Reader Service #346

Strategies

Siege & Conquest: Strike at the jugular of your victims by destroying their home castles. Once the castles are gone, the rest is a simple mop-up job.

The quality of the soldiers in each attack.

Try to capture the castle of your strongest opponent as quickly as possible, whether it be the innocent Lady Amelia or the treacherous Rasparuk the Druid. Then whack the hell out of the other opponents, burning and pillaging whatever and whenever you can. You'll have to keep fighting effectively against men-without-castles, but they'll be much weakened. After conquering King Ralph's castle I saw a captain of mine now down 11 of Ralph's men, including two captains, three lieutenants, and assorted other characters.

Moves in Brief

With all of these tips in mind, we'll wrap this up by returning to the beginning. Your first moves, and how quickly you make them, are extremely important.

The first thing you have to do is choose the site of the castle. This is more difficult than it seems, for SERF CITY does not allow you to pause the game while you are considering things. While you are out searching for the perfect spot—fairly level ground, with mounds of rocks, lots of trees, and mineral-rich mountains nearby—the computer-controlled opponents will grab the best sites and begin building their kingdoms.

Switch to the map the moment the game starts, and pick an area near the center. Don't worry about the terrain being too hilly; if you do your road building right, ups and downs aren't a problem. If you're blocked in on one or two sides, you can always expand in another direction. Get the geologist's estimate on the area's mineral potential, but don't let it influence you too much. If the area contains deposits of coal, iron ore, and gold, build immediately.

Don't worry about underground granite: just make sure the site you have chosen features both trees and several of those grey-black lumps that are rocks. Rocks are much better than underground granite, since building a quarryman's hut is much faster and simpler than a granite mine. Also, a quarryman does not require food, while the miner does.

The first buildings you should construct following the castle should be the lumberjack's hut, the sawmill, and the quarryman's hut. You'll construct a forest ranger's hut later, especially if there are a lot of trees and you need more clear space for your buildings. Remember too that since you'll be expanding, you'll want to have building materials right next to the construction sites.

Serfs By Land, Goods By Sea

The use of sealanes can help ease congestion if there is a lot of ground traffic, but setting up the routes can be confusing. To use boats, place a flag at two points along a lake and then construct a path over the lake connecting them. Any sea lane that runs against the shore is illegal. The sea lane will show up as a slightly different colored line on the lake. Note that the boats will not transport serfs, just materials.

Once you've done that, build guard huts where you want to expand, and replace them later with watchtowers. If you can, build watchtowers right away. If you've got your roads right, building a watchtower takes very little more time than building a guard hut, and the benefits are many.

Do not hesitate to destroy all defensive structures well beyond the front line. You'll free up many soldiers you can profitably use. Sometimes, the space bonus will pay benefits, too.

Most importantly, always remember to hit them before they hit you. Medieval life, eh?
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No Longer Adrift In The Ascalon Rift

Combat-Tested Tactics For STAR CRUSADER

by Jeff James

With STAR CRUSADER, Take 2 and Gametek have taken the space combat simulator genre into previously uncharted stellar reaches. Instead of being bossed around the galaxy by a superior officer and forced to complete missions which you had no part in devising, STAR CRUSADER gives you the opportunity to plan your missions and assemble strike forces with pilots and ships of your own choosing. Fast reflexes

and sound strategic doctrine are both essential to victory in STAR CRUSADER since it requires you to do everything from flying your own vessel to planning missions for your entire squadron.

When A Pistol Meets A Rifle...

Regardless of whether you choose to champion the cause of the Goren Empire or the Alien Alliance, there are several basic combat tactics that will help you get the drop on the enemy. Success begins with mastering the intricacies of each weapon type. If you're flying for the Goren camp, you need to know your torpedoes like the most intimate pieces of your anatomy, but flying for the Alien side gives you a much wider range of weapons. If your ship has a limited number of torpedoes/missiles and other weapons, they're usually most effective when employed at a decisive moment in the battle. If your goal is to eliminate a Tancred destroyer, you don't want to waste all of your torpedoes on the escorts. Keep in mind that all vessels have shields which must be battered through to damage the hull of the craft. Shields regenerate quickly, so press the attack when you finally break through. Most weapons also diminish in strength over distance, making long-distance fire-fights an exercise in futility. Learn to overwhelm the enemy with a barrage of weapon types at close range and you'll soon be master of the space lanes.

When fighting in large, sprawling space melees with a melange of ship types and sizes, it's all too easy to get caught in the deadly crossfire between large capital ships.

To avoid getting splattered in larger battles, hover around the flanks of a friendly capital ship. The capital ship will keep up a steady barrage of fire on ships that are trying to attack you, and you can move quickly to engage a specific threat to the larger vessel. Capital ships, and some larger patrol ships, can fire backwards as well, so be mindful of your position next to these vessels.

Some ships are extremely maneuverable in a dogfight, making it impossible for larger, more ponderous vessels to hit them. There are two ways to defeat an enemy like this, and they both involve your afterburners. One option is to hit your afterburners and speed away from your attacker, them turn and fire on him as he approaches. If you're flying a hefty vessel such as the Goren Liberator or the Tancred Warlord, you have the added luxury of having a powerful weapon which costs nothing to use. When an enemy fighter races towards you, simply point the nose of your ship in its direction and hit the afterburners, physically ramming the enemy ship. This works best with a Goren vessel,
Galactic Arachnophobia

The normally brave Tancred pilot can be forgiven for turning tail here, because even his *Samurai*, with its powerful plasma cannon, is no match for the two spider-like Gorenne ships on his tail.

As the Liberator has auto-repair capability, as modern-day pilots will tell you, flying in a bee-line towards an objective at the same rate of speed over heavily defended territory is akin to suicide. You'll want to vary your speed and your heading often when you're in combat, making it as difficult as possible for an enemy to draw a bead on you. Finally, nothing works better than a timely save game. Regardless of how tough a mission is, chances are you'll eventually get it right and see your way through to a successful completion.

A Pilot's Gotta Know His Limitations

Perhaps the most important advice of all is to structure your actions around the mission goals. When in a swirling dogfight, resist the temptation to fixate on one craft to the exclusion of all else. Chasing down fighters far from your objective may raise your kill rating, but it will also leave your mission objectives in shambles. Put your objectives first and victory will follow.

Threading your ships through a minefield is one of the most difficult aspects of the game, and can give you a fair share of frustration if you don't know how to handle it. The mines in *Star Crusader* home in on your energy output. Hit the afterburners just once, and you'll have mines screaming towards you from all directions. To survive minefield missions in one piece, you'll need to take out the controlling mine, which usually shows up as a flashing red blip on your radar. Should you manage to destroy this mine, all the other mines will cease to target and pursue your vessel. They're still armed however.

Fire more weapons, use more afterburners, and generally assume a very aggressive tactical posture. Fighting long, drawn-out battles is a definite possibility in some missions, and Gorenne vessels are well-equipped for that role. Finally, all the Gorenne craft generally share the same armaments and cockpit, making it very easy to jump from one ship to the other without having to re-educate yourself from square one.

Whereas the Gorenne player may often assume the same tactical posture due to the similarity of ship designs, playing for the Alien Alliance will give you a diverse assortment of vessels to fly. For heavy gunships, the Tancred Warlord is undeniably the best choice. Loaded with a wide variety of weaponry and defended by thick armor and shields, the Warlord should be considered your "designated hitter"; use it when brute force is necessary to complete a mission. The Amien Guardian is perfectly suited for capture missions, as its EMP torpedoes can penetrate shields, destroying only the pilots on board.

This specialization is also a drawback for many Alien Alliance vessels. Whereas the Gorenne vessels are capable of fulfilling a wide range of roles, your vessels are not quite as flexible. This demands an extra level of tactical planning, as you must carefully craft each mission with a variety of vessel types, taking the strength and weakness of each into account. This difficulty is compounded by design inconsistencies between vessels. While one vessel performs in one fashion, another alien vessel will have a different cockpit, different weapons and different performance. If you do switch sides to the Alliance, you'll also bring along some of the Gorenne's technology, specifically auto-repair capability and the Intruder stealth ship. Even with those additions, heading up the Alliance will be a tough job. With all of these extra factors to control, leading the Alien Alliance to victory is undeniably more difficult than seeing the Gorenne achieve their aims.

Regardless of which side you choose, several personalities will be introduced throughout the game who are central to the game’s plot. So that the storyline may...
be properly advanced, the designers have infused some characters with impressive abilities to keep them alive during combat. When you're still playing on the Gorene side of things, your wingmen will also exhibit unique personalities during combat.

Krugon Dept is one of the better pilots in the Gorene staff stable, and he can be used as a valuable wingman. Krugon has the disconcerting tendency to punch out of combat (either by jumping out of the sector or by ejecting) when his shields get low. Communicate with him before he leaves to keep him in combat. Kara Helmar is a dream come true for novice STAR CRUSADER pilots. She tends to be the protective sort, rushing to your aid when you're getting pounded in combat. Other pilots have unique characteristics as well. Learning to maximize the strengths and minimize the weaknesses of your primary wingmen is one of the keys to winning the game.

**Top Sun**

Once you've been given command of your squadron, you can start assigning ships and pilots to missions of your own design. The missions you assign will depend on your own playing style. If you aren't the greatest star pilot, assigning a number of your fellow pilots to a contingency mission will ensure that your mission goals are achieved. If you don't need that kind of security, send your pilots on an aggressive combat mission in order to gain territory from the enemy. Obviously, the better the pilots you send on the mission, the more likely it is to be a success. Additionally, sending your best pilots to the pilot academy—basically Top Gun for space jocks—will ensure that you'll have a steady stream of fresh (if untested) recruits. Giving all your rookie pilots a last name starting with "R" (for Rookie) will make selecting the correct pilots for missions much easier. If you have the pilots to spare, defensive patrol missions will guard against any enemy advances into your territory.

These tips and tactics should put you in a good position to begin experimenting with new tactics and strategies of your own. The Alien Alliance is a particularly good choice for gamers looking for a challenge, while the Gorene Empire is a better choice for novices. In either case, there is much to explore in the richly detailed world of STAR CRUSADER, and much work to be done to determine the ultimate fate of the Ascalon Rift.

The author would like to thank Tom Rigas for his assistance in preparing this article. ☺

**AMMEN GUARDIAN:** With its EMP torpedoes, the Guardian is ideal for capture missions and missions that involve disabling enemy craft.

**AMMEN STARWOLF:** This ship packs the Aegis field, a powerful weapon that can scythe through waves of enemy ships. The field does suck a lot of power, so use it sparingly.

**GORENE INTRUDER:** Fast and hard to spot, the Intruder is an ideal reconnaissance craft. Next to useless for any other mission type, though.

**GORENE LIBERATOR:** A well-rounded strike vessel. Tough, durable and able to dish out gigs of punishment, the Intruder is well-suited for many mission types.

**GORENE SCORPION:** An excellent dogfighter. The Scorpion packs a powerful wallops with its lasers and torpedoes, and is fast and maneuverable enough to tangle with most fighters.

**MAZUMAN BUCCANEER:** The most maneuverable ship in the game. Speedy and nimble, this ship is essentially a futuristic version of the Japanese Zero.

**MAZUMAN CAPITALIST:** A so-so strike craft, this vessel carries a neutron cannon that can injure and kill an enemy pilot—if his shields are down. This ship does work well when teamed with the Zemun Harbinger.

**TANCREW SAMURAI:** A good dogfighter, the Samurai carries a plasma cannon that gives it powerful offensive capability.

**TANCREW WARLORD:** This one's a bruiser—easily the most potent ship in the game. With four laser cannons and two torpedo launchers, use the Warlord whenever brute force is the best option.

**ZEMUN HARBINGER:** A good dogfighter, the Harbinger sports the awesome hellfire missile. This nasty weapon has the tendency to wipe out an enemy's shields, leaving him open to such nasty weapons as neutron cannons and energy siphons.

**ZEMUN PALADIN:** A good strike vessel, the Paladin—which carries an energy siphon—works well when teamed with the Zemun Harbinger. The Harbinger can knock out the enemy's shields, while the Paladin can suck the poor sap's energy away with the siphon!
How to make sure your multimedia software talks to your hardware.

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The Man Who Would Be King

How to Conquer Impressions' LORDS OF THE REALM and Have Change Left Over

by Josh Bruce

Obsidiones multa consumunt tempora...
(Sieges take a lot of time...) So reads the Latin letter sent from a seneschal to his lord during the Middle Ages, found in a French chronicle entitled, Deeds of the Counts of Anjou. The letter goes on to suggest that open battles are superior and cause those defeated to vanish like smoke.

Of course, most historical lords wouldn't have agreed. In history, fortified defense was more relied upon than the rare pitched battles. Impressions' LORDS OF THE REALM accurately follows the historical philosophy. If you wish to win the game due to prudent actions away from rather than upon the battlefield.

LORDS OF THE REALM presents players with a castle design sequence that leaves Vauban looking like an amateur, and delivers a frighteningly realistic economic model, complete with crop rotation, fleece manufacturing, and dairy production. That's okay. I'm from Nebraska. I know cows. But for those of you who are not so blessed (?), here are a few pointers to get would-be kings through until the next harvest moon. In order to more fully understand how to get the most from your puttering peasants and bodacious bovines, three separate things need to be addressed: the economic model, military concerns, and grand strategy.

Nunc orant, ali pugnant, aliique laborant.
(Now, [some of them] pray, others fight and others work.)

Taxation is both an effective means of getting money from your people and controlling the population. As a rule of thumb, setting the tax rate to 15 will raise the happiness level of your people, 20 will maintain the happiness level, and 25 will lower it. At the beginning of any game, the tax rate should be set to 15 (or even 10) until you have a nice happy population with a steady increase in the number of people immigrating to your county. By controlling how much you tax your population, you will be able to effectively control how many people are in your counties, but you have to make sure that you don't let too many move in.

I know that many of you insist on living in over-populated mega-cities; but if there's one thing Midwesterners know, it's that too many people cause too many problems. LORDS OF THE REALM seems to agree with me. Most strategy games, such as GENGHIS KHAN II and L'EMPEREUR, insist on having an economic model where the more people you can pack into a province, the better. But LORDS OF THE REALM uses a much more realistic system. Population can be easily increased by simply lowering the tax rate or increasing the rations. However, once you have more people move into an area than said area can support, real problems begin. The excess population will quickly eat any cattle or sheep that you have been raising and will deplete the grain stocks so drastically that nothing can be planted. Once this situation begins, there is nothing the player can do except try to buy new food stocks.
Armored warriors ride the wings of flying dragons. Trolls devise a surprise attack. To survive, you’ll need to stay alert. And have a Sound Blaster sound card. In *Dragon Lore*, every nuance of battle comes to life with synchronized speech and sound effects. Bones crumble beneath your broadsword. A flailing mace rips through chainmail. And you hear it all with Sound Blaster. Just think of it as your most important weapon.
from a traveling merchant, or send in produce from other counties that the player controls. Sorry, but enforced starvation does not a ruler make.

After the stocks are depleted, the happiness of the population will take a nose-dive until open revolt breaks out in the region. Once this stage is reached, there is nothing the player can do except pull out what little stock he has left in the area and write it off as a loss. By the way, it isn’t usually worth your time to march an army into a rebellious province and reclaim it, since the area will be a virtual desert after the fight is over and the whole process will simply start all over again.

The key to solving this problem is never to let a county’s population grow faster than the food production. Whenever crops need harvesting or planting, you should transfer all of your available population into these tasks until you have enough people involved to actually get the job done. While you will lose any experience they may have gained over the past year working in one of the specialized professions, it is far more valuable to have a good harvest than to mine iron. Remember, all the timber points in the world won’t help you if you start running out of food.

On the other hand, having a happiness level that is too low is another problem that can rapidly lead to your dismissal from a county. Oddly enough, raising the people’s happiness level is actually far easier than dealing with the problems of having one that is too high. If your population seems a little glum, you can always lower the tax level to one, import some food from your local merchant, or order a few additional kegs of beer until they begin to cheer up. Certainly, if one of your counties is about to explode into revolution, you should immediately use all three of these methods to raise the happiness level until you are out of danger. It should be noted, however, that the only way this system will work is if you have enough food to begin with. If not, simply write it off as a doomed experiment.

DIVINE BOVINE You don’t have to be from Nebraska to know that you can never have too many cows to feed the hungry hordes.

Once you have a respectable population which is moderately happy, start using people in the specialized tasks. The four specialized tasks are: mining for iron, mining for stone, cutting timber, and making weapons. Each of these commodities, of course, has its own special usage. While stone and timber are completely worthless unless you are currently building a castle, note that timber can be purchased quite cheaply from any traveling merchant. So, it is usually best to purchase wood and use the excess workers to cut more stone. Also, while iron is necessary for building your own weapons, the mercenary option is significantly more useful.

**Milesi auxiliares...in expensis ejus erant.**
(Auxiliary soldiers...were in his pay.)
While most strategy games have the player raising massive armies from their own population, in LORDS OF THE REALM the best army to have is a mercenary one. Until very late in the game when a large army is needed, you should shy away from arms production and rely on hiring troops to fight your battles for you. Mercenaries are far cheaper than raising your own troops, both in terms of money and the effort it has on the native population. For example, to raise 200 mercenary swordsmen costs about 650 gold, but to supply the same number of your own troops with weapons would cost over 3,600 gold and cause a large drop in the happiness level for the entire population.

In addition, the mercenary troops are of a far higher quality than any that you could raise yourself. Much later in the game, when enemy armies of over a thousand men are marching back and forth, you will have to raise your own troops because of the inability to combine several mercenary forces. When this time comes, remember to recruit nothing but knights. They are very expensive, but well worth the investment as these forces are virtually indestructible and can wreak havoc on any force that tries to oppose them.

Strategically, when the time comes to take the offensive you should move any available forces into the target county and head straight for the nerve center of the county, whether it be a castle or the county seat. If the county is not owned by another player, then immediately attack the county seat and destroy whatever forces the enemy can muster. These armies are usually small and poorly armed, but they can surprise you once in a while, so make sure that you have a respectable force before marching in.

If there is a castle in the region, a scorched earth tactic must be used. So, immediately lay siege to any castle that happens to be in the county with one of your armies, and use the rest to destroy whatever crops or villages there are in the area. Leaving a few crops to supply your own besieging force, move the rest of your armies into any neighboring counties and destroy their villages and crops as well. The computer will try to raise any

DOWN BY THE SEASHORE Empire building in LORDS OF THE REALM works best when you seize counties on the coast, and consolidate your position with castles and mercenary armies.
Destruction looms in the year 2027. Global terrorists threaten to capture a doomsday device in *Cyberia*. But you can stop them. Armed with your instincts and a Sound Blaster card, you experience every detail. Interact with synthetic 3-D characters and move in a beautifully rendered world. Stunning sound effects and a full musical score make every action sequence breathtaking. Call it a truly original experience. And with Sound Blaster, it's unlike anything you've ever heard.

Ah, the crack and sizzle of another enemy ship turning to toast.

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Strategies

The siege of one of its castles immediately by mustering large quantities of troops from any adjacent areas, and even from the one that contains the castle, and hurling these at the besieging army. The best way to prevent this is by leveling the entire area. Killing all the people and burning the crops may not make you the most popular guy in town, but it will keep the other players so busy at simply running the decimated provinces that they won't have any time left over to deal with the siege.

A note should be made about attacking, or rather, not attacking castles. The best way to take any fortress is by simply besieging it and not worrying about building siege engines and ladders. While it is kind of fun to run around building massive siege engines and laying intricate assault patterns, the best form of attack is to simply wait until the garrison starves. You should also take any troops that are assigned to building and simply move them over to foraging. By doing this, a bloodless victory is assured. Although it may be fun to knock holes in the enemy's castles, it's not fun to repair them once it surrenders.

Bello subacti evanescet tamquam fumus....
(The ones subdued in war, vanish like smoke....)

Most battles will not take place in a castle, however, but rather on the open field. Field battles are rather straightforward affairs, but a few things can be done to maximize your chances. First of all, try to outmaneuver the enemy by marching around the sides of his units. Archers and crossbowmen are particularly effective in immobilizing them while you do so. Once your men are in position, swing back and attack from the side or rear of the enemy army. Secondly, if he sends only a part of his army against you, throw everything you have at this small contingent and destroy it, then move on to attack his other units. Finally, if things start going too badly, don't be afraid to retreat. But keep in mind that forces under 50 men are almost automatically destroyed during a retreat, so you might as well let them fight to the death and take somebody with them.

Scuti scuta junguntur.
(Shields were joined to shields.)

The first thing that you should do once you have an army and your economy is on the right foot, is to begin building an empire. Start by taking over several small counties by the coast, next to enemy lords and not too far inland, and build castles in these regions. By doing this, you will be able to secure a safe area for your men on the coast, where they can concentrate on economic matters while leaving the fighting up to the fringe counties.

Unlike most wargames, where the faster you conquer territories the better, Lords of the Realm forces players to move much more slowly. Never attempt to conquer a province unless you already have at least 500 gold in your treasury. When you take a county, there will almost always be a drop in happiness and population, and there could be some serious starvation problems. Remember to have some extra cash on hand so that you can solve any problems you might encounter, and the new county can rapidly be transformed from a desolate desert into a prosperous boom town.

Try to make friends whenever you can. Always accept any alliance that is offered to you, unless it completely blocks your forces, and be sure to honor these agreements. Stabbing friends in the back always brings a certain sense of satisfaction, but nobody will have a thing to do with you if you decide to do this too many times. The long term benefits of making alliances far outweigh any short term benefits that you may get from attacking your friends.

Secondly, once you decide to attack another player, keep attacking until they are destroyed. Keep all of your actions focused on destroying their army and leveling their castles until they are completely eliminated. Also, ally yourself with other nobles that border your opponent, and try to get them to help in the conquest. By doing this, you will assure as quick a victory as possible while helping your chances of one day becoming king.

Now that you have an understanding of how Lords of the Realm works, both economically and militarily, it's time to grab your favorite morning star and set off to show why you should be king. Remember to build plenty of castles and keep a very close eye on your population. Then, you'll be ready to follow the bard's advice, "Cry havoc, and let slip the dogs of war!"

*Ed: All Latin quotations are brief excerpts from those found in Hans Delbruch's excellent History of the Art of War, Volume III: Medieval Warfare, trans. by Walter J. Renfroe, Jr. (Lincoln, Nebraska: University of Nebraska Press, 1990).*
Your clues are hidden in the whispers of floating apparitions. Eerie piano music could be a sign of danger. Warnings come to you through strange murmurs. So, if you want to unravel Old Man Stauff's bizarre secrets, keep your eyes peeled, your

One by one the guests arrive. Then the party really starts howling.

nerves steady, and your ears open. And take this hint—make sure you have a Sound Blaster sound card. Every bone-chilling shriek, hair-raising scream, and breathless gasp in The 7th Guest™ seems terrifyingly real when played on a Sound Blaster. Forget about getting out alive without one.
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That’s Mister Scottie Pippen to you. Brittany loves a winner. And only a winner. “How’d you get up that high?”

When Movie-Makers Make Games, Everything Else Is Just Cartoons.
The Imperial Pilot's Secret Guide
How To Make Friends In High Places
And Annihilate Rebel Scum In LucasArts' TIE FIGHTER
by Jason Kapalka

The following excerpt is from a book found among the personal effects of a prisoner in the Bulimak Imperial Re-Education Center. The inmate, a former pilot, unfortunately died of natural causes. The Imperial High Command is very interested in this manuscript, and Lord Vader has promised to personally reward the author or authors if they will step forward.

Pilots should be aware that reading this document in part or in whole contravenes Section 12 of the Imperial Information laws, and is punishable by up to ten years imprisonment in the Outer Rim jail of your choice.

But before cadets rush off to report this treasonous text to your flight officer, remember that even a cursory mind probe will reveal that you have already read the first paragraph, or rather, now, the first two paragraphs. Do enjoy your stay in the Bulimak C racer.

Or... you can suppress that knee-jerk of “loyalty” and find out for yourself why this unofficial guide has remained in circulation among TIE pilots despite the dangers. It’s not because of the inclusion of “The Cadet’s Map of Outworld Bars and Cantinas” in Appendix A, nor the infamous (and, need it be said, pseudonymous) Captain Moonbarker’s “Budget Guide to Pleasure Palaces of Imperial Space” in the center fold-out. Well, at least not entirely for these reasons.

No, this guide’s main purpose is a simpler one: to give you the edge over the straight-arrow flyers who believe everything their flight officers tell them, like the oft-repeated maxim that the basic TIE is a state-of-the-art space superiority fighter. Wake up! The standard TIE starfighter is an outmoded patrol craft, cheap and expendable...and so is its pilot.

These are the cold economics upon which our Emperor Palpatine’s grand stellar navy is built. Do you want to become another mark in some Imperial accountant’s balance sheet? No? Then listen up, cadets, and maybe you’ll live through your first tour of duty.

An Imperial Ounce Of Prevention

Before you even get into your first furlough, there are a couple of things you can do to maximize your chances of survival. First, make sure that you’ve subscribed to the special Imperial cloning program, known unofficially as “Automatic Backup,” and don’t deactivate your policy unless you want your whole career ended by one stray laser bolt.

Second, be sure to grill your flight officer and the cloaked figure from the Secret Order for all available information before the...
mission. “What is this Secret Order anyway?” we hear a chorus of cadet voices cry. Perhaps when you reach the Inner Circle you’ll know... “And how do I get into the Inner Circle?” Hush... remember, survival before promotion. We’ll talk of this later...

Always press “G” to check your mission goals as soon as you arrive on site, as this screen is generally more concise and informative than your commander, who’s sometimes (surprise!) long-winded and unclear. And finally, once the mission’s over, for better or worse, be sure to ask for additional advice in the post-combat debriefing.

The post-combat debriefing often yields detailed and helpful information. However, if you’re flying near rebel space, failing a mission will almost inevitably result in capture, and you won’t be able to access these hints. In such cases, it’s often advisable (though, it goes without saying, strictly against Imperial Navy policy) to hit “Q” to quit the mission while still intact. Get the additional info and try again. Keep in mind that you only have to complete the Primary mission goals in order to advance to the next mission. Secondary and bonus goals yield more points, but that won’t do you any good if Rebels turn the frigate you were supposed to be protecting into plasma and scrap metal.

Forget about your commanding officer’s exhortations to put in time on the Training Simulator. Frankly, very few actual combat situations involve flying through interminable lengths of space tubing. The Combat Chamber, on the other hand, presents simulated situations much closer to reality, and all wise pilots will spend time here familiarizing themselves with their craft’s basic controls. Don’t worry about the TIE Advanced for a while—you’re going to be flying the lesser craft for some time. Concentrate on energy management, marksmanship, and working in harmony with your wingmen.

When you actually find yourself nose-to-nose with insurgent starfighters, you’d better have an instinctive understanding of your craft’s computer systems. A quick recap: when the tiny lightmost light on your targeting sight turns red, someone’s got you in their sights—move or die. When the middle light goes green, a capital ship or installation has a lock on you—run away, you can’t shake it. And when the rightmost light starts blinking yellow, this means someone is trying to acquire a missile lock. If it goes red, they’ve got it, and you’d better crank up your shields. Of course, if you’re flying a TIE Fighter, Interceptor, or Bomber, you don’t have any. As the rebels say... may the Force be with you. Good luck.

**Some Straight Ship Specs**

We expect all you cadets have been thoroughly lectured on the characteristics of the various Rebel starfighters, but surprisingly few novice pilots have as firm a grasp on the strengths and weaknesses of their own craft. This, of course, may be due to the Imperial reluctance to notice, design flaws, a tendency the recent Death Star debacle points out all too clearly. Didn’t anyone notice that stupid exhaust port? Here are a few more honest appraisals.

**TIE Starfighter:** Don’t let your commander show you into believing this ship is anything besides a flying eggshell. Cheap to produce, sure, but that’s no soace to the poor souls who have to fly these deathtraps. Maneuverability is their sole asset, and you’d best use it. Beware of collisions and friendly fire, particularly when flying near your own capital ships. Since you will normally outnumber the enemy when flying this craft, take advantage of this by attacking Rebels who are otherwise engaged. Never approach an enemy capital ship in a basic TIE Fighter unless you’ve got the reflexes of a womp rat and the luck of a Corellian smuggler.

**TIE Interceptor:** An improvement, but not by much. You still lack shields, and the Interceptor’s hull is not much tougher than the basic TIE’s. What you do have is heavy short-range firepower and high speed. Avoid long-range duels; get behind the Rebels and stay there. Occasionally Interceptors, along with basic TIEs, will be modified to carry torpedoes or missiles. Remember that 2.5 kilometers is the maximum lock-on range for starfighters, and that attaining a target lock any closer than one kilometer is next to impossible. Capital ships can be targeted at up to six kilometers, and it’s a very good idea to do so.

**TIE Bomber:** A much tougher hull, but still no shields, so avoid heavy furballs. You have a hefty load of missiles, but be sure to use them effectively, while the enemy is still at long range. Up close, the TIE Bomber can still outmaneuver sluggish ships like the Rebel Y-Wing, but is no match for a skillfully piloted X- or A-Wing. If you’re attacking a capital ship, consider targeting the weapons systems first, and take advantage of any ships in the vicinity that can board and reload you (by activating the Shift-B command). Sometimes the cargo manifest on a missile-carrier will change to “empty” after you reload the first time, but in most cases this is just typical Imperial miserliness; board them again and you’ll almost certainly be able to pry another load of weapons from the tight-fisted clerks.

**CALL OUT THE CAVALRY!** The Rebs will attack in waves in Battle 3, Mission 6, so it’s a good idea to call for backup. Stay close to the platform and the two Space Rangers and blast any ships targeting them.
Assault Gunboat: Shields at long last. Be certain to crank up your recharge rate at the beginning of a battle or at any time when speed is not important. You will often be called on to disable fleeing enemy craft with your ion cannons; remember that ships like the Corellian Transport can outdistance you unless practically all power is redirected to the engines. Make sure your laser batteries are well-charged before you start the chase, or you may catch up but be unable to do anything. And when making rocket passes at capital ships, it's often a good idea to redirect all shield energy forward, then back as you pass the target, as you'll be forced to come in close and endure heavy flak.

TIE Advanced: A superior weapon, combining the best attributes of the Assault Gunboat and the TIE Interceptor. If you're good enough to be flying one of these, you don't really need our advice.

TIE Defender: This hyper-secret three-winged prototype has been the subject of much heated discussion due to the inclusion of an experimental tractor beam weapon which in theory slows enemy craft down, making them easier to hit. In practice, the tractor beam is of minimum utility, since you need to center your sights over a target to activate it, and if you've got your sights on the enemy, why not just blast them? However, the Defender is so heavily armed, so massively armored, and so fast that few pilots will really care about this minor problem.

Enough of the generalities. Onwards, then, to detailed tactical advice on the various Imperial campaigns, along with one or two dirty tricks. After all, why should Rebels have all the fun?

**BATTLE 1**
Most of the missions in this series are not very tricky, but serve as good examples for more difficult actions. Pilots unable to complete missions 3-5 might as well hang up their helmets and fly Gar-Barges instead.

**Mission 1:** Far too many Imperial casu-

alties occur as a result of enemy action
but of pilot error. A prime example is the TIE pilot who, in a hurry, attempts to in-
spect multiple freighters or containers while flying at top speed. Shields or no shields, colliding with a multi-ton fighter will pancake any Imperial starfighter up to and including the De-
fender. Slow to 1/3 speed when inspecting

can fire missiles from up to 6 kilometers
away. If you're worried about return fire,
use the "-" button to target the ship's laser
turrets first, and avoid making close at-
tacks until the vessel is crippled or en-
gaged with other targets. When attempt-
ing to disable the fleeing commander's shuttle, use the Enter button to match speeds as you approach, or you're likely to overshoot the slower-moving craft. In fact, matching speeds is a good tactic against practically all Rebel starfighters. It still takes time for you to accelerate or decelerate to the en-
emy's velocity, so don't smash Enter just as you roar up behind a Y-Wing nial.

**MISSION 2**
**Mission 1:** Nothing too awful, but you should try to in-
spect Modular Conveyor group Asbo and capture the
appropriate ship. If you really want some bonus points,
try to take out the Light Calamari Cruiser Farar.

**Mission 2:** As the Assault Transports are otherwise engaged, you can use your lasers against them with minimal risk. Keep an eye on the middle light on your target-
ing indicator, as you may be flying uncomfortably close to several enemy capital ships.

**Mission 3:** The best way to take out Escort Shuttles is with missiles; unfortunately, you don't have any. Beware the Typhon's rear-firing laser. The best at-
tack angle is from the side, but you'll only be able to get off a few shots before you pass the target. Good luck.

**Mission 4:** Four missiles will take out an Escort Shuttle. Close to about 2 kilometers to make sure none miss. If you opt to go for the bonus points by inspecting the various capital ships, charge your shields heavily first, then redirect all power to the engines as you make your pass. DO NOT fly in a straight course.

**Mission 5:** As the Y-Wings are armed with missiles, be sure to take them out first. Use Enter to match speeds, and then hit the "-" button a few times just to make sure you don't overshoot the target. If you can stay behind a Y-Wing, their slow turning rate guarantees their doom. The Z-95
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Strategies

Headhunters pose little threat to the Tie Advanceds or the Escort Carrier, but are fairly fast and maneuverable. Use Shift-C to get your wingman to cover you if Z-95's interrupt your attack on the Y-Wings. Destroying 100% of the attacking forces will net you bonus points, so don't return to the hangar as soon as the T/A's are safe.

BATTLE 3

Mission 1: Ignore the enemy fighters until you've finished inspecting the containers. Try to maneuver your ship so that the containers are in a row directly in front of you, and keep your speed reasonably low.

Mission 2: Six missiles will kill a Corvette. Assign your wingmen to attack the most distant Corvette. It's a good idea to inspect the containers before all the Corvettes are destroyed, otherwise your over-exuberant wingmen may blast them before you have the time to check them out.

Mission 3: This may be a good time to ask for reinforcements (using Shift-S). Don't send your wingmen to attack the enemy capital ship, they'll just be destroyed. X-Wing Red and Z-95 Gold pose the greatest threat to the frigate and should be dealt with accordingly. Use your wingmen to attack targets that are too far away for you to reach in time.

Mission 4: Focus your efforts on protecting the platform, which is much more vulnerable than the frigate. Watch out for the armed Transports that appear later on.

Mission 5: This starts with waves of A-Wings hyperspacing in. Try to kill as many as possible with missiles, because they're very difficult to hit with lasers. You should generally ignore A-Wings, as their main purpose is to distract you from your mission goals, but in this particular mission they can cause you no end of grief, since you'll have to fly straight in order to line up targets for missile attacks, thus giving the A-Wings plenty of time to plug you. Once Thrall's safe, reload missiles and shoot Rebels for bonus points.

Mission 6: Another mission where calling for reinforcements is a wise move. The Corvette can take care of itself; worry about the platform and, especially, the two Space Rangers. Lock them into memory and attack any vessels targeting them. In particular, use missiles to destroy the Transports that hyperspace in to attack them a little later on (not the Assault Transports going after the Corvette). The bonus shuttle appears after the two AT's are destroyed, but you'll probably have too much on your hands to go after it unless you leave the AT's for later. Stick close to the Rangers and the platform, and don't get led away on a hopeless chase.

BATTLE 4

Mission 1: Don't succumb to the temptation of a Y-Wing turkey shoot. Destroy the enemy Corvettes early on, or they'll take blips equal laser fodder. There are too many vulnerable targets in this mission for you to keep track of each individually, so just hang around the Cargo Ferries and blast Y-Wings as they show up.

Mission 5: Get some distance from the Xerxes, then unload your missiles into its laser ports. Make certain the resupply shuttle doesn't get destroyed. To reload, it's best to come to a dead halt very close to the shuttle (.10 kilometers or less) before hitting Shift-B.

BATTLE 5

Mission 1: It's a trap! Those familiar with Imperial politics will not be surprised. First, immediately send for reinforcements. Second, kill your two wingmen. You'll get a message saying, “Alpha 1 doesn't work or play well with others…” Ha ha. Forget about shooting the mines. Just redirect all power to the engines, zoom in and identify the four containers. When the Osprey arrives, use it as a shield until the shuttle appears, then head out to identify it. Don't bother shooting at anything—keep your speed at maximum at all times, and move evasively.

Mission 2: Ignore your wingmen's suggestion to attack the containers on your own—the platform's guns will chew you up. Use lasers to destroy the attacking B-Wings, which are no real threat unless you are foolish enough to attempt a frontal attack, then kill the Z-95’s. Now your wingmen will start attacking the containers. While the platform is distracted blasting your friends, fly in close and destroy as many containers as possible with lasers. Harkov's Star Destroyer will arrive when most of the containers are gone, and your wingmen will pull out. Now use the missiles you've been saving to quickly take out the remaining containers from a safe distance, before Harkov's Tie Advances arrive on the scene.

Mission 3: You're here to destroy the convoy—ignore enemy starfighters, maximize your shield recharge rate, and redirect all laser power to the engines. Hit each target with one rocket—you should be close, less than .5 kilometers (but greater than 0.0 kilometers, if you get the idea) and use Shift-A to send your wingmen in to finish it off if necessary.

Mission 4: Unless you have a lot of patience, it's a good idea to use two missiles each to destroy as many Tie Advances as you can before they get in close, where they're harder to hit than a Jawa in a sandstorm. Assign your wingmen to take out the ones that do get in close.
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**Mission 5:** First, lock the Shuttle, Transport, and Corellian Transport into your computer. Kill time by shooting mines with missiles until the Corellian Transport pulls away from the platform. Dump all power to your engines and pursue it. Time is of the essence here, and you might want to fire a couple of missiles at the Corellian as you approach in order to take down its shields, thus making the job of disabling it much easier. Some pilots like to fire their ion cannons in single rather than dual mode in order to maximize their rate of fire. Next go after the Shuttle and Transport. Once the platform is disabled, target it and hit Shift-I to make sure your wingmen don’t inadvertently destroy it.

**BATTLE 6**

**Mission 1:** Just concentrate on the B-Wings. The other craft pose no serious threat to the Tie Defenders or the Cargo Ferries.

**Mission 2:** Lock the Hinibing in your memory and attack any ships that make an attempt on her. A huge pack of X-Wings will appear later. Your best bet is to keep them distracted from the Tie Defenders by flying into their midst. Keep an eye on your shield levels.

**Mission 3:** Lock the two freighters into your ship’s memory. Send your wingmen to deal with the X-Wings, and attack the B-Wings yourself. Try not to use too many missiles on them. It’s best to wait until there’s only one or two left before you try disabling them, as the others have a nasty tendency to attack any disabled ships in order to keep them out of Imperial hands. Later, a group of Assault Transports will appear and attempt to disable the freighters, and this is when those missiles you saved will come in handy. Be wary of close attacks on Assault Transports; you can usually get off a few shots before the gunners notice you, however.

**Mission 4:** This is very similar to the last mission in Battle 5. First, use missiles to take out the four immobile Z-93’s parked below the platform. Then lock the Shuttle and Transport into your ship’s memory; as they leave the vicinity of the installation, pursue and disable them quickly. Soon after, the Corellian Transport Lucky Day will appear. Target it as swiftly as possible and follow, rerouting all power to your engines. Again, you may wish to use missiles to weaken the ship’s shields before switching to ion cannons to disable it. Corellian Transports can take at least three missile hits; two should knock down most of her shields.

**BATTLE 7**

**Mission 1:** You’ll probably exchange missile fire with a traitorous TIE right near the start. Dodge the missile if you can, but don’t get too far off course. Next head for the containers. Use Shift-C to get your wingman to cover you as you blast them with lasers. Tugs are starting to haul containers away; be sure to hit those containers first.

**Mission 2:** The heavy space bombs are best fired from very close in. Reload from the Goya and fire as many as necessary. Keep an eye on the Harpax.

**Mission 3:** Go for the Warhawk first. No subtype here; just order your wingmen in and unload your torpedoes. Quickly reload from Transport CUV 18F1 and finish the job, if that hasn’t done it. Lasers won’t do a heck of a lot to the Protector’s shields, so keep loading up on those torps. Aim for the Protector’s shield generators first. Although TRN CUV 18F1 will scan as having “NO CARGO” after the first time you reload, you will in fact be able to pick up as many torpedo shipments as you need. If you’re greedy for points, hang around and blast the Modified Corvettes that’ll come warping in later.

**Mission 4:** Order your wingmen in and fire all your torpedoes at the Harpago immediately, then mix it up with the Gunboats. Consult your map, and try to stay close to the Gunboats in order to keep them from using missiles. You can use the tractor beam if you like, but frankly, it’s no great help; better to redirect that power to shields.

**Mission 5:** Once you’ve disabled the Emperor’s shuttle, immediately get some distance and take out as many of the other Escort Shuttles as you can using missiles, as they will attack MCRV Rescue when it
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### BATTLE FOUR

<table>
<thead>
<tr>
<th>Mission</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Inspect Corvettes Charger 1 &amp; 2</td>
</tr>
<tr>
<td>2</td>
<td>None</td>
</tr>
<tr>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td>4</td>
<td>None</td>
</tr>
<tr>
<td>5</td>
<td>Destroy Transport Tele</td>
</tr>
</tbody>
</table>

### BATTLE FIVE

<table>
<thead>
<tr>
<th>Mission</th>
<th>Task</th>
</tr>
</thead>
</table>
| 1       | Destroy the following:  
TIE Interceptor Gamma 2 & 3  
TIE Advanced groups H-Alpha and H-Delta  
TIE Bomber group H-Beta  
Shuttle Lambda  
Mine groups 1A & 1B  
Container groups Chi & Psi  
X-Wing group Blue |
| 2       | Destroy B-Wing 1, 2, 3  
Destroy Z-95 group Wolf  
Destroy Z-95 Wolf 3 |
| 3       | Inspect at least one of Container Pi  
Victory Star Destroyer Protector must be attacked  
Destroy Heavy Lifter AAV Tow & A1 Tow  
Destroy AW group Blue  
Destroy at least one of these groups:  
TIE Advanced H-Alpha, Beta, Gamma, Delta |
| 4       | Attack Victory Star Destroyer Protector  
Destroy Modified Corvette group Wurger  
Shuttle Token completes mission  
Destroy ferries Badger 1 & 2 |
| 5       | Inspect Frigate Olinor  
Destroy Modified Corvette group Wurger  
Destroy Shuttle Toten  
Transport Kolemgk is boarded  
Corellian Transport Geddawai captured |

### BATTLE SIX

<table>
<thead>
<tr>
<th>Mission</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Destroy all Rebel craft</td>
</tr>
<tr>
<td>2</td>
<td>Destroy all Rebel craft</td>
</tr>
</tbody>
</table>
| 3       | Destroy X-Wing Group Blue  
Destroy A-Wing Group Gold  
Destroy A-Wing Gold 3 |
| 4       | Tugs 4f91, 4f93, 4f94, 14f1 complete missions  
Tug 4f92 completes mission  
Destroy A-Wing group Red  
Destroy ferry Bujiboi |

### BATTLE SEVEN

<table>
<thead>
<tr>
<th>Mission</th>
<th>Task</th>
</tr>
</thead>
</table>
| 1       | Destroy heavy lifter group Waq  
Destroy ferry group Whell |
| 2       | Destroy all of:  
Y-Wing Red  
Y-Wing Gold  
Z-95 Blue  
Z-95 Red  
X-Wing Gold |
| 3       | Destroy all Rebel craft  
Interceptor Harpex completes mission |
| 4       | Destroy all Assault Gunboats  
50%+ of TIE Defender group Delta completes mission |
| 5       | None |

tries to board. On the other hand, pilots who've tired of a career with the Empire can "accidentally" attack the Emperor's shuttle with torpedoes instead of ion cannons, thus accomplishing what millions of foolhardy Rebels have failed to do over the long course of the war. Don't expect many bonus points for this, however.

### AND NOW THE DIRTY TRICKS

**The "Speed Kills" Maneuver:** When being pursued by an A-Wing, if you fly straight at a platform or capital ship and pull up at the last moment, the A-Wing will often career directly into it. Crunch.

**The "Free Parking" Stratagem:** Position your ship as close as humanly possible to a friendly platform... nestled under a ledge is best. Attacking Rebels will shoot the platform instead of you. And we all know what happens to ships that shoot at Imperial platforms...

**The "Heavy Load" Tactic:** In scenarios involving enemy capital ships, change your missile load to heavy rockets or space bombs before you begin. Approach the capital ships from the rear or front to minimize the angle of deflection, and let fly when you're in close. The heavy bombs can take down a cruiser's shields with just a few hits, so if you reload quickly you can dispose of a mighty vessel in minutes.

**The "Cheat Like Mad" Scenario:** Imperial pilots with Internet access can locate some helpful hack programs at wpi.wpi.edu in the /starwars/TIE_Fighter directory, including a utility for letting you use a TIE Defender in any of the missions, and other interesting tricks.

### The Inner Circle

That concludes the tactical section of this document, and none too soon, for already we suspect fingers are itching to flip to the "Budget Guide to Pleasure Palaces." In fact, we may peruse those well-thumbed pages once again ourselves... but wait. Did someone say something? Something like, "But what about the Inner Circle?"

Hrm. Some things are, after all, best left unsaid. But that said, we could note that scoring over one million points will net the ambitious pilot a small surprise. But no—perhaps we've said too much already.

(The strategic portion of the document ends here, and is followed by several appendices of no great interest to the common reader. The center fold-out, unfortunately, appears to have been ripped out.)
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THEY'VE HAD THEIR POUND OF FLESH

IT'S TIME TO TURN THE TABLES

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Of Noble Savages And Savage Europeans
How To Ring The Liberty Bell In Sid Meier's COLONIZATION
by Michael Rysmaszewski

ike many CGW readers, I'm an old-time fan of Sid Meier's games. I got hooked into computer gaming with PIRATES!, and spent many sleepless nights with CIVILIZATION and RAILROAD TYCOON. Through many, many hours of play, I learned that in all of these games, the broad strategy that worked best was to hit the opponent, keep on hitting, and make money while you're at it.

COLONIZATION is slightly different. It contains a whole bunch of computer characters that you shouldn't hit, at least not unless they become perfect pests. These are the native inhabitants of the Americas—the Indians.

The manual to COLONIZATION makes the point as to who are the bad guys and who are the good guys very clearly. A section at its end is devoted to a general description of the Indian tribes featured in the game. It stresses how advanced and sophisticated the Indians were in their own way; when it mentions the darker side of some Amerindian cultures, such as slaughtering prisoners by the thousand or cannibalism, it is quick to point out that such practices were entirely appropriate given their cultural context. On the other hand, European brutalities are judged most severely; somehow, historical and cultural considerations are unimportant when it comes to European behavior.

Although I might take issue with its approach, the manual actually suggests the best path to ultimate success in the game: appease the good guys (Indians), and be merciless when dealing with the bad guys (Europeans). This holds true even when you're playing the Spanish side.

Since COLONIZATION climaxes with a War of Independence which you have to win, it follows that there is one and only one objective you should set yourself right at the start: create a strong army and navy that will beat the stuffing out of any opponent. As we all know, military might is expensive. So how do you get there, from a single ship with two colonist units, and no money in the treasury?

The First Hundred Years
If you're to win a game of COLONIZATION at the Governor or Viceroy level, you'll have to achieve several objectives by the time 1600 AD rolls around. You'll have to have at least five strong towns producing a mix of tools, guns, and valuable goods; a standing army of eight to ten dragoon and infantry units, plus a couple of artillery pieces; and a navy that includes a couple of privateers in addition to a merchant ship, or ships.

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Stalingrad is sure to excite even the most sophisticated gamer.

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Stalingrad can be found in computer game stores near you. For order information, or for the name of a retailer near you, call Toll Free: 800-999-3222; ask for Dept. CGW 1.
Circle Reader Service #234
your colonies economically, and use the profits to build your armed forces. Not so. The most important things that your colonies produce are not cloth or cigars or rum, but crosses and liberty bells. These are absolutely necessary to turn that little settlement into a huge manufacturing, educational, and political center. If your colonies are producing enough crosses and liberty bells, the rest follows automatically. New colonists keep pouring in, and you'll find yourself making lots of money almost by accident; all you have to do is put them to work.

You have two colonist units on that first pilgrim ship. Use them to start two towns. Two towns produce twice the number of crosses and liberty bells. Also, right away you'll have twice as many goods for sale.

Of course, you should choose the location of your towns with care, but that doesn't mean you can afford to go exploring up and down the coast while other colonial powers are grabbing land left, right, and center. At the beginning, any spot situated at least two map squares from the nearest Indian settlement will do. Remember that you can always pull up the stakes and relocate the colony somewhere else later on: as long as you haven't built anything, you lose nothing. The main thing is to start producing as many crosses and liberty bells as soon as you can.

Determining a good spot for a town can be difficult, because the trees make everything look similar. Yeah, there is a special key that allows you to see what you'll get once you've removed the trees, but even then some types of terrain look quite alike. The rule of thumb is this: if there's any water showing among trees, that map square is basically good only for food. If you can't see any water, it's good for food and other stuff, too. The only thing you should worry about is the presence of a nearby hill or a mountain, which will guarantee an adequate supply of ore.

Your first two colonies won't produce a lot of commodities for sale, but you should make enough money to equip almost every new colonist with either tools or muskets. If you have at least one colony that produces a surplus of food, get horses right away; they need time to breed.

Generally, every free colonist or indentured servant should be dispatched to an Indian village to learn a skill. Also, make sure a wagon train is the very first thing you build. You can use it as a mobile warehouse, and it also allows you to initiate trading with the Indians on a much more profitable level than when you trade from a ship. Trading with the Indians is truly profitable only the first few times around, but right at the beginning of the game you need every gold piece you can get.

The moment you've got all the tools and muskets you need, start saving money. No, don't import any expensive crafts-
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ber of liberty bells produced; but although rebel sentiment concerns the population, it is tied to a specific town. You can have a town that’s 100% rebels, but as soon as you move a colonist out of it, you turn him into a Tory. In other words, the longer a town exists, the more rebels it has. This is precisely why it does not make sense to start new colonies in the late stages of the game; they’ll contain a larger percentage of Tories, and have weaker defenses to boot, because you didn’t have the time to build any.

Make sure there is an armory in every town that has a skilled carpenter. You can build artillery there even without a gunsmith, and artillery is the best defensive unit there is. Build shipyards only in towns that have a lumber mill, and ensure that there are two carpenters working in each; otherwise, the number of ships your town can subsequently build isn’t worth the shipyard.

Build a blacksmith’s shop in every town that is producing iron ore for you’ll have a continuous shortage of tools. Construct second-level buildings whenever you want to produce something in meaningful quantity and don’t have the right specialist (a free colonist working in a rum distillery produces as much booze as a distiller working out of his house).

Finally, before you declare independence, make sure every town is protected by a fort, and the very important ones by fortresses. The European troops’ bombardment bonus is quite lethal, as you’ll find out.

However, there is a great third source of new colonists, some of which come with ready-built colonies: war against the other colonial powers. You’ll be forced to fight a war against other Europeans sooner or later; that’s the nature of the game. The trick is to fight it when you want to.

As soon as you encounter other Europeans, their dragoons will start assembling in droves outside your towns—an annoying tactic that was carried over from Civilization. If you don’t constantly improve your defenses, they’ll attack, and they’ll win.

Make sure you’ve got at least one fortified artillery piece in the town that’s under pressure, and start preparing for war. You don’t need as many muskets as you do horses; you always want to attack with mounted troops, so that even if you lose you still have infantry that can be fortified for defense.

Attack as soon as you have four or five dragoon units. Always try to concentrate your attack on one unit so that you capture the enemy colonist before the end of your turn. Important: before any warfare begins, go to game option and switch the “end of turn” option on. This will let you fortify as many soldiers as you want before the enemy’s turn.

This is all you have to do. The AI is far from bright here, and so the enemy soldiers will keep fighting until you’ve captured every single one, and gained up to half a dozen colonists in a single battle. After a few turns, the enemy will reappear, and try to negotiate peace. Do not be misled by these amiable overtures; they are only meant to gain time until more soldiers arrive to teach you a lesson. Sure, you can agree to peace, but as soon as there are several enemy soldiers around your town, you’ll break the treaty.

Capturing foreign colonies is even better. Not only do you capture the town intact, and make a little cash, but all the unarmed veteran soldiers in the town become yours without losing their veteran status. If you see a foreign colony right next to yours, you should capture it as soon as you can, and the earlier in the game, the better. Players who manage to capture a European rival’s only colony right at the start of the game will be richly rewarded: they’ll have a constant stream of new colonists arriving on nearby shores, often unarmored types who will bleed for peace. Of course, you should attack mercilessly when that happens, and make them your own. On the higher difficulty levels, you’ll gain some insight into how the AI works: almost every homeless colonist showing up will be a highly skilled guy. Ah, so that’s how the computer players build colonies so fast!

In the unlikely event that no foreign troops appear on your territory, I would recommend that you pick a European rival to start a war with as soon as you safely can—probably around 1620 or so. A successful colonial war is very profitable in more ways than one, and to top it off, at least some of your soldiers will gain veteran status.

It goes without saying that a strong navy can aid you immensely. As mentioned, privateers are always a good investment, as they usually bring you in profits far above their cost. They also make excellent blockade runners, even though their cargo
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capacity is limited. Frigates are prohibitively expensive. You should have one or two to protect your shipping routes, but concentrate on acquiring privateers. With Drake in the Continental Congress, a privateer has the same attack strength as a frigate.

**You’re the Father, But Who’s the Midwife?**

In a twist on the Wonders of the World concept from *Civilization*, the liberty bells your towns produce not only increase rebel sentiment, but also members of your own Continental Congress. Choosing the right Congress members is extremely important, since half of them are absolutely worthless (poor Henry Hudson is a good example). You’ll get a good clue as to which ones matter once you’ve assembled a few. There’s this group portrait, in which Benjamin Franklin proudly occupies the front and center, seated on a comfortable armchair—which confirms that going to war when you want to is of prime importance. And right next to him are Washington and Jefferson, two guys you definitely want.

My first choices are always Peter Minuit and Pocahontas. Given those two on your side, you can proceed to expand without worrying about Indian aggression, as long as you remember to place every town at least one map square (preferably two squares if it can be managed) from any Indian settlement. This holds true whether you’re French, Spanish, or Polish.

Special Cheat Alert: What happens if neither Minuit nor Pocahontas appear on the first list of choices you’re presented with? Just hit the Escape key! You’ll be given another set of choices. This might lose you a turn at the beginning of the game, but it’s always worth it.

So, by judiciously hitting the Escape button, you’ve got Minuit and Pocahontas. Your next Founding Father should be Thomas Jefferson. His presence will greatly increase the effectiveness of your efforts to make each town or city more productive.

If by that time you’re heavily into naval warfare, your next choice should be Francis Drake. If not, choose Benjamin Franklin, and get Drake next.

After Drake and Franklin, it will be time to go to war with someone, so get Washington. You’ll have a strong force of veteran soldiers in no time at all. Washington’s presence is invaluable in assuring the quality of your army.

Following Washington, you should elect Bolivar, as he makes starting those last-minute towns in the middle of the 17th century much easier. You should definitely get Peter Styvesant before the war of independence to make sure you can afford last minute purchases of artillery when a siege is on; and prior to that, you could use Adam Smith’s assistance to build the four or five factories that are really worth the expense.

That’s it as far as the necessary Founding Fathers go. Since your towns will produce more liberty bells than needed for all of the above (if you manage things right, of course), you’ll also have the choice of a few others. You should choose them according to the subtle shades of your strategy. For instance, if you had the good fortune to afford missionaries and have a lot of converts, and you’ve got Washington preparing for war, you could take des Casals. Your converts would then become free colonists, and subsequently veterans upon winning their first fight.

A word of warning. Thomas Paine sounds good for the later stage of your colonial development, when the tax rate is high and getting higher. However, my copy of *Colonization* repeatedly reduced the tax rate to zero starting from the War.
of the Spanish Succession, when one of the colonial powers drops out. It didn't happen in every game I played, but made things Paine-less, so to speak.

Preparing for Independence and Winning
I am lumping preparations for the War of Independence together with winning because once you're well prepared, you can't help but win.

The first requirement is to have all of your towns build a fort, unless you don't mind losing them, and retaking them later. If it's no trouble, build fortresses around your most important cities.

Each town should have a couple of artillery pieces, a couple of veteran dragoons, and the possibility of raising another half a dozen dragoon units in an instant. It's usually best to put all your free colonists under arms right away, and still have a hundred horses and muskets each in reserve. You'll have no problem meeting this requirement, particularly if you follow the strategy described earlier, and have at your disposal a bunch of veterans—victors of the obligatory colonial war, in which they fought under George Washington.

Finally and importantly, you should have a good road network. Dragoons can cover a distance of nine map squares and still attack effectively.

Once you've got all that, it's as easy as pie. Declare independence, and simply keep attacking every Tory soldier as soon as it hits land. Launch massive strikes from several towns at the same time: for instance, you can attack with all the dragoons from two towns neighboring the one under attack, filling the gaps in with dragoons brought from farther back. Attack from several different directions, always starting off with a lightning strike in the back of the invading army. Then follow up with a charge from the besieged town. If some of your dragoons lose, remount them and fortify them if necessary before clicking on the End of Turn.

During the War of Independence, it is impossible to conduct intelligent naval warfare: Tory men-of-war appear out of nowhere right next to their target town. However, since keeping your ships in port is senseless, you might as well attack with them, too. A frigate and two privateers win almost every battle you send them to, albeit sometimes with losses. You'll want to form your navy into operational groups like the above.

If you lose any towns, don't attempt to retake them until the Foreign Intervention arrives together with the bombardment bonus.

And that's all there really is to it. Fight on, patriots!

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Hell's Little Secrets
The Hidden Levels And Cheat Keys Of DOOM II

by George Jones

“Up the ramp, over the ledge, into the Demon's lair...nothing but bloody imp.”

Kay, so you wound your way in and out, up and down, and all around the levels of DOOM II: HELL ON EARTH. Yet you still don’t feel like quite the man or woman you should be. Perhaps it’s all those times you didn’t get 100% of the “secrets,” or maybe it’s just the simple fact that you can’t win Level 30 without (gasp!) cheating. Or maybe you’re just jealous because you can’t find a legitimate entrance to the secret levels (maybe you don’t even know they exist!).

Whatever the case, we at CGW are not going to sit around and let you be a DOOM II wimp. It is time to pump up.

The Nazis Meets the BFG

Heard the one about the chainsaw and the Nazi soldier? DOOM II’s 2 secret levels take place in the land of WOLFENSTEIN 3D. The truly lazy can warp to either level at any time using the “IDCLEV31” or “IDCLEV32” cheat, but DOOMers with integrity will be happy to know that there is a legitimate entrance to this secret level in Mission 15, The Industrial Zone.

On this mission, there is an isolated, raised platform in the south with a radiation suit and a switch on top of it. To reach it, you’ll need to jump from a nearby ledge to the east. After making the leap of faith, flip the switch and drop off the platform into the lovely lava lake. Sprint east through the east wall-opening, where an invisibility sphere awaits. Grab it, and jet back out into the lake of lava, this time to the southeast side of the building surrounded by the lava moat, where you’ll find a transporter. Step in, and you’ll appear in the central room high in the sky. Jump from the walkway over the lava lake to the southwest corner, and enter the yellow door. Follow the toxic stream to the south, where you will find a recently opened, secret passage to the south. From here you’re home free. Use the teleporter, and you’ll enter Mission 31, which is an authentic replication of an actual WOLFENSTEIN 3D level, right down to the swastika wallpaper.

You haven’t experienced fun until you’ve mowed down a few Nazi dirt bags with the chainsaw, and if you finish this Secret Level, you’ll move on to Mission 32, otherwise known as Grosse. Here prying eyes will find COMMANDER KEEN (remember him?) hanging by the neck from four platforms.

Blasting the Brain

Most of the DOOM II levels are challenging, but Level 30, Icon of Sin, feels downright impossible the first few times you play it. Until you figure it out. In actuality, beating The Pinnacle of Evil is fairly straightforward. The focal point of your attacks should be the exposed brain of that overblown Goat from Hell. First, go all the way up to the highest tier, and trip the skull-switch; this raises the tall platform on the bottom level. Brave the molten lava down there and activate the platform, which will lower back down to ground level. Get on, and arm yourself with the rocket launcher, facing towards the Boss. Pay attention here: When the top of your rocket launcher lines up with the bottom of the arch-fiend’s chin, fire away. Your rocket should hit the brain (you’ll hear it if you do). Repeat this attack one more time, and you’ve saved the Earth! Do it quick though, because
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during all of this, the number of monsters starts to skyrocket, making your job all the more difficult.

An interesting "nugget" on the final level can only be found by using the "No clipping" cheat. After typing "1DCLIP," enter just below the goat's head. Inside you'll find a room containing the head of id programmer John Romero on a stake. For an added thrill, fire your weapons at him. Guess he pressed a little too hard on that last release date...

Cheater, Cheater, Demon Eater
Here are a number of cheats Doom players can use when they're caught in a bind, or just plain scared:
IDKFA: "Happy Ammo" mode, gives you full weapons and ammo of every type, jacks your armor rating up to 200%, and gives you all three color keys.
IDDQD: "God Mode" gives you permanent invincibility, without that annoying white and black tinted screen.
IDBEHOLD plus one of the following letters gives you six different power-ups:
I=invisibility
S=berserker stimpack
V=Invulnerability for 30 seconds
R=Radiation suit for 60 seconds
A=Computer map revealing areas you have not yet visited in gray.
L=Light amplification goggles for 120 seconds
1DD1: Use this code when you're viewing the map; the first time you type the code, you'll see the entire level. Type it again and you'll see all objects on the level as small green triangles that represent monsters (dead or alive), and objects.
1DCE1V [+] level number: Warps you to the level number typed in. Be sure to type in two digits. For example, level 4 would be "1DCE1V04". The secret levels are numbered 31 and 32.
1DCLI1P: "No clipping mode" allows you to walk through walls across the whole level. Be careful though, for it is real easy to become disoriented here. ☺
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The Wolf And Its Prey

Attacking Convoys And Racking Up Tonnage In Aces Of The Deep

by Kevin Turner

It cannot be denied that submariners of any nation are brave and skillful men; and that they are accustomed to continue to exercise their skill in conditions of acute danger, which is perhaps the bravest thing of all. But what they actually do, what constitutes their life work—killing by stealth, without warning and without quarter—is evil as well as skillful; moreover, it is predominantly evil, and when we come to our senses, inexcusably so."

—From the introduction of "U-Boat 377," by Heinz Schaeffer

Heinz Schaeffer encapsulated the submarine credo very nicely in the introduction to his book: kill by stealth and without quarter. As a former submariner, I also appreciated being called brave and skillful, although I’m a bit uneasy about the evil part. I guess the truth of the statement would depend upon who you asked.

German U-boat crews were notoriously effective at their grim task, especially early on in WWII. The allies developed the concept of multi-ship convoys precisely because the Germans were so skillful at hunting individual merchant ships in shipping lanes. By traveling in convoys, merchant ships were able to achieve two things. The first was increased stealth: by having ships travel together, the odds that a U-boat would find them were sizably diminished. The Atlantic is a big ocean, and a convoy placed a lot of tonnage in a small area. The second goal was defense. Convoys invariably traveled with escorts, and escorts could more easily defend a convoy than an entire shipping lane.

In Aces of the Deep (AOD), as in World War II, the convoy is the U-boat crew's chief target. In order to fight a convoy, the AOD player must first understand some important points about the convoy itself. First, convoys placed all the important ships toward the center for protection. Second, convoys changed course often in order to confound those trying to set up an attack. Third, convoys are relatively easy prey, once a sound tactical doctrine is established.

How Wolves Find Prey

In order to find, track, and eventually wreak havoc with a convoy, captains must first become familiar with the two chief navigational tools at their disposal. The first is the top-down display, or what I call the "geo plot." This is the close-range navigational tool, and where you will be doing most of your work. The second is the chart, which provides information on the convoy once it is discovered. The chart shows the Atlantic Ocean with symbols to denote the U-boat position, convoy position and heading, bases, and other U-boats when operating within a wolfpack.

The geo plot is the best tool for discovering convoys, and is the key to successfully prosecuting a target. The key thing
about the geo plot is that you will be able to spot targets on the plot long before your lookouts report them. It also displays important visibility information, crucial when planning the timing of an attack. Plan on becoming a geo plot specialist if you want to become an "ace of the deep."

The chart will display convoy information for as long as contact is steadily maintained. A convoy will appear as a black square with a white line, which indicates the convoy's direction of travel. Should contact be temporarily lost in another view, a quick jaunt over to the chart will enable the player to reestablish contact.

Convoy hunting is an art, and an art that takes much practice to master. New players should practice with "Convoy Encounters" from the "Single Missions" menu. This is a great place to practice techniques that will become commonplace once a career is begun. Set up a scenario for a medium convoy, lightly escorted. As for realism, I recommend that you start easy and gain experience.

For carrier captains, the hunt for tonnage begins with an assignment to a known shipping lane. Once you've reached your assigned patrol area, set up a search pattern, and a convoy may wander into the area after a while. (It's odd, but I actually find more convoys transiting to and from patrol areas than anywhere else.) For those less patient, there is no place like the southwest coast of England; convoys come and go from there regularly. The problem is that escape routes are limited, and the depth of the water can be highly restrictive should submerged evasion become necessary.

While patrolling and transiting, and any time that time compression is above 16X, I highly recommend keeping one finger on the <return> key while you watch the geo plot. Hitting <return> will take time compression to 1X, and allow time to react.

Another word about time compression: I recommend shadowing and evaluating the convoy at about 16X time compression. It is easier to evaluate movement patterns at that speed than at 1X. While maneuvering out of sight of the convoy, you can kick up the compression to 64X, but when visibility is low, never exceed 8X compression. Reaction times are critical, and 8X compression is the fastest in which good reactions can be made. At low visibility, an escort can appear at 2500 meters, and will be lobbing shells at the deck before you can even target him.

**FAST FORWARD** When shadowing a convoy on the "geo plot," 16X time compression seems to work well, allowing you to analyze the movements of the convoy and the patrol patterns of the escorts. Have your finger on the <return> key, though, in case the unexpected happens and you need to react in "real time."

Once an escort is encountered, the convoy will not be far away. A good rule of thumb is to keep the escort at the outer edge of the red ring on the "geo plot." It is important to remember that you will see the escort in the geo plot well before the escort spots your U-boat. Designate the escort as a target, allowing you to evaluate its speed. Should the escort be traveling at a speed greater than the U-boat's top speed, and is heading directly for the U-boat, you've got two options: dive, or run in the opposite direction. If the escort is slower than the U-boat, go the opposite direction until the escort turns around. If the escort is faster, dive to periscope depth and wait until the escort turns away.

**When The Wolf Enters The Chicken House**

There is a trick to sinking ships in a convoy when all other methods fail. I encountered an escort off the Florida Keys which was headed in my direction. I would have run, but the Keys were blocking my escape. I dove to periscope depth and encountered a white line on the geo plot, which usually means high-speed screws. I made my heading directly toward the screw noise, in case of active sonar. I transited for a while at about 90 meters depth and at a two-thirds bell. When I reduced speed to one third, I was surrounded by gray lines, which denote merchant screws. Rising to periscope depth, I found myself in the center of a large convoy. Two tankers and a troop ship soon plunged to a watery grave.

But convoys won't always steam over you. The best way to locate them is by watching the edge of the visibility ring of the geo plot for ship tracks running closely together. When at least three merchant ships are visible, switch over to the chart, which will indicate the direction the convoy is heading.

Another important tip is to radio the location of the convoy immediately. The most important information you can gain by doing so is the quality of the escort. The radio report will state the quality from "lightly escorted," up to "heavily escorted." If the convoy is lightly escorted, success is assured. If, however, the convoy is heavily escorted, my compliments on getting close enough to establish contact.

**SOMETHING'S SCREWOY** A U-boat moves in for a submerged attack. The gray lines indicate slow speed screw noise from merchant vessels; the black squares are the escorts.

It is very important to evaluate the escort. With a light escort, there is a good chance that it is made up of a fast mover (up to 24 knots) and a slow mover (about 12 knots). As you monitor the escort, determine which side of the convoy the slow mover is stationed, as well as the general pattern the escorts follow. The
Strategies

escorts will roam around the convoy, sometimes moving away to the flank, other times running ahead. Sometimes they seem to spin in donuts, as if trying to make up their minds.

The Wolfpack And The Prey

After the radio report has been made, you will probably be ordered to shadow the convoy. If this happens, check the chart. Yellow squares, marking other U-boats, will be moving in to help with the attack.

Shadowing a convoy is a simple matter of making as many sightings of the convoy as possible, and then sending these reports by radio to the wolfpack and BDU. As you stalk the convoy, use this time to evaluate its defensive screen and decide on an approach. For example, if a convoy has a four ship escort, I would find the place where the escort seemed to travel through the least, and note that position.

Before we discuss attacks, it is important to consider the realism options you might choose. Two in particular are critical. These options are "dud torpedoes" and "realistic relosts."

When you're playing with dud torpedoes, always assume that at least one of the torpedoes you fire in a series will not explode. This is important to remember, as there is nothing worse than finding a valuable target that requires two torpedoes to sink and having one of the torpedoes fail while the escorts are closing. For a valuable target, meaning over 10,000 tons, send three weapons. If only two of the bow tubes are loaded, fire them both and maneuver for a stern shot on egress.

In the case of realistic reloads, the only weapons available for use during attack will be the weapons already in the tubes. Should below decks weapons storage space be available, load the weapons from the deck into these storage spaces. This will take a full two hours, but reloads from below decks will take only 20 minutes, compared to the 2 hours required for reloads from the deck. Upon exhausting all available weapons, leave the convoy and reload. Once this is accomplished, then consider attacking again. Never wait for a reload from inside the convoy.

As day turns to night, reduced visibility should become a factor in your attack strategy. In the Captain's Log, there is a notation for sunset and sunrise. While shadowing the convoy, establish how long it will take before the sun sets. As visibility decreases, the time for attack grows nearer. I heartily recommend attacking when visibility has dropped to the point that the suddenly given. I have attacked the convoy before the order was given and suffered no penalty for it. I have also not attacked when the order was given, waiting for better visibility, and I wasn't penalized. Should visibility not deteriorate to the point that I feel comfortable, then I may attack anyway depending on the quality of the escort. Remember, the crew's lives hinge on the decision.

As the time for attack approaches, check that the speed is set to flank, that all tubes are loaded with reloads available, and then check the chart. The chart will show the black square, with the white line denoting the convoy's heading. Should the convoy's "weak spot" be the left front corner, maneuver so that the red square (the U-boat), is closing on the convoy from that aspect. Do not linger on the chart, for as visibility decreases so do reaction times. An escort may appear from nowhere and be within gun range in seconds. Set up for the attack away from the convoy and close in.

As you approach the convoy, keep a careful watch for the escorts. When a target presents itself, quickly evaluate it with the "I" key. If the target is a merchant, then the convoy has been located.

Target Selection

When the convoy is located, it is important to remember some key ideas. First and foremost, find the target that will make this risk worth taking. It will be in the heart of the convoy. The most valuable target will be in the heart of the convoy, and it is without a doubt a troop ship. These targets, when encountered alone in open water, can make up to 26 knots. When located in a convoy, they become sitting ducks. As these targets can displace up to 14,000 tons, it is easy to see why they are the best target.

The second most valuable target is a tanker. Tankers can range from 1,000 tons to 10,000 tons. Evaluation is more critical in this case. Should the tanker be 5,000 tons or under, keep looking for more valuable targets.

Another trick is to look carefully at the
geo plot, and notice the size of the target depiction in relation to other targets. This, barring any other useful data, should be the factor weighed most heavily. Do not spend time lingering inside the convoy looking for the best target. Should an opportunity arise, take it. This is especially true if a ship has already been destroyed; the escorts will be coming, and they will not be pleased.

Should an escort arrive while you’re still in the convoy, evaluate its speed, plot a course which will open the range, and take any available shots, regardless of their quality. Time is of the essence, and better some tonnage than no tonnage.

Another key idea is to take out ships quickly, with a minimum of maneuvering. Evaluate, strike, and move on. Should a target of high quality present itself, and only one torpedo has hit the target, maneuver behind and to one side of the target and open fire with the deck gun. While doing so, keep a sharp eye out. This is a risky tactic, but one that is sometimes worth the risk.

**Firing Considerations**

When shooting torpedoes, get as close to the target as possible. Six hundred meters is my personal maximum for bow tubes. As stern tubes are much more difficult to align, 800–900 meters is a maximum. Should a valuable target present itself, shoot the weapons in rapid fire succession.

When lining up a shot from the bridge binoculars, many captains make a common mistake, and I am as guilty as anyone: fixating on the target and ignoring everything else. It is very easy to run into a target that has already been hit, or another merchant that lies between the target and the boat. Use the hot keys (F3 and F5) to toggle between the geo plot and the binoculars, and pay attention to the situation!

Finally, while attacking the convoy, keep in mind that some of the convoy may be armed. Some merchant ships have guns, and can wreak havoc on the unprepared. Should one of these ships open fire, open the range with that ship or torpedo it, but do not get in a running gun battle. One hit of a shell can cause the U-boat to dive, and this is the last place to be with serious hull damage.

Once the attack is over, move quickly away and re-evaluate the torpedo room. Check on the status of reloading, and are times when a convoy presents itself suddenly, and no other option is available.

When making a submerged attack, keep in mind these key ideas. First, the speed advantage is gone. When speed is used, the advantages of silence and sonar are negated. The only time I consider using speed is when a target is already within range, and a turn must be executed to bring the weapon to bear. The other consideration is battery life. Should the player select realistic battery consumption, one-third speed can be maintained for long periods of time, but a flank bell will eat up the battery very quickly.

The first consideration when making a submerged attack is to get as close as possible to the convoy before attacking. The convoy may zig, taking them out of range. Should the convoy zig to either side, the escorts, which act as flanks and use their active sonar, may stumble upon the boat and drop a few depth charges. The chart will inform the player of any zig. Try to time the dive so that position is set right after the last zig.

Set up so that the convoy will run right over the boat. Keep periscope time to an absolute minimum, and never look through the scope while using time compression. Escorts can spot a periscope, and should this occur, you’ll need to get deep and get away.

Once the convoy is penetrated, keep in mind that the targets will, as they pass by, be moving faster than it is possible to turn. Use a burst of speed to bring the boat around. Have multiple targets in mind. The idea of a submerged attack is to hit a lot of ships very quickly, and then go deep. Don’t stick around to find out if the torpedoes hit.

These tips should bring the player additional success, and add to the enjoyment this game will bring. **ACES OF THE DEEP** is a complex game, and it is highly addictive. As success with convoys increases, more rewards are given in promotions, medals, and newer boats. But nothing feels as good as coming into port with a dozen pennants flying from the mast.
**The rules are simple.**

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Just don't breathe too loudly—it might be tracking you. Something sure is. Man-eating slime pools? Artillery Spiders with twin-barreled lasers? Jellied Suckers that inhale entire ships? Or electric Distortion Rings that fry you to a crisp?

Or is it one of those really ugly things that we don't even want to mention?
Ex Libris Arcanis

Wisdom To Dispell An Inimical MASTER OF MAGIC

by Robert L. Hayes, Jr.

"Caveat veneficum inimicum!" read the disintegrating yellow page. "Beware the hostile sorcerer!" Thus began the tome from which I have translated this arcane sagacity. Alas, the provenance of its wisdom suggested that the ritual and calculation required to produce its arcane knowledge must have been during the reign of MASTER OF MAGIC 1.1 and may not accurately reflect the era of 1.2 or its disciples. Perhaps, I shall be privileged to find a later tome and translate that wisdom at another time.

"Caveat consilium perfectum..." began the first page with its advice to beware a perfect plan in not discover the full book, so I will focus my attention on MOM's combat system, one of the least-understood aspects of the game. All the tips, strategies, and examples below are based on my individual experience with the game. I have tried to keep things general, but nothing here should be taken as holy writ.

There are three main types of battles in MASTER OF MAGIC: fighting in cities, fighting in the wilderness, and fighting in ruins/nodes. Each type of battle has different objectives and requirements, and each unit at the player's disposal is more or less suited to each type of battle. The successful wizard will allocate his or her armies accordingly.

When attacking an enemy or neutral city, the most important attribute for your invaders to have is a decent speed (two or above). Spearmen slogging across the battle board at one space per turn will be cut to ribbons by defending archers before they can get in position to stand and fight. Not all attacking units need to blaze across the map, of course. Your own ranged-attack forces can be slow, since they are likely to stay in their starting positions, and any forces that are missile-proof do not need great mobility. If a defending city is lightly held or has no missile troops, then the speed of your attackers becomes irrelevant.

Of course, when the tables have turned and those pesky enemy troops are besieging your cities, your ideal combat group is significantly different. City defense is where ranged forces come into their own—covering behind city walls and, unlike their enemy counterparts struggling across the battlefield, hard to kill. Unfortunately, bowmen and slingers are not usually available to your cities until the city has become reasonably developed. For most races, the first units a city builds will be the ubiquitous spearmen. This is okay. One or two spearmen units in a city will provide some de-
Strategies

fense and will often scare off computer players and rampaging monsters alike. Then, once your city is large enough to support the industries necessary to build missile troops, those original spearmen can be used to guard the city gate while your new archers and slingers cut the enemy to ribbons. Of course, once you have flying troops, it’s good to retire those spearmen and let the flyers guard the door. That way, if the enemy has no missile or flying troops, he cannot engage you at all, letting your own missile troops have a field day against their helpless enemies.

BLADE FOR THE BUCK As they slice this Guardian Spirit into vaporware, the swordsmen of the wicked Egonis prove why they offer so much bang for the buck. They’re cheap to build, relatively resilient on defense, and get two attacks per tactical phase.

When fighting in the open field, missile units are not quite as useful, due to the greater freedom of movement of both sides. Wilderness battles are generally wilder and less predictable than city fights. When badly outnumbered (regular army units versus a lone settler, for example), the computer player has a habit of wasting spells before retreating. This can be used to your advantage in the early stages of the game when mana is precious. Chase that enemy settler across the map, watching as the computer player casts stone skin, web, etc. in each battle before withdrawing his troops. Be leery of using magic in the first round of wilderness fights where you suspect the computer player plans to withdraw, since your magic is likely be wasted in such a case.

Capturing nodes and ruins, of course, is one of the more inter-

UNIT-WIDE WEB SITE Enemy units decide to stick around until Egonis’ swordsmen can finish off their livelier counterparts. Ranged spells are useful when ranged weapons are limited.
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PUPPIES FROM PURGATORY These priests haven’t got a prayer against these Hell Dogs. Too bad the wizard hadn’t thought about using regenerating units to take this vital tower.

enchanted regenerating troops (trolls, or for sufficiently advanced Nature wizards, any troops you have cast the Regeneration spell on), along with a hero possessing the Leadership attribute. Such stacks can take on the weaker and medium-powered ruins, and will constantly heal themselves, making casualties irrelevant (so long as you win the battle).

Armies raised strictly from flying groups are also powerful, especially when the flyers are missile-armed. A good half to two-thirds of the ruins you encounter will fall automatically to such invulnerable troops. In the later stages of the game, often a good ruin explorer is a single incredibly powerful hero or heroine, massively enchanted with all your protective and enhancing spells, and laden down with artifacts to further boost his or her already godlike powers. This option also has the advantage of being a great deal of fun: wading into nine Death Knights and crushing them all in three rounds of combat is a marvelous experience.

"Carpe commodum!" or "Seize the advantage!" read the title of another page. Obviously, even the ancients felt that the bewildering array of unit types could be somewhat overwhelming. Information was provided in tabular form (Table 1) and summarized each unit which could normally be built. Some of these units are specific to a given race, and most require significant industrial investment in the building city. The first value in the table, Firepower, is a measure of the number of hits the unit can be expected to inflict, on average, in a round of combat (before defenders apply their shields). Units with both melee and missile attacks are considered to combine those factors for purposes of the firepower value, since most such units fire one or two rounds of missiles then close for melee. The Hits to Kill (HTK) column in-
Strategies

dicates the number of hits, on average, it takes to kill the unit in a single round. Part of the HTK value derives from the unit’s intrinsic hit points, and part of it derives from the unit’s ability to defend itself. These values are roughly comparable, but many special attacks cannot be fit into a simple numeric index – poison, stunning, paralysis (everything that doesn’t cause direct, simple damage) has been left out of these numbers. Thus, manticores look terrible (Firepower of 3) mainly because their strength 6 poison attack has been ignored. The column originally labeled Incendium Pro Pecuniae (“Bang for the Buck”) reflects the ratio of a unit’s firepower to its construction cost, while the “Blood for the Buck” (Sanguineus Pro Pecuniae) reflects the ratio of its HTK to construction cost.

Another tabulam (Table 2) summarized summoned creatures and monsters found in ruins and nodes; for obvious reasons, there is no Bang for the Buck or Blood for the Buck rating for these creatures. Resistance was not integrated into the tables, since the pages found did not deal with the magic system. The buildable unit with the greatest firepower is the Nightmare; Nightmares also have the highest HTK. Nightmares are generally powerful creatures whose only drawback is that they can be built only by Dark Elves.

The unit with the highest Bang for the Buck and Blood for the Buck is the Swordsman (not surprising, considering their incredibly low cost). These values are somewhat misleading, however, since fully developed cities may have enough production to build four or five swordsman units per turn, but can only build one swordsman per turn due to the nature of the building system, with the rest of the city’s production being wasted.

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**TABLE 1: COMBAT ANALYSIS OF BUILDABLE UNITS**

<table>
<thead>
<tr>
<th>Unit Name</th>
<th>Firepower</th>
<th>HTK</th>
<th>Bang/ Buck</th>
<th>Blood/ Buck</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Ship</td>
<td>3.9</td>
<td>21.5</td>
<td>0.020</td>
<td>0.108</td>
</tr>
<tr>
<td>Berserker</td>
<td>14.4</td>
<td>21.6</td>
<td>0.180</td>
<td>0.270</td>
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<tr>
<td>Bowmen</td>
<td>3.6</td>
<td>7.8</td>
<td>0.120</td>
<td>0.260</td>
</tr>
<tr>
<td>Cavalry</td>
<td>4.8</td>
<td>14.4</td>
<td>0.120</td>
<td>0.360</td>
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<tr>
<td>Catapult</td>
<td>3</td>
<td>10.6</td>
<td>0.030</td>
<td>0.106</td>
</tr>
<tr>
<td>Centaurs</td>
<td>6</td>
<td>15.6</td>
<td>0.060</td>
<td>0.156</td>
</tr>
<tr>
<td>Doom Drakes</td>
<td>8.4</td>
<td>21.8</td>
<td>0.053</td>
<td>0.136</td>
</tr>
<tr>
<td>Dragon Turtle</td>
<td>4.5</td>
<td>17.4</td>
<td>0.038</td>
<td>0.145</td>
</tr>
<tr>
<td>Elven Lords</td>
<td>10</td>
<td>16.8</td>
<td>0.063</td>
<td>0.105</td>
</tr>
<tr>
<td>Engineers</td>
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Of the units with higher costs, Berserkers and Halberdiers provide the most Bang for the Buck, while Halberdiers, Cavalry, and Nightmares provide the most Blood for the Buck. The clear loser in the efficiency category is the Catapult. There are units with similarly low efficiency ratings (Manticore snakes, Wyvern Riders) but those units have highly useful special powers that are not reflected in the table.

Several units have special ability combinations that can be extremely powerful when properly used. Elven Lords, Griffins, and Paladins all combine first strike and armor-piercing attacks, rendering them all but omnipotent against normal units. One Elven Lord unit can easily defeat nine ordinary spearmen or swordsmen due to this effective combination.

Other highly useful units are Berserkers (good general fighters and reasonably inexpensive), Horsebowmen (mounted bowmen that are a good value for the production), Slingers (inexpensive and very powerful) and War Trolls (good fighters and best of all, regenerating). The fantastic units are somewhat more difficult to quantify, as almost all have special powers and most have more than one. The immunity to magic possessed by Sky Drakes renders them among the most difficult of opponents, since only mundane weapons will have any effect at all.

The powerful, life-draining Death Knights can overcome all but the strongest of normal armies, and generally significant magical resources will be required to defeat them. The ability of Demon Lords to summon three other Demons can be devastating against armies not able to eliminate the Demon Lord before he completes his summoning. The teleporting Great Wyrm is capable of killing most units in a single blow, but is helpless against flying armies. The sheer vitality of Hydra make them very annoying to fight, but a strong army can generally defeat them.

The last page crumbled in my gnarled hands and I sprinkled the pieces into a potion I had concocted. It had ended with the suggestion that Master of Magic rewards combined-arms tactics and that the wizard who will be victorious on the battlefield is the one who has used the proper unit in the proper role. In other words, I smiled wickedly and drank the newly fortified potion, “Keep your armor oiled, your sword clean, and never let the computer fight your battles for you.” Words to conquer by, indeed.
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Combined Arms In Chipland

Winning Strategies For SSI’s PANZER GENERAL

by Mark Walker

What is the sum of one plus one, in combined arms warfare? Two, you say? Au contraire; it is much more. Tanks plus infantry, properly employed, equal a devastating force, and SSI’s PANZER GENERAL can painfully demonstrate this point to the uninitiated. So, here are some pointers on bashing our silicon or water/ protein-based opponents. First, as in most games, we must master (Don’t you just love the sound of that verb, Herr General?) the variety of units included in the mix. Then, after touching briefly on the units, their capabilities, some employment tips, and some examples of combined arms combat, we will move on to some scenario examples showing how to kick some heinie.

Naturally, since it’s important to know what you are fighting before you fight it, reconnaissance plays an important role in PANZER GENERAL. Remember that your recon units, while lightly armed, move faster and see farther than your other forces. Always keep the recon elements out front, unless you want your troops to blunder into hidden enemies. With the recons’ tremendous sighting range, there is no need to risk other units unnecessarily; a blind army is like a pig on the way to the worst factory.

Tanks are, of course, the mightiest and most colorful of all your units. Do not, however, be so blinded by their power that you use them for tasks for which they are ill-suited. Use these enormous machines in open country, and don’t be so foolish as to think they are capable of city-busting. Keep them moving constantly—mobility is the key. When attacking, don’t fall back to regroup. Move ahead, bypassing strong points, and capture weakly defended towns behind enemy lines, using them as staging areas for reinforcements. Avoid entrenched infantry and anti-tank guns like the plague.

With all due respect to the old Marlene Dietrich song, Artillery is everyone’s best friend. Infantry always enjoys having the big guns around, because they soften defenders’ entrenched positions. So, on defense, place as many units adjacent to artillery as is tactically feasible. The guns will fire in support of any adjacent unit, and three or four well-placed artillery pieces will (regardless of gun caliber) create a protective umbrella of fire for any key defensive position. Of course, you might feel differently should you happen to be attacking a position that has artillery support.

As slow as it is when unlimbered, most artillery moves quite briskly when transported by truck. Obviously, artillery should not be tied to the slow-moving infantry when you are on the offense. Let most pieces surge ahead with the mobile formations, sticking mainly to roads. Don’t forget to keep fighter-interceptors and anti-aircraft nearby, as artillery on the move makes for a very inviting target.
Aircraft excel at fast moving, hard-hitting operations. Tactical bombers should be used as flying artillery, with Ju87s particularly effective in this role. Level bombers can interdict naval forces and suppress bomber units for the turn's duration, rendering them impotent. Additionally, level bombers drain ammo and fuel from enemy units and destroy prestige points when they bomb enemy victory point areas, whether they do any damage or not. This terror bombing strategy will slow down the rush of enemy reinforcements, but remember that it was insufficient to launch Seelowe in real life.

Now, Herr General, it's time to discover how the puzzle pieces fit together. Consider first a generic city assault. If the city is defended by a lone, yet well entrenched, infantry unit, the job is fairly simple. First, get your tanks out of the way! They would be dead meat in the city streets. Second, call for air support. In a perfect world, you would have air superiority, plenty of air support, and would have remembered to park a tactical bomber squadron on top of the city. Bomb the position and move on.

Next, bring in your level bombers to suppress most of the target's remaining strength points. Hopefully, you've placed artillery within range of the city's defenses. Fire it! By now the defenders are getting weak and are ripe for assault with your adjacent infantry. Suddenly, a hole appears in the enemy line, the perfect spot for the tanks we pulled back into reserve. Led by a recon unit, they will go on a sight-seeing tour as they exploit the enemy rear areas. Is warfare always this simple? If it were, any dumb bastard could be a military leader. Real defenses very often have defensive artillery, which can ruin the best-laid plans of any Panzer General.

The best method of dealing with opposing artillery is bombing it into submission. You can attack with your own artillery, but unless you have a range advantage, your tanks will take some casualties from counter-battery fire. But what if your opponent has air superiority, or an anti-aircraft battalion bordering the artillery? Call the Navy (yet another good reason to keep that Admiral's hat around, Herr General). If the artillery you wish to attack is within range of your battleships or cruisers, then attack with impunity.

Sometimes it just doesn't pan out the way they told you in tactics school, and you may have to take a city or other fortified position the hard way. Be resigned to the fact that it can and will get bloody. If you must assault numerous, well-prepared defenders, use the best infantry available—lots of them. Place the infantry two deep, and throw in an assault gun battalion and some artillery support. You'll just have to accept the counter-battery casualties. The first wave should attack, then fall back. The second wave then moves forward and assaults. While this approach can be expensive, sometimes it's the only way to gain an important hex.

How does this work in the grand scheme of a scenario, mein General? For instance, Husky, the invasion of Italy, is a challenging defensive scenario when played from the German side. The top priority is to evacuate as many German mechanized units as possible. Use the Germans already trapped, along with the Italian units, to delay the Allied advance. Move the rest of your forces to Messina and across to Reggio.

Use the Italian fleet, and combined Axis air power, to engage and defeat the Allied amphibious task force headed for Naples. This done, turn your attention to the defense of the tip of the boot. Build lots of
Strategies per your aggression with proper judgment. As Allied combat power on the peninsula builds, you will have to eventually withdraw. However, if you retreat slowly, conserve your combat power and get some bad weather, you should retain the five cities needed for victory.

The invasion of Norway has long been regarded as one of the models for modern, joint combined arms warfare. Many generals unfortunately find themselves short of needed prestige when at the shores of Norway. Even though resources are relatively scarce, you should invest in JU88s, because you need them to counter the British fleet. Start the invasion by taking Oslo and the nearby airfield with the south-eastern task force, supporting the attacks with one heavy cruiser. Sail the rest of the fleet northward. Send the motorized units of the south-western task force up the Oslo-Trondheim corridor.

The paratroops, after assisting in the capture of Oslo, should be dropped in the vicinity of Lillehammer to pave the way for the mechanized units. Use foot soldiers to capture the airfield at hex 18,24, simultaneously launch the attack on Trondheim. With luck, the Brits will be defeated in both battles. Re-deploy the remaining troop transports and paratroops for a conclusive attack on Nasmo. This strategy should give the Germans five cities and the win. There never seems to be enough time, but victory is possible for a persevering Panzer General.

Another interesting variation on the five-week theme is Berlin West. To emerge victorious, the Germans must retain five objectives in addition to Berlin. The future American imported beer kings may attempt the classic broad-front-trip-wire-withdrawal defense or play a riskier game. In the former defense, the Axis will try to defend a continuous line from Berlin to Freiburg, with its armored units to counterattack local penetrations. A real commander scoffs at that type of attitude—after all, what did it gain the German army in real life? Those with fire in their veins will counterattack in the north; the Panzers will attempt to capture Eindhoven and Aachen. Meanwhile, back on the northern flank, German forces will strive to delay the American juggernaut.

Here's how the German armor should side step to the north. This will, conceivably, give them a significant advantage in the vicinity of Aachen. Employ an airlift to join the three Berlin infantry units with this assault force. Use some precious prestige points to build a towed 105mm and Wespe unit and keep the rest to replenish the hurt units. Place them in the vicinity of Muenster. Concentrate those awesome fly-boys (Me-262 et al) to support this northern killer group. Far from a repeat of history, Hitler's finest will rule the sky.

The rest is simple...in concept. The killer Kampfgruppe should advance west then wheel south, capturing Eindhoven and Aachen. In the south, use prestige points to buy the cheap Wehrmacht infantry to plug holes. Small, hard-hitting armored reserves should counterattack Allied success stories. The Berlin Panther, Tiger II, and Jagd Tiger should head towards Frankfurt to strike the inevitable American puncture there. If you're lucky, (and doesn't luck favor the bold?) this should net you five cities and keep the Allies from even getting anywhere near Berlin.

If you like playing with a loaded deck, leading the Allies in the D-Day scenario is for you. They have the armed equivalent of a silver spoon: Naval gunfire support, air power, and overwhelming ground forces. Unfortunately, they're missing St Lo, Caen, and Cherbourg...which happen to be the objectives needed for victory. Take your time; with patience you can crush the Germans. Divide the Americans in 60/40 fashion. The larger contingent advances to St Lo, the other to Cherbourg. After the Yanks are safely ashore the fleet, from approximately Bayeux north, should steam to Cherbourg. They can help neutralize the ring of forts surrounding the city.

Allied airpower can be most lethal; and much to the delight of human-controlled Allied commanders, the computer doesn't know it. That's right, the Nazis sally forth with their meagre Fw190s as if this was May 1940, and are easy prey for the superior numbers of Allied aircraft. After you have established your air superiority, use the B25/26 and A26 units to soften up strong points. The fighters should strafe units, particularly the guys from the 21st Panzer (you know, the armor east of Caen). Be sure to capture French airfields quickly, as your squadrons' worst enemy is re-supply. It takes a long time to go back to England (evidently, silicon pilots spend a realistic amount of R&R time in bars).

Otherwise, the D-Day scenario is pretty straightforward. Use the allied treasury of prestige points to buy artillery and armor. Barrage and bombard the cities before committing your grunts and don't miss a chance to take out weakened enemy units. Build some British Fireflies to handle the 21st Panzer and keep an eye on the calendar. With practice, you should be able to capture all three objectives by turn eight.

If you have any tactical understanding at all, this scenario is a lock. If you lose, it's time to start over with Poland. PANZER GENERAL is only mastered through repeated play—so keep on blitzing until you see the Tower of London (or the ruins of Berlin) before you.
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Surely You Jest!

IT ISN'T OFTEN THAT ADVENTURE GAMERS GET TO PLAY THE BAD GUY. Usually they're out bashing "Foolees" and righting all of the wrongs that game designers care to write. In fact, until now there has only been one adventure or role-playing game in which we had a chance to explore the "evil" side, Wizardry IV: The Return Of Werdna. In that Sir Tech oldie, we directed the evil wizard on his quest to retrieve the stolen amulet. However, at the end game, Werdna had the opportunity to redeem himself.

This is also the case for Malcom the misfit jester in Westwood Studio's Kyrandia 3: Malcolm's Revenge. Kyrandia 3 picks up where the first game, the Legend of Kyrandia, left off. Having been turned to stone by the game's hero, Malcom was left petrified, standing alone and forgotten in the castle junk heap. In the animated introduction to the game, a stray lightning bolt hits the statue, returning Malcom to life and mischief.

As it turns out, Malcom is just a poor, misunderstood jester. While it's true that he did usurp the throne, steal an important magical dooddad, and petrify most of Kyrandia's leading citizens in the first game, no one seems to bear a grudge against him for these little peccadilloes.

No, everyone is mad at him for killing (or supposedly killing) the king and queen of Kyrandia. Murder, after all, is serious business. Much too serious for a jester. Of all the nasty things that Malcolm did, this wasn't one of them. Proving that to the citizenry, however, will prove difficult for a guy with his track record.

The game proper begins with Malcom's revival in the junkyard. From there he makes his way off of Kyrandia (not a congenial place at the moment), adventures on the Isle of Cats, entices pirates to help him get revenge (which quickly turns sour), escapes banishment to the Ends Of The Earth, eludes the clutches of the tic-tac-toe crazed Fish Queen of Limbo, pays a brief visit to the fiery down-under, and finally returns to Kyrandia for—we hope—his triumphant vindication. All in all, quite a lot to do for someone who really wants nothing more than to take a peaceful nap in his own bed.

Game play is very simple; this is definitely a "no frills" interface. The main cursor is a small arrow. Clicking that on an object picks it up (if it can be taken), or "uses" it (pushes a button, moves an item, etc.). Moving the cursor to the edges of the screen will turn it into a large arrow, designating an exit from that location (if there is one). Moving the

MALCOLM THE TWISTED JESTER IS BACK IN KYRANDIA 3, BUT THIS TIME HE'S LAUGHING WITH YOU, NOT AT YOU.

SCRY SIGHT

There must be some atmospheric interference in the old crystal ball. We're getting so many mixed images from SSI's upcoming ThunderScape game that they just can't possibly fit together. There are some "steampunk" elements to the fantasy role-playing system which allow for steam-driven vehicles like ThunderTrains and steam-powered flame throwers, but there is also the more traditional magic system. However, just when you think you have it all figured out, you discover that there is a magical metal that allows certain wizards to create gigantic metal golems.

The monsters in ThunderScape are all being rendered on SGI machines and they have very unique looks. Not only that, but although the initial story is a simple "Kill Foole" romp, there is a rich background about how the diabolical evil that pervades the new gaming universe is incredibly foul and corrupt. You can definitely expect some dark and intriguing encounters in this game.

by Scorpia
cursor elsewhere and clicking causes Malcolm to walk to that spot if no obstacles are in the way.

A drop screen is hidden at the bottom of the display; moving the cursor down to the bottom causes it to appear. This holds Malcolm’s inventory (maximum of 10 items), the game controls (save, restore, quit), and the mood meter (more on this shortly).

Conversations are equally simple: you just click the cursor on anyone in sight, and conversation begins automatically. There are no responses to choose; Malcolm and everyone else decide for themselves what they will say. How these little chats go depends on what mood Malcolm is in at the moment.

The mood meter has three settings: nice, normal, and lying. In normal mode, Malcolm is honestly honest, but somewhat on the sarcastic and cynical side (his typical personality). In nice mode, he’s, well, nice, or at least pretending to be that way. In lying mode, warm butter wouldn’t melt in his mouth.

Deciding what mood to be in is the tricky part, as all three are necessary in different sections of the game. Starting a conversation in nice mode may not get you anywhere, while talking in lying mode might get you someplace you’d rather not be. It is usually a good idea to save the game before starting a conversation with someone, just in case.

Malcolm doesn’t go it alone, either. For most of the game, he is accompanied by Gunther, his “bad” conscience. As a youth, Malcolm also had Stewart, the “good” conscience, but Stewart was lost somewhere along the way, leaving only Gunther to egg Malcolm on, ummm, politically incorrect activities. (There were times when I thought this wasn’t such a bad thing, after all; Stewart is such a goody two-shoes I wished I could punch him out on several occasions.) Gunther pops up every now and then with smart remarks, either snide comments when Malcolm messes up, or kudos when Malcolm pulls off something good (or bad, depending on your viewpoint).

However, Stewart is not gone forever. He makes a stunning reappearance for the end game, at which point you (not Malcolm) get to choose which of the two to keep around—or if you’re really masochistic, you can opt to keep them both.

This is not mere window dressing. What you decide here has an effect on the rest of the game. As you may have guessed, things will be a little easier if you have Stewart alone, a little harder if you take both, and difficult should Gunther be the sole companion. Choose wisely.

Like the second game in the Kyrandia series, The Hand of Fate, Kyrandia 3 is a linear game. Malcolm progresses from area to area, each one having its own set of objects and locations. Typically, items don’t travel with him; upon arriving in a new sec-

tion, Malcolm’s inventory is usually empty.

This is not a cause for alarm. If an item is needed somewhere else along the line, Malcolm will keep it with him. Otherwise, everything necessary for solving the puzzles in a particular area will be found in that area. So you don’t have to worry about leaving things behind, or that you’ll get to the end game and find you missed something important at the beginning.

I played the CD version, which requires about 10 meg on the hard drive and has full voice support (all dialogue and remarks are spoken). For those who may not want their computers talking to them, or who may not want speech late at night, there is an option to turn off the voice and have text boxes instead. The game also has internal controls for adjusting the volume of music and special effects. Happily for Gravis Ultrasound (and Max) owners, the Gravis cards are fully supported.

Kyrandia 3 ran perfectly clean. The game never crashed, locked up, or exhibited any bizarre happenings. Only one minor bug surfaced in the game controls, and its not so much a bug as an oversight. Malcolm can walk at either a slow or fast pace; the default is “saunter.” Likewise, there is a “studio audience” (inane laugh track) that can be on or off; the default is on. If you change either or both of those settings, the software doesn’t remember them from session to session, and you have to change them again each time you boot up the game.

The music, special effects, and voices are good, but not cleanly recorded. A static hiss was always present to a lesser or greater degree throughout the game.

As a test, I booted a couple of other games that support native Gravis sound, and they did not have the background noise.

OUT WITH THE RUBBISH Poor Malcolm, his petrified form left to rot in the kingdom’s trash heap. But there’s hope for our jester; a burst of lightening will bring him to life and put him on the road to redemption.

BOTH OF ME Freed from imprisonment in stone, Malcolm still bears the burden of a bad conscience, personified in the chubby Gunther.

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NOCTROPOLIS
The City of Night
An Adventure in Depravity
MALCOM’S
MANY PATHS

So how does MALCOM’S REVENGE work as an adventure? There’s the rub. Westwood took a lot of heat over the first two games being, for the most part, too simple and obvious. Determined to do better, they swung the pendulum the other way, and made much of the game rather obscure. They also included multiple solutions for many of the game’s puzzles.

On the one hand, that’s good, as you aren’t locked into the “only one way to do things” syndrome. On the other hand, matters can rapidly become confusing as solution paths cross each other and you aren’t sure what to do in the first place.

This is especially true of the opening section. Malcolm’s objective is to get off Kyraandia while avoiding such unpleasant stops as the jail cell, the rock quarry, the chain gang, and the slave galley (as I said earlier, Kyraandia isn’t a congenial place at the moment). That’s really all you need to do, but there are five or six ways of escaping, and it’s easy to become tangled up in them, or find a way off and worry about all the stuff you left behind unfinished. Even worse, you might find part of a solution, and spend hours wandering around, trying to come up with a use for a flask of cream or a handful of sesame seeds.

The Isle of Cats, next stop on the tour, has its own problems. First is the non-logical jungle maze. While it’s not very large, the jungle does have to be mapped, which is tedious business requiring much patience, especially since you have to chop your way through the underbrush in each scene (the stuff grows back as soon as you leave).

More serious is the cat altar. To do the right thing there, it is vital to get into the Hieroglyphics Room of the ruins at the Dog Fort. This requires light in the first room, and there’s only one way to get it. Some players will likely miss the solution, just by going the “wrong” way first from the Dog Fort, letting themselves in for much frustration. It is difficult to explain further without giving things away, so I’ll just remark that it’s best to explore the entire jungle before heading into the ruins.

Another negative aspect is the need for repetitive actions. You find a lot of bones in the jungle, and it’s pretty obvious you give them to the dog. The first time, he buries a bone and uncovers a gem. After that, things become monotonous. You need more than one gem (six, actually) and they are randomly distributed each game. So you save the game, drop a bone in a new location, and see what turns up. If there’s nothing, restore and try a different location (otherwise, you must go into the jungle and collect more bones). If a gem pops up, save and keep going. Only trial and error works here, as there is no pattern to the positions of the gems.

Similarly, in Limbo you need a particular item to perform a Royal Seance. It can be obtained only from the junk heap, which is reached by riding the

FOR THE HALIBUT While strolling through Limbo, Malcolm stumbles upon a school of fish (apparently, Ferris the Fish took the day off). This puzzle is one of the more obscure paths to the nether world.

sluice. Unfortunately, you can only grab one item each visit, again determined randomly, and you don’t even know what it is you’re looking for, which does not make things any easier. My experience was, on average, four or five tries before the object turned up (it was much the same if the game was saved after arriving on the heap and before taking anything).

There are other instances like this, as well. One you could live with, but multiple situations merely drag out the game while not adding anything to the pleasure of solving a puzzle.

Still, KYRANDIA 3 has several good things going for it. The game is funny, and Malcolm is a refreshingly different character to lead through an adventure. Eric Randall, the voice of Malcolm, does an excellent job, having just the right sound and tone of voice.

The designers took care that you wouldn’t come to a dead end over missing some necessary item during earlier play. This is an important consideration, especially in a linear game, where there is no going back except via a save position.

At a time when most of the industry seems to have “gone Hollywood,” with everyone scrambling to get “big names” for full motion video and voice-overs, and pushing the edge for whiz-bang graphics and sound effects, it is nice to see at least one company is concerned about content over gloss (not to say that the graphics aren’t pretty). Westwood may have erred a little on the obscure side of the puzzle-building equation, but at least they were listening to the game players, and went for “toughing up” instead of “dumbing down.”

Now if they can find the golden mean between the extremes, their next product should be really something. In the meantime, MALCOM’S REVENGE is a refreshing game in many ways, although frustrating in many others. Definitely not a game for the beginning or impatient player.

AN UNREASONABLE REQUEST? The Voice of Reason, who resides in the town hall, has a thing for fish cream sandwiches made of eel cream and sesame seeds. Of course, you’ve got to hunt down the ingredients for his snack.

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The Dark Sun Unshrouded

Scorpio Offers Illumination on Dark Sun: Wake of the Ravager

Well, here we are in the holiday season again. The Christmas Tree Monster is back in the corner, swishing its tinsel and blinking its lights, and Fred's shrunken head garland is on the wall. For all that, the mood around here isn't very festive. It looks pretty much like we're in for another dismal gaming Christmas, with many expected releases pushed back to January, February, or "sometime in '95." Indeed, the prospects seem rather dark at the moment, so you may as well take what comfort you can from tips on another dark subject, Dark Sun: Wake of the Ravager.

If you have a team saved off from the first Dark Sun game, Shattered Lands, bring it over. The characters will transfer in with some of their good stuff intact, such as Elf's Drinker, Dark Flame, Phyrnin's Bow, the Living Cloak, Ring of Insight, etc.

Armor doesn't do quite as well, however, and you'll find much (though not all) of the better pieces missing. Regardless, you still come out ahead in that department as opposed to starting with a fresh team. In addition, levels aren't lost in transferring characters, and that's another plus.

One word of warning when transferring characters: don't touch any of the money bags until the game has actually started at the gates of Tyr! Any money put into the pool before then is apt to be lost, and you'll end up with only the default amount of 5000 ceramic pieces.

If you're starting with a brand new team, you want multi-class characters for the most part. I suggest at least two Fighter/Preservers, and a Fighter/Druid, with the fourth perhaps a Gladiator, or maybe another Fighter/Druid. Thieves don't have much scope in this game, Clerics aren't as good as Druids, and I didn't find Psionics all that useful.

Further, there appears to be a bug in regard to the Fighter/Psionicist mix. They all stopped gaining levels at 13/14, even though they had the necessary stats in both professions to go higher. All other multi-class and single-class characters gained levels normally and maxed out at 15, so it's just that particular combination that is not working right.

You don't want a single-class Druid or Preserver, because they can't wear armor, and that makes them extremely vulnerable. The same is true of the Thri-Kreen; as before, there is almost nothing they can wear, and this time around, it isn't worth having one in the group (my transferred Thri-Kreen F/Druid took plenty of damage, I can tell you). The opposition in Wake of the Ravager is high-level and hits hard; you want all the protection you can get.

That means, at character creation time, you should max out the stats of everyone in the party. You are going to need every ounce of muscle, every hit point you can muster up, and every point of AC reduction you can manage.

My own experience was that a team composed of a Mul Gladiator, Mul F/Druid, and two Half-Elf F/Preservers was a solid group. Half-Elves are slightly better than Elves because the halflin-creeds have better constitution and usually get more hit points than the pure Elf. Half-Giants make good gladiators, but their dexterity is poor. Then again, they have the most hit points of anyone, and can absorb more damage than most.

If you are playing with a transfer team, or a team composed of transfers and new characters, the default difficulty will be set to "hideous." A team of all brand-new characters has a default of "balanced." Note that even if the team is all brand-new, the difficulty will go to "hideous" if you bring even one transfer character into the party temporarily during character creation.

Difficulty level affects mainly how many hit points the opponents have. The easier the level, the easier it is to kill off the monsters. Players who don't want combats to drag on for too long may want to set this to "easy" or "balanced." Rabid hack'n'slashers may prefer "hard" or "hideous."

Difficulty also affects the situation in the volcano when you're after the fire ruby. The higher the difficulty, the less time you have to get everything done. So before descending, you may want to make some adjustments.

Notaku is back, still looking for rare and exotic ingredients. As before, he's an optional part of the game; you don't have
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to take any of his quests. However, accepting these little errands will net you experience points, money, and goods; they are also subtle indications of where to go next in the game. Notaku is also a good person to sell excess equipment to, as he will pay you full price for the items.

Play begins at the gates of Tyr, where your party quickly becomes involved with the Veiled Alliance, an underground group of mages working for the preservation and restoration of Athas. It is best to stay in the city until after you've returned from the pyramid; otherwise, you may become caught up in all sorts of side quests and lose track of what's going on.

The Alliance has two errands for you in this section of the game: finding out what the Templars are up to, and what the Draxans are doing inside the pyramid. Neither of these is especially difficult, as you get plenty of direction. It's after you've finished up the pyramid and survived the attack on Alliance HQ that matters become more vague. Now you have to find three elemental artifacts (the Alliance has the fourth), and where to go and what to do is left pretty much up to you, and there aren't many signposts.

Getting the artifacts can be done in any order; all three sections are stand-alone and don't have an impact on each other. They are also static: there is no time limit, so you don't need to run off and finish them right away. You can take some time to explore around and do some of the side quests (because of space limitations, the side quests are not discussed in this article).

So, which item you want to try for first is up to you. The Fire Ruby quest nets you some hefty experience points. The Lyre Of The Winds quest gets you some good experience and one (only one) +4 leather breast plate. The Hammer of Promere provides good experience and the very best armor in the game (three pieces, two of them +5 and one +4). I preferred to go after the Hammer first myself; couldn't resist that neat armor! You may look at it differently, but it doesn't matter so long as you get all the artifacts.

**HAMMER OF PROMERE**

Yes, it's in the mines, or actually, below them. You have to talk to the overseer by the NW gate to get the mine key (a character with high charisma can beat down his price a bit).

Not much happens on the entry level; your job is to get down to the lower tunnels as quickly as you can via the elevator. This is where most people have some trouble, as they aren't sure what to do down there. It's simple: you have to find (and kill) the group of possessed miners before they wipe out everyone else. My experience is that they don't show up until after you have reached Luckout Tunnels. Then you go back through the rest of the lower levels and get them before too many people die.

It is only after they're dead that the secret door in the Old Digs opens (there is no way to open it yourself). NOTE: If you have the early release of RAVAGER, there is a bug that will keep you from going through the secret door, even though it's open. You must proceed directly to old Digs after killing the miners; under no circumstances should you go back up to the top level.

That brings you to the Underdark, where the Mind Flayers hang out. As you probably guessed, they all have to be trashed. Unfortunately, if you have the early release, you're stuck with doing it the hard way.

Cleaning the individual sections (kitchen, lab, arena) isn't too tough; it's the big battle in the room with the elder brain that's the problem. There's a flask of poison gas in the lab that works on Flayers, but because of a bug in the game, you can't use it. Ouch.

The best way to handle the fight is good preparation beforehand. Just before entering, cast a haste spell on the party. Stoneskin and Improved Invisibility should also be cast on everyone. During the fight, get the Flayers first, followed by Intellect Devourers, and leave the slaves for last. If you have El's Drinker, this is a great weapon to use against the Devourers, as the sword will keel their hit points even though the hit does one point of damage. Be sure to destroy the Elder Brain as soon as the fight is over, or more Flayers will keep showing up.

Beyond this room is the cave with the Hammer (and that neat armor); expect to have a couple of fights before you can take it. You will also need the hammer equipped as a weapon to get out of the Underdark.

**LYRE OF THE WINDS**

This requires some advance work. The mangled tapestry in the secret room of Alliance HQ has to be fixed, which can only be done by Utella of the Jann living in the desert. Once repaired, you can put it back where you got it from, use a certain item (found nearby) to activate it, and step through to the Silt Sea area.

Now you're in the land of the (more or less) friendly Giants, who have some problems of their own. A couple of them will be solved as you go after the Lyre. Look around for the three items you need to fix the skimmer, then use it to visit Keigh. He isn't going to help much, so you may as well kill him as soon as possible so you can pass through the tunnel to the mountains.

Here you can ignore the Giantess and all that business about the flute. There are switches all over the place that are supposed to turn off the traps; I never bothered with them. It's much simpler and faster to make a Preserver the party leader, then have him or her cast Minor Globe of Invulnerability. After that, just walk right up the path to the drakes.

Slow down as you near the top, and then stop as soon as you hear the click. Don't move. Now shoot an arrow at any convenient target, and watch as (for whatever strange reason) all the other drakes gang up on and kill the one you just poked with an arrow. Keep this up, and soon there will be only one drake to deal with (it is important not to move anyone until the single drake is left).

The ones down by the nest are smarter and won't fall for this trick. Multiple fireballs are better to use here, followed by
Shadows of Cairn is the story of a young thief named Quinn, who has a serious problem. He's too honest to steal anything. Worthless to his guild, his own master has set him up to take the blame for the murder of the Duke of Cairn. His only hope for survival is to make sure the assassination fails.

In order to help Quinn save himself, you'll have to guide him through slinky sewers, a trap filled dungeon, an evil wizard's tower, and a monster filled hedge maze (not to mention guards in the streets and buildings) to save the Duke in his palace at the top of the city.

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melee on whatever's left after you run out of spells. Be sure to pick up one drake hide for the blacksmith, and one for Nottaku. Then just do the business at the nest and you're done here (and don't forget the Lyrel!).

**FIRE RUBY**

You get here through the volcano tapestry (there is something in the room that will activate it). After some fights with the Draxans, the Verini will let you into their temple (do remember to save Prosser before entering). Before long, you'll be investigating a murder.

This can be tricky, since some clues are dead ends. You certainly want to read Sorval's notes (in his room), and examine carefully the statues in the south. Anything you find should be shown to Norreus. After the temple has been sealed, have a chat with Prosser (if for some reason you didn't save Prosser, look for Winter instead). This will set you on the right track.

Ulthin won't cooperate, however much you try to manipulate the conversation. You'll need Silvan's (not Rhone's) help here. Save before you go for the amulet. Once you have it, events will move very quickly, and before you know it, you're down in the volcano core after the ruby.

Plenty of Draxans are down here, too. Most of this section is just a matter of fighting, although there is the Stones Maze you have to figure out. I suggest saving before you start on that, and making careful notes as you go along, especially if you're in one of the more difficult modes. Once you have the path worked out, restore and go through it again (remember, there is a time limit here, and the volcano will blow if you aren't fast enough).

**END GAME**

In case you haven't figured it out before now, the entrance to the Lord Warrior's lair is in the house with the two Golems, right next to Acar. You will of course have to open the door behind the tapestry. Elementary, my dear Watson <grin>.

Kovar (the prisoner) can be helpful, in spite of his arrogance. He can especially help you with Jumah, who is in charge of the Templars. It's better to talk to Jumah than kill him.

When you make it to the Inner Sanctuary, the Lord Warrior teleports away, leaving you to figure out how to activate the portal (after you've dealt with his undead minions). Well, there's an interesting sarcophagus on the left, and a room with four element-type objects on the right, so it shouldn't take you too long. Since there's no going back, you may want to save before stepping through the portal.

Now you're at the Temple of The Cosmos, where a Pyrene clues you in on what's been happening there, and what you need to get into the temple. After that, it's the big one, and I do mean BIG. You may want to lower the difficulty level a notch or two before entering. Good luck, you'll need it.

Whee! That takes care of the tale for this month. 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 and Clubs menu).
- On GEnie: Stop by the Games Round-Table (type: Scorpia).

Until next time, happy adventuring!

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Moonstruck

Access Software's Four CD Extravaganza,
UNDER A KILLING MOON

by Charles Ardai

MUCH ANTICIPATED, MUCH DISCUSSED, EXTRAVAGANTLY TOUTED, AND RICHLY PRESOLD, Access Software's big Christmas title, UNDER A KILLING MOON, is as much a disappointment as it is one of the year's more remarkable achievements. It's a virtuoso performance both deserving of and marred by the designers' pride in their accomplishment. They know how good it is, but they seem not to know how good it isn't.

KILLING MOON is served up on four CDs, because, by God, there's too much game here to fit on just one or two. In the real world, the only thing that comes on four CDs is a Puccini opera; in the world of computer games, what comes on four CDs is several hours of animation, audio, and video, a super-saturated feast for hungry gamers to gorge themselves on.

Almost every location in the game—and there are many—is a fully built-out, three-dimensional, photorealistic environment that the player can explore with complete freedom of movement. Every word of text in the game is spoken out loud, often by well-known movie actors. To give you a clear picture of the lengths to which Access has gone to make KILLING MOON the game to end all games, consider this: they hired no less than James Earl Jones as the narrator.

Since KILLING MOON uses one of the world's most famous voices for its incidental narration, it's obvious that no facet of the game which could be embroidered, gilded, or otherwise adorned has been overlooked. You know the little clock icon that many games put up on the screen while a new scene is being loaded from the disk? Here it's a lovingly rendered, 3D, high-resolution grandfather clock with a gold pendulum swinging back and forth.

It's all terribly opulent, sumptuous almost to the point of decadence. Thrill-seekers out to push their hardware to the limit will go gaga over the visuals before they even leave the main character's office, where the game begins. From your first-person perspective, you can turn in place or just turn your head or move in any direction, either by walking forward or by walking sideways. You can look up, you can look down, you can crouch or crawl on your belly or stand on tiptoe. You can look up or down while crouching or crawling or standing on tiptoe. It's enough to make a player accustomed to the limited control offered by ordinary games delirious.

But visuals are just visuals and controls are just controls. Once you've spent the half hour it takes to learn how to do all the things the game permits you to do and marvel at the luscious presentation that unfolds as a result, you'll want to get to the meat of the game. As a wise philosopher once said, "Where's the beef?" Alas, you'd have better luck finding pork in Haifa than beef in this game. KILLING MOON is crammed to the gills with the sort of talent you can buy, but all too obviously deficient in the sort you cannot.

Actors can be had for the right price, even actors with marquee value and familiar faces like Margot Kidder or Brian Keith. The price probably isn't even all that high, since Hollywood hasn't exactly been throwing roles at either of them for the last few years. Gorgeous 3-D graphics engines can be bought, too, and so can nifty user interfaces.

What's harder to come by is good acting, good direction, good writing, and good game design. These are what KILLING MOON lacks. To be sure, it also has some technical weaknesses—for instance, the matte work that permits Access to superimpose its actors on the computer generated virtual sets is less seamless than in ORIGIN's Wing Commander III (another four-CD extravaganza), but these pale before the much more substantial weaknesses in the story the game tells and the way it tells it.
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THE MEN IN THE MOON

Tex Murphy, the tough, hard drinking, chain smoking private eye who starred in this series' first two installments (Access' Mean Streets and Martian Memorandum), returns in Killing Moon to investigate and foil an attempt by a lunatic religious cult to destroy all life on Earth. The cult has built a space station orbiting the moon, to which they plan to escape prior to losing a genetically engineered virus into the Earth's atmosphere. After a few hundred years on the station, they intend to return to a newly Edenic Earth, cleansed of the moral and genetic impurities that make Tex's future San Francisco resemble the set for Blade Runner. Needless to say, they've got to be stopped.

Along the way to cracking this big case, Tex has to solve a handful of smaller cases, each of which contains anywhere up to a dozen puzzles of the sort you might expect: getting past barriers, navigating conversations with other characters, even identifying a criminal using a database in the manner of a Carmen Sandiego game. ("He had bright green eyes and a tattoo of an anchor."") One character tells Tex, "Back in his office, Tex turns on his computer and chooses "green" from a list of possible eye colors and "anchor" from a list of possible tattoos.)

The puzzles tend to be neither difficult nor clever; they are, for the most part, mechanical exercises in doing the obvious. A good example is the matter of Tex's fax machine, which is broken when the game starts. Replacing it requires one to find a pencil, a stamp, and a mailbox (all three are where you'd expect to find them); fill out and mail a form; wait for the return mail; and then go to an electronics store, find a fax machine, and buy it. Another example, this time from the end of the game: Tex is locked in a room where, if he looks around, he'll find some dry leaves, a rake, a can of lighter fluid, a stone, a piece of flint, and a smoke alarm. Can you guess what the solution is? There are a few puzzles that are more taxing than the above, but what those puzzles tax is less your creativity than your patience, since they can only be solved by trial and error. It would take a finer casinist than I to make the correct choice between dia-

logue options like "Casually investigative" and "Casually inquisitive." And I defy any player, however keen his intuition, to solve on his first try either the dialogue about security systems with the electronics store owner or the resuscitation sequence.

THE NOSE KNOWS

Nuclear fallout has bred bizarre mutants, including Beek Nariz, whose elephantine schnozz is a none-too-subtle metaphor for his underworld knowledge.

Unfortunately, the main thing references like these accomplish is to remind players who are familiar with the works being referred to just how much worse Killing Moon is.

It is the simplest thing in the world to plant references to classic hardboiled novels in a story; what is hard is writing a classic hardboiled story of your own. Authors Chris Jones and Aaron Connors never rise above the level of making gags and sly references, though they show signs of wanting to. With the plot about the cult and the crusade for genetic purity, they appear to be trying to tell a serious story, with serious threats and grim implications. Yet every time the story threatens to go off on an interesting direction, they cut it off at the knees by throwing in lame, inappropriate jokes and cheap slapstick, such as scenes that involve Tex falling over in his chair or walking into walls or getting captured by villains who do Three Stooges-style eye-poking schtick.

This undisguised willingness to sacrifice the story in order to stick gags in where they don't belong is typical of amateur writers, and it is deeply unsatisfying. Jones and Connors seem to be hoping that they can make a single game be both a serious thriller and a goofy comedy, both Chinatown and Dead Men Don't Wear Plaid, and it just doesn't work. They should have paid more attention to their sources: Hammet and Chandler were able to make their books extremely funny without ever undercutting their
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Night Live. James Earl Jones is James Earl Jones—how can you go wrong with a man who is able to make phonebook inches away from the fiery explosion that is about to engulf the space station. Not only is the graphic of Tex in front of the fireball poorly done, and not only is Chris Jones unable to convey the impression that he is actually running, but the dramatic conception is screwy. It’s fine to have Indiana Jones running away from a huge boulder, as in Raiders of the Lost Ark, or to have the Millennium Falcon high-tailing it out of the Death Star just ahead of a reactor core explosion, as in Return of the Jedi, but you can’t mix the two. A guy running away from a nuclear explosion? No. Uh-uh. Back to the drawing board, kids.

It’s too bad that one more trip to the drawing board is not an option, since KILLING MOON has much that would have been worth salvaging. The game engine is terrific; if only there were better things to see and do, it might well command the player’s interest for more than the first half hour. Better actors could have been hired, or a better director might have been able to coax less horrible performances out of these. A professional script doctor could have worked wonders on the dialogue, even with only a week or two of work.

It would have been worth it. Now it’s too late, and UNDER A KILLING MOON is far less than it might have been. To which I can only say this: I hope this game sticks in people’s minds as a monument to arrogant presumption. Heaven save us from game designers so blinded by their ability to craft spectacular technology that it makes them think they can write and act, too.

THE EDITORS SPEAK

UNDER A KILLING MOON

RATING ★★

PROS A revolutionary interface that puts you inside the game world as no adventure game ever has before.

CONS The writing and the acting don’t measure up, by a long shot.
We have seen the future, and it’s not very pretty.

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My Ship And Welcome To It

Gain Privileged Access To The Enterprise
In The Star Trek Interactive Technical Manual

by Allen L. Greenberg

Followers of the original Star Trek series may remember the 1967 episode "Tomorrow Is Yesterday" as the occasion when a 20th century U.S. Air Force Pilot not only stepped aboard the Starship Enterprise, but was also given a first-class tour of its workings and facilities by Captain James T. Kirk and his command crew. Most Star Trek fanatics would, of course, gladly slice off their pointed ears in order to be offered a similar opportunity. Taking advantage of 20th century computer technology and multimedia presentation, Simon and Schuster attempts to provide an interactive version of that tour in their CD-ROM, STAR TREK: The Next Generation Interactive Technical Manual.

Star Trek technical manuals have, of course, been available for many years. Aside from providing convention-goers with accurate schematics for their fully functioning costume paraphernalia, they have generally served as reference books which prove that the pseudo-science and techno-babble featured in every Star Trek episode actually enjoys some cohesive and internally consistent structure. As the Next Generation has grown in scope and complexity, so has its fictional technology made staggering scientific advancements, so that one trade paperback can barely contain it all. Appropriately, the interactive CD-ROM version is filled to its shiny-silver brim with panoramic scenes, computer animations, photos, schematic drawings, movies, text and spoken narration.

The manual is not a game, and game players may, at first, feel slightly frustrated by the program's slow pace when compared to an action adventure. Your trek kicks off with an 11-minute tour through the ship, narrated by Jonathan Frakes speaking as First Officer William T. Riker. Less than a quarter of the screen is used to display actual footage of the Enterprise, while the remainder is reserved for technical information and the standard Next Generation computer-screen graphic display. Riker's tour provides some personal observations by the first officer, and briefly touches on each of the main sets available for your inspection. Once Riker disappears, you're left alone with the Enterprise and your baby-boomer buddy, the computer.

It is to the exterior hull of the 1701D that the program will first take you. Here, you can see a wonderful, eye-pleasing model of the ship at any angle. While you can do so only from a fixed distance, extensive menus and sub-menus allow you to see close-up views of certain key features. Schematic diagrams are also used to display some components that are not easily seen on the ship's exterior. Like much of the information that appears throughout the Star Trek Technical Manuals, it is impossible to tell if each item was lifted from one of the many Star Trek episodes, or if it was composed specifically for the trivia-hungry minds of inquiring Trekkers who have purchased the manual. However, certain "behind the scene" pieces of information serve to remind us that we are still talking about a TV show.

The Enterprise's bridge, the captain's ready room, engineering, the transporter room, sickbay, Ten Forward, the observation lounge conference area, and the holodeck are all available for detailed study. Using the holodeck, you will be able to examine the interior of a shuttlecraft, but most users will be magnetically drawn to the living quarters of Captain Picard, Lieutenant Commander Data, Counselor Troy and Security Officer Worf. Each room is home to several locations into which you can stick your prying nose. In Data's room, you can peruse his art work; in Troy's quarters, you can free associate while staring at her meditation candle; and in Worf's room, you can browse his spiritual icons. Each location can be slowly panned all the way around, as well as 45 degrees up or down. You may also zoom in or out, so
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that nearly every control panel and ventilation duct, no matter how tiny, can be inspected with a full-screen. The video is generally quite good, and there are some great sounds to be found, such as the business-as-usual bleeps and clicks heard on the bridge, and the familiar, deep vibration of the massive machinery down in engineering.

Each technical area contains its own system of menued and sub-menued information which relate to the ship’s systems. The subjects are cross-indexed so that those systems which relate to more than one area of the ship may be followed from one control center to the next. The information is often presented as schematic diagrams or as panels of hyper-text. Highlights from the text are read aloud by Majel Barrett Roddenberry in what has arguably become the most recognizable of her many-faceted Star Trek roles, the voice of the NCC1701D computer. Often, illustrative video clips of the ship in action are hidden amongst the text and drawings. As you might expect, the various living quarters contain far less technical data, but the computer still offers descriptions or explanations of whatever personal items you might find there.

The key to fully enjoying the Interactive Technical Manual is to seek out and explore its “hot spots.” These are areas on the graphic screen which, when selected, will provide an opportunity to study that area in more detail, or bring up a list of sub-headings and related topics. Some very special hot spots, generally located on one of the Enterprise’s many control panels, react as though you had actually pressed one of the ship’s more important buttons. You will be able to fire photon torpedoes as well as set off a near-disaster down in engineering. These Federation Easter eggs are discovered by slowly moving the mouse-driven cursor over the graphic screen until the cursor transforms into a different shape. Unfortunately, these transformations can be slightly erratic, leaving you to wonder whether some otherworldly being might not be testing your intelligence, if not your patience.

Many of the Enterprise’s control panels can be isolated and enlarged for close inspection. Because many of these screens made only the briefest of cameo appearances during The Next Generation’s seven year run, many of the show’s followers will enjoy this chance to get to know them better. Instruments and equipment in sickbay, while possibly somewhat intimidating, are also particularly fascinating. Many objects, through some very impressive three dimensional modeling techniques, may actually be picked up and examined from any angle. These include hand-held phasers and some of those flat data-screens that the crew is always reading and handing around to one another. You may also discover what an insignia communicator pin looks like from behind.

The Interactive Technical Manual is very sensitive to processor speed. Originally programmed for the Apple Macintosh, it uses Apple’s QuickTime 2.0 video playback software in the Windows version, and the new QuickTime VR for the Mac. Although it will run on a 386 processor, owners of 486 or Pentium-based computers will certainly be in for a smoother ride. In any case, you should be prepared for at least some slow transitions between screens.

More than anything else, this program has the feel of a giant, computerized coffee-table book. While it is difficult to imagine that Star Trek followers will be able to resist the idea of a close-up tour of the Enterprise, some may find that the scope of the project was so ambitious that no execution could possibly measure up to it. Others may find it a hollow experience without the characters who normally populate the beloved starship. It is unlikely, however, that any of us will receive an invitation to sail out from Captain Picard’s window, or up at the star-filled ceiling from Counselor Troy’s bed. There is certainly quite a bit here that we won’t ever find in any other Star Trek collectible.

**THE EDITORS SPEAK**

**STAR TREK INTERACTIVE TECHNICAL MANUAL**

**RATING ★★★★★**

**PROS** Contains a wealth of Star Trek trivia delivered in high quality pictures and videos.

**CONS** Moves slowly on most systems, and the interface has its strange moments. The Enterprise can also be a little lonely without its crew.
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Playskool Visions And Psychedelic Dreams
Fisher-Price Meets Surrealism in Electronic Arts’ RELENTLESS

by Charles Ardai

Some games are great because of their strengths, others in spite of their weaknesses. RELENTLESS is a fine example of the latter.

Starting with an inappropriate title, which describes neither the game’s storyline nor its gameplay, and a peculiar surfeit of subtitles (where most games have none, this one has two: “Twinsen’s Adventure” and “Little Big Adventure”), RELENTLESS is a game with which no one will have difficulty finding fault. The slanted overhead perspective makes it hard to maneuver your character around obstacles. The game lacks a serious save-game function, meaning that you have to replay most scenes numerous times before reaching an unspecified milestone point. The music sounds like something lifted from a TV western. The graphics make it look like you’re wandering around a planet built by Fisher-Price: rectangular plastic blocks, conical plastic trees, stiff-jointed plastic people.

The storyline is a bizarre blend of kiddie-book pap and police state science-fiction—“The Spheroids, the Rabbit-bunnies, the Quetches, and the Grobos...all lived in harmony until a tyrant named Dr. FunFrock reared his ugly head...” There are elephants who blast you with tennis balls shot from their trunks and giant deer that talk in tipsy Roger Rabbit voices, but there are also hooded, sadistic bullyboys who backhand you across the face if they catch you breaking out of prison and bayonet-brandishing guards who will run you through if given half a chance.

It’s confusing, all right. The cutey graphics will make serious gamers roll their eyes, while the game’s nasty streak will make cautious parents think twice before buying RELENTLESS for little Johnny or Mary Sue. Putt-Putt Goes To Mars is ain’t: it’s more like Putt-Putt Goes To Sing-Sing, with just enough Putt-Putt to frighten away some gamers and enough Sing-Sing to scare off the rest. Even the brave experimenters who remain may take a look at the odd keyboard control scheme they have to learn (<F2> puts you in “Aggressive” mode, <F3> in “Athletic”) and bail while the bailling is good.

Who’s left? Reviewers, who have to see these things through to the end. It’s a lucky thing, too, since we’re the ones who can let you know that in this case first impressions are deceptive: once you familiarize yourself with the controls and the milieu, RELENTLESS is a terrific game.

ALONE IN THE LIGHT
Gamers who have played I-Motion’s ALONE IN THE DARK will probably be among the first to find RELENTLESS familiar. On the surface the two games may appear to have little in common—ALONE is a Gothic horror game derived from the works of H.P. Lovecraft, featuring dynamically shifting camera angles and origami-style graphics constructed out of large polygons, while RELENTLESS is a colorful fantasy featuring credibly threedimensional graphics and only a single, over-the-shoulder camera angle. In practice, though, starting with the non-trivial fact that both titles are of European ori-
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Circle Reader Service #274
gin, they have a number of similarities.

Keyboard control is surely one of the most significant. You can put away your mouse and joystick for this one; the cursor keys are all you'll need, left and right to turn your character in place, forward and back to get him walking. Shift activates your inventory while pressing the space bar initiates whatever action is appropriate to the situation and mode you are in.

There are four of these "modes" for you to choose from, including "Normal" (in which you can walk quickly and search through things like chests, barrels, and lockers), "Athletic" (in which you can make great leaps), "Aggressive" (in which you can lash out at friend and foe alike with vicious punches and kicks), and "Discreet" (in which you can crouch and crawl and creep about and generally make a great unnoticed spectacle of yourself). "Aggressive" mode comes in two flavors, "Auto" and "Manual," but since it's hard enough to get your character, a bob-tailed Quetch named Twinsen, lined up on the correct angle with his opponents to land a punch, I recommend steering clear of the "Manual" option.

Twinsen starts out imprisoned in an Asylum on Citadel Island, one of the primary land masses of an alien planet called, for the sake of further confusion, "Twinsun." If Twinsen knocks out his guards and scurries up to the second level, he can trade his prisoner's stripes for warder's garb, recover his ID card and hologlobe (a nifty mapping device that allows you to survey the entire planet at a keystroke), and sneak back to the outside world. Stowing away in a load of garbage will get Twinsen past the trigger-happy front gate guards. More sneaking will get him to his home, a secret network of interconnected sewers, a buried treasure linking Twiensin to a forbidden form of goddess worship, and a ferry that can help him fill in the blanks on his hologlobe.

Now that we've got Twinsen skulking about in dank cellars and digging up artifacts of ancient, unholy religions, the resemblance to ALONE IN THE DARK is probably easier to see. To make it still easier, a trip to the "Advanced Options" menu allows you to turn down the graphic detail a notch and—voila!—there are ALONE's polygons, only much smaller and in greater abundance. That Twinsen, with his slapping ponytail and hippity-hop gait, is made out of the same origami voodoo that brought us I-Motion's stiff French detective and triangular hellhounds is perhaps RELENTLESS's greatest accomplishment.

Indeed, the graphics in RELENTLESS are, if anything, over-polished, with that waxy gloss that super-refined computer graphics can sometimes get. They are also weird: fluid animation makes up for a lot, but I was reminded of nothing so much as the dated stop-motion puppetry of TV specials like "Santa Claus Is Coming To Town" and "Rudolph The Red-Nosed Reindeer." On the whole, though, the effect is an appealing one: you're plopped down in a graphically rich environment, supplemented here and there by full-length animated sequences showing us the various characters in close-up and the sense of being inside an alien world is convincing.

Sound effects are undertaken with an equal measure of vigor but considerably less success. Twinsen's footsteps echo...
The evil Commander Borf has kidnapped Ace's girlfriend, the beautiful Kimberly, and is plotting to enslave the Earth by means of his dreaded "Infanto Ray", a weapon that changes everyone it blasts into a helpless baby.

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Featuring full screen animation and crisp, powerful sound from the original laser disc arcade classic, Space Ace plunges you into intense, non-stop action.

The fate of Earth is in your hands.
like coconut shells clunked together to make horse sounds. His grunts and groans while engaged in any strenuous activity (such as walking with his fists raised) sound dyspeptic. His voice makes him sound like as much of a doped-up Zen surfer dude as his bitchin’ ‘do and hi Zippy the Pinhead features make him look. Meanwhile the other characters all sound like amateurs trying to do cartoon voices.

To build up suspense, the sound effects man occasionally smashes cymbals in your car or plucks a bass string loudly. The technique is, shall we say, somewhat less successful at setting a mood than ALONE IN THE DARK’s similarly used wolf howls and creaking floorboards were.

One nice side to the soundtrack is that if the English voices displease you, you can re-install the game so that it speaks French or German instead. Just wait till you hear the rabbidunnies squeaking at you en Français. If the game wasn’t surreal enough before...

THE TWINSUN ALSO RISES

Successfully navigate the game’s half-dozen-or-so islands, some of which contain large, Ultima-worthy towns and others of which are no more than a few yards across, plus the snowy Hamalayi fortress and a mercifully brief stay amid the blasted vegetation of the White Leaf Desert, and you can save Twinsi from its threatened subjugation and/or destruction. Fail, and...well, you really can’t fail, since the game kindly restarts itself any time you perish or get caught. The fact that each time this happens you get kicked back to an earlier point in the story and have to fight your way through scenes you’ve already beaten and really don’t want to go through again is more than mildly annoying, but less than unbearably so. RELENTLESS is not the first excellent game to make this mistake—Broderbund’s PRINCE OF PERSIA comes to mind—and I don’t doubt that it won’t be the last. There is probably a good technical reason why designers design games this way, though this is small comfort when you’re banging your head against the monitor and praying that you’ve gone through the Temple of Bu for the last time. Suggestion for RELENTLESS II: let the player save the game anywhere he wants to, even if it means making sacrifices in other areas.

Oh, and ditch the title. A game like this ought not to be saddled with either the DOOM-like overtones of “Relentless” or the thumb-sucking sweetness of “Twinsi’s Adventure.” RELENTLESS is neither sweet nor relentless. It’s tough and tricky, expansive and intriguing, confusing and infuriating, not to mention addictive as all get-out. Electronic Arts could choose one of those adjectives, or all of them if they prefer—it’s worth it, if it helps stave players’ curiosity long enough for them to realize that they are playing one of the most enjoyable games of the season.

THE EDITORS SPEAK

RELENTLESS

RATING ★★★★

PROS Though it’s surreal as can be, the world looks great and feels real, and you end up caring about your poor little Quetch.

CONS There’s only so much surrealism a person can stomach—and more user-friendly gameplay might have been nice.
YOUR ticket to an EARTH shattering adventure...

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When Men Were Men And Dragons Were Dragons

Medieval Fantasy Opulence In The 3D-Studio World Of DRAGON LORE

by Peter Olafson

High art and high gameplay do not suffer each other gladly. They are not friends so much as acquaintances who share a ride to work. Oh, the one may sometimes spring for the morning coffee. And the other may occasionally hand over the sports section without having read it first. But when they get to the office, the coffee drunk and the paper read, one's the boss and one's the drone and never the twain shall meet. (except perhaps after hours in DOOM).

Mindscape's DRAGON LORE is at once a demonstration of the new-found promise of, and the enduring limitations to, the alliance of game and glamour. This high-gloss fantasy adventure, created by French developer Cryo and Mindscape's English division, couples a richly-appointed environment to a deceptively simple point-and-click adventure. It is a good game—though not, I think, a great one—whose basic puzzles and technological exoticism should please beginners and whose open-endedness may draw in more seasoned gamers.

And yet, like so many CD-ROM games, DRAGON LORE is also something of an empty suit. It's great girth contains better than 1.2 gigabytes of data spread across two CDs. Filled with deep and affecting beauty, it has a certain ornate, mystical charm. But it lacks the detail, and the level of interactivity, for complete satisfaction. It's rather like visiting a very large historical mansion: Please follow the yellow line on the floor, and stay behind the velvet ropes.

THE RITES OF SUCCESSION

As Werner Von Wallenrod, you become an 18-year-old farmer-in-the-making with a great shock of red hair, something of an attitude and an outfit that appears to have been made from a tablecloth. Like so many heroic young men in computer games, Werner is not quite what he seems: He is in line to become a Dragon Knight. This is an exclusive club, with only 12 living members; and while the prospective knight doesn't require a sponsor (Werner's natural father being a Dragon Knight and all), the membership will put his admission to a vote.

The vote is an especially nice touch. It echoes MASTERS OF ORION (with which DRAGON LORE otherwise has nothing in common) in that it keeps your eyes constantly on the end and on the Big Picture, rather than simply whatever colorful puzzle is before you. Adventures often aim for an epic sweep, but wind up existing in fits and starts, and anything that encourages a world view should be embraced.

Essentially, what you're doing in DRAGON LORE, the first in a planned series of games, is making a case for yourself and influencing people by your actions. The knights watch your progress and judge your suitability on a scale ranging from violence (you solve problems at sword point) to wisdom (you work through them inventively using your inventory). You may view the scale at any time to judge your progress, and the puzzles build in pleasant fashion. If Werner succeeds, he joins this elite fraternity, buys some proper clothes, and we all get around to the business of waiting for DRAGON LORE II. If he fails... well, it's not quite clear, but it involves flames and falling, and it doesn't look like fun.

You'll quickly begin to get a sense of where the balance of knighthood opinion lies, for you will occasionally cross paths with other Dragon Knights. They appear to wander about idly at fixed locations, but evidently are keeping tabs on you nevertheless. The knights are a varied lot—ranging from samurai warriors, to a Kate Moss look-alike, to a blue woman with Grace Jones eyebrows and KISS...
makeup, to a dragon rider—but most seem sociable enough. You can speak to them after a fashion—it's a one-way street—and they'll respond in slow, sonorous tones and tell you something of their orientation on the Violence-Wisdom axis. (Disconcertingly, when they finish speaking, their lips continue to move—rather in the fashion of old-fashioned computer-baseball outfields whose legs continue to cycle against the wall after a home run.)

Now, this will seem pleasant but predictable until you come upon a handful of enjoyable complications. One is that, along with the rights to the title, you’ve inherited your father’s feuds. There is one Dragon Knight, Diakonov, that does not love a Von Wallenrod either vile or wise.) And if you find the ring of a dead knight, Fujimoto, you can cast its accompanying proxy in your favor.

Finally, as with the puzzles, all is not set in stone. Once you learn who’s for you and against you, you can effect the vote's outcome by selectively killing off those likely to oppose you—an ethically-suspect but nevertheless inspired touch designed to encourage replays. The designers have given the player some fire-breathing room in DRAGON LOR. And that's more than can be said for many of its do-it-this-way-or-not-at-all predecessors.

So, after errands to retrieve a bowl and cow for your adopted father (and familiarizing yourself with the game’s basic mechanisms), you’re off into a wide 3D Studio world. Movement within a given area is handled in increments, rather in the fashion of Myst. This isn’t click-and-wait; these splendidly rendered scenes dash by almost as quickly as you can click the mouse, and since you’re within an environment (rather than just looking at pictures of an environment), it’s often enjoyable to look around you before moving on.

When Werner moves between regions (or simply through a portal), you’re in for another treat. The hard drive shivers briefly, the screen telescopes to about two-thirds of its normal size and off you go, whipping along to the next area in a first-person free scroll at positively gleeful speed.

If the house in The 7th Guest had a particularly expansive garden, it might be a bit like this. The fly-by is a seamless and utterly beguiling experience—if an utterly non-interactive one—and may well be what sells DRAGON LOR to novice gamers. And even an experienced gamer may take decided pleasure in being allowed to so travel. If the whole game was like this, we might begin to wonder who was actually playing here—as or the computer—but these bits are sensibly intercut with player-controlled movement. Besides, as we’ll see the game is relatively spartan in terms of obscure objects of desire, so it’s not like you’re missing much.

Beauty is not at issue here. DRAGON LOR is gorgeous: a virtual art gallery. The flat countryside is ringed in inaccessible gray-green mountains. Mist always seems to hang in the middle distance (a shrewd move that allows the game to maintain atmosphere without preserving great depth of field) and the sky always promises a storm. There is an abundant sense of being in a different world, and a vague yet imminent sense of dread hangs over the proceedings.

But beauty is, as they say, only skin deep, and once you get under DRAGON LOR’s skin, you'll find it does not give you much room to simply explore or much to find when it does. Anything you don’t strictly need isn’t given the time of day here, and hence the scenery is to a great extent non-interactive.

That may be in some measure a function of the labor-intensive quality of the game’s graphics—the more elaborate the look, the more time it takes to generate extra material—but it also makes DRAGON LOR something of a tease. The books on the shelves up in that high riverside tower? Out of bounds. The contents of the barrels in that witchy treehouse? Mind your own business. Those interesting green beakers and artsy furniture in the sprite’s woody home? Not available to you, sir.

Sometimes you can’t even touch the ground. Characters have a tendency to look as though they are sliding over surfaces rather than walking on them. This is especially notable in the third-person perspective when Werner’s fleeing a giant stone ball (oh, please, can someone please invent a new dungeon trap for computer games to rip off?) or piloting a barge across a lake.

And most of the Dragon Knights’ abundant history is in the documentation, rather than in the game. As Alone in the Dark showed, it’s possible to create a fast-moving adventure and include all sorts of extraneous but interesting material. At times, the game seems almost uninhabited.
THE ROAD NOT TAKEN

Dragon Lore can also be irritatingly fussy about where it allows you to walk. You're rarely permitted to take more than one or two steps off the beaten path without a clear purpose in sight, and often even those two steps lead nowhere. Other times, the way before you may appear clear, but you'll often need to detour anyway to conform to the game's internal map. This becomes downright confounding in places like the sprite village, where you can appear to walk through buildings, but sometimes not through apparently clear terrain.

Consider the Stonehenge-like archway you'll find early in the game. It is blocked by a spider's web. In the real world, you'd just walk around it, since it's out in the middle of nowhere. Well, you can't here. The game won't let you, even though there's plenty of space around the sides. Evidently, they really, really want you to solve this puzzle. But then why not position the archway at a narrow pass, or at least conjure some magical barrier as an excuse for having to use it?

Difficulties aside, movement and commands are handled very nicely via the mouse and a dragon-shaped cursor. If the dragonbeckons in a particular direction, then you can turn that way. A right click on a person starts a one-sided chat, while one in the upper-left corner opens a graphic inventory. One drawback: The same right-click command used to strike up a chat is also used to strike a blow if you have a weapon readied. Keeping a weapon at the ready is pretty much SOP for gamers, and more than once I found myself inadvertently redistributing brains I just wanted to pick.

You can attack anybody—nice guys included—and sometimes, of course, violence is called for. (If you need an item in a monster's inventory, you're going to get it only over said monster's dead body.) Much like movement, combat here is scripted (the tactic depending where you click on the screen), but there are enough moves that it doesn't feel limiting.

The monsters themselves are a mixed lot. The dogs look like buffalo. The scorpion resembles a lobster. The Dragon Knights look rather like the mannequins that museums often use to display historical costumes. But they get better, and you'll set those opinions aside once you fight a raspy, halberd-wielding skeleton that goes down with a wonderful clatter of bones and armor. A giant Venus fly trap comes to horrifying, lunging life when attacked, and so vigorously does it defend itself, that it may take a while to sort out that fighting's not the way to go here.

Dragon Lore is certainly a step forward for CD-ROM adventure games. There really is a game in here, and a lovely-looking game at that. But it's a step taken while following the yellow line on the floor. The velvet ropes are still in place; but now, at least, they're swinging.

THE EDITORS SPEAK

DRAGON LORE

RATING ★★★☆☆

PROS To go along with the tremendous graphics, the designers have tried to go one step beyond the current state of "multimedia" storytelling by creating a richer world with more meaningful game options.

CONS Unfortunately, one step is not enough. The world is still a bit too empty and non-interactive.
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Metaltech: Earth Siege Puts The Earth On The Line

by Jeff James

Early a decade ago, FASA Corporation released Battletech, a futuristic pen and paper game based on the megameldowns to be seen in Japanime's cyborgian cataclysms and robotic ragnaroks. Battletech immediately established a loyal and ardent following of players. The FASA game pitted players against each other in small squads of piloted war machines, skirmishing on the war-ravaged battlefields of the future for enough territory to assure each "house" of a tentative peace and sufficient salvageable parts to keep their antiquated Battlemechs running.

In the West, the idea of anthropomorphic "walking tanks" has been given credibility by a number of movies, most notably the huge Imperial walkers in The Empire Strikes Back and the malfunctioning ED-209 robot in the Robocop films. Several attempts have already been made at translating this sub-genre of science fiction into a computer game, with Activision's Mechs and Infocom's Battletech: The Crescent Hawk's Inception being two of the most notable releases. With the major delay of Activision's much-anticipated and oft-delayed Mechwarrior II, Dynamix' new Metaltech: EarthSiege emerges as the front runner in a soon to be competitive field.

A "TERMINATED" PLOT

The story of EarthSiege takes place a few hundred years in the future, after humanity has perfected computer-controlled fighting machines: Cybrids. Due to the advance of Cybrid technology, a new army race ensues, eventually resulting in a global nuclear holocaust. Even before the radioactive ash begins to settle, the Cybrids decide that they'd be better off without humans, so they turn on their creators and begin systematically destroying the scattered remnants of the human race. As a member of the human resistance, you must struggle to win back control of the Earth from the machines. Astute readers will immediately recognize this story as a near carbon-copy of the Terminator films, with giant computer-controlled fighting machines (Cybrids) taking the place of human-sized computer-controlled fighting machines (Terminators). The setting works for the game, but definitely doesn't win any points for inventiveness or originality.

Cybrid-Bashing 101

EarthSiege is broken down into two main modes of play: single mission and career. Obviously, it's a wise idea to get plenty of practice playing single missions before putting your Herculan (HERC) fighting machine at risk in the dangerous career game. The single mission games allow you to practice a wide variety of mission types, ranging from fast recon missions to hard assaults on heavily-defended Cybrid bases. You're given free reign as to what HERCs you can take on your missions, and you're also provided with a wealth of program options to tailor the difficulty of single mission games to match your skill level.

In the career mode, you're given command of a small, four-person squad of HERCs. Consisting of 45 interconnected missions, your ultimate goal in this mode is to defeat the Cybrids and return control of the Earth to the human race.

Regardless of whether you choose the career or the single mission play option, all the action begins at your base, with...
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your round HERC technician prominently in view. At the base, you can choose from the different HERC types available. In the single mission games, you can choose any of the nine available HERCs with which to take on your mission. In career mode, only a few light HERCs are available at the outset, with more powerful HERC types being added as the game progresses. Some HERCs are ideally suited for fast recon missions (such as the Roadrunner and the Outlaw), while others excel in defensive (Patriot) and heavy strike (Samson, Colossus) roles. Matching the correct HERCs to your mission goals is an essential element of success and equipping the right HERC with the correct weaponry is also vital. Fortunately, a panoply of high-tech armaments are available, ranging from the lowly (but effective) autocannon to the deadly electron flux cannon, which sprays your target with bolts of lightning.

**ROCK 'EM, SOCK 'EM, ROBOTS**

Once you've started a mission, your viewpoint shifts to the cockpit of your selected HERC. Here, a battery of keyboard, mouse or joystick commands allows you to accelerate, arm weapons, track targets, and view a detailed report on the status of your system. Depending on the model of your HERC, you can have up to nine weapons available at once. Since your vehicle has a limited supply of energy in its "master energy pool," you'll have to effectively manage your weaponry to maximize your chances for success. Crucial to this endeavor is the concept of "firing chains." Instead of firing all your weapons at once, thereby depleting your energy reserves, you can assign certain weapons to fire together in a sequence. For example, you could have your missile launchers in one chain for long-distance combat, while your autocannons and lasers are on another chain designed for close-in combat.

You'll have plenty of opportunities to try out your tactics, as the Cybrids field an impressive number of fast and deadly units. From flying landskimmers to ground-pounding Cybrids, they are certainly the equal of your own HERCs. That's one reason you don't operate solo. You operate with up to three other friendly HERCs to help achieve each objective. So, by using a brief list of commands, you can order your comrades to patrol designated waypoints, attack certain targets, protect you when you're under fire, etc.

Although your fellow HERC-drivers will usually follow your orders to the letter, don't expect any miracles. Most charge blindly into combat regardless of the pilot's skill level, gleefully marching into their doom via a concentrated hail of enemy fire within the first few minutes of a mission. They frequently run between you and the Cybrid you're shooting at or expend all their ordnance (missiles and cannon shells) within the first few minutes of a mission. Needless to say, keeping constant tabs on what your cohorts are doing is of vital importance.

To make matters worse, effectively controlling your own HERC requires an excessive amount of practice. Even the fastest HERCs seem a bit on the pokey side, making most battles deteriorate into toe-to-toe slugfests where the last HERC standing becomes the default victor. Trying to keep an eye on the tactical situation while keeping your HERC moving, shields up, firing chains in order, and enough evasive action to avoid sudden death at the hands of the Cybrids (who don't have to worry about things like hand-eye-coordination) will keep even an expert gamer's hands full. Throwing in the added burden of shepherding your dimwitted compatriots, and you're destined to get blasted into a smoking pile of HERC droppings. Mouse and joystick controls alleviate this to some extent, but not much. Some gamers may relish the real-time challenge (as I did), while others will be simply overwhelmed by information overload.

**PRETTY PICTURES**

Even if you are having trouble staying alive in the EARTHSEIGE gameworld, the stunning graphics and animation will at least make you enjoy the scenery during your brief stay there. Each HERC and Cybrid vehicle is wrapped in a detailed texture-mapped skin, replete with insignia and the patchwork-effect of overlapping armor plates. EARTHSEIGE uses a modified version of the same game engine employed in AGES OF THE PACIFIC and AGES OVER EUROPE, featuring very impressive animation and graphic detail. A variety of terrain and weather effects are implemented with flair, such as units gradually appearing out of thick curtains of fog and moon-light battlefields during night-time missions. The eerie walking motion of all the HERCs is a joy to behold, from the ostrich-like gait of the Roadrunner to the methodical plodding of the Colossus. Music and sound effects are used effectively throughout the game, including a satisfying elephantine stomp when your HERC's heavy footpad slams into the ground. The game worked fine when used with a Sound Blaster 16 sound card, although I did have some trouble getting it to work with a Creative Labs AWE32 using general MIDI. Dynamix reports that a patch is in the works which will fix these and other problems, and should be available as you read this.
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HERCULEAN HEADACHES

Gorgeous graphics aside, Earthsiege suffers from a number of problems. The single biggest problem is the difficulty of the career missions. Unlike single missions, which offer a host of playability and configuration options, the career option is limited to one difficulty setting: hard. About half of the missions are of average difficulty, while the other half will even give experienced gamers a chance to experience considerable amounts of frustration. The problem is two-fold. First, some missions are impossible to complete without losing several HERCs to enemy fire. This leaves the player with an ever-dwindling supply of units to face evermore difficult missions, resulting in the player experiencing yet more failure and frustration. Secondly, the game seems to take little heed of failed missions. In its current state, gamers can play through the entire 48-mission career game by aborting roughly two-thirds of the missions. The only time players may need to engage in combat is for salvage (in order to build new HERCs and repair damaged ones) and to complete the paltry few "must-win" missions. At worst, players who adopt this strategy will receive a tongue-lashing by their CO and will obtain new HERCs and weapon types a mission or two later than normal. This combination of overly difficult missions and consequence-free mission failures results in players skipping missions in an effort to get an "easy" one, bypassing large portions of the career game in the process. Any game which rewards players for not playing has serious playability problems.

In addition to the career playability problems, Earthsiege is saddled with a host of tiny, but irritating, glitches and questionable design decisions. The turning radius and firing arc of most HERCs is appalling, making an already difficult game even more so. During the career game one of your pilots may get killed in action, only to be eventually resurrected, given a minor name change (i.e., "Braxton" becomes "Braxton 1") and inserted back into your squad. You're also given the ability to change the HERCs your pilots drive, but you can't change the pilots available for each mission. For example, in a mission involving two HERCs the game selects the other pilot for you, preventing you from choosing him yourself. As is, rookie pilots remain unskilled and expert pilots are more likely to get killed in combat.

JUDGMENT DAY

Despite the aforementioned shortcomings, Earthsiege emerges as the best attempt yet at creating a futuristic simulation of giant armored combat; of course, it's also the only game of its kind to come out in the last few years. The stunning graphics and animation are clearly a large step forward in the genre, and the design team's attempt at making the HERCs as believable as possible is clearly evident. A program patch is in the works, and additional Battlesets will become available, hopefully alleviating the chronic difficulty problems. Earthsiege has the potential to become a great game, a potential unfortunately thwarted by poor career-mode playability and a number of other problems. Die-hard fans of the genre may be able to overlook the design flaws, although less-interested gamers would be well-advised to wait for the arrival of the promised program updates before buying.

THE EDITORS SPEAK

METALTECH: EARTHSIEGE

RATING ★★/2

PROS Eye-popping graphics and plenty of hi-tech 'mech hardware make Metaltech: Earthsiege the biggest 'bot on the block.

CONS Of course, it's currently the only 'bot on the block. The storyline is not only derivative, but not at all developed in the game. Overly difficult career missions (without difficulty settings) and a host of irritating design details.
This one you won't want to miss.

It’s been nearly three years in the making with a budget we won’t even talk about. It employed a team of over a hundred people, including programmers, artists, musicians and writers as well as Hollywood make-up and special effects houses (we liked the flames in Backdraft™ so we hired the movie’s special effects house to bring in a little heat). As the creators of Wasteland™ and The Bard’s Tale™, our goal was to produce a game every bit as innovative and unique. We think you’ll like the results.

Art and Stuff
Graphically, the game is state-of-the-art stunning (we’re a little biased but check out the screen-shots for yourself).

We used a combination of live actors and computer generated creatures with Silicon Graphics environments and magical effects which were painstakingly rendered down to the finest crack, doorway and magical lightning storm.

The Box, the Book and Story
The packaging is every bit as cool as the game.

Shipping in a special tombstone-shaped, hologram box, the package starts you on your quest “through dark corridors, treacherous sewers and subterranean realms of faeries, magick and the living dead.” (We had to throw a bit of marketing hype in here somewhere.) Along with the skeleton hologram cover, you also get a limited edition, hard-bound Stonekeep novel by Steve Jackson and David Pulver.

Interplay™
“By Gamers. For Gamers.”™ is Interplay’s slogan and Stonekeep is the kind of game we’ve always wanted to play.

It looks cool, sounds great and tells a good story. It’s one of those games you’ll stay up playing until three in the morning on a work night. Basically, it’s just a lot of fun.

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Metal Kombat

Time Warner Takes On Arcade
All Comers In RISE OF THE ROBOTS

by George Jones

PC gamers who enjoy coin-op fighting games haven’t had a whole lot to quench their thirst for hand-to-hand violence. The PC conversion of STREET FIGHTER II was pretty rotten, and that of MORTAL KOMBAT was fairly decent, but there hasn’t yet been a game this side of cartridge systems that has landed a solid punch and a creative round-house kick.

It’s no surprise, then, that RISE OF THE ROBOTS has been eagerly awaited by fans of the fight. Promising 3-D graphics that would put most arcade games to shame, there was no doubt that this STREET FIGHTER clone would look good, and from preliminary indications, the promised game play would be cool too. After much hype and anticipation, Time Warner’s futuristic side-view fighter is finally here. Frankly, I couldn’t wait to wade into the fray, metal limbs a-flyin’.

In the setup story of RISE OF THE ROBOTS we find that things are amiss at the completely self-sufficient ElectroCorp manufacturing complex in Metropolis 4. Somehow the head robot, known simply as “The Supervisor,” has been infected with the wicked Ego virus. Her behavioral programming has become completely restructured so that she derives a great deal of joy from destroying things. As a consequence, she has shut down the factory and has begun to reprogram all the other robot workers with her own Destruction/joy program.

That’s the storyline, such as it is. As the ECO 35-2, a unique bio-mechanical cyborg with a human brain, you’ll be facing five of The Supervisor’s most powerful mechanized mates. Defeat the five of them, and you’ll face the Supervisor herself in a winner-take-all showdown.

LOOKS GREAT, LESS FILLING

Breaking with tradition, RISE OF THE ROBOTS’ high-resolution graphics and animation look just as good during game play as during the cinematic splash screens. The robots were rendered using 3-D STUDIO, so all of them exist in a true three-dimensional environment and can be rotated or lit from virtually any angle. This means that each of the six deadly enemies move smoothly and realistically as they try to turn the little Cyborg into a tin can. It also means that computer gamers can use this game to quiet cartridge game devotees, who argue that the PC will never be as good an arcade platform because it can’t combine fast action, large, attractive graphics, and entertaining game play. Well...two out of three ain’t bad.

Action enthusiasts jazzed by the sharp look of RISE OF THE ROBOTS may be disappointed once they actually start playing the game. For some reason, the designers decided to completely turn their backs on the successful formula used by legendary games such as MORTAL KOMBAT, STREET FIGHTER, and even KARATE CHAMP. While you have some of the usual range of motions, moving left and right, jumping, and ducking, fighters can’t flip over each other, and can perform only 6 kinds of attacks. So, not only must you fight the whole time from one...
It's not just a game.

It's an infection.

Your name: Sol Cutter. Occupation: data thief. The bad news is you've just down-
side of the screen, but you have a minimal repertoire of ways to inflict pain upon your opponents. The fact that there is only one attack button is to blame here. It's too bad that Time Warner didn't use the arcade standard: one button for punch and one button for kick, with blocking accomplished by moving the joystick away from your opponent. While the one-button system does make the game easier to play when using the keyboard, it's unnecessarily frustrating for players expecting real coin-op action to go with the coin-op style graphics.

RISE OF THE ROBOTS does have some fine moments. Each robotic opponent has a unique war-cry, and the sounds in general are well-done. The rich ray-traced environment is filled with sparks and metal flakes flying from each blow, and the screen jolts with every leap of the fighters. Your various enemies even seem to possess sufficient artificial intelligence to figure out your fighting strategies, and tailor their own strategies accordingly. Which brings me to another of my complaints: the special moves of each robot are entirely too difficult to figure out. The game manual lists which buttons to press, but gives no indication of the timing necessary. After getting my bolts loosened a few times, I figured out that the key is to perform the required actions in each sequence quickly. Now, I'm all for a good challenge, but the docs should at least prepare you properly for the reflex-intensive task at hand.

1. ROBOT

Even after you figure out the interface controls, the enemies in RISE OF THE ROBOTS will provide you with worthy competition. With the exception of The Loader, a converted forklift, expect a few losses before you learn how to beat your other four adversaries on your way to the top. The fighting arena is so small (the width of one screen), and the enemy robots so big, that it is really hard to beat tinheaps with long reach like The Crusher. The special moves are key during these fights—if you can't perform them, you're not going to beat anyone. After losing to The Crusher 15 or 20 times in a row, you'll be tempted to perform your own special attack: the enraged head-but to the monitor maneuver.

When you finally defeat the Fearsome Five, then you'll really know futility at the hands of The Supervisor. This nightmare is able to morph into various shapes, guaranteed to have you howling in agony time after time after time. There doesn't seem to be any simple way to defeat this Terminator 2 clone, so you just keep bashing away. When I was finally successful, it was one of the happiest moments in my gaming life, ranking right up there with when I finally beat Jordan Mechner's KARATEKA.

The other game play options include training and two-player modes. The latter is the most fun, since you can pick any of five robots (The Supervisor is off limits to humans), and duke it out with a friend. The training mode is also a fun way to blow off some steam, although a little frustrating in that if you don't choose The Cyborg as your fighter, you have to fight against him. This means that you can never fight as The Military versus a computer controlled Sentry. However, there is one very good thing about the training mode; you'll feel a whole lot better about your hand-eye coordination after you unmercilessly thrash the Cyborg with the lowest robot of all, The Loader.

I really want to like RISE OF THE ROBOTS, despite its flaws. With its graphics, it could have easily become the kind of game that rivals other games in its class. But there are just too many limiting aspects to this game for it to hold gamers' attention for very long, the saving grace being the two-player mode (but that, of course, requiring a friend willing to play). Although RISE OF THE ROBOTS is gorgeous, very gorgeous, it doesn't have quite the riveting arcade action needed to stand in the same ring as others in the genre.

THE EDITORS SPEAK

RISE OF THE ROBOTS

RATING ★★★★★★ ⅓

PROS Hot graphics that would warm even the heart of a robot.

CONS Limited moves, limited space in which to fight—just plain limited in its gameplay. Fans of fighting games will only be impressed with the graphics for so long.
Lean Down On Your Steel Knees And Play

Accolade's CYCLEMANIA Takes A 160mph Turn Toward Digitized Raceways

by Gordon Goble

"Get your motor runnin', head out on the highway, lookin' for adventure and whatever comes come my way."

HAWG trivia time: Name the writer of that classic 60s biker anthem, "Born To Be Wild." If you said Mars Bonfire (yes, that's really his name), you are correct, and you spend entirely too much time reading record covers. So drop that old vinyl and grab your leathers, because one great American institution, the computer, has hopped on that other great American institution, the motorcycle, in Accolade's CYCLEMANIA. And, yes, cows (horses, too, for that matter) are fair game.

While CYCLEMANIA won't let you flash a digital, one-fingered, Dennis Hopper salute while perched cockily aboard your chopper, it will let you pilot a very fast racing bike against a number of computer opponents over a variety of highway courses. There are a bunch of intriguing elements to this CD-based, semi-simulative of motorcycle racing, and while some work better than others, surely the highlight of the package must be the courses themselves.

In a move that is sure to have repercussions throughout the race sim community, Accolade has created in CYCLEMANIA one of the first products of this nature to use real-life background video footage within the gaming experience. A fast-moving film crew collected video footage from five distinctly different areas of American roadway—from desert to forest—and that footage was used to build the game. So much emphasis has been placed on the actual racing environment that CYCLEMANIA's CD format became a necessity, not merely a matter of convenience.

While each track isn't particularly lengthy, nor are there hundreds from which to choose, they are real, even if the motorcycles and obstacles (farm animals, cars, trucks and low-flying aircraft) are animated. In the case of CYCLEMANIA, more storage space is usurped by race tracks than is available on a typical hard drive.

MEGA BIKES ON MEGABYTES

So what does 400 megabytes of digitized roads and scenery do for a game? Well, it must first be noted that the action does not fly by in what is commonly termed "high resolution." That means a pixelated, mushy look to the road and background; in other words, don't expect to find yourself in the middle of a finely detailed movie. But at the same time, the very idea and inclusion of real footage versus an artist's rendition is an innovation that lends a certain sense of credibility, and overall it feels and looks pretty cool. CYCLEMANIA does not approach the clarity of, say, the high-res version of NASCAR, yet it is the next natural step in the evolution of vehicle sims and may send a bevy of racing software designers in search of the nearest camera crew for their next project.

In actual gameplay, CYCLEMANIA is a curious mix of racing simulation and arcade-type free-for-all, and stands somewhere in between, not quite sure of where to go. Certainly, dodging assorted hazards such as static cows, galloping horses, and Sunday drivers while traveling in excess of 150 mph is
an amusing and hair-raising pastime. Yet while oil spills may throw a little wobble into your day, and inappropriate contact with other obstacles will launch you viciously from your bike to the ground, cows don’t explode, cars don’t veer tragically off the road, cops don’t attempt to halt your progress, and generally all that good stuff one might expect from a slam-bang arcade-type affair just aren’t there. At the same time, while ride and bike mechanics are quite good, the wacky nature of the program and lack of serious attention to realism squashes any long-term interest for fervent simulation devotees. One can’t help but feel that with a little more work in one direction or the other, Cyclemania could have been either a superb cross-country, smash-em-up adventure, or a great full-bore simulation. As it is, Cyclemania blends a strong sensation of two-wheeled speed and knee-scraping intensity with the wacky, joystick jamming action of a coin-op arcade machine.

The player’s view of the proceedings is interesting. Although cockpit controls mold across the bottom of the screen in authentic fashion, the view is not first-person. The gameplayer’s digital persona is seen from behind, merely as one of the half-dozen competitors that show up for each event. Therefore, the entire screen does not tilt from side to side as you wind through hairy left-right switchbacks, although your on-screen representation does. Furthermore, this behind-the-racer point of view brings something to Cyclemania that real racers never experience—their own image being blocked by trailing riders, and that can be annoying during its rare occurrences.

WHEN THE RUBBER LEAVES THE ROAD

As previously mentioned, five tracks make up the Cyclemania world, each different in its topography and demands. The tighter the track, the tighter the racing, and the tougher it is to scout around those slow-moving debutantes in their VW convertible, or Harry in his moving truck. Too much speed through a tight corner, and you’ll be first skidding cross-road, then picking yourself off the roadside marbles. Although crashes are never initially fatal, each time you go head-over-heels your overall health will be adversely affected, and too many accidents will bring the body bag boys—your day is over. Yet, some bumbling is not only condoned, but encouraged. Nudging an opponent just hard enough to send them flying off their trusty steed will actually score big bonus points. But prospective Cyclemaniaics won’t ever feel the ecstasy of victory without learning the quick way to the finish line, and that involves deprogramming from traditional four-wheeled conveyances.

As any Hell’s Angel will tell you, riding a motorcycle is not the same as driving a car. Acceleration and deceleration is instantaneous, carving a corner involves an entirely different approach, and bikes can fit places cars won’t. All this translates well to the Cyclemania environment, and an attentive pupil will end up with both an improved technique and better times. Top finishers score more points and win more money, and this permits one to purchase various high-performance equipment such as racing slicks, improved exhaust systems, and more powerful powerplants for use in future races. The more you win, the more stuff you can get, and the more stuff you get, the more you can win—and that’s important in the full Cyclemania season of five races.

Finding victory in the beginner’s level of Cyclemania is at first difficult, but becomes quite commonplace with a little familiarity. Fortunately, the skill level of opponents can be raised, as well as the amount of realism injected into one’s own ride. Racing the fast crowd with a more realistic machine is not a walk in the park (choosing a manual tranny, for instance, not only involves constant gear selection but the probability of overheating). Unfortunately, a season championship, even at extreme levels of difficulty, rates no on-screen celebration other than a dull standings board with a “#1” beside your name, and that will undoubtedly be seen by some as an oversight.
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ANIMATION, CARNAGE AND OTHER CHROME

Off the track, CYCLEMANIA excels, with beautiful 3-D animations lending support to the otherwise mundane chores of track selection, ride selection (a CBR 900RR, FZR 1000, or GSXR 1100), parts purchases at the "Cyclemania Shop," and menuing. Accolade has even thoughtfully included footage of several horrific real-life racing accidents to get the player in the mood for the upcoming carnage. Audio is effective both on and off the track, complete with funky musical score. The soundtrack also includes sampled motorcycle roars and squealing tires, which lend audio realism to the racing. The sound is definitely a winner.

On a losing note, CYCLEMANIA does not permit retries, plays, and believe me, when you emerge unsathed from some up close-and-personal action involving a half dozen bikes, two trucks, a car, a cow, and a frigging tower of tires someone dumped on the road side, you'll wish you could see it again and again. Nor does CYCLEMANIA support printing of any kind (there'll be no hard copy spoofing here), or head-to-head competition, which would have made a hot option in this particular game. Being CD-based, CYCLEMANIA involves the usual lengthy game loading process (even on the mandatory double-speed drive), yet the action flowed almost seamlessly on my 486-33 testing machine.

CYCLEMANIA offers a smart depiction of the racing bike experience in a semi-realistic and enjoyable arena. For a quick thrill, it excels, and certainly the inclusion of real video is one giant leap forward. But depending on the individual, the game play may quickly wear thin, like Taiwanese brake pads, and CYCLEMANIA may slide off the hard drive like a fast squid on black ice.

THE EDITORS SPEAK

CYCLEMANIA

RATING ★★★

PROS Use of video footage for the courses is a unique approach. Hot action at high speeds for the action fan.

CONS Not a simulation and not the greatest action game, and so may not rev the engines of some gamers. Limited life on the replay warranty.

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Fighting For The Prince's Crown

Interplay's Swashbuckling BLACKTHORNE Challenges PRINCE OF PERSIA's Rule

by Charles Ardai

JORDAN MECHNER'S SUPERLATIVE Prince of Persia Games from Broderbund have had a lot of imitators but have never yet been improved upon. The best of the imitators, such as Disney's ALADDIN or SSI's FLASHBACK, at least offer imaginative settings and top-notch animation; the worst seem to think that merely having a character leaping, climbing, and fighting his way across a multi-screen playing field is enough to make a game a best-seller.

What both the better and worse pretenders to the throne overlook is that it is not the basic game type that makes Prince of Persia so good—after all, the format dates back at least to Activision's PITFALL II on the Atari VCS—but even the incredibly fluid and lifelike animation, though this has deservedly won kudos from one and all. (Incredibly fluid and lifelike animation was not enough to save Epyx's IMPOSSIBLE MISSION 2 from the bargain tables.

On the other hand, its absence didn't hurt the sales of classics like JUMPPAN and LODERUNNER.)

No, what really makes Prince of Persia stand out is that Jordan Mechner is a diabolically clever puzzle constructor who builds his castles, caverns, and dungeons the way a master watchmaker makes watches, placing every tiny gear just so, and then setting everything in motion in such a way that not a movement is wasted and not a spring, wire, or screw is out of place. Every screen in Prince of Persia (and even more so in its sequel) is a devilish trap, whose machinations the player must escape by being as resourceful and ingenious as the author. There is no way to go through Prince of Persia "on automatic." It is a demanding—and eminently satisfying—game.

Interplay's BLACKTHORNE is the latest pretender to come along. How satisfying is this one? How demanding?

Well, on the surface it seems to have a lot of the right elements. The graphics are a little crude, but that befits the ultra-modern, ultra-violent setting Interplay has chosen for the story. The animation is just short of "incredibly fluid and lifelike," but it's certainly not bad.

Your character climbs ladders the way a person would; he runs with a convincing, loping gait; and when he unholsters his gun and fires it backhanded at foes behind him he does it as well as Arnie did in T2.

The settings are a bit odd, with four levels to go through in each of an underground mine, a treetop dwelling, a sand fortress, and the castle of the demonic Sarlac, but the settings in Prince of Persia were rather odd, too. The opening animation is a bit stiff and the storyline is overcrowded—but so are the opening animation and storyline of Prince of Persia. Your character in BLACKTHORNE is even a prince.

The ultimate clincher would seem to be the gameplay, which is smooth, fast, and brutal. Maybe occasionally too brutal—such as when you discover that you not only can shoot the chained prisoners you have come to save but sometimes must do so to get them out of your way—but seldom offensively so.

All in all, a promising beginning.

So how satisfying is BLACKTHORNE? How demanding? In a word, not.

What makes BLACKTHORNE so clearly, so obviously, so definitively a lesser game than Prince of Persia? It has no imagination. No artistry. No panache. IF Prince of Persia is a Porsche on the Autobahn, BLACKTHORNE is a Tinkertoy car putt-putting around in somebody's living room.

BLACKTHORNE is a videogame, plain and simple. The first dead giveaway you come across is that it contains no way for you to save your games. Instead, you can jump to any level you want by entering, at the start of a game, the four-letter password entrusted to you when you completed the preceding level. There is nothing inherently terrible about this arrangement, but when I saw that BLACKTHORNE used it, it felt like a slap in the face. This is the sort of thing you expect to see in a Nintendo cartridge game, not a PC title from a top

BLACKTHORNE

Price: No SRP
System Requirements: IBM compatible 386SX or higher, 2MB RAM, VGA graphics; supports Ad Lib, Gold, Sound Blaster Pro and compatibles, Roland MT-32/SCC-1 and Pro-Audio Spectrum sound cards
Protection: None
Designer: Ronald Miller
Publisher: Interplay Productions
Irvine, CA
(800) 959-GAME

THORNE IN YOUR SIDE

BLACKTHORNE is a videogame, plain and simple. The first dead giveaway you come across is that it contains no way for you to save your games. Instead, you can jump to any level you want by entering, at the start of a game, the four-letter password entrusted to you when you completed the preceding level. There is nothing inherently terrible about this arrangement, but when I saw that BLACKTHORNE used it, it felt like a slap in the face. This is the sort of thing you expect to see in a Nintendo cartridge game, not a PC title from a top
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firm like Interplay.

The second dead giveaway is the level of violence in the game. Sure, Doom is bloodier than any title Nintendo will ever allow on its platform, but by and large when you find a game that asks you to spend more than half your time shooting bad guys who pop up across the screen and start blasting away at you, you know you are in a videogame, not a computer game.

Prince of Persia, for all its swashbuckling brawls, permitted and rewarded moments of quiet contemplation. Mehner forced you to wrack your brain. Blackthorne, on the other hand, doesn't particularly require you to have a brain, just a trigger finger and enough common sense to know that when you see a keyhole on one screen and a key on the next, they probably go together.

That brings us to the third and most significant of the dead giveaways: the maze of interconnected levels in Blackthorne, linked by all the usual ledges, ladders, elevators, chasms, doors, and hidden passageways, is hardly a maze at all. For the first several levels, it is literally not a maze: there is only one path the player can possibly follow and if he survives all the combat encounters along this path, he wins. But even in subsequent levels, where the map of possible paths diverges somewhat, it is simple to test out all the paths, choose the right one, and reach the goal.

Most importantly, even the more complex levels don't have any particular cleverness to them. The paths are just paths, leading this way and that; there is no evidence that they were constructed to give the player the greatest possible difficulty in getting through to the goal. In fact, there is a good deal of evidence to the contrary.

This is not to say that the game is easy, but where it is hard it is hard only because of combat. Initially, you have to fight a cadre of pig-headed soldiers who look like the Gamorran guards from Jabba the Hutt's lair in Return of the Jedi. They are relatively easy to take out since they always pause after shooting off a round or two, giving you a chance to come out of concealment and plant a shotgun blast between their eyes. Soon thereafter, though, you come across dinosaurs, slavemasters with long, deadly whips who can only be killed by a bomb blast; human assassins who, like you, have unlimited ammunition and never pause to reload; and other, even deadlier enemies. In the end, you have to go toe-to-toe with Sarlac, a demon who can not only shoot lightning bolts at you but also teleport from one side of the screen to the other, so that you can neither hit him nor escape him easily.

So, the game is not simple, and there are plenty of players who will have a hard time making it to the end simply because their shoot-'em-up skills are rusty, atrophied, or otherwise inadequate. But the game is also not very mentally challenging. Even those bits in the game that briefly look as though they might require some cleverness don't. For instance, when I saw waterfalls on a couple of the mine screens, it occurred to me that one of these might conceal a passageway. Before I could test this hypothesis, a helpful prisoner I passed whispered something like, "Check out the water-

The Editors Speak

Blackthorne

Rating ★ ★

Pros: It's big, it's tough, it's loud, it's violent, and it's easy—if that's what you're looking for.

Cons: It has the brain, but it doesn't have much brains. Might impress those with cartridge game sensibilities, but it will send most PC gamers on a quest for more interesting challenges.
So, you want a perfect game. Get Hardball 4. Get cutting-edge graphics that are incredibly real. We’re talking about wake-the-neighbors-and-call-your-friends kind of real. Get stat compilation that would make any sports bureau envious. Get all 28 stadiums with different altitude, field, and wind conditions. Throw in an add-on disk with over 700 major league players. And you’ve got a masterful gem that compelled *Computer Entertainment News* to label it One of 1994’s Ten Best Games. Now, to get a perfect game you don’t have to be in the zone. Just the right software store.
Fortress Of Sillytude

Battling Goof-Ball Characters (and Game Mechanics)

In THE FORTRESS OF DR. RADIAKI

by Mark Clarkson

The date is May 8, 1963, and the world is teetering on the brink. A maniac is threatening "nuclear destruction" on a global scale unless paid $1 billion in cash. The ransom notes are anonymous, but all signs point to Dr. Nikko Radiaki, household appliance magnate and dabbling in nuclear physics. Radioactive waste has been detected leaking from his private island. And what about his name? Dr. Radiaki? Radiation? Radi-ak. Need I say more?

Unable to come up with the cash in a timely fashion, the U.N. turns to you: Special Agent Mark Banner. You must infiltrate Dr. Radiaki's island fortress, confront the diabolical doctor himself, and destroy his world-wrecking machine by any means necessary.

You turn down the UN Secretary General's offer of a captured alien spacecraft to deliver you to the island, opting instead to be grease up and shot naked from the torpedo tube of a submarine, armed with only a corked baseball bat. And your wits.

You are ready to enter THE FORTRESS OF DR. RADIAKI, the new first person shooter from Merit Software. Unlike most of the procession of WolfenDoom 3D clones, Dr. Radiaki promises you a few laughs as you hack, bash, and blast your way through the game. (Well, okay, that splatter sound in DOOM always makes me chuckle, but this is different.)

Dr. Radiaki gets off to a good start. There's a wacky story, a wacky villain (horribly deformed as the result of his sloppy nuclear science), wacky monsters, and a brave but wacky hero who lives in a belfry and licks himself clean between levels.

But a good start isn't enough. It's relatively easy to make people laugh for a little while. It's much harder to keep them laughing for a dozen or more levels of play.

THE CAST OF CHARACTERS

Most of Dr. Radiaki's humor comes from its characters. In keeping with the times, the first foes you encounter aren't Nazis or space aliens, they're cigar smoking, fatigue-clad, pistol-firing Castro-ites who cry "Ay! Mi cabazo!" (Ow! My head!) as you bludgeon them to death with your bat.

Make your way through the Cubans, and soon you'll face mutant rat-men, ninjas, storm troopers, killer tanks, toaster-headed robots and more—if there's a theme here, it eludes me. You never know what's going to show up around the next corner. And that's OK.

Each character has a tagline or two to throw out when you kill them or they kill you: a whiny "Owwwww!" or some famous last words ("Rosebud...!). Defeated ninjas, lamenting their shame, fall on their own swords. Much of this dialogue is in Spanish, Japanese or Russian. While this is entirely in character, I'm afraid it means the jokes, if any, are lost on me.

NO JOY

IN THE FORTRESS TONIGHT

You move through THE FORTRESS OF DR. RADIAKI using either your keyboard or your mouse—it doesn't support a joystick. Keyboard movement uses the arrow keys and a few others (the scheme is annoyingly different from the DOOM key commands). You don't have sideways "strafing" movement, which makes popping out from behind walls a bit tricky.

I often found it impossible to aim a weapon precisely using the keyboard. The increments of movement were just too large; the gun would swing between five degrees too far left and five degrees too far right.

Dr. Radiaki also offers a unique mouse interface. To move, you hold down a mouse button and push the mouse a little ways in the direction you want to travel. You will continue moving in the same direction, at the same speed, without any further mouse movement. To stop, let up on the mouse button. You can run down
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a long hallway without running off the end of your mouse pad.

The mouse interface also provides a much finer degree of control than does the keyboard interface. I could always aim my weapons where I wanted to, and could almost manage to move sideways. I would have used the mouse exclusively, but couldn't get it to fire the weapons properly.

The levels of Dr. Raddiaki's fortress are strewn with useful items for you to pick up: ammunition, keys, and drug-filled syringes the size of your leg to help ease the pain of your wounds. You'll also find an array of weapons ranging from Samurai swords to machine guns and grenade launchers. Some weapons, such as the machine gun and the flame thrower, hold a limited amount of ammo. When it's used up, you've got to slap in another clip or screw in another canister of jellied gasoline. This is a nice touch; it adds a bit of fumbling and confusion as you run backwards at full speed, dodging swords and bullets.

**A MAP TO NOWHERE**

The automap in *The Fortress of Dr. Raddiaki* is almost, but not quite, completely useless. I could write an entire review detailing how much I didn't like it.

The automap's uselessness hinges on two cunningly designed and seemingly innocent devices: One, the map records not what you've seen, but where you've stood; and two, the zoom is fixed, and the map is always centered on you.

Imagine that you step briefly into a room, see that it is empty, and step back out. When you look at the map you will see, not the entire room, but only that tiny space near the door where you actually set foot. When you look at the map later, you'll have forgotten whether that door leads to a small, empty room or a huge, unexplored area. The mazes in *Dr. Raddiaki* are filled with wrong turns, dead ends and little nooks and alcoves that contain nothing and go nowhere. The rooms have narrow, oddly-shaped corners. But leave any spot untraveled and you'll eventually feel compelled to return and make sure you haven't missed something important. The only cure is to meticulously pace out every dead end, every alcove, and the interior of every room in the entire level.

To make matters worse, the map is always centered on your current location and zoomed in far enough that it shows less than a quarter of the level at a given time. You cannot zoom out to see the entire explored area, nor can you scroll the map around. If you want to consult the map for a different part of the maze, your only recourse is to walk there first, then look at the map. And, given Raddiaki's maze-like layout, the route to that different area is often long and convoluted. It may leave the visible portion of the map at one point and re-enter it at another. As you move, your destination may disappear off-screen, leaving you unsure of which turns to take.

The levels seem laid out to capitalize on the automap's failings. The two work in concert to make finding your way around as frustrating and difficult as possible. I can hear the design meeting now: "How can we make this game more challenging without a lot of additional programming?" "I know. Let's give them a map they can't use."

I found it maddening.

**THE VERDICT**

The monsters in *Dr. Raddiaki* are nicely rendered, although some look better than others. But those who've gotten used to 3D environments with elevators, stairs, and pits to leap into will find Raddiaki's 2D layout a little dull.

*The Fortress of Dr. Raddiaki* was a great idea, but one that was not followed through. There's too little wackiness, and too much time spent trudging through mazes, wishing for a map that worked. And as Raddiaki doesn't offer anything original aside from that wackiness, I'd pass on it, unless you're a Doom-like-aholic looking to collect a complete set.

*Mitsumi* CD-ROM owners beware: *The Fortress of Dr. Raddiaki* would not run from my CD drive, a Mitsumi double-spin. Merit's technical support told me that the problems between *Dr. Raddiaki* and Mitsumi double-spin drives are common but limited to those models and, in fact, the game ran fine on a number of non-Mitsumi drives.

**THE EDITORS SPEAK**

**THE FORREST OF DR. RADDIAKI**

**RATING:**

**PROS:** Glossy graphics and some funny tidbits.

**CONS:** Other than the rampant silliness, *Dr. Raddiaki* adds very little to the 3-D action game pack. The automap is useless, and the level designs are uninteresting.
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For Sail By Owner

A Spunky Little Flyer Catches Another Thermal In GLIDER PRO

by Eden Maxwell

We've all made paper airplanes, and we all daydream, but John Calhoun seems to have fixated on the two. Calhoun released a charming little shareware program named GLIDER in 1987 which, you could say, has been catching thermals ever since. Players controlled a little paper airplane that had to catch heat thermals and bursts of air to stay aloft and navigate through a small, spare house. Few would have predicted it, but the game evolved into a cult phenomenon with tips, tricks, and customized maze-like houses posted online by loyal fans.

Eager to improve upon the game and release a commercial version, Calhoun developed an all-new GLIDER 4.0 for both Macintosh and Windows. This time players piloted their paper drones through an eerie old mansion that had about 60 rooms of an increasingly diabolical, non-violent nature. There were staircases leading up and down, dank basement chambers, and secret passageways capable of warping the glider to unexpected locations. By catching updrafts the glider could stay aloft, pick up bonus points or extra gliders, and try to avoid flying obstacles or electrical sources that could shred it into confetti.

Building on this successful blueprint, GLIDER PRO takes up residence in Slumberland, a townhouse complex of 270-plus rooms interconnected by open spaces, blue skies, and courtyards, some still dripping with laundry hung out to dry. And so the spunky little flyer with an attitude continues its aerodynamic saga with enhanced flying environments, a powerful new Room Editor, and a two-player game mode.

GLIDER PRO aces can now escape out of windows, pop out of chimneys and mailboxes (bewitching portals to strange places), fly over meadows and rooftops, and even venture to lairs deep underground. Catching updrafts from a variety of clever outdoor sources such as a barbecue is one way to stay aloft. In addition to making it through the entire house (the objective is to collect six elusive stars, possess the Magic Star Wand, then experience the surprise ending—your spouse leaves you on grounds of neglect).

Before gliding off to glory, newcomers would do well to visit the small Demo House, which serves as a self-running demo explaining the objectives, and a learning tool for understanding the principles of play.

THE SOUND OF ONE WING FLAPPING

The game begins with a fleet of three gliders; the first hovers over a floor vent in the entrance foyer, which you must traverse to get to the next room. Since paper planes don't have engines, gliders can thermalsurf across rooms. Other means of glider support include hot air from candles (don't get too close!) and energy batteries found along the way that provide stand-by turbo power. There's often more than one way to soar through a room, and only a few rooms require the speed of battery power.

Gliders, in either standard mode or under battery assist, can move forward and backward. But power isn't everything. A subtle reverse stall is often critical in reaching a battery, or obtaining a jar of rubber bands—ammo for shooting down enemy gliders, balloons, and swirling 'copters. Your path is full of obstacles as you progress. Benign household objects suddenly become a threat to the pilot of a paper airplane. Shelves, tables, the floor or ground, even personal computers can cause your craft's untimely demise. Avoid contact with deadly electric wall sockets, flying toast, paper shredders, jumping fish, and other dangers too humorously gruesome to mention. Explore everything, even areas that appear to be dead ends.
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—Computer Game Review

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you may find bonus points, an extra glider, or an invisible transporter that zaps you to another part of the surrealistic estate.

Cocky pilots can use rubber bands to tip over grease bottles (whose slippery purpose will become clear to you) or trip electric switches from a distance. If you see a box of aluminum foil lying around, grab it; this new bonus armament sheaths your glider in a thin skin that protects it from crumpling mishaps for a limited number of close encounters.

To remain airborne, players must develop a knack for graceful control, precise timing, and going with the air flow, which becomes increasingly complicated as gamers reach more difficult rooms. Judging just how close you can come to an object is critical in sidestepping possible disaster, earning bonus points for making the top ten all time high score, or picking up defense mechanisms.

Electric switches are often linked to powering up floor or ceiling vents that will get you across a room, or whisk you off to another part of the house. Some switches must be activated with a deft touch of the glider to engage a blower vent, or turning on a light in a dark room before a glider is lost to the floor, or some other doomsday household item. Using your wits is always important. For example, finesse may be the ace up your sleeve for getting past a dread paper shredder without foul protection or shutting off that pesky electric switch. Or, you may fly into an invisible transporter and magically end up in a tree house.

**BOUNCING BOGIES** Flying the glider is a careful trapeze act of maintaining lift from sources like floor vents, avoiding obstacles like these basketballs, and then sailing to the next room, in this case through the ceiling vent.

**GLIDER GREASE** Gliders are destroyed on landing, unless the surface has been greased. The folded paper is an extra glider bonus, but don’t hit the switch, or you’ll be blown away.

**GO EDIT YOUR ROOM** **GLIDER PRO** includes a comprehensive Room Editor that allows players to design a house full of rooms of their own. The editor deserves a review in its own right, but we’ll touch on a few highlights to get you going. Creating a house is simple, but creating a “great” house requires an artist’s touch.

Since constructing a new house from scratch may seem daunting for the beginner, users will find a file called Empty House. This house was specially designed with all the air vents and blowers positioned to propel your glider across each room. By eliminating the need to figure out the aerodynamicics of flight, you are free to concentrate on selecting which objects—obstacles, enemies, and prizes—you want to include in each of the rooms. The type of environment you create is limited only by your creativity.

The Room Editor contains a Tools Window with a pop-up menu of object types such as prizes, clutter, blowers, furniture, switches, lighting, enemies, transport, and appliances—a comprehensive list to satisfy the most demanding interior decorator.

A single house can contain no more than 8,192 rooms with a maximum of 24 objects per room, which will keep you busy for years. Besides rooms, a house file contains information about the high score for that house and the saved game, if any. In this way, high scores for your own house design have nothing to do with the scores for Slumberland. When quitting in the middle of Slumberland, the state of the game is saved automatically. GLIDER PRO saves only one game per house, so if you had previously quit Slumberland and resumed, you overwrite that saved game.

**CONSTRUCTION TIPS**

Sure, you can go crazy and drop all sorts of things in rooms. It’s easy to make a hard room, and it’s even easier to make a room that’s impossible to get across. My tip for the budding custom house builder: create a house that starts out easy and gets progressively more difficult with more than one path through it; rooms should have more than one solution, and the house should look ordered and not too chaotic. Creating a balanced series of glider-defying rooms exposes the genius behind this unique, whimsical game.
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THROUGH THE LOOKING GLASS

Some rooms have normal mirrors, this one does not. Fly in front of it and the room reverses, leaving all your controls a-d-e-f-g-h-i-j-k-l-m-n-o-p-q-r-s-t-u-v-w-x-y-z.

The graphic details are attractive, especially in 256 colors. Each screen is so nicely rendered that players may feel they're inside a fine illustration come to life. For example, the shadow of the glider along its flight path and the glider reflected in mirrors add a sense of three-dimensional realism. More importantly, the ambiance of the house gives the distinct impression that some-one actually lives there—which is what transforms Calhoun's programming code into magic. This old house, many parts still under construction, has all the elements of life-leaking water, plus other well done mood-altering sound effects that contribute to the game's eccentric spirit, a telephone ringing somewhere in the house. Who could be calling?

Larger monitors allow players to see more than one room at a time, or view upstairs and downstairs simultaneously; the wide three-room letterbox panorama option works extremely well. Look for scanned photos of Calhoun and the other house builders who helped raise Sumerland.

Incidentally, the house builders credited for helping create Sumerland came from three GLIDER fans who impressed Calhoun with the creative dwellings they uploaded to America Online. America Online members can also check under the New Game Scenario section for custom houses (GLIDER and GILDER PRO) created by fans, plus a template file called "Glider Folding Instruction 2," courtesy of Calhoun, for making a flying model of GLIDER.

Computers were supposed to eliminate society's glut of wasted paper. Ironically, GILDER PRO is about a piece of artfully folded, computer-generated paper that continues to maintain its permanent crease as one of the most original, non-violent action games yet conceived for the personal computer.
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A Spot of Tee

A Desktop Putter Takes A Threesome To The Greens

by Peter Scisco

It's one week from Thanksgiving as I write this. Here in North Carolina, a bright blue sky is painted faintly with wisps of high clouds. The temperature hovers near 60 degrees. I just need to think of a way to sneak out of the house before my wife asks me to rake the three tons of leaves I've let fall for the last month. And I have to avoid answering the phone so I don't get caught by one of those CGW editors looking for the article I promised. If I can just make it down to the market, I can call one of my pals from there and maybe get in nine holes before anybody notices I'm gone.

The best plans, of course, are quickly laid to rest. But not all is lost. On my PC I've got a trio of golf games, the latest in a long line of lunch time entertainment for around the office or evening whileaways at home.

Computer golf games are the perfect arcade tonic for twitch-resistant gamers settling comfortably into their gaming golden years. They're simple games, real-ly, blending a token amount of strategy with only the most rudimentary reflex motions. There's no hard thinking involved. Sure, you have to avoid dropping an egg into the beach. You'd like to keep the ball in the short stuff and bring in high on the green. But face it—it's not rocket science. You don't have to mount, man, focus, and direct a team of instant relay cameras to catch every stroke. No 3-D heads-up display. No draft. No trades. No chalkboards. No three-on-three with color-changing sneakers. No scoreboard. No out of bounds corners.

Instead, there's a kind of exactness. You peer into the virtual panorama cast upon your computer screen, aim your shot, and then tap, tap, tap the mouse button (or the spacebar). Sure, you need to keep an eye on the wind gauge. You need to take enough club to fly the bunkers. You need to read the slope. But in the end it's tap, tap, tap.

With this exactness comes a frustration unique to golf. The best player can shank one into the woods or blow a two-foot putt. The lucky player can sink a 30-yard chip. From those extremes, you have to approach the next shot as if it's the only shot in the game. Because there are no teams to manage, and little action, golf games do best when they can successfully imitate this concentrated experience. For half an hour, you should feel the frustration and occasional joy (or at least approximate the memory of it) you feel during a round of 18 holes. So let's tee these three up and see how far they drive.

**SOMETHING BORROWED, NOTHING NEW**

If you've played LINKS 386 Pro, then you've played MICROSOFT GOLF 2.0. Or, to be more exact, you've seen the same graphic quality that you get in this version from the boys and girls in Redmond, WA. Originally, MICROSOFT GOLF lagged behind LINKS 386 Pro, the DOS game from Access Software. MICROSOFT GOLF 1.0 put the original LINKS inside Windows, but couldn't touch the visual quality in the LINKS 386 Pro game. With its push-buttons, radio buttons, pop-up and drop-down menus, LINKS 386 Pro looked better than anything running under Windows. Still does.

Playing catch up is never pretty, but after a great gnashing of teeth Microsoft has for the moment drawn even with its DOS inspiration. (If Access recovers from publishing UNDER A KILLING MOON, we could see a 486CD version—runs better on a Pentium—by fall.) So if you want a Windows golf game, this is the best game in town.

MICROSOFT GOLF 2.0 puts you on the tee at Firestone Country Club, built 60 years ago by Harvey Firestone for his employees. The South Course, which is the course played in this game, was re-
designed in 1959 by Robert Trent Jones. His influence turned an
easygoing duffers daydream into a first-class
PGA challenge course.
The most famous hole, number 16, is a 5-par,
625-yard undulating
green monster that will suck up more shots than a
driving range scooper.
And it plays just as long
on the computer.

To its credit, and with
a leg up on the other two
games reviewed here,
MICROSOFT GOLF 2.0 will
also use any of the
Links386 Pro Super VGA Champion
Courses (the ones in the white boxes)
that Access releases about four times a
year. The game also comes with a con-
verter for the older Links386 Pro cours-
es. Neither of the other two games
played for this article come close to
matching the number of courses avail-
able for MICROSOFT GOLF 2.0.

So how does it play? A lot like Mi-
crosoft Golf 1.0, to tell the truth.
The player’s perspective puts you about 30 feet
behind the animated golfer. You can aim the
shot using the mouse to move a red
and white pole along the fairway.
The pole is mostly a directional marker, even
though it also provides distance informa-
tion. You can use those measurements to
avoid obstacles and to help you choose the
right club—just in case you don’t trust
your caddie wizard (and you shouldn’t).

Shots are governed by a circular swing
meter, with 100-percent power at the
12:00 mark and a straight hit at the 6:00
mark. Go over the 12:00 mark, and you
had better nail the bottom line, or you
can count on picking your ball out of the
trees or fishing it out of the water.

The display, as mentioned previously,
adopts the Links386 Pro graphics to the
Windows environment. But, unlike the
DOS version, you don’t get much control
over the layout of your display. Links386
Pro version offered for more clarity than
its Windows offspring, even on 14-inch
and 15-inch monitors.

Statistics for each course, and cumulative
stats for each player, are recorded for
printing, browsing, or hiding. You can also
record your performance and save it
as a file to send to a friend, who can then
load your player on his or her machine
and play against your performance. Likewise,
you can replay and save those great,
and not so great shots to watch over and
over again.

All of this is very familiar, and Mi-
crosoft Golf 2.0 brings nothing new to
the table except the fact that it plays within
Windows. If you’re trying to
get in a round in be-
tween the hours you’re
supposed to be crunch-
ing numbers for the
fourth-quarter earnings
report, that’s useful. But
you better make sure you
have plenty of RAM
socketed into your mother-
board. The manual
says it will run in 4MB of
RAM, but you can forget
that noise. I played it on
my regular machine—a
486DX/2 50 with 8MB of RAM—and
wished for something much bigger and
faster. I found the swing meter and ani-
mation somewhat erratic, which makes it
hard to be exact. And that made it hard
to keep my score down.

I can hardly imagine why someone
would want to play this version of the
game rather than its DOS cousin. Com-
puter newcomers who have adopted Win-
dows as a preferred interface will
welcome the improved graphics and the
familiar Windows controls, but I miss the
detail and performance that define
Links386 Pro.

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**ON THE TOUR**

I have always enjoyed PGA TOUR GOLF on
the Sega Genesis (I will now duck as old
golf halls are hurled in my general direc-
tion), but never found it as fun to play on
the PC as Links or even Accolade’s Jack
Nicklaus series. But I take it all back.
This latest edition—PGA Tour Golf
486—gets rid of the cartoon characters
and coloring-book look, and replaces
them with realistic graphics that equal
anything the competition has to offer.

But it’s not just the representation
of trees, greens, and sky that makes PGA
Tour Golf 486 look so good. The game
has also been redesigned from the play-
er’s perspective. The hokey sliding bar
used to govern the swing action in previ-
ous versions, for example, is replaced by
a graceful arc that encompasses the golfer
like the halo of Saint Mulligan himself.
Aiming your shot means adjusting a
graceful golden trajectory that ends in a

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**STATISTICALLY SPEAKING** One of the best features of Microsoft Golf 2.0 is the comprehensive stats for player and courses.
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definite arrow. Move the mouse forward, back, left, or right and both the arrow and the swing meter adjusts for distance and direction.

Like MICROSOFT GOLF 2.0, you can also adjust each of your shots for those tough situations. But instead of filling out a dialog box and making adjustments in a window, PGA Tour 486 lets you use the mouse to control how you hit the ball. Hold the right mouse button and move forward or back to put topspin or backspin on the ball; or, move the mouse to the right or left to spin the ball for a fade or draw. Despite the fact that I was using a mouse, I found this design to be closer to the experience of a real game, and a little easier than when I’m standing on the fairway.

You don’t have as many add-on courses to choose from in this game, but the main program does include three championship courses: TPC at Summerlin (host to the Las Vegas Invitational); TPC at River Highlands (home of the Canon Greater Hartford Open); and TPC at Sawgrass, the Florida course that’s the site of The Players Championship. Each of the courses is lushly detailed in its on-screen display. There’s plenty of depth and perspective, which enhances the experience.

One of the features I have always liked about PGA TOUR GOLF is the Tournament mode, in which you and up to four other players can compete with nine actual professionals. If you’re not up to that, you can shoot 18 holes, or play the front or back nine, just as you can in MICROSOFT GOLF 2.0. Also like its Windows counterpart, PGA Tour keeps track of your stats, including your handicap. But it goes one better than MICROSOFT GOLF 2.0 in allowing match and skins play in addition to the tournament mode.

Playing on the Pro level here can be a humiliating experience. The swing meter moves with lightning speed, and you have to be on your toes to get the snap just right. Less skilled levels—Novice and Amateur—are more forgiving and offer the beginner an introduction to the game. You can practice any hole on any of the three courses, but there isn’t a separate driving range or putting green.

The first several times I played the game, I was annoyed at the length of time it took for the screen redraws. From a tee shot to a second shot from the fairway, measured from swing to swing, it took almost 30 seconds to set up. Measured from the point immediately following your shot, when you press “Continue,” the count came to about 8 seconds. You can speed up these times by turning off the Snap Around view, which is a reverse view that takes over after you hit the ball. Since there’s no way to see a reverse view at the same time you see the main

Our new Casino game’s so lifelike about the only thing you won’t experience are the free drinks from Bunny here.
view (unlike Microsoft Golf 2.0) some players may want to keep it on—but be prepared to pay in terms of time.

There are other prices to pay for what could have been the finest golf game ever. The most blatant is the lack of a female golfer. There’s no reason why a player shouldn’t be able to stick with his or her gender when teeing up a golf game. Beyond that extreme missing piece, there isn’t much in the way of customizing your player, either. You’ll be a brown-haired guy in a pink Polo shirt and a pair of white Dockers. It’s not an outfit you’ll ever find me wearing, but then again you’ll never see me playing the TPC courses that I get in this game.

This version, updated with photo-realistic graphics, better controls, and an appealing visual design, put new life back into the PGA Tour title. I’d see this one up any time.

NOT MY BEST DAY At least I wasn’t in the cellar during early play of the first round.

PGA TOUR GOLF 486 RATING

PRETTY AS A PICTURE
Here’s a different looking bit of green altogether. Picture Perfect Golf uses thousands of photographs—not digitized video footage—to supply a view of the Nicklaus-designed (with Pete Dye as architect) Harbour Town Golf Links. The course is a true links, a seaside course that, unlike others that the long-ball-hitting Nicklaus designed, stresses accuracy and the approach over the big drive.

The use of photographs not only gives the game a different look, but it also speeds play. Your computer doesn’t have to redraw screens; it merely takes your lie and dumps in the photograph from that position. From my experience, it seems accurate enough. All possible lies are accounted for—even those you wish you’d never found.

The photography, even if it gives an accurate and totally realistic portrait of the course, has one disadvantage over the digitized courses used in Microsoft Golf 2.0 and PGA Tour Golf 486: the perspective is flattened. The illusion of depth is lost, so that it looks like your ball is traveling across a photograph. For some players, this may detract from the game’s realism. Personally, I don’t think it affects play, even though I do believe that many of the photographs lack enough contrast to maintain the golfing illusion.

Another visual difference that should be noted is the player’s perspective. Picture Perfect Golf doesn’t use animated golfers. In fact, you can’t see the ball at all when you address it. Your position is at the lie; when you swing, the ball emerges from your feet to fly, if you’ve
done your job correctly, toward the pin. This first-person perspective works well with an optional infrared golf club accessory (available from Sports Sciences and available from the publisher), a half-club that feeds your swing information to the computer for those electronic duffers who don’t want to play with the mouse or keyboard.

The swing meter in this game is exactly like that in Microsoft Golf 2.0, a circle with 12:00 representing 100-percent power and 6:00 representing perfect snap. Preset swings for straight, draw, fade, and punch shots add to your arsenal, but you don’t have as fine a control over your shot as you do in the other two games reviewed here. A driving range and putting green are available for practice sessions.

Wind and break (on the green) are, like the other two games reviewed here, represented by a dial on the game dashboard. Also standard is the shot information—distance to pin, player’s name and score, and the hole’s par rating. All three games allow Gummes and Mulligans, but Picture Perfect Golf differs in requiring the player to choose the number of Mulligans he or she will be allowed in the game.

With only one course, Picture Perfect Golf lacks the depth and challenge of the other two games discussed here. The publisher plans to release a new course CD-ROM every three-to-four months.

THE 19TH HOLE
All three of these games share similar features, which makes it difficult to distinguish the advantages of one over another. None of them has a course designer, for example, which throws some computer golfers into spasms of agony. All of them allow you to practice, although PGA Tour Golf 486 doesn’t have a driving range or putting green. All of them keep stats, offer replay, and provide an afternoon of non-serious entertainment. But for my money, PGA Tour Golf 486 takes the day.

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Smokin’ SIGs

WITHOUT QUESTION, FLIGHT SIMULATIONS ARE the most complex pieces of consumer software around. Not only are they difficult to create, with their sophisticated flight modeling and graphic magic, but they’re difficult to use. Products such as FLIGHT SIMULATOR 5.0 and FALCON 3.0 require many hours of simulated flight time to fully appreciate their depth.

Fortunately, it seems that simulation flyers, like nature, abhor a vacuum—in this case, a vacuum of knowledge. In on-line forums and in special interest publications, sim jocks have banded together to share in their ignorance and swap battle-tested wisdom. These special interest groups (SIGs) provide training, information, and resources, and bring people together to share in their common obsession.

Flight sim SIGs take on many different forms. Across the nation, groups of players come together to form “electronic fighter squadrons,” providing training and partners for network and modem play. Almost every on-line service has some sort of flight simulation forum or bulletin board. Several groups have started newsletters and mini-magazines catering to their charter. Other groups connect via Internet e-mail and newsgroups. There are dozens, maybe hundreds, of these organizations out there. This month I’m going to give you the Bogey’s dope on a few of my favorites. By no means is this coverage exhaustive; I’m simply going to discuss a handful of groups that I find to be the most efficient, informative and useful.

MICROWINGS
First, for the non-combat flight sim fan we have The International Association for Aerospace Simulations. More commonly known as MicroWings after the name of their magazine, membership in this group offers 1) a free copy of Microsoft’s AIRCRAFT AND SCENERY DESIGNER or Mallard’s FLIGHT SIMULATOR 5.0 SCENERY UPGRADE for the Mac to the first 2,000 members; 2) a free CompuServe sign-up kit; 3) discounts on ThrustMaster, BAO, and SubLogic products; 4) a member database to help locate modem-play partners in your city, area code, or around the world; 5) a subscription to their black-and-white, bi-monthly, 42-page magazine, MicroWings. Each month MicroWings offers lessons and instructions written by experienced pilots on everything from crosswind landings to IFR navigation. Membership is a bit pricey at $50 per year, but provides excellent instructional information for

ON THE RADAR

CGW informants indicate that Domark’s CONFIRMED KILL (formerly Dogfight) has been confirmed dead. The project has been canceled.

However, Domark has announced a new title, FLYING NIGHTMARES 2000, a sequel to their popular PowerMac title, FLYING NIGHTMARES. Unlike the original, FLYING NIGHTMARES 2000 will be available on DOS machines, and much like Domark’s AV-8B HARRIER ASSAULT, the action will focus on a combined arms invasion of a small region, most likely an island in the Caribbean famous for its dictatorial government. Players will lead Harriers, Cobra helicopters, and LAV-25 personnel carriers in the invasion, jumping from vehicle to vehicle in real time. The sim will support four, possibly six, players on an IPX network, and two players on a 28.8 modem connection. It has been Domark’s style to support cutting-edge graphic accelerator cards (they supported the S3 chip in previous releases), and we wouldn’t be surprised if they continue that trend with newer graphic acceleration technology.

by Tom “KC” Basham
general aviation fans. Combat vets beware; MicroWings caters only to non-combat simulations, such as FS 4.0, FS 5.0, and Air Transport Pilot. For more information, contact MicroWings, Inc. at (214) 324-1406.

**INTERCEPT**

Second up, we have *Intercept*, a journal dedicated to combat flight simulation. Published bi-monthly by SIMCAP (as in, Simulation Combat Air Patrol), each issue focuses on a single, newly released combat flight sim. However, the bi-monthly schedule bend as software delivery slides. If the focus product misses its release by a month or two, the corresponding *Intercept* issue slides also. As a result, subscriptions are for a set number of issues rather than a time period. Six issues of this 32-page, black-and-white magazine costs $20, with each issue shipping as a major new combat flight simulator ships. The magazine includes tactics and strategy columns applicable to the featured product, briefings on the aircraft and weapons modeled in the product, news, and "readers forums" where readers share tips, tactics and stories. *Intercept* may be best known for its head-to-head tournaments. Seventy-two simulation pilots recently flew Falcon 3.0, MiG-29, and Hornet in tournaments across North America. Serious prizes were awarded to finalists, culminating with the grand prize: a day at the US Fighter Squadron in St. Paul, Minnesota, donated by Spectrum HoloByte. US Fighter Squadron, in the fine tradition of Sky Warriors and Air Combat USA, lets you fly real dogfights in real aircraft under the watchful eye of military safety pilots! *Intercept*’s competitions are held fairly regularly and are open to subscribers only. For more information, contact SIMCAP at (918) 339-3320.

**INTERNET ENGAGEMENTS**

If you have Internet e-mail access, there are numerous “mailing lists” you might find interesting. While there is a countless number of Internet mailing lists, there are three stand-outs for flight simulation fans.

1) The Falcon 3.0 mailing list. Subscribe to its mailing list at major-domo@onion.rain.com with the following text: subscribe falcon3

The Falcon 3.0 list is dedicated to Falcon 3.0, MiG-29, and Hornet. Discussions vary widely, but include how to solve various hardware/software conflicts, tactics, bug reports, how things work in real life, and related topics.

2) The Hitch-Sim mailing list is similar to the Falcon 3.0 list, but widens the focus. All graphics-based, “first-person” simulations are fair game for discussion on this list. Subscribe by sending email to major-domo@onion.rain.com with the following text: subscribe hitch-sim

3) For SVGA Air Warrior fans there’s the 666th-etal mailing list. This list is populated with veteran, novice, and in-between Air Warrior pilots discussing every aspect of on-line and off-line Air Warrior play. Information on patches and revisions can be found here, as well as a thorough FTP site filled with Air Warrior-related files, patches, maps, etc. Additionally, this list serves as the basis for an Air Warrior ladder competition played through Internet links instead of the Genie arena or direct phone calls. Join by sending email to listsproc@rexy.plk.mit.edu with the following text: subscribe 666th-etal.

Be warned, this list has heavy traffic and will fill your mailbox daily! The list is available in "digest" format, but even so, the traffic is heavy enough that I typically receive three or four digests per day.

These leads barely scratch the surface of the resources available out there. If you know of other user groups, electronic flight squadrons, BBSs, or Internet groups that provide accurate information and helpfull services, feel free to drop a note to my CompuServe account [73760,1251] or write the magazine ATTN: Boggies Bar & Grill.
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Pulling Punches

ARMORED FIST Packs A Mean Graphic Jab, But A Weak Realism Hook

by Patrick C. Miller

The turbine engine in your T-80 strays as the tank grinds its way to the top of a ridge line littered with the smoking hulks of American tanks you destroyed minutes ago. Just as your tank crests the ridge, a panicked shout from your Russian gunner rings in your headphones. "Meessle! Meessle! Meessle!" The gunner quickly swings the turret to the right, spotting an American infantry fighting vehicle barely visible in a rocky crag below. The TOW anti-tank missile launched two seconds ago is too close. Just as your finger squeezes the firing trigger, a thunderous explosion rocks your tank and a red blur is the last thing you see as you slump in your seat.

Life, as they say, is short, then you die. Nowhere is this more true than in ARMORED FIST, a simulation from Novalogic that captures the lethal intensity of armored combat in the 90s. In ARMORED FIST, as in real armored combat, if it can be seen, it can be hit. If it can be hit, it can be killed. ARMORED FIST exposes you to the threats that predominate on today's battlefields: attack helicopters bristling with guns, missiles and rockets, murderous salvos from multiple-launch rocket artillery, tank-crippling minefields, precision-guided long-range anti-tank weapons and deadly high-velocity tank gun rounds.

HAVE GUN, WILL TRAVEL

The Cold War is over, but thanks to ARMORED FIST you can climb into the commander's seat of four different armored fighting vehicles to wage war in various hot spots around the world. You can operate the American-made M-1A2 Abrams main battle tank (MBT) and the M-3 Bradley infantry fighting vehicle (IFV) or the Russian-made T-80 MBT and the BMP-2 IFV. Novalogic's reputation for creating realistic 3-D worlds with its Voxel Space graphics, the game's unique box design (shaped like a tank hull), and the superb graphic animation, music and sound during the game's introduction make you itch to begin combat. Novalogic does such a good job of building expectations for ARMORED FIST that what you anticipate seems a far cry from what you get.

Armored aficionados hoping for a more up-to-date replacement for M-1 TANK PLATOON (released by MicroProse back in 1989) will be disappointed by ARMORED FIST's lack of realism in certain areas. Others hoping to feast upon ARMORED FIST's visual delights will be disappointed to find that the Voxel Space graphics which provided breathtaking scenery in COMANCHE, a helicopter simulator, don't produce the same spectacular results when they're brought down to earth. Still, even though ARMORED FIST might not be everything expected, within its limited scope, it can provide interesting, challenging and, yes, even enjoyable game play, provided you can tolerate the blocky graphics, stick with it long enough to become accustomed to some of its irritating features, and think of it as more of a game than a simulation.

Although Novalogic has sacrificed realism for playability, ARMORED FIST is more than a shoot-em-up action game. Players must devise sound strategies and use proper tactics to have any hope of success. Those familiar with the vehicles portrayed and modern armor tactics will adapt more easily to the game. For the novice, however, the manual is of little help. While it does an adequate job of explaining the mechanics of game play, it places more emphasis on grand strategy rather than providing useful information on weapon characteristics and battlefield tactics.

The game comes in both floppy disk and CD-ROM versions. The CD version can be installed using between 2 and 6 megabytes of hard drive space and includes sensational animated combat sequences at the conclusion of each mission. (Mere eye candy, to be sure, but oh, how sweet it is!) The CD also includes an additional set of voice audio files providing higher quality sound. Because Novalogic tried to design ARMORED FIST to be more user friendly than COMANCHE, it's less likely that you'll need to modify system files or create a boot disk to run the game. On the 486DX2/66 system on which the game was reviewed, it installed easily, exhibited no strange behavior, and played very smoothly.
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MISSION IMPROBABLE

Game play is straightforward, giving you the option of selecting individual, campaign or player-created missions. When selecting either a mission or a campaign, you can choose between Eastern (former Soviet) or Western (American) equipment. The campaign mode shows a map of the world area where you’re fighting and the specific locations of the campaign’s seven battles. Campaigns include India versus Pakistan, Iran versus Saudi Arabia, a civil war on Cyprus, Syria versus Turkey, Armenia versus Azerbaijan and the Ukraine versus Byelarus. The basic premise is that a “Multi Lateral Force” using Western equipment has been deployed to each of these conflicts.

After selecting a mission, you receive your orders and go into battle, which can sometimes begin with the alarming suddenness of enemy rounds impacting on your vehicle. A wise move immediately after the mission loads is to press the Escape key followed by F1. This takes you to the Command and Control Vehicle (CCV) screen and pauses the game, allowing you to view a detailed map of the battlefield where you can inspect the units under your command, see how and where they’re deployed, and determine what their movement orders are. Plunging directly into battle without first reviewing this information can lead to a quick, humiliating defeat.

Often you’ll find that while you’re kicking butt and taking names on one part of the battlefield in your personal vehicle, the rest of your force is off licking its own wounds, leaving you alone against overwhelming odds. Periodically switching to the CCV map helps you keep tabs on both your units and those of the enemy. You’ll frequently find it advantageous to move to a different vehicle on another part of the battlefield, where your divine intervention can turn the tide.

TANKS FOR THE MEMORIES

The real fun comes when you take control of a tank or IFV, assuming the duties of commander, driver and gunner. Fortunately, you get quite a bit of help from your virtual crew, who spot and identify enemy units, lock on to targets, automatically reload your weapons, and keep you verbally informed of gunnery results and other events on the battlefield. In Armored Fist, it’s easy to suspend reality when you’re tearing along a dusty desert floor in an M-1, careening past charred, smoking wrecks with your sights locked on a T-80 as its turret swivels to engage you. Your main gun thunders a near miss kicks up a geyser of dirt next to the T-80, and you begin counting the seconds until another round is loaded, all the while trying to ignore the roar of artillery exploding around you, the crash of rounds impacting on your armor, and a crew member’s frenzied shouts of “Hind! Hind! Hind!”

In modern tank combat, he who fires first usually wins, and Armored Fist admirably reflects this fact. Using the auto-targeting feature, you can quickly lock onto new targets and get off that critical first shot. The disadvantage of this is that there’s no easy way to break the lock or switch to a more threatening target. Occasionally you’ll find yourself in the awkward position of having your gun locked on a satellite dish while a nearby enemy tank is blazing away at you, forcing you to first destroy the dish and then pray that you’re still alive by the time you can return fire. The only way around this is to avoid using auto-targeting, a solution that leaves you with World War II style gunnery, hardly ideal when your opponents are using modern fire control systems.

Don’t be fooled by the presence of IFVs because infantry is completely absent on this battlefield (as are buildings and roads). In addition to their auto cannons and anti-tank missiles, Bradleys and BMPs carry Stinger and Greenline surface-to-air missiles—the best defense against enemy helicopters. In an odd decision intended to reflect the older design of the BMP, Novalogic excluded the overhead map display from this vehicle (as if BMP commanders don’t carry maps), making it difficult to navigate or command from this IFV.

Air and artillery support are crucial to minimizing losses and winning consistently. Air support is usually less effective than artillery because gunships can be shot down or will return to base when they’re taking fire. Helicopters fly “kamikaze” missions straight to their assigned targets to pummel them from point-blank range, which does little to improve their survivability.

Hits on vehicles cause a variety of damage, ranging from insignificant to catastrophic. Usually the first thing to go is the vehicle’s night vision, a real bummer during missions after dark. Tracks can be blown off by mines or enemy hits, and engines can be knocked out. As unrealistic as it may seem, if a vehicle can survive long enough, track...
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record. In campaign mode, some missions must be completed before others can be played. Other than that, the outcomes of your battles have no effect on your overall campaign or the subsequent performance of your units.

**Armored Fist**'s mission editor is one of its strongest points, giving you the ability to modify existing missions or create new ones. Unfortunately, you're limited to the terrain maps that come with the game, only four vehicle types, a maximum of 16 vehicles per side, and a small number of terrain elements. As a result, efforts to reconstruct historical battles from such conflicts as Desert Storm end up looking and playing like typical **Armored Fist** missions.

When all is said and done, **Armored Fist** falls short of being either the kind of tactical simulation for which grognards grudgingly reserve their respect or the graphically stunning action game admired by those who prefer that genre. That's too bad, because within its limited scope, **Armored Fist** is capable of creating an exciting sensory experience as well as presenting players with challenging tactical problems. If you're not too hung up on realism or graphics, you're in the market for a game that's relatively easy to learn and quick to play, and if the sights and sounds of modern armored combat appeal to you, **Armored Fist** could be your front-row ticket to the fight.

**The Editors Speak**

**Armored Fist**

**Rating**

**Pros**

- Great graphics in general, with realistic terrain, visual effects, and animated sequences.
- The scenarios and mission editor will yield much short, fast, and explosive gameplay.

**Cons**

- The game is limited in scope and lacking in realism. Definitely not a game for those who worship at the altar of Simulation.

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The Fleet Sails Into New Theaters

FLEET DEFENDER GOLD CD Boasts Two New Theaters, A Mission Builder, And Multimedia Glitz

by Tom “KC” Basham

You've probably heard this before: as software grows in size, CD-ROMs become increasingly more attractive to game publishers as a distribution media over floppy disks. No exception to the rule, MicroProse has not only adopted CDs, they've made good use of the 600 megabytes on FLEET DEFENDER GOLD's (GOLD) disc. GOLD consists of three components: 1) The latest update of FLEET DEFENDER including two additional theaters (Indian Ocean and Korean Peninsula), 2) a multimedia introduction to the game including an animated tutorial, and 3) a multimedia presentation on naval aviation. No prior version of FLEET DEFENDER is required; GOLD contains all components necessary to install and run the simulation.

Expanding the Squadrons
Multimedia gloss aside, FLEET DEFENDER forms the core of this product. The CD-ROM includes the latest version of the F-14 Tomcat simulation including a mission builder and two new theaters of action. Each new theater, Indian Ocean and the Korean Peninsula, contains three new campaigns. Except for the mission builder and new theaters, the basic game operates identically to the disk-based versions of the software. The new theaters, generally referred to as “Pacific Theaters” compared to the earlier “Atlantic Theaters,” are appropriately staffed by F-14 squadrons assigned to the Pacific fleet. F-14s bear appropriate West Coast markings and are assigned to appropriate Pacific-based aircraft carriers. Unfortunately, other aircraft, such as A-6s and F/A-18s bear Atlantic squadron markings regardless of which theater you're flying in.

While the new theaters add new challenges, the mission builder provides potentially limitless adventures. Users may create missions in any of the three Atlantic theaters and two Pacific theaters, with the only constraints being a maximum of 70 objects (such as ships and aircraft) and 60 ground targets. Although very flexible, the mission builder's interface is rather clumsy. For example, when adding objects to a scenario you must page through a long list containing all available aircraft and ship types. The menu lists a handful of items to choose from and a "more" button. You can move forward in the list by pressing the "more" button, but you cannot move backwards. If you accidentally pass the desired object, you must either exit and re-enter the menu or cycle through the rest of the list back to the starting point. Despite a less-than-perfect interface, the mission builder is quite powerful, allowing you to create missions on par with the most complex ones included in the various campaigns. The 66 waypoint commands include "crash this object at the specified waypoint" (useful for missiles), "jam communications" (causing enemies to jam E-2 to F-14 datalinks), and "drop paratroopers."
NARRATED COCKPIT TOUR
Gold includes a fairly lengthy, two-part, multimedia tutorial which runs under Windows 3.1. The first part, the cockpit tour, audibly describes every switch, indicator, and display in the cockpit, including indicators not described in the documentation. When you click on a particular object, the narrator explains what the object does and when you might need to use it. For example, click on the "Collision Indicator" located beneath the HUD and the narrator tells you the purpose of this light: it illuminates when your aircraft is on a collision intercept course with a radar-locked target. If you can't find what a particular indicator does, just fire up the cockpit tour!

The second half of the tutorial teaches actual flight operations includingarming weapons, take-offs, searching for targets, defensive tactics, radar locking and engaging targets, basic fighter maneuvers, and carrier landings. Most of the sections, especially the landings section, are reasonably detailed but definitely geared toward the novice user. The basic fighter maneuver section is very brief and gives only a cursory description of break turns, merges (called "early turns"), the split-S, scissors, the Immelmann, and the loop.

MULTIMEDIA PRESENTATIONS
The rest of the CD-ROM contains various multimedia presentations. In 1984, two Libyan MiG-23s challenged two US Navy F-14s operating over international waters in the Gulf of Sidra. The F-14s engaged and subsequently splashed both MiGs. The majority of the recording from the cockpit voice recorders are included on Gold along with a written transcript and glossary to help listeners understand what is being said. Gun and HUD camera footage from the last few moments of flight (showing the hit on one of the MiG-23s) appear as the engagement nears conclusion. Military aviation buffs will definitely find this part of the package interesting. I did notice some intermittent bugs with the text display. A bar moves along the text display highlighting the text being spoken. Sometimes, the text display would become garbled and multiple pages would overlap, making it difficult to read. The voice, however, performed flawlessly.

Finally, Gold includes most of the Aviation Week & Space Technology video tape: "Flight Deck." This excellent video explores every aspect of modern carrier aviation spanning the makeup of carrier air wings, hand signals, color codes for flight deck workers' uniforms, landings, and adverse weather operations. The latter tells a particularly harrowing tale of a landing made in extremely bad weather. The CD-ROM includes most, but not all, of the video. The video contains excellent footage of carrier operations and interesting interviews with pilots, a landing systems officer (LSO), and an air boss. Anyone who enjoys "Wings" on the Discovery Channel will thoroughly enjoy this video.

Additionally, as an advertising campaign, the CD-ROM includes the introduction from six other Aviation Week videos. Although the clips last only a couple of minutes each and are clearly meant to pique your curiosity, each still contains some great footage ranging from SR-71 operations to Gulf War actions. MicroProse's tactic of attaching advertising to their software has always annoyed me, but in this case I find the advertisements very enjoyable to watch.

Whether you already own Fleet Defender or are just now taking the plunge, Fleet Defender Gold is an enjoyable package for any fan of naval aviation. If you didn't like the original, floppy-based Fleet Defender, however, you will find little of interest in Gold except the video clips (which can be purchased on VHS tape separately).

THE EDITORS SPEAK

FLEET DEFENDER GOLD
RATING ★★★★

PROS Mission builder and new scenarios breathe new, extended life into a good sim. Cockpit walkthrough is great for new pilots, while the video additions will be enjoyed by all.

CONS Mission builder interface is crude.
Visions At Dawn

Empire's DAWN PATROL Challenges RED BARON For Control Of WWI Skies
by Michael Rymaszewski

For many years now, the World War 1 flight sim skies have been
ruled by one game: RED BARON from DYNAMIX. A design and
programming masterpiece, RED BARON was powered by a realistic flight
model that helped propel it all the way into the CGW Hall of Fame. The one
gripe shared by many BARON aficionados was that the graphics could have
been better.

Now a new contender has broken out of the clouds, one that could ace
out the BARON at its own game. Named DAWN PATROL after the movie, it has
been developed by Rowan, the British company that previously gave us
REACH FOR THE SKIES.

DAWN PATROL is a game that stands out in two respects. One is the concept
behind the game. Instead of offering a smorgasbord of single missions and pi-
lot careers, it presents the history of aerial war in WWI in the form of an
interactive book whose pages literally come alive. I'm avoiding the term "multi-
media" intentionally; it's been so prostituted that, like a stained blanket, it covers
too wide a variety of things.

STILL LIFE WITH TRIPES
AND PURPLE ALBATROSSES

The second outstanding feature of DAWN PATROL is its graphics. Never in your life
have you seen such beautiful planes. Every plane and bit of landscape is image-mapped, and
it shows. Although there are no individual clouds and no glare effect, DAWN
PATROL is one of the nicest-looking historical flight sims ever done.

The game comes beautifully packaged, and the box contains not only the manual,
disks, and technical supplement, but also a classy book about the First War's infamous
ace, Manfred von Richthofen. It's a nice twist on the tendency to stuff abbreviated
histories into manuals. All in all, you get the feel of a meticulously finished product.

Installation involves choosing between the VGA version, the SVGA version, or
installing both; this last option allows you to view the book in SVGA while flying
and fighting in VGA. The game's technical supplement states you'll need a
DX2/66 or a Pentium 66 to get a good frame rate while flying in SVGA. If you
do have the good fortune to own one of these, and your video card is not featured
in the setup options, you might still have problems. You'll have to create a boot
disk with custom CONFIG.SYS and AUTOEXEC.BAT files, and this can be
tricky; a computer whiz friend of mine could not get the game to run for three
hours, even though he had run other games in SVGA without any problems on
the same system.

That sounds like bad news for the majority of gamers, so let me add quickly
that the VGA version is pretty good, too, and should work smoothly on practically
every 486. The wily Brits have devised a way to avoid choppy frames once things get very busy on the screen: an optional feature maintains frame rate by automatically adjusting the width of the window. The combination of the WWI looks—struts and wires all over the place, gaudy German paint scheme—with the beautiful graphics is entrancing. It’s always gratifying to shoot at a nice target, but pumping bullets into a purple-winged Albatros with a flecked fuselage is especially captivating. The ground is quite well done, too, although ground targets from close up leave a little to be desired. This is where all the frustrated aesthetes among the Red Baron veterans will really get off, and this could be one reason why Dawn Patrol could become the most popular WWI flight sim among newcomers to the genre.

VIRTUAL COCKPIT A L’ANGLAISE
Dawn Patrol also features a British take on the virtual cockpit concept, which made its debut earlier in MicroProse’s 1942: Pacific Air War. You hit the appropriate button to padlock the view on your target, and then attempt to bring your guns into the picture, too.

As in 1942, this entails certain visual sacrifices. The parts of your own plane that come into view will remind you of those good old days when you played Blue Max on a 286. A press release states that the guys at Rowan use this mode exclusively to fly and fight. Being both an aesthetic and a homicidal maniac who likes to shoot down as many planes as possible, I did not use it much.

The emphasis on the visual aspects of the game is underscored by a multitude of commands giving you different views of different aircraft. Many of those commands are two-key combinations, and using them in a fluid sequence calls for a monkey-like dexterity which I, for one, do not possess. I can see, however, the rationale behind developing such an elaborate system of different views—anyone running Dawn Patrol in SVGA will spend hours staring at the aircraft from various angles, mouth slightly open.

IS IT A SOPWITH OR A SPITFIRE?
Dawn Patrol’s pursuit of visual perfection comes at a cost: its flight model is relentlessly optimistic. There is the option of setting your airplane’s engine to “normal” and “super.” It’s unnecessary, because even at the “normal,” or supposedly authentic setting, a Spad 7 feels more or less like a Mustang in Aces Over Europe—except it has a little more power, and doesn’t spin out. I’ve spent 20 minutes trying to tip a Camel into an uncontrolled spin with no success. This feature will cause lips to curl with contempt among the serious sim pilots, but I suspect that it will prove immensely popular with many others, particularly those who are relative newcomers to the genre. The engines also turn miraculously powerful when autopilot is switched on—a damaged Eindekker will climb at an angle approaching the vertical at a steady 46 mph.

The cockpit interior is nicely rendered, devoid of any instruments apart from two dials giving airspeed and engine revs. Altitude is displayed elsewhere, on the information bar across the top of the window, so the cockpit is there mainly for decorative purposes. Right where the inclinometer should be, it features two mysterious silver switches: one switch indicates whether the magic autopilot is on, and the other confirms it will actually fire the guns for you. As silly as it sounds, it makes sense because of the graphics: many players will enjoy missions flown exclusively on autopilot while flipping through the various views.

In addition to engine settings, adjustable options include joystick sensitivity. Therein lies a warning: all the 13 planes you can fly are curiously devoid of personalities. Yes, a Fokker DVII is faster and more powerful than a Tripe, a Camel can turn while standing still, the fast Albatross turns poorly but climbs well, and so on. However, all of them are ridiculously easy to fly, and react to controls pretty much as you indicated you’d like them to on the options screen.

THE SOUND OF GUNS
Finally, there is the issue of what you hear while you’re doing all this flying. Apart from magnificent-sounding machine guns, sound effects are rather poor—at least on AdLib and Sound Blaster cards. Hits, whether scored by you or on you, are indicated by arcade-style noises, and the same slight silliness is present in most other sounds. The engine was almost totally silent on both AdLib and Sound Blaster, while ack-ack fire made me jump in my seat. For some historical background, here’s a quote from Billy Bishop’s memoirs in Winged Warfare: “The German shrapnel shells are nearly always mixed with high explosive.
They are very noisy, but most of the time your engine is making such clutter the explosive efforts to wing you in flight go entirely unnoticed.”

I think that is one factor that was simply overlooked, given the game’s serious approach to historical accuracy.

**DOGMEAT SANDWICHES**

While flying a plane in **DAWN PATROL** is easy, fighting isn’t. The AI is really well done, and even veteran pilots will be truly tested. The enemy planes work in teams; for instance, if you’re alone, they’ll sandwich you from above and below, and make firing passes from opposite directions. You’ll see some startling things happen, too. **DAWN PATROL** is the first sim in which I witnessed a phenomenon often described by real veterans: a plane following another following another following another, all locked in a chain of death, each firing at the one in front. Other details include balloons hurriedly winched down when attacked, and opponents who sometimes dive out of the fight and run for home, as they often did, without contesting you to the bitter end.

While aerial gunnery is childishly easy (except when flying the Nieuport with its overwing gun), shooting down something isn’t because you have to hit it many, many times. Damaged aircraft stream white smoke and limp visibly; upon achieving a kill, you are often rewarded with spectacular sights—wings coming apart, etc.—accompanied by tell-tale black smoke.

As mentioned, **DAWN PATROL** takes a bold step away from the format adopted by most historical flight sims, and presents what in effect is a set of 150 single missions. Having a marked preference for fighting in the career mode, I was rather suspicious of this. To my pleasant surprise, **DAWN PATROL** has proved to be very replayable.

This is possible thanks to the fact that you can modify the number and types of aircraft involved in almost every mission. Nearly every mission can be flown for either the Germans or the Allies, and on many “repeat” missions (I told you, the AI is good) you’ll find the enemy appearing from a different direction than they did previously, sometimes lower, sometimes higher. There’s always a factor of unpredictability thrown in, and the possibility that a mission you thought you’d mastered will master you instead.

Changing the number of planes or their types makes a big difference: you’ll find yourself replaying the same mission over and over again, seeing how three Spads would stack up against four Albatrosses, then five Fokkers, and so on. Of course, the key enjoyment is seeing all those different, beautiful airplanes.

The game does contain an attempt to mirror the pilot career option present in most sims. Since **DAWN PATROL**’s format is that of an interactive book, it quite logically asks you to write eight new pilot biographies, where each page would describe how a mission was fought. The challenge supposedly is to create the most engaging and fascinating biography possible in the course of eight missions.

I’m afraid this is one novel concept that didn’t quite work. There are only eight missions for each pilot, and you fly the same missions over and over again. Depending on the outcome, you see a page fill with text that attempts to sum up the experience. The effect is not only feeble and repetitive, but sometimes ludicrous. On one occasion, fighting as the great Guynemer, I found myself very badly damaged. I landed quickly in a nearby field (landing is always a snap in **DAWN PATROL**, even with no engine) and waited anxiously for the Fokker’s bullets to start thudding into my Nieuport. The Fokker circled and flew away, and I found myself reading that the great Guynemer, seeing that his opponent’s guns had jammed, gallantly spared his life, waved and flew away.

The copy on **DAWN PATROL**’s box sleeve promises “the aeronautical experience of a lifetime.” It also asks you to forget all other flight sims, because **DAWN PATROL** tests your flying skills to the full. I would not agree with either of the above. **DAWN PATROL** is the visual experience of a lifetime, not an aeronautical one; and it tests not your flying, but your dogfighting skills—an entirely different ability, though of course related.

All in all, **DAWN PATROL** offers a lot of flying time for the money in a very unique format. As they say about movies, this one has to be seen.

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**THE EDITORS SPEAK**

**DAWN PATROL**

**RATING** ★★★ 1/2

**PROS** Sumptuous graphics, good dogfighting AI, and a novel approach to its structure. **DAWN PATROL** will deliver many hours of fun, unless...

**CONS** ...you require a realistic flight model from your sims, in which case you might think twice about your buy.
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And A Happy New Year

In spite of the expected flack I’ve taken over last month’s “Windows for Wargaming” column, I’m still smiling. With the smell of pine still wafting through the house, the fire burning in the fireplace, my life’s mate smiling at me from over her monitor, and a shelf full of great computer and board wargames, how could I not be a happy man? The fact is, 1994 has been a great year for strategy and wargames. Sure, game companies have been bought and sold; sure, “New Hollywood” is looming over computer gaming and, sure, on-line services and communities are growing and changing faster than my 9-year old son. However uncertain the “big picture” of gaming may be, the grass looks pretty green (under all that snow) in our niche of the gaming market.

Looking back on 1994, I recall a crazed bit of MOOing. By MOO, of course, I mean Master of Orion, the space strategy game from MicroProse that has earned plenty of kudos from gamers. So popular is this game that MicroProse has signed the SimTex team to do the Master of Orion Deluxe (MOOD) sequel for 1995. It’s going to be a major revamp from stem to stern (see the G2 file for more info) and will be one to watch for the coming year.

I had a lot of fun with QQP’s Merchant Prince this year, as did our Editor-in-Chief, Johnny Wilson. The back stabbing and political intrigue required in that game ensured that my diplomacy vs. computer opponents stayed sharp in 1994. However, if I see one more fluctuation in the price of silk, I’m liquidating. There is just something nice about games that can keep you discovering maps and engaging in commerce until all hours of the morning. The recently released Transport Tycoon from MicroProse promises to uphold this time-honored genre of economic empire building, so a building I will go.

Avalon Hill forged a couple of fine additions to my gaming shelf for 1994. The boardgame cum computer game of Kingmaker kept me distracted for some time. I even dusted off my boardgame version and pushed the pieces around. I still wish that this fine multiplayer boardgame had appeared as a multi-player computer game.

Operation Crusader, Atomic’s blast, raised the level of what a computer game with a boardgame feel can be. Best of all, Crusader landed well by Alan Emrich

A WARGAMER SITS
BACK, CRACKS
SOME CHESTNUTS,
AND RELIVES
THE YEAR IN
WARGAMING

* Arsenal Publishing has got a line on two new Civil War games. One features operational level coverage of the Gettysburg campaign, while the other is (brace yourself) a first-person action game that puts you right in the middle of a Civil War battle. Don’t look for these in 1995, but preliminary work has already begun on filling the Civil War gap.

* Civil War historians/gamers are awaiting the re-release of Adanac’s Road From Summer to Appomattox (RFSTA). Chief programmer, cook, and bottle washer Frank Hunter is about finished with this major 2.0 release. Of particular note to computer wargamers is the news that Frank and Scott Hamilton of HPS Simulations are forming a co-op to market and distribute their respective lines of computer wargames. There is even a rumor that the brothers Lapkoff of Incredible Simulations (Defend The Alamo!) will soon be joining this union. It’s nice to see small wargame companies working together to increase their clout.

(continued on page 210)
with both Macintosh and IBM versions that can be played by e-mail, which I think will be a bright star in our hobby's future.

I was pretty enamored of SSG's Warlords II, but I nearly jumped for joy when the Warlords II Construction Kit arrived. As a staunch power-to-the-players partisan, I was delighted to see the many creative scenarios developed by gamers on the various on-line networks. I was particularly lucky to play some scenarios based upon the Tolkien fiction before the networks pulled them for possible infringements on the estate's rights. Next year promises an increase in user power tools, when White Wolf Productions unveils its next iteration of Empire (whatever they decide to call it). Any strategy gamer with a designing itch is likely to have a lot of fun creating wargames with its tools.

We're all pleased when good things happen to good people, and so it was for me this year when I saw my friend and co-editor Terry Coleman get game-lock over Romance of the Three Kingdoms III from Koei. He even orders Mongolian beef at our favorite Chinese restaurant now. My wish for 1995 is that Koei keep their fingers on the keyboards of the IBM gaming market and not go completely cartridge. Terry also got into SSG's Carriers at War II and loved those 1930s scenarios. It's always a good sign when a fellow gamer hoists and hollers as events unfold while playing a game; you know he's being pulled in and having fun.

Electronic Arts surprised me this year. Not with their update of NHL Hockey, one of my favorite action games, but with PowerPoker. Truthfully, I'm afraid to install it on my computer at home. The siren call of those rattling chips would kill my productivity there. Even though the AI isn't quite up to my playing league, PowerPoker is so well done I can't help but play it with a quick ALT-TAB in Windows.

Although I was disappointed with Impression's Detroit, their D-Day and Lords of the Realm were more to my liking. Their line up for next year looks even better. Impressions Front Lines is another power-to-the-player wargame that I'm greatly anticipating, as I am QQP's Perfect General II, The Pure Wargame and Battles in Time. It looks like the East Coast elves will be kept busy for our war and strategy gaming pleasure.

While others raved over X-Com and Doom II, I was checking out Tanks! and Tigers on the Prowl. I'm pleased to see tactical armored enthusiasts (they call themselves "metal heads" in my gaming group) get what they wanted this year, especially with the entry of Transports to the field. Were expecting the Windows version of this Macintosh release in the spring of this year. While I liked these armored warfare games, I really got a severe case of game lock over SSI's Panzer General. I am so involved that I laughed the author of the upcoming strategy guide, Ed Dille, into allowing me to co-author his book and contribute all of my ideas. So much for how I spent my summer vacation... Kudos to SSI for adding a play-by-email feature. I'll be looking to take on challengers among this column's

**EMPIRE IN PROGRESS** White Wolf's next Empire game will have a host of scenario creation tools. Note that the graphics are being improved for the final release.

**THE PURE WARGAME** Like the airborne troops it features, this one should be dropping in on us in the near future.

in Windows, while the former will have a sequel published in 1995). Also, Flight Commander stormed onto my Mac and hooked me quickly. I'm glad that Avalon Hill will have a Windows version of Flight Commander 2.0, with its tactical air battles, to keep my IBM warm this winter.

While I entered 1994 MOOing, I'm leaving it MOOing, if you will. MicroProse's Master of Magic has been keeping my hard drive light blinking considerably of late. While the initial release had an egregious number of bugs in it, I couldn't stop playing it. Fortunately, the patches came fairly quickly. It reminded me of the initial release of Harpoon or Falcon 3.0 in that regard—a great game worth waiting for.

Good things appear to be in the stars for 1995. I'll probably be playing SSG's The Last Blitzkrieg these cold winter eves. It always amazes me how Roger Keating and company find new ways to outdo themselves. Let the good times (and the panzers) roll, I say.

One thing that pleases me in particular, though, is the ever strengthening bridge between board gaming and computer gaming. With 1994's darling collectible card game Magic: The Gathering off to computer land at MicroProse, and SimCity off to collectable card game land at Mayfair Games, I know that these are just the thin end of the wedge.

What I'm looking forward to most of all is Aide de Camp v2.0. Between all of the new features and having every game in the new GameFix boardgame magazine to freely use in ADC format, I'm looking forward to a lot of PBEM gaming next year. Yes, I'm really pleased with how 1994 shaped up, and 1995 looks very promising indeed. Unfurl the maps, people. We've got a lot of campaigning to do.
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and make their products more accessible to us all. Okay, Frank, hurry up with RFSTA so that you can start down The Road From Marengo to Waterloo.

* Speaking of HPS Simulations, Scott Hamilton is in "deep research mode" finding the throw weights and degrees of armor slapping for equipment used on the Western Front during World War II. His still unnamed companion game to TIGER ON THE Prowl will feature evolutionary improvements and should be out during the first quarter of 1995.

* Not to be topped by HPS, Jim DeGoey of Arsenal is firing back with PANZERS EAST. It will use a slightly larger scale for tactical warfare (more akin to the Avalon Hill boardgame PANZERBLITZ) and can be thought of as a WWII version of TACOPS. Rev up the engines, boys, we'll be taking a fateful step!

* AIDE DE CAMP modules from supporting board game companies continue to be announced. Command magazine (805-546-9596) has announced that four of their games (LION OF ETHIOPIA, CORTESE, ANTETAM, and CZECH '38) are now available for ADC. All are on a single disk for $10. ADC version 2.0 is already under development and new features are being slowly added and tested, with the released version probably available in the second quarter of 1995.

* If you would like to sample the latest wares of RAO Entertainment, specifically their RISE OF THE WEST AND BRAVO, ROMEO, DELTA games don't look at your local software store. RAW Entertainment's games are only available directly from the company. Call them at (713) 286-2386.

* News abounds at SimTex software, which spent a lot of time fixing bugs in their premature release of MASTER OF MAGIC. With MOMB safely bed, the details are starting to take shape for MASTER OF ORION DELUXE (MOMD). Its slated to be SVGA and CD-ROM only, with multi-player capabilities (network, modem and email). As development continues, MOOD is shaping up to be a new game in its own right, borrowing some of the successful aspects of MOO, but taking them a good deal beyond what a mere "enhanced version" might offer.

* Galactic overlords will note that Changeling Software's Pax Imperia for MS-DOS should be out by the time you read this. The long delay in releasing the IBM version was due to the addition of features from the latest Macintosh version.

* The 'mech game from New World Computing (via SimTex) is coming along nicely. Each player is an aspiring leader game will feature multi-player play by email (although scenarios for modem-playable, real time battles is still a possibility). The bottom line is, this game is going to be very grand in scope.

* Game designer Andrew Visscher phoned in and mentioned that The Perfect General 2 will be using the AWE 32 sound card in new and exciting ways. Also, modem play is currently being tested, although play-by-email has been ruled out. A scenario builder is not likely to be released with the final version of the game, but might be made available in a follow-up disk.

* New life for Maxis' SimCity is in the cards. Mayfair Games is doing a collectable trading card game based on the simulation of city building and management. It will play both solitaire and multi-player, both cooperative and cutthroat. In competitive multi-player play, one player can be the Mayor while all players can control votes on the city council. You want to play a card to rezone an area? It has to go to a vote in council. You don't like the way a vote went? Play a disaster card on one of your opponents. Look for this in game stores during the first quarter of 1995.

* When H.G. Wells wrote the first set of miniatures rules for his toy soldiers and cannons, he entitled it "Little Wars." Now, Jeff Johannigman of Starjammer Studios (his latest venture) has taken that title and applied it to what he describes as "SimCity with toy soldiers." Play is similar to Syndicate in that there are 40 sections of the world to conquer and eight computer opponents to challenge, such as Napoloien (shown at left). Each opponent has a very distinct personality and style of game play in this post-apocalyptic game. Steve Beeman (Savage Empire and Wing Commander II for Origin) is the lead programmer and promises to deliver a FAST Windows product for use all to enjoy. MicroProse should be releasing Little Wars sometime in the second half of 1995.
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Avalon Hill Celebrates The Machine Of Capitalism In 1830

by Johnny L. Wilson

Frank Norris, author of such muckraking classics as The Octopus and The Pit, either would have been delighted with or horrified by 1830, Avalon Hill's faithful translation of the popular boardgame on the history of U.S. railroads. 1830 neither celebrates the role of railroads in settling the American frontier nor recognizes the railroad companies' impact upon urban planning. (The North, South, East, West grid structure in many Midwestern and Western cities is credited to railroad expansion and real estate brokerage by rail companies.) Nor does 1830 emphasize the impact of rail service on the overall economy. Rather, 1830 celebrates the ruthless business practices of the railroads and relishes the economic manipulation that once made railroad stocks and bonds the high-flying equivalents of today's telecommunications sector (i.e. that which makes you get rich or go broke quickly).

Because your success or failure depends as much on how you juggle the game's volatile stock market as on the structure of your rail system, you may have many rounds where you feel like Matthias Baldwin, founder of the famous Baldwin Locomotive Works. After being unpaid for a steam engine he had constructed called Old Ironsides, he vowed in 1832 that Old Ironsides would be his last locomotive. It obviously wasn't, and no matter how badly you are trounced by the very capable robber barons, who serve as artificial opponents, you'll find yourself coming back for more. 1830 not only captures the adrenaline rush of trying to outwit your opponents with technological advancement timed to hurt them the most and the frenetic thrill of dumping their rail company's stock onto the market, but it vividly captures the excess of an era of amoral ethic and economic excess in a manner that is both entertaining and enlightening. Gamers will feel like they control "that great monster, iron-hearted, relentless, infinitely powerful."

THE AUCTION

The game begins, as does the history of U.S. railroading, with the small private companies on the east coast. The game's title, 1830, comes from the fact that the Baltimore & Ohio was chartered in 1829 and first carried revenue traffic on January 7, 1830. Although the original route was only 13 miles (from Baltimore to Ellioct's Mills, the modern Ellicott City), it set the pace for the expansion of North American rails. Other private companies included at the start are the: Camden & Amboy (which began running a Planet-style locomotive called John Bull in 1831); the Delaware & Hudson (the intended anthracite coal carrier which actually ran the first steam engine in the U.S., the Stourbridge Lion, in 1829, but not for long); the Mohawk & Hudson (which commissioned a steam engine from John B. Jervis' named Experiment, later known as Brother Jonathan, in 1832); the Schuylkill Valley (a small Pennsylvania line in the coal country); and the Champlain & St. Lawrence (which was chartered in 1835 to run between Laprairie and St. John, Quebec; its first train ran on July 21, 1836).

Players bid for the ownership of these foundational lines which have revenue potential and special advantages proportional to their initial asking price. For example, owners of the C&SL and D&H may run track independent of their major lines' operations; the M&H owner can glean 10% of the NYC when it goes public; the C&A operator gets 10% of the Pennsylvania Railroad when it opens; and the B&O founder gets the President's Certificate to the B&O without having to pay any additional fees. Be aware, though, that the artificial Fisks and Vanderbilts are extremely efficient at melding these private companies into the major lines.

Of course, the real action begins when
players begin to create public corporations. Here's where you'll first discover how diabolical the artificial opponents actually are. They're extremely good at gaining control of other companies while dumping just enough of your stock to depress the price. Unfortunately, they usually dump this stock just when you get 60% control of a company and can't buy back any of the diluted stock. You can't fight back by buying back stock with the railroad's treasury, so they often get away with it.

**OPERATIONS**

Once the initial stock purchasing phase is completed, the game follows the boardgame's rhythm of one-to-three operating phases, followed by a stock market phase. Animated sequences announce changes in the ground rules due to new engines causing obsolescence of older locomotives and the game progresses until one player goes bankrupt or the bank is emptier than a failing bank in 1929 or a poorly run savings and loan in the 1980s.

Purchasing 50% of a company's stock automatically makes you the president. For those companies in which you serve as president, you have full control of the corporation for purposes of laying track (the computer indicates which hexes are eligible for new track pieces, a great simplification over what is usually the longest part of the move in the boardgame version): purchasing trains and placing stations. As in the boardgame, station placement can be critical, since one railroad can stiff-arm another out of solid revenue by using station tiles to block profitable routes.

Such activity is vaguely reminiscent of the late-19th century practice of building parallel lines and undercutting fares. In 1885, for example, the Pennsylvania Railroad apparently established the West Shore Railroad parallel to existing New York Central trackage. The Pennsylvania used it as a loss-leader to undercut the NYC until J. Pierpont Morgan, the famous banker, became an arbiter of the dispute and hammered out an armistice.

The bad news is that there is no J.P. Morgan to protect you from the artificially opposed companies in 1830. The good news is that the computer will run your trains for you at the most optimal level, once you establish the configuration of your lines and the types of rolling stock available. Considering all the possibilities for running your trains, this game makes things a lot easier than the board game. Even better news is that those who consider this default procedure to be "cheating" can toggle it off and figure it out for themselves.

Once you operate the trains, you are confronted with a choice: does the corporation keep all of the revenue or pay it all out in dividends? Obviously, the game poses a more clear-cut choice than a real corporation, since it is an all or nothing choice. Fortunately, however, there are multiple operating rounds as the game progresses. By mid-game, you can pay out dividends on one round, keep all the money on another round, and pay out dividends on another. This will add to

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**YOUR HOLDINGS**

It isn't exactly the Home Shopping Railroad Network, but much of the strategy in 1830 comes from wheeling and dealing on the stock market, and deciding which initial offerings to bid highly for.
the corporation's treasure, while also profiting shareholders and causing the stock price to increase.

**THE STOCK MARKET**
Since the game is won by having the most wealth (money in hand plus the aggregate value of your shareholdings) when either one player goes bankrupt or the bank busts, it is important to be able to protect your stock value at all times. When players sell stock certificates, the stock is affected adversely for every 10% of the corporation sold. So, you want to give your opponents as little reason as possible to sell stocks in which you have major holdings.

Paying dividends has a two-fold value. It increases the money in your pocket, makes your opponents feel slightly more pleased with their investment, and insures that the stock will be positively affected prior to the next opening of the stock market. Even if the artificial robber barons do decide to offload some of their holdings, you can weather a 10-30% sell-off, assuming you have paid dividends during one-to-three of the operating rounds held prior to the stock market opening.

**GO WEST, YOUNG MAN** As rail lines spread in open bewilling patterns around the map, the program helps speed play immensely by indicating areas where new track may be laid.

The big problem occurs when you are a minority stockholder in a corporation and the majority shareholder decides to dump his shares. Although he will most likely pay out dividends during each operating round (after all, if he is dumping his shares, that money is going to serve him better in his own pocket than in that of the railroad's treasury), selling off all of his holdings could hit you for three negative hits (30% to reach parity with the last turn's price and 30% worth of negative hits).

**THE OCTOPUS**
If you have too many experiences like that, you may find yourself agreeing with Frank Norris' protagonist in *The Octopus*: "They swindle a nation of one hundred million and call it Financing; they levy a blackmail and call it Commerce; they corrupt a legislature and call it Politics; they bribe a judge and call it Law; they hire blacklegs to carry out their plans and call it Organization; they prostitute the honour of a State and call it Competition. And this is America."

As I said at the beginning of this article, I don't know if Frank Norris would like 1830 or not, but he would sure feel like they got the historical feel of the blood-thirsty competition right, even at the Easy level of difficulty. I know I like 1830. The computer version of the game plays faster and I don't have to wait to play the game until I attend a game convention where there are other enthusiasts. Now, I can be a robber baron on my own time.

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Der Reich Stuff

SSI's Panzer General
Blitzes Through Wargame Boundaries

by Terry Lee Coleman

It has been a surprisingly fertile year for good wargames. From the fluidity of Operation Crusader to the playability and depth of Lords of the Realm to the sheer addictive qualities of X-COM (yes, I know that technically it's a strategy game, but why be picky?), several recent designs have been both clever and entertaining.

Now Panzer General shows up to crash the wargaming party, swaggering through the door with a bit of an attitude. Despite its familiar WWII European theatre setting, it is in many ways an atypical SSI wargame. Proudly it stands, with no detailed orders of battle, complicated supply rules, or arcane combat routines anywhere evident. While the various combat arms do interact, they do so without cumbersome mechanics or multiple phases in the sequence of play. In fact, the game is so easy to play that you could almost figure it out without ever consulting the documentation. For wargamers who lack time, most of the scenarios can be finished in an evening's play versus the computer, and the game works very well via e-mail for two players. All of which is a good thing, because as much as I enjoy playing Pacific War (my favorite SSI game to this point), the average life span of a human being does not permit more than a few games of Gary Grigsby's magnum opus.

Hexgrids, Lies and Videotape

I own a lot of books on WWII, and like most wargamers, know a lot more about the various commanders than I do about the politicians currently in Washington. Still, when I visualize Erwin Rommel (although I have numerous photographs of him), for some reason, it's James Mason's face that appears, his voice emerging from WWII films seen in my youth. Silly? Perhaps, but it is these images that Panzer General evokes. The opening screen draws you in with black-and-white videos of archival WWII footage, superimposed over a gorgeous SVGA backdrop of Europe. Martial music resounds with just the right mixture of style and bombast (you'll never again question how much you spent on your wavetable sound card), and the digitized explosions of combat echo strong and true. Sure it's corny, but it's darned effective in setting the tone.

The 38 scenarios may be played singly, for those who must get their panzer-pushing in quickly. Kursk has lots of tanks, and the desert battles in North Africa will keep any gamer happy for quite some time. But forgoing the campaigns would be a huge mistake, because they are such fun that even non-wargamers are likely to find themselves hooked.

Campaigns may be started in 1941 (in either the eastern or western theatre), in 1943 (east or west), or in 1939 with the invasion of Poland. As you prepare for a campaign, you are briefed by a member of the German general staff. His digitized voice is obviously American, but the German accent doesn't sound hokey at all, and adds immensely to the feeling that you really might be the next Rommel or Guderian. The real secret of Panzer General's success lies in its role-playing aspects, as it allows you to carve out a career in the Wehrmacht while simultaneously helping to conquer the world.

And conquer you must—and quickly, for the general staff has set a demanding timetable for you. If you fail to meet the required deadlines, disaster could strike your career, not to mention your nation. If Poland is not conquered quickly, then England and France will have time to garner sufficient force to invade Germany; and upon your ears will fall the most ill-fated message for any would-be Panzer General: "Your services are no longer required."

Prestige, Promotion and Politics

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perceived as political and military realities. Rather than allowing the player the benefit of historical hindsight, PANZER GENERAL makes you view the world from the uncertain perspective of 1939.

Central to the play of PANZER GENERAL is a most clever mechanic, prestige points, which you expend for a variety of useful things. If you want extra air power, for instance, the top brass back home have to believe you're doing a good enough job to merit the allocation of such precious resources. A squadron of Me-109s costs 328 prestige. When you consider that conquering Poland only nets you some 750 prestige points, it forces you to decide whether the bargain-basement Wehrmacht infantry (only 60 prestige) might be more beneficial to you in the long run.

Every unit has ratings for movement, attack and defense versus soft or hard targets, range, ammunition carried, and so forth, all of which are endemic to the type of unit. Where individual units differ is in their experience level. Each time a unit engages in combat, its experience increases, which makes it more effective in combat. Appropriately for WWII combat, units that fire first generally do more damage to the opponent, within the boundaries of what that unit could do in real life. The basic initiative of each unit type is augmented by the experience level, and then the computer adds a randomizer (rolls a die). Whichever unit has the highest total goes first, with simultaneous fire in a tie situation. Normally, units have a maximum value of 10, which can be increased with elite replacements or lowered according to the firepower of the opposing unit.

Once losses occur, the only way to replace units is to use up those precious bits of hard-earned prestige. Similarly, if a unit runs out of ammo or fuel...you guessed it. There's no Wartime Credit Union on the Eastern front, so the only way to rack up more prestige is to impress the big guys back home. Much of the game finds your forces frantically attempting to capture cities and kill enemy units, the more the merrier. Without a
lot of complex rules, Panzer General thus fills the player with a sense of urgency lacking in a lot of wargames.

As one might expect, rapid conquest is much more difficult than it sounds—one of the reasons why Panzer General is such a good game. Enemy units are hidden from view until you move within a certain radius of them, which gives the player the ability to see four hexes rather valuable. Engineers are a must to effect river crossings, and the tank commander in the Russian steppes without enough anti-tank guns.

The AI is quite effective, even on the medium setting, and is surprisingly adept at wiping out your damaged units with aggressive play. And while computer opponent "cheats" are common these days, I can attest after many hours of play that if there are any AI cheats, at least they aren't blatant.

While most players will be fascinated at first with the more high-tech (and expensive) specialized units, Panzer General has a number of interesting rules for the mainstays of the WWII battlefield, tanks. The popular image of the WWII armored vehicle is a lumbering behemoth of frightening firepower—which is fine for 1944, but not the beginning of the war. Most people are unaware that the French and British fielded superior tanks to those of the Germans in the early period of the war. In Panzer General, the designers thankfully didn't stress fun so much that they let out the history. Panzer I and II tanks are basically WWI tanks with a tad more spunk, more useful against enemy infantry than tanks. Artillery on both sides moves painstakingly slowly and has limited range, which increases as the war goes on. Bombers are notoriously ineffective until they earn experience, and so forth. Newer and more efficient unit types become available for purchase during the period that they were historically available. Thus, a beginning Panzer General will soon find that those silly-looking
Polish cavalry are not quite as out of place as they seem, which is a tribute to the focus of the design. Another clever design element is that new units, when built, are added to the core element, and move with you from scenario to scenario in the campaign. Certain units, such as infantry, may be built with transportation (trucks or half-tracks), so that they move faster than a warm slug; but if you pass up the chance to buy transportation, your men will be foot-sloggers forever. Units which air transport from one airfield to another must leave their ground transport behind as well, a remarkable touch of realism for such a simple game. A lot of the strategy in Panzer General comes from selecting which of the dizzying numbers of units will be your “go-to” guys as you move from scenario to scenario. Imagine what a system like this could do for a Civil War game, where you would have to choose between augmenting the Stonewall Jackson brigade, or buying those newfangled rifled cannon.

EXCUSE ME, BUT THERE'S SAND ON YOUR NARVIK
The campaign rewards players in several ways. First, there is the obvious satisfaction of winning a particular scenario. If you narrowly lose a battle farther on in the campaign, the “plot” of the game branches a la Wing Commander, and your career is still alive because of past glories. As units gain experience, they are awarded with battle honors, and you may even increase their combat strength points above the usual limit of 10, if their morale is high enough. The individuality of each unit is accentuated by the fact that you can name the units yourself. This is fortunate since, in an attempt to make the game more marketable, SSI left out SS units. With the naming facility, sticklers for accuracy can put those units back in, at least in name if not in power. Or you can have “Kelly’s Heroes,” or “Val’s Vikings” or whatever suits your fancy.

Considering its lighter approach, some gamers might worry about the accuracy of the orders of battle. Actually, I have less problem with Panzer General’s order of battle than most wargames. After the first scenario, it is essentially simulating “what-if” scenarios, as everything that happens stems from your actions in previous engagements. Does this invalidate the historical lessons that Panzer General teaches? Not really, because the game design models the effect of actions on a campaign level, rather than setting out to slavishly recreate the conditions of a particular battle. In a very broad sense, it shows the difficulty of staging WWII campaigns, and rewards those players who can both think on their feet and engage in long-range planning. No one who has attempted to take Norway by amphibious assault, or bring about the Fall of France with inferior German armor, will be anything but impressed with how the real-life panzer generals pulled it off.

Those armchair strategists who live for a challenge will find a joy which comes with only a few select games. Clever, fresh and innovative, Panzer General is probably the most addictive game since Civilization. Of course, like anything these days, Panzer General isn’t perfect. It’s a bit irritating that the documentation, while adequate, isn’t more detailed concerning weather effects and the like. While I understand the decision to have enemy units setting up the same way every time you play a particular scenario, there’s a part of me that wishes for more randomness. Even though I found the game to be remarkably bug-free, there is still a small percentage of users who have experienced trouble with their sound cards. Still, all of these quibbles pale next to the tremendous amount of play value in the design. In the end, Panzer General may only give a nod to history, but it’s a reverent nod. Anyone who plays the game will come away with a basic understanding of why each scenario turned out as it did (or as it may have), with the implication that, almost without realizing it, they have learned something about WWII as well.

Unfortunately, there will be those who dismiss Panzer General as being suitable only for novice wargamers, due to its lack of complexity and only passing historicity. Well, it’s their loss. Sure, the design falls heavily on the side of playability, but it does so with such style and balance that even the most cynical of gamers will find themselves swept away. If playing this game means I have to surrender my official grognard license and go to wargaming purgatory, I will gladly go—as long as I can take my copy of Panzer General with me. Maybe then I’d have time to get through that Seelow scenario....

THE EDITORS SPEAK

PANZER GENERAL

RATING ★★★★☆

PROS Great scenarios with a unique and compelling campaign device (not just a wargame, but an adventure). Elegant combined arms, logistics, and experience rules are easy to learn, and will play until the panzers come home.

CONS Those requiring great historical insights from their wargames may find it lacking—but they’ll have fun while they complain!

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Science Fiction Wargaming With Accolade's BATTLE ISLE 2200

by Martin E. Cirulis

A WHILE BACK I WROTE SOMETHING ABOUT THE BLANDING OF SCIENCE FICTION WARGAMES, ESPECIALLY WHEN IT COMES TO THE SCENARIOS. FOR SOME REASON, GAME DESIGNERS GENERALLY FEEL THE NEED TO PRESENT FUTURE WARS AS ULTERLY BALANCED AFFAIRS, IN WHICH BOTH SIDES START EQUALLY ON AN EVEN PLAYING FIELD; TOO BAD REALITY HAS SO RARELY REFLECTED THIS SITUATION. WARS ARE USUALLY DESPERATE STRUGGLES FOR ONE SIDE, MAINLY BECAUSE YOU HAVE TO BE SOMEWHAT PSYCHOTIC TO PICK A FIGHT WITH SOMEBODY YOU THINK HAS A FAIR CHANCE OF KNOCKING YOU SILLY. AFTER ALL, HILaryl STARTED WITH CZECHOSLOVAKIA AND POLAND, NOT FRANCE AND BRITAIN. WHILE SF ACTION GAMES LIKE WING COMMANDER HAVE ACKNOWLEDGED THE DRAMA OF REAL LIFE, SF WARGAMES SEEM TO BE AFRAID OF GIVING THE PLAYER A HARD TIME. FORTRANICATELY, ACCOLADE HAS IMPORTED FROM EUROPE ONE OF THE FEW EXCEPTIONS, A SEQUEL CALLED BATTLE ISLE 2200. WHILE THIS GAME HAS ITS FLAWS, SUPPORTING FAIRNESS IS NOT ONE OF THEM.

ALIENS NEVER ASK FIRST

The premise for BATTLE ISLE 2200 involves some desperate aliens (who happen to look just like you and me—Star Trek xenobiology rearing its mundane head yet again) kidnapping you from your comfortable job—probably as a CPA, if your clothes and hair are any clue—and whisking you to their embattled world Chromos. It seems, in addition to the plight of a terrible name, their world is in the grip of a desperate war between the forces of a fascist AI called Titan-Net and the valiant, outnumbered forces of fascist alien brains called The ROOM, who rule the Island empire of Drulla. You are hailed as the master strategist destined to save their way of life, such as it is; they give you complete control of their military. That'll teach you to fill out those reader's surveys in the back of Strategy & Tactics. Fortunately for your delicately-developed world sensibilities, war on Chromos is fought only by robotic units who don't bleed, run away or require telegrams home.

If this premise were only so much chrome on Chromos, it would be worth a short laugh and then forgotten. But BATTLE ISLE 2200 is played out through a series of linked campaigns in which a kind of behind-the-scenes storyline develops through your communication device, and various persons of note on Chromos call to pass along tips, threats and current events. It seems that even shouting "Glo-ry to the ROOM!" at the end of every official communiqué isn't enough for some of the citizens of Drulla, and there is intrigue aplenty as you discover all is not what it seems...and how hard it is to advance and watch your back at the same time.

THE ARTICLES OF WAR

Despite the back-of-the-box hype, BATTLE ISLE 2200 is a fairly standard wargame in its mechanics. The view is top down, but scale is pretty much left to imagination. Key facilities are represented by single buildings amidst the wilderness, though port facilities usually provide enough asphalt for some high-casualty combats. You point and click your way through movement and attacks. Your units leave little tracks on the terrain, but with square edges they would make fine counters in a board game. Each unit represents a group of vehicles, usually ten, that are gradually destroyed during combat, reducing firepower but gaining experience. When the last vehicle is destroyed, the icon is gone forever, so wise commanders will withdraw heavily damaged units to facilities capable of replacing lost machines. The downside of this is that a point of unit experience is lost for every new vehicle.

Combat is resolved in a single exchange of simultaneous fire between attacker and target, modified by the traditional aspects of firepower, armor, terrain and experience. The chrome here is that after you indicate your target and weapon of choice (most units carry multiple weapon systems), you are presented
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with a panoramic view of the combat rendered in filled-polygon graphics. Each individual fighting machine is represented in a little square formation, firing its little guns and either surviving or exploding into satisfying small chunks. It's an effect that is more cute than awe-inspiring, but it does livens up a process that is essentially a roll of the dice and a look at a results table.

The campaign is represented by a series of battles, each getting progressively harder, which must be won in order to advance, à la Populous. Unfortunately, this may wear a little thin to wargamers who are used to some other result of failure than simple repetition. Victory conditions almost always involve taking one or more towns, factories or enemy headquarters. Once you get farther into the game, you begin to realize that there is usually a "trick" to achieving your ends. Your opponent is usually far stronger than you in numbers. So much time must be spent exploring the mapboard (revealed via your units' scanning ranges) looking for a hidden opportunity, which will hopefully deliver a quick victory while the foe is occupied elsewhere with your few heavy units. Since only three unit types are capable of capturing a structure, care must be taken to keep these key units safe while blasting a path to your objective. Your computer opponent is highly skilled in going after the specific units you need to satisfy your victory conditions.

The real meat of the game is in the huge array of unit types. Over 50 different types of units are available, a few of them unknown even to the documentation, and you must learn how to use them on the fly. There are even a handful of non-combat units dedicated to transport or the construction of roads, rails and fortifications. Learning how to exploit the strengths and weaknesses of all these vehicles will test the mettle of even experienced wargamers. And since new kinds of units are introduced gradually from one scenario to another, a player's inter-

CHOPPER STRIKE! These filled-polygon 'copters may look blocky, but they pack quite a punch, with mobility to boot.

est is kept alive over a very long time, even when judged by the tough standards of wargamers.

A TOUGH ROOM

Unfortunately, the biggest problem with Battle Isle 2900 can be summed up in one word: Frustration. To begin with, the software is pretty finicky, and unless you are running the very latest in DOS (6.22), CD-ROM drivers, and memory managers, you better save every other turn. One must follow the setup modifications to the letter or the crashes occur too often to actually play the game. These kind of boot-disk gymnastics will turn off just dedicated to shutting info packets around. It would have been nice to see a little more work put into the network system, as the huge variety of weapons and tactics available make human opponents real nail-biters to play against.

This is not to say the computer is a push-over, though. While it is no more a brain-surgeon than any other wargame AI, the computer has read your victory conditions well and is an expert at destroying your ability to achieve them—sometimes before you know them yourself. It is not atypical to spend two hours fighting over a map, only to discover the last building to be captured lies over a river that can only be crossed by the hovercraft that the computer obliterated in the second turn. Other computer talents lie in the realm of the cheap shot, specifically in sneaking a unit behind your lines to capture a structure full of your units under repair. Since anything in a structure becomes the property of the capturing player, this can mean an explosion of enemy units in your backfield, units that used to be your tactical reserve.

As I pointed out earlier, most scenarios have a trick of some kind: a building full of new weapons to be captured, an undefended backyard to the victory condition, etc. The frustrating part is that each scenario can take up to four hours to complete and usually you don't get the idea until halfway through, at best. While the game is enjoyable, slogging through another two-hour repeat of the action just to do things right is not an inspiring idea. Most gamers might be tempted to let the game sit for a day or so, until they have built up the enthusiasm to try again. Many players will find themselves saving

WHERE'S THE CHECKERED FLAG? It seems that these reccon buggies are lined up for the Indy 500, but your opponent won't be laughing when those surface-to-surface missiles find their targets.
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multiple versions of a scenario, as if they were playing a role-playing game where every misstep has to be re-taken. Now, to be fair, you can still ring out a victory the hard way, but even should you have the military skill to defeat your opponent head-on, a built-in time limit makes this unlikely and even more frustrating. Nothing is worse than spending an evening crushing the computer, only to have the time limit go off when you are literally a move away from victory. And since failure means repetition, one's enthusiasm wanes quickly.

TODAY LOOKS LIKE SUNSHINE AND COLORFUL EXPLOSIONS Weather reports, delivered by a fetching female Drulian meteorologist, help you decide whether it's time to go picnicking in enemy territory.

While the linked scenarios and nested storyline are a very nice touch for a wargame, the adoption of this POPULOUS-inspired "try, try again" system really defeats any sense of perceived realism. Anything involving a storyline must be branched for success and failure, or the player begins to ignore what is happening in the game because, obviously, his actions have no effect on the outcome of things—and a nice touch becomes a slide show. It's not like the Allies got to reset Dieppe until they got it right.

A THREE-HOUR TOUR
BATTLE ISLE 2200 is an odd duck of a wargame. While it is intuitive and simple enough to be enjoyed by the casual combatant, it has enough variety and subtlety to keep most grognards happy and snarling. Conversely, the subject matter and strategic elements are probably a little fluffy for the serious wargamer, but the battles themselves require a commitment of time and concentration that will daunt the weekend warrior.

This may not be the definitive SF wargame, but it is a step in the right direction. If you like variety, a pretty tough fight from a computer opponent, nice pictures of exploding polygons and are lucky enough to have the perfect CONFIG.SYS, then you might consider a trip to Chroma for a long tour of duty.

THE EDITORS SPEAK

BATTLE ISLE 2200
RATING 3 3 3
PROS Challenging play and a wide variety of weapons.
CONS Frustrating design elements: "tricks" to scenario "solutions," time limits, and a linear campaign system that forces you to win each scenario before you can proceed.
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War Crime In Real Time

An Age-Old Hatred Lives On In Blizzard’s
WARCRAFT: ORCS & HUMANS

by Chris Lombardi

Where have all the humans gone?
Gone to Orc meat, everyone.
Where have all the humans gone?
—6th Century folksong

Will it ever end, this blood feud between Orcs and Humans? Ever since the great historical chronicler, J.R.R. Tolkien, stepped through a fantasy wormhole into the land of Middle Earth and recorded the horrendous wars that rocked that land, we’ve heard nothing but more reports of cruelty and bloodshed.

Is there nothing we can do? If only we could get the U.N. involved, perhaps they could negotiate a cease-fire. Better yet, if we could send Jimmy Carter on a diplomatic mission through space and time, he might return with the assurance that all would be well.

Alas, all of these measures would be stopped dead by the barrier between our world and the other. As meticulous a reporter as Mr. Tolkien was, he was negligent in detailing the means by which he accessed that alternate world. Are we left to despair?

Perhaps not. If, by a refocusing of the eye, we change our view of the matter, we might be able to find good in an ugly situation. One benefit, and the one closest to our hearts, is that the wars between Orcs and Humans have given us many a good computer game.

What we have in Blizzard Entertainment’s WARCRAFT: ORCS & HUMANS, is exactly that—a pretty good game set in the Tolkien-esque mythos. This slick, real-time strategy game recounts a war between a human kingdom and an orcish invasion force in an area called the Borderlands. The game tries its hardest to avoid partisanship in its retelling of the tale, and so the game gives each side in the conflict equal time. The single player game is played through 20 or so scenarios, half of which can be fought from the human side, half from the orc. Even the manual shares this clean division, with the human account on one side of a split-formatted book, and the orc on the flip side.

If Blizzard borrowed generously from the accounts of Tolkien for its story and setting, they performed a perfect bit of creative larceny when it came down to the game mechanics and play. Replace the overhead graphics of orcs and humans with Atreides and Harkonnen, substitute WARCRAFT’s resources (timber and gold) with Spice, and rename the various buildings that you must construct in a simplified SIM CITY style, and you have Westwood Studio’s DUNE 2.

The similarities are more than skin deep. As in DUNE 2, the scenarios are constructed linearly; you must complete one before going to the next, and the difficulty crescendos with each passing scenario. At the beginning of a scenario you’ve given an objective, usually to lay waste to the opponent’s town. Starting with the harshest makings of a town (usually a town hall and a few farms), you must build up your plot of land into a well-oiled war machine capable of out-producing and out-researching the opponent. From an overhead perspective, you build roads, place buildings, and muster new units, all financed by peasants who must seek out timber from forests and gold from mines. If you’ve played DUNE 2, you could probably get halfway through the game without looking at the game manual. It’s a good thing for Blizzard that there’s no precedent for “look and feel” lawsuits in computer entertainment.

All of these tasks must be done now, which is the thrilling part of real time games. While you’re moving each unit to explore the blackened unknown of the map, you should also be creating peasants and putting them to their wood or gold harvesting tasks. Of course, to support new peasants, you’ve got to have farms, which must be built by the same peasants you just ordered to the mines. Meanwhile, your exploring soldiers have probably run across a small group of enemy troops, so you must quickly scroll over to the fight and make sure your troops are properly dealing with the threat (they don’t do very well on their own). If your troops have a poor showing, you may have a few ugly invaders pouring into your town attacking your buildings and killing off your peasants. More troops are required, so barracks must be built, which requires more
HPS Simulations, the WARGAMER’S Computer Company™, and designer Scott Hamilton, bring you the ULTIMATE WWII tactical combat simulation.

Covering the ENTIRE Eastern Front from 1939-45, *Tigers On The Prowl* includes a detailed database of hundreds of fighting vehicles, weapons, and force structures for the Axis, Allied and Soviet forces. Likewise, combat is resolved by precise calculations of armor thickness and round penetration at the instant of impact. It also features morale, hidden movement, communications, airstrikes, night fighting, forest fires, and much more. Designed for all levels of wargamers, *Tigers On The Prowl* includes 5 scenarios, a flexible scenario builder, and three levels of complexity. Orders are given to platoons or sections, with a maximum of a supported combat brigade on each side. Can be played solitaire against the computer, or by two players - either face to face or by mail/e-mail. *Tigers On The Prowl* can use maps and symbols created with Aide De Camp. *Tigers On The Prowl* is as real as you can get without being there.

Requires VGA, 570KB free RAM and 2 MB hard disk space. Mouse optional. For IBM and compatibles.
CHARGE OF THE ORC BRIGADE As this orc scenario opens, a frontier town is under attack by vile human troops. The orcs must save the town and launch a counter-attack.

CORRIDOR OF DEATH The humans have set up a formidable defense at a strategic choke-point. With their piecemeal attack style, the orcs don't stand a chance.

peasants, more trees, more gold, more time—of which there's never enough.

The panicked pace rarely leaves room for a dull moment. Warcraft is a game of split-second decisions, a mad-dash juggling of resources and demands, that requires you to be both long-term planner and octopedal micro-manager with a quick but steady mouse hand. If you like to calmly contemplate your next move and carefully add up combat factors before launching your next attack, or if you can't manage the carpal calisthenics to right and left mouse click in rapid succession, you can forget about Warcraft.

If you can handle the pace, Warcraft will show you a good time. The scenarios are structured such that the game slowly doles out new buildings that produce new unit types that have new abilities, so there's always a "carrot of coolness" constantly dangling before your nose. While you start with basic grunts and archers, and a handful of basic buildings, you'll soon find that the human can build stables (kennels for the orcs) that produce mounted knights (or wolf-riding raiders). A timber mill and a blacksmith will allow you to build catapults, in addition to improving the quality of your basic weapons. Then come churches/temples that produce clerics/necrolytes that can cast a variety of helpful spells, and towers that produce conjurers/warlocks who weave a death-dealing web of offensive magic.

There is a fundamental parity between the units and buildings of the orcs and the humans, but there are some differences that make for interesting play. While some of these differences are subtle (the human archers have a slightly greater missile range than the orc spea-

men, for instance), others are great. The two races have a completely different set of spells. While the human cleric can heal injured warriors and make units invisible, the orc necrolyte can raise the dead and bestow unholy armor on its compatriots; and while the human conjurer can call down a nasty rain of fire on his enemies, the orc warlock can call up a cloud of poison that drifts through the human's lands, injuring peasants and damaging their abodes. Both conjurers and warlocks can summon creatures from other planes, but the warlock's demon has slightly more strength than the conjurer's water elemental, but the water elemental has greater range with its attack.

Between the real time play and the interesting mixture (but basic balance of) the opposing units, it seems we've got a great game here—a game designed for an ebbing and flowing contest of tactical and strategic wits. There's room in this game for tricky feints, misdirection, and devious combined-arms tactics. Unfortunately, Warcraft's artificial intelligence (AI) doesn't quite live up to the design. Computer AIs in general, and Warcraft's in particular, don't do "ebb and flow" very well, and certainly very few, if any, can be said to have much "wits." It's tough enough to give AI direction, much less the capability for "misdirection." So, with a nod of acknowledgment to the fact that programming a good AI is extremely difficult, especially in a game as free-flowing as Warcraft, it must be said that Warcraft's AI is predictable at best, and very gullible at worst.

On the predictable end, the AIs overall strategic approach seems to be the same for each scenario. The computer has a group of units that it uses to attack at the beginning of a scenario, giving the player some early headaches. From that point on, it sends a steady stream of small groups, usually just enough to weaken the human player's defensive line, but rarely enough to cause serious trouble. Meanwhile, it keeps a small defensive cluster at its town. The human player's strategy, then, is to weather the initial attack, set up a defense for the steady stream of small threats, and then amass enough troops to take out the computer's relatively small home defense. For

PEE ON THE PEONS Human knights race to save a group of gold-bearing peasants that are under attack. Peasants are a favorite target for both sides.
the human with any sort of natural intelligence (NI), most of the scenarios are a walk in the park, especially if the NI can master a few tricks to take advantage of the AI's tactical weaknesses.

To deal with the AI's inability to match the NI wit-for-wit in an even fight, the designers have used a device about which I have mixed feelings: they've designed "puzzles" into the scenarios. Each scenario seems to have a "trick" that you must figure out, and there's usually only one basic approach to the solution. For example, in one of the human scenarios you must rescue a group of peasants being held in a compound. Since you aren't given any other peasants or money at the beginning of the scenario, you must rescue the peasants before you can generate money and build more troops. Once you find the compound and the "correct" path to the compound, then you must figure out how many troops it will take to spring the prisoners and get them back safely, while defending your home town against the huge orc army that is programmed to attack immediately after you've breached the prison walls. This whole affair is a trial and error process requiring you restart the scenario a half dozen times before you figure it out.

On the one hand, I like this device because it in part makes up for the AI's weakness, and the designers use it to tell a story, and tell it well. Each scenario is a chapter in the story of the war (introduced with voice-over speech and a cool animation where a 3D landscape morphs out of a 2D map), and the scenarios are designed to reflect the story. In one orc scenario, for example, an orc town is under siege. You start with a group of units some distance from the town, and you must race over, relieve the siege, and then use the buildings that you save as a platform upon which to build your war machine. On the other hand, once you've figured out the trick to a scenario, the challenge is gone. So, Warcraft is not a game that you would play over and over again.

These criticisms crumble into so much mud dust once you get another human on the other end of a network or modem. Warcraft has a remarkably clean and easy interface for both two-player network and modem play, and a number of customizing options allowing you to choose the map and starting unit mix of both players. In less than a minute after installing the game on the CGW network, my orc hordes were thrusting their scythe of death through wave after wave of humans controlled by a fellow editor. Here is where Warcraft really comes alive! Fast-paced, fun, and flexible enough to support a wide variety of tactics, Warcraft ranks up there with such classic two-player slug-fests as Command HQ and Global Conquest.

When the final body count is tallied, and the streets have been scrubbed clean of orc and human blood, the recommendation is this: if you enjoy frantic, real time games, and if you don't mind a linear structure in your strategic challenges, Warcraft is a good buy. While the AI is no Einstein and the "puzzle-based" structure of the scenarios won't make for much replay, you'll still get a good 30+ hours of moderately demanding play. In the meantime, start a campaign to convince a natural intelligence (a gaming buddy) either to buy a modem or stay after work and play Warcraft head to head. For while the history of the Orc and Humans is one of tremendous bloodshed and cruelty, nothing in this world or any other can match the ferocity and unrelenting bitterness (all in fun, of course) of two humans locked in mortal gaming combat.

THE EDITORS SPEAK

WARCRAFT: ORCS AND HUMANS

RATING ★★☆☆☆

PROS Exciting real-time gameplay and a terrific suite of two-player options.

CONS The AI is dull and the "puzzle based" scenarios do not encourage single-player replay.
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Opponents wanted for (707) area code games of Doom, Doom II, Falcon, Meg, or Homer. Judson Landerskin, Santa Rosa, CA (707) 824-8566, 2400, 9600 or 14.4 baud.

Seeking opponents in the PA (717) area code. Contact Aam in Chambersburg at (717) 244-4675 or through the Internet: ThirdBrot.com. I am interested in working on Doom II or Doom III deathmatch or cooperative games via 14.4 or 9600 baud.

Wanted: Doom Deathmatch opponent in the Jacksonville, FL area. Call after 5 PM, (904) 388-7408. Ask for Tom S.

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**THE NETWORKS**

The following are voice contact numbers for the various on-line network services that connect gamers. Call them for more information.

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Lite Games From Miller: All The Flavor, Half The ‘Splat’

by Chuck Miller

I just finished watching Cybermania '94 live on TBS, which didn't quite live up to its billing as “The Ultimate Gamers Awards.” I'm sure many hard-core gamers were disappointed by what they saw. At the very least, this gala event may have confirmed suspicions that Hollywood's involvement with interactive gaming would reduce it to its lowest common denominator. Don't get me wrong; the event was professionally handled and featured some prominent personalities from both the acting and gaming communities. However, it did not showcase our industry in the best light. The emphasis was definitely on the video game scene; award categories were a mixed lot at best (Super Street Fighter and Return to Zork in the same category, for example); and much of the best in computer gaming never made it on screen (with the notable exceptions of Doom, Myst, 7th Guest, and a few other key titles).

So, what does Cybermania '94 have to do with shareware gaming? Well, in all honesty, I have seen a lot of shareware games with greater play value and more entertainment than some of the “games” that were nominated for awards in this Hollywood production.

Alright, I've spoken my peace, and this isn't supposed to be a forum for airing grievances, so let's turn to the nominees for this issue's shareware winners. This month we duke it out with Epic MegaGames' One Must Fall: 2097 and Must Fall: 2097 (OMF) from Epic MegaGames. OMF, as you have surmised by this point, is a one-on-one combat cocktail with a sci-fi twist. The game warps you to the future as the “pilot” of a 90-foot-tall robot which, oddly enough, can jump, punch and kick like a Ninja. The round's over when you or your opponent winds up sitting amidst a scrap heap. There are, however, several key features and a design philosophy that sets this offering apart from the “blood baths” of the video game alternatives.

Rendered in an art style similar to Japanese anime, OMF's “non-violent” action is more akin to World Championship Wrestling than down-and-dirty street fighting. The combatants are shiny, animated robots capable of traditional fighting moves, which makes the game look like a low resolution Rise of the Robots (a high-res CD-ROM game reviewed in this issue). The tone between opponents is more that of friendly jibes than bloody threats, and is further softened by the animated graphic style.

Players choose from among ten pilots and eleven different 'bots to battle it out in five arenas. There is even a tournament mode with predetermined combi-
nations of bots and jockeys. Players pick from one of four tournaments provided, each one offering different fighting styles and attacks. Game speed, fight mode, hazards, number of rounds and difficulty level are all selectable, making OMF extremely customizable. When enemy 'bots bite the dust, players earn extra backs to build bigger, badder 'bots.

But one of OMF's most unique features is the two-player, head-to-head mode. Using two Gravis PC Gamepads (my favorite action controller) and a Y-adapter, the game becomes a rock-em, sock-em arcade-style slugfest on the PC. The combat action is depicted with 120 frames of 3D animated artwork for each robot, which heightens the game's visual interest. In addition, multi-channel sound effects and a catchy stereo soundtrack mean you can hop to the beat while the 'bots take a beating.

The shareware version of ONE MUST FALL: 2097 comes with four 'bots, one arena, five pilots and one tournament mode. The full registered version, described above, is available for $39, or $49 with a full-color strategy guide poster, plus $4 shipping and handling (an advanced CD-ROM version is scheduled for 1995). To order, contact: Epic MegaGames Inc., 3204 Tower Oaks Boulevard, Suite 410, Rockville MD 20852 or call (800) 972-7434. You will need a 386 or better system, VGA graphics and 4MB RAM to be a hot 'bot jock.

IT'S A MAD, MAD, WACKY WORLD

WACKY WHEELS is so incredibly cute and captivating that you don't miss the fact that no one gets hurt (unless, of course, you count pride). Picture stuffed animals in go carts and you'll have a good idea what this racing game from Apogee looks like.

Designed for one or two players, WACKY WHEELS offers the chance to take on the computer or a friend in a comical race to the finish. There are single-player and two-player racing modes, single-player or two-player shoot-outs, Wacky Duck Shoot (like a shooting gallery on wheels) and Comm-bat mode for modern- or serial-based competition. There are options galore to adjust the music volume, sound effects and engine noises; toggle the clock speedometer and overhead map displays on or off; and raise or lower the screen detail depending on your processor and graphics display speed.

And speaking of speed, you don't have to be stuck in a go cart with a weed whacker engine. There is a choice of 6hp or 12hp vehicles, although beginners should probably stick with the smaller engine. Racers can opt for 6, 8 or 10 lap races, and of course difficulty level is also adjustable. In addition, time trials are available, which give drivers the chance to set records and compete for the fastest elapsed time. There's even an option for younger players, Kid Mode, that allows children with coordination difficulty to navigate the track by just steering the vehicle at a pre-set speed. Another cute feature is the Giggle Keys that allow you to communicate with or annoy your opponent (in two-player games) by sending him or her visual messages, like a cute, devilish creature holding a "Learn to Drive!" sign.

Traditional racing strategies come into play as the players accelerate through the tracks. Drivers who don't slow down going into corners will crash into a wall, while obstacles like water holes pose their own problems. Bumping into or being bumped by other vehicles occasionally causes spinouts. There is some ammunition available on the track; hedgehogs can be tossed at your opponents to slow them down. Bombs, oil cans and matches can also be collected, but they can't be used to impede the other drivers. Fortunately, there are no fatalities in WACKY WHEELS, making this an ideal game for those concerned about the mayhem and destruction in most action titles.

The designers didn't seem to leave out many options, with the possible exception of being able to print out top scores or an award certificate for strong finishes (kids love this kind of thing). Although the 236-color low-resolution VGA graphics are decent, I would like to see a high-res version of the game. Perhaps WACKY WHEELS will prove successful enough to allow Apogee to make one available as a future upgrade. As it stands, though, WACKY WHEELS turns in good times on the course of enjoyable, non-violent action games.

The shareware version of WACKY WHEELS includes 10 race tracks, four shoot-out tracks, four race animals, and four Duck Shoot zones. The registered version brings the total to 15 tracks, six shoot-out zones, eight race animals and six Duck Shoot zones. It also adds more background songs (which are great, by the way), special amino codes and a full-color game manual. An upgrade option is also available that brings the total number of tracks to 30, with 12 shoot-out zones. To drive your own WACKY WHEELS home, place a factory order with: Apogee Software, P.O. Box 496389, Garland TX 75049 or call (800) 426-3123. The registered version is a modest $24.95, plus $5 shipping and handling, and an additional $10 gets you the Upgrade Edition.

Chuck Miller, CGW columnist and editor of Interactive Gaming, is available on CompuServe at 72241,2122 and through the Internet at 72241,2122@compserve.com.
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Get With The Program!
How Programming Wizards Turn Cryptic Code Into Alternate Universes

by Paul C. Schuytema

Once upon a time, computer games were sold in zip-lock bags and came on a single disk. Once upon a time, these games were love labors of only a single individual, working in anonymity in a dark basement somewhere, cranking out 6502 assembly code until the wee hours of the morning.

In those bygone years, "C" was one of two things: the letter that followed "B" and the cryptic semi-language muttered between Unix gurus in research centers and universities.

Things have changed quite a bit since then. Today, C is a highly developed and widely used programming language. A computer game can have a budget in the millions of dollars, created by a team of specialized professionals, all using state-of-the-art tools such as 3D Studio, motion trackers, scanners, etc. The programs themselves have increased in size by several orders of magnitude since 1979. Yet still there is something which has remained constant: somewhere in the genesis of the game, there is at least one code guru, still laboring into the dusky orange of the dawn.

Just what is code? And for that matter, what is a programming language? Most of you already have an intuitive or even expert sense of what a program is: it's the bundle of files and commands that make your games run, creating the illusion of another world on your PC. In fact, as a game player, you've undoubtedly done some programming yourself as you've attempted to get your favorite game up and running. The ubiquitous CONFIG.SYS and AUTOEXEC.BAT files are essentially computer programs. They are, in essence, a series of commands which tell your computer to perform one or more tasks. That, in the most sweeping sense of the term, is what a program is: commands which tell your computer to do something.

Today, programming comes in different forms, from the transparent to the downright indecipherable. If you create a data query from one of the "wizards" in Microsoft Access, you are programming, even though you are only clicking and dragging your mouse. You are also programming if you are hammering out assembler mnemonics to create an interrupt branch to the draw routine of your latest first person shooter up

A programming language is, in function, very similar to a human language; it is a specific means of communication. In this case, it is a means for a human to communicate with a computer and tell it what to do. Computer languages exist in a hierarchy of complexity. At its very core, the CPU chip in a computer has a finite "vocabulary" of commands, all of which refer to the most primal of its operations. There are commands for adding, subtracting, shifting (since a computer's "native tongue" is the binary number system, shifting is a process of simply moving a series of 0s and 1s one direction or another in memory, thereby multiplying or dividing the value by an exponential factor of 2), and moving data from one place to the next.

THANKS FOR THE MNEMONICS
When a manufacturer designs a CPU chip, a specific value is given to each command, as well as a mnemonic. A mnemonic is a several character symbol for a specific command, such as ADD for the add command or MOV for the move command. These mnemonics and their associated arguments are what is known as assembly language.

Since assembly language communicates with the CPU at its own level, the language is "platform specific." An assembly routine written for a 486 PC will be simply meaningless gibberish on a Macintosh, though the same general concepts in programming still apply.

An assembly language program is essentially four columns of text: the mnemonic, argument one, argument two and the comment (not part of the program, but a means for humans to describe what is happening in this cryptic code). This text file is then fed to an assembler program, which converts this information into the raw binary data which constitutes a program.

Assembly language is termed a "low level" language, meaning that assembly language programmers communicate with the CPU in a manner which, as close as is possible, represents the way in which the CPU actually performs. Each instruction in assembly language represents one and only one CPU instruction. Because of this, assembly language code is extremely fast. Often, programmers will write the majority of the program code in a language such as C and use assembly language to write the small routines which require the most speed, such as routines to draw pixels to the screen or blank the screen before another image is drawn.

FROM HIGH-BROW TO LOW-BROW
Computer languages such as Pascal, Modula-2 and Lisp are "high level" languages, meaning that they are more geared to the
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way in which a human thinks. An instruction in a high level language might translate into one, two or several hundred machine instructions. When a programmer writes code in a high-level language, it must first be run through a compiler, which is a program which takes the instructions the programmer has written and translates them into machine instructions.

A compiler can translate code very effectively, but still not as effectively as a truly talented programmer, which is why assembly language is still utilized for specific routines which require blazing speed.

Beyond being easier to understand and program in, high level languages have the theoretical benefit of being able to be run on different computers. A Pascal program which calculates the orbital periods of Jupiter's moons, for example, would run exactly the same on a Macintosh, VAX mainframe or IBM PC. All that is needed is a platform-specific compiler to generate "native" instructions for each machine.

All of this falls apart, of course, when designing games. So much of the program code for PC games deals with the graphics and the nitty-gritty details of making the visual and audio portion of the game perform. All of those tasks are very "machine specific." The commands for drawing a line on a PC screen are very different from those on a Macintosh.

C is what some might call a "mid-level" language. It contains the advanced control structures of high level languages, such as "if-then" statements and looping procedures. Yet C is a language which deals with the computer at its very core, often manipulating individual bytes of data, addresses, pointers and even the data registers within the CPU itself.

C, as well as the high level languages, are called "structured" languages. Remember the old days of BASIC interpreters? If you wanted to move to another location in the flow of the program, you used the GOTO or GOSUB commands. I remember writing the "ultimate" dungeon adventure game in BASIC on my old TRS-80, and the code was a few thousand lines long and totally out of control. If I needed a new routine, I'd simply GOTO a line number several hundred numbers higher. The result was an indcipherable mess of bad programming which was impossible to debug or even read (but the program did run!).

Structured languages, on the other hand, require much more forethought on the part of the programmer. There are no line numbers. Flow goes from top to bottom and the program code calls functions or procedures with predefined calling formats. This forces the code to be logically organized, with smaller tasks doled out to independent procedures. It makes the code far easier to read, debug, and most importantly, share with co-workers.

Nearly all of today's games are written with some form or another of C, since the language is so flexible. A programmer can create elaborate decision making and data structures as in Pascal, but he or she can also manipulate the bits and bytes necessary to make pixels dance on your screen.

The programmers at id have chosen pure ANSI C to code their next project entitled QUAKE. They work with PCs set up with the NextStep operating system (the folks who gave us the now defunct Next computer). "NextStep is basically the best development environment in the world," says John Romero, who is in charge of all tools programming, as well as game design and areas of game programming in QUAKE. "QUAKE won't even run under DOS for many months to come. It is totally NextStep based."

SPINNING THE PAGAN LOOM

Here is a small chunk of code from Origin's Ultima 8: Pagan that is used to animate a loom when a player clicks on it. The program is written in "Unk," the proprietary scripting language developed by Origin programmers.

```c
process TypeLoom:look() {  
    //The look method is called whenever a player single clicks on an item.  
    bark(loom & lbattler & & Webstuhl);  
    //bark is a process which displays text over an item for a given amount of time.  
    if (lbattler & & Webstuhl) {  
        //The & and & are toggles for the French and German language responses.  
    }
}
process TypeLoom:use() {  
    //The use process in called whenever a player double-clicks on an item.  
    num := Number;  
    spam playSFX (LOOM_HDHRK) ->  
    spam playSFX (CLICKING_SOUNDS) ->  
    return;  
    //This code spams two separate sound effect processes. The "->" in effect  
    //means "and then," which means that the first sound should be completed  
    //before the second sound is begun.  
    if (getFrame()) == 0 {  
        for num = 0 to 7 {  
            setFrame(num);  
            //setFrame is a C routine which changes the active  
            //frame of art and notates that this item needs to be redrawn  
            //during the next screen refresh.  
        }
    }
    wait(5);  
    //This is a process to wait for five game turns before  
    //moving on to the next frame of animation. Since there  
    //is no spam in front of the process, it does not need  
    //to complete for the program to continue running. This  
    //wait is transferred to the multi-tasking kernel of Unk  
    //and the rest of the game is still running while the loom  
    //is waiting to move on to the next frame of animation.  
    //The player could, for example, smash the loom with an  
    //axe in the middle of the process. This type of interaction  
    //significantly complicates the programming of  
    //Origin's Ultimas.
    }
    else {  
        num = getFrame();  
        while num >= 0 {  
            setFrame(num);  
            wait(5);  
            num -= 1;
        }
    }
}
```

MY KINGDOM FOR AN OBJECT

Another development in recent years is that of "object oriented" programming. This is an overused buzz phrase in computerdom, much like "virtual reality." The truth is, object oriented programming can define a myriad of programming techniques, from Windows-based Object Linking and Embedding to C++, the object-oriented version of C.

First evolving out of the highly structured programming languages such as Pascal, object oriented programming is a means to break a programming task into a cluster of tightly defined units, each of which can be created and tested independently. Nicklaus Wirth, one of the great "linguists" in computer language development, created one of the first object oriented approaches to programming in his language Modula-2, which was essentially a refinement of Pascal. Xerox, in its Palo Alto research center (where such milestones as the graphical user interface and the mouse first saw the light of day), created an object-oriented language called SmallTalk.

C++ is the same language, essentially, as C, but with the characteristics of object oriented programming blended into the language's lexicon. As in SmallTalk and Modula 2, an object oriented program in C++ is essentially a cluster of small programs, all working together to create a single application. Objects are very similar to their in-code cousin's subroutines (or procedures), but they are far more independent. Picture a well-armored sphere, with only a plug for input and output. You can't get into the stuff inside, nor do you need to. You simply plug in the right input to get back the anticipated output.

Object-oriented programming allows game designers to develop core code modules once and reuse them as often as they need to. No longer does a programmer (or a team of programmers) need to write a joystick routine more than once. That program "object" is simply filed in the company's library for use by whomever might need it. Far more complicated tasks can also be created only once. You can imagine writing the code to control the flight of a missile and packaging it as an object. To use the object, you might simply send it the parameters of what sort of missile (SCUD or Kilothi heat-seeker), top speed and any other variables, and the object would then calculate the missile's position within the game world each program cycle.

Programming today's games requires a team of talented code-crunchers, which creates some logistical problems. How do you create a single, unified program when you have a handful of programmers each working on different modules?

John Carmack, who is handling the superstructure programming for Quake, is in charge of the master code directory. Romero and Dave Taylor, id's sound programmers, each have their own code directories. They work on their modules, compiling them independently and working through the debugging process. When a chunk of code gets the thumbs up, it's then copied over to Carmack's master directory where the game will begin to take shape.

RUMINATIONS AT ORIGIN

At Origin Systems, where pushing technology to the limit is a daily affair, the programmers rely on C, C++ and assembly language to code and build their games. Origin, though, makes extensive use of in-house programming languages to handle the game flow of their various products. Wing Commander III, for example, uses an interpretive language to handle the game's "meta" decision-making processes. An interpretive language, or an interpreter, is a language like the old version of BASIC; it is compiled and executed on the fly. For BASIC programs, this meant that the programs were very slow, but for Wing Commander III, the language is "built-in" to the code game, so there is really no loss in speed. Zach Simpson, Origin's Director of Technology Service, describes the proprietary language as a "quick and dirty way to make some of the game decisions."

On the other end of the technology scale, Origin has developed a language called Unk (named after a grunting sound made by Simpson's roommate). The language rivals full-blown C++ in complexity, it is object oriented, and it is designed to be a true multi-tasking language. The language grew out of an earlier language called AGIL (A Goofy Interpretive Language) which was used in the development of Ultima VII. Unk was perfected in Ultima VIII, but its usefulness will really shine through in the next Ultima project. Unk is a scripting language used to describe the multitude of concurrent events within the world of Ultima. Actions such as a wizard casting a spell, Lord British sitting down in a throne, and a horse munching on some grass are all scripted events that can occur concurrently via Unk's scripts.

C and C++ are what is known as "functional model" languages, meaning that the code proceeds from function to function, and can go on any further until the last function is completed. Unk, on the other hand, is a "process model" language that can execute more than one process at a time, and therefore can perform true multi-tasking functions.

Unk is based on a paradigm of C++ in the way that it utilizes various objects in the code modules. For example, there might be a code module (sometimes called a "class") which defines all of the traits for a non-player character (NPC) in the game. A more important class of module would be Lord British, which includes the NPC module, but can also override some of its rules (such as the fact that Lord British can't die, while an NPC can; this is handled by having the Lord British module check the hit points of the subservient NPC module; should the value reach zero, instead of dying, the value is reset to maximum).

"The most difficult part of an Ultima game is that it is so completely interactive," said Simpson. "It's not trivially simple to do the kind of interactivity that we need." In Ultima VIII, Unk was finalized as a development language, but there were still only a few programmers fluent in its syntax. For Ultima IX, the key will be to train the programmers to use the Unk language more effectively.

"People complain all the time about the time it takes for Origin to put out a game," reflected Simpson, as an aside. "But, in reality, it takes just as long as it should take, which is a completely unknown amount of time."

To crunch code, you need to be a binary polyglot, able to speak at least a small handful of language dialects, understand data structures and logical procedures and, of course, be extremely creative. That kind of smarts doesn't come from a pigskin diploma. In fact, at Origin, over half the programmers don't have college degrees, and a quite a number of their more gifted code-crunchers, including Simpson, never graduated from high school. What they did do was to spend countless hours in the trenches, crunching code, debugging it and learning how to use programming languages on the tabula rasa of their computers to make the magic happen.
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The Gamer's Toolkit
CGW's Gamesmith Reviews The Tools Of The Trade
by Mike Weksler

As PC computer game players, we have to deal with hardware and software problems that are, for the most part, left untouched in many computer science curricula. While the Macintosh owner enjoys a cool and clean operating environment, Intel-based gamers enjoy the best games, and with them, legions of configuration, installation, and maintenance hassles. Low memory problems and I/O port conflicts are the crosses that we bear for our hobby.

Here at CGW, we run more games in a month than most of you run in a year. And who do the whiny editors call when they can't get a game running? Yeah, you guessed it. I've seen problems that you wouldn't even want to imagine—really ugly stuff like computers spontaneously rebooting, important files teleported to Mars, and bizarre game glitches that keep my sanity in question. To help me deal with these problems, I've got a box of handy tools appropriate for each task. This month, I'd like to open up my toolbox and give you a look inside.

QEMM 7.5
When you're having trouble getting a game to run, there are two names that you must keep in mind: CONFIG.SYS and AUTOEXEC.BAT. These are the two configuration files which tell DOS how to set up your machine. I like to think of configuration files as spells which you can use to invoke different states of being in your computer. Indeed, like a spell, invoking the commands therein can boost your machine's performance or, if done improperly, grind everything down to a slow crawl.

QEMM 7.5 is the tool to use to ensure that these "spells" are crafted to produce the desired results. It is considered a "memory manager," but just think of it as a memory wizard that can go in, analyze your system, and eke out the most memory for your games. Seasoned DOS sorcerers may poo-poo such magic, but apprentices take note: all you have to do is install this program, type a single command to run it, and you're done. QEMM 7.5 can usually liberate up to 634K of lower RAM on the first try, even in situations where DOS 6.X's MEMMAKER doesn't make a dent. Additionally, QEMM 7.5 has a nifty "quick boot" utility that will reboot your machine in the fraction of the time it would boot normally (worth the price for those of you with older BIOS chips). The "Optimize" command will analyze your configuration files (yes, even multiple configurations for your DOS 6.X boot menu). QEMM 7.5 also comes with several utilities for managing Windows better than with previous versions. Additionally, its "Manifest" diagnostic utility will show you what memory is used where and tell you all about your system. Whether you've just installed a CD-ROM and can't run your games, or you don't know which type of memory to use (XMS or EMS) when running a particular game, QEMM 7.5 is the right tool for the job.


MULTIMEDIA CLOAKING
Although QEMM can solve most of your configuration problems, sometimes there are configuration scenarios so intense, even QEMM will choke on them, and your conventional memory will still be lower than required for running many games. The installation of a new SCSI host adapter, a sound card with lots of features, or certain software can place a ton of commands into your CONFIG.SYS and AUTOEXEC.BAT files, eating up valuable lower memory. Multimedia Cloaking gives you some of that memory back by replacing common drivers—a hard drive cache (SMARTDRV.EXE), a mouse driver (MOUSE.COM), and a CD-ROM driver (MSCDEX.EXE)—with "cloaked" counterparts. Whereas these common files would normally take up approximately 85K of conventional memory, the cloaked drivers only take up 9K. And believe me, 76K can mean the difference between whacking orcs in your favorite role-playing game and whacking your computer with a mallet.


REMOVE IT
Next to the CONFIG.SYS and AUTOEXEC.BAT files, nothing is so baffling than the general funkiness that permeates Windows. Anyone who is playing Windows games on an old installation of Windows is skating on mighty thin ice. The reason is that Windows has no means of tracking files that are dumped into it during installation. When your hard drive fills up, you can remove your old games by deleting their directories, but the various .INI files and Windows directories will still contain cryptic entries and files of unknown origin.

Remove It is a complete suite of utilities designed to let you instantly kill programs from your machine, once and for all. Once installed, it can analyze programs and find the web of drivers, INI entries, icons, DLL files and groups which it belongs to and remove them, or back them up in a compressed file to install at a later date. The "Log It" feature will track future installations for foolproof removal or archival storage. This is great for those times when you mistakenly install that 18 meg Windows game to your root directory. In this case, you'd simply backup the installed program to a compressed file and re-install to a new directory with a few mouse clicks. Remove It also helps you remove hardware drivers so you can install a new hardware item without completely re-installing Windows. Additional features include "Watch It," a 1K TSR for monitoring file usage, "Find It," for finding and removing duplicate or infrequent...
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ly used files, and “Report It,” a rich tool that allows you to see links between INI files, DLL files, and application files. For the frequent Windows user, it’s superb! The emergency disk feature is comprehensive, copying your configuration files and their attendant files onto a bootable emergency disk. Ideally, REMOVE IT would be the first software package you’d install after a clean Windows installation. One warning: I enjoyed this software so much I was installing Windows games just so I could use REMOVE IT to wipe them out!


**XTREE GOLD FOR WINDOWS**

When I think of all the utilities I have used over the last decade of computing, nothing has been so useful as XTREE GOLD. Mike Welker’s XTREE is like Zorro’s sword, Popeye’s spinach, and Samson’s hair—absolutely indispensable.

XTREE GOLD is a powerful file management program that allows you to rename, sort, move, delete, undelete, zip, unzip, or otherwise manipulate your files. If you own a smaller hard drive, file management can be a pain unto itself, as you try to make room for the latest gaming addiction without deleting some of your older favorites. Once the basic key commands are committed to memory, even neophytes can round up their files with the best of the data wranglers.

For you Windows users, there is now XTREE GOLD FOR WINDOWS, and it’s fully key-compatible with the DOS version. The Windows version has some powerful new features. It has excellent file finding and file viewing utilities, and its undelete functions are terrific for those unhappy times when you accidently delete an entire directory. It has built-in compatibility with PKZIP 2.04G, treats a zipped file as a subdirectory, and you can work with the zipped files without ever using PKUNZIP in DOS. Its best feature, however, is a little program called “File Companions” which installs a tiny button in the upper left corner of the “File Open” dialog box in all of your Windows programs. This little menu will give you more power than the folks at Microsoft ever wanted you to have in one place! Besides such needed options as “Create Directory” and “Rename File,” you can zip and unzip files right from the “File Open” dialog box! You can even view graphics files from your word processor—something that’s mighty handy for those times when you have to use your computer for its work potential. Finally, XTREE GOLD FOR WINDOWS even comes with its own uninstall routine, but I’d still use REMOVE IT (see above) to make sure you get all the “roots.”

Central Point, PO Box 10849, Eugene, OR 97470-9722 (503) 690-8090. Price: $99.95

**THE NORTON UTILITIES 8.0**

Like XTREE, it’s hard to imagine one of my PCs running without a copy of THE NORTON UTILITIES. This full featured suite of programs has almost everything I need to keep my machines running in tip top shape. The “Speeddisk” hard drive optimizing utility is like the Microsoft DEFrag program (for defragmenting the files on your hard drive) except that you can double click on a cluster of data and see what files are in there. THE NORTON UTILITIES 8.0 has a great suite of Windows programs (which mirror their DOS counterparts) for INI tracking, file finding, and undeleting files. Besides “Speeddisk,” your interest will probably be in the area of “Sysinfo,” the system information utility, and “Ndiags” the Norton Diagnostic tool. The latter is one powerful DOS program, capable of identifying what devices are using the various IRQ (hardware interrupts) in your machine. This feature alone is worth the price of the software. Finally, for the hackers out there, “Diskedit” is a killer hex editing utility for dissecting your favorite save games. There’s even a handy search function and hex calculator to help you in your dark endeavors. If you want to grow up to be a techie, or just become a bigger one, check out THE NORTON UTILITIES 8.0.

Symantec, 10201 Torre Avenue, Cupertino, CA 95014 (800) 441-7234. Price: $179.00

**PC 911**

This mighty utility is my hardware hacking mainstay. PC 911 is a DOS utility that makes backup files and emergency disks for your configuration files. I think they should have called this PC 411 because its best feature is that it can give me the vital information on my hardware devices. This baby can tell me not only what device is using a particular IRQ and ROM address, but it can also give me the I/O port address of the device it’s using as well! Microsoft MSD (diagnostic program), NORTON UTILITIES’ NDIAGS, and Quarterdeck’s MANIFEST can do everything except this. What’s the big deal? OK, check out this scenario. Let’s say you drop in an Adaptec AHA-1522 SCSI adapter into your bus. You like that new SCSI CD-ROM you’ve slung off of it. Nice, huh? Yeah, except what happened to your General MIDI music? A quick foray into PC 911 will show you that both devices are trying to use the I/O port address of 330, which is a default for MIDI devices (fortimately, the Adaptec can be jumpered to 140 to alleviate this). You can set the program up to detect network cards, sound cards, fax/modem devices, mice, and SCSI devices. The program will tell you the vital information on what device is present, the IRQ, the DMA, the I/O address, and any important RAM and ROM addresses. You also get a list of free IRQs with which to test your hardware. This is great info to have printed out prior to doing any hardware upgrades. PC911 is simply a must-have, quick-n-dirty utility for the computer gamer.

CyberMedia, 1800 Century Park East, Suite 1145, Century City, CA 90067 (800) 529-2373. Price $29.95

**MORE PC TOOLS**

This is really the SYSTEM INFO utility from THE NORTON UTILITIES 8.0 on steroids.
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bundled with more utilities. After running a one-time DOS program, you run the SYSTEM INFORMATION PRO utility in Windows and get the complete dirt on almost everything in your machine. I found PC 911 to do this right off the bat without any fuss, but SYSTEM INFORMATION PRO allows you to go the extra step and test hardware devices. Like PC 911, you get to see I/O port addresses for each device in the machine. Additional features include "Crashguard," a utility which shows you remaining resources like memory and hard drive space so you can shut down before Windows shuts you down by crashing. It also recovers data when you do crash. There's also "DriveSpeed," an IDE drive accelerator which seems to speed things up a bit (especially when re-launching applications), and "Backtrack," a configuration and INI file backup program. Overall, I found MORE PC TOOLS to be a solid enhancement to THE NORTON UTILITIES 8.0 and to my toolbox.

Central Point, PO Box 10849, Eugene, OR 97440-9722 (503) 690-8090. Price $89.95

ANY VIEW PROFESSIONAL

The scenario: You like using 256 colors at 640x480 resolution for playing your Windows games, 16.7 million colors at 800x600 resolution for doing graphics work, and 16 colors to do boring word processing. ANY VIEW PROFESSIONAL with "TrueSwitch" color changing installs a little toolbar in your Windows environment which allows you to change pixel depth and resolution without having to restart Windows (great for those of you with complex Windows installations that take forever to restart). Additionally, you can assign a pixel depth and resolution for each application on your desktop. You can set EXCEL to start at 800x680 with 256 colors, while CIVILIZATION FOR WINDOWS can be set to start at 640x480 with 256 colors. When you run EXCEL, the resolution and pixel depth changes and then reverts back to whatever it was before you ran it. Likewise, CIVILIZATION FOR WINDOWS will run at its set resolution and pixel depth and will revert back to the previous resolution once you've conquered the Mongols.

ANY VIEW PROFESSIONAL also has a few more useful utilities, including "Catalyst," which accelerates graphics in Windows up to 25 percent, and "Optimem" which allocates Windows memory more efficiently when several applications are running at once. As the name indicates, users who aren't "professionals" should note that messing with Windows graphics can be tricky, especially if you configure your way into a situation where Windows will not longer start (something I did more than once). Make sure your video card is supported by the product before you spend the dough.

Binar Graphics, Inc., 30 Mitchell Blvd., San Rafael, CA 94903-2034 (415) 491-4182. Price $49.00

The hassles we deal with in our hobby relate to configuration, installation, and maintenance of our ugly beige boxes, two of which are actually configured the same. Let's hope that after using these utilities to get your machine running smoothly, you'll have some time left over to play your games. At the very least, I hope that this article will assist you in selecting the right tool for the job.

Under the Hood is both a column on technology and a Q&A technical support forum. Please send technical questions, comments, and solutions to Under The Hood, c/o Computer Gaming World, 130 Chaparral Ct., Suite 260, Palm Springs, CA 92260, or at any of our e-mail addresses.

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These Just In

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

ARYA VAIV

Return with us to simpler times, when goils were goils and men were men, when all a real gamer needed was an industrial strength joystick with one button to fire, and the "plot" of a game could fit on a 3x5 card taped above a coin slot. ARYA VAIV is a throw-back to those classic shooters of yore, most resembling the old coin-op XVIOUS. You man a lone craft (with 5 lives) battling against wave after wave of good geometry gone bad. As you duck and juk the spinning shuriken of death and the bullets of defensive turrets (navigating through dangerous laser gates all the while), you must collect "power ups" to turn your pea-shooter into a bullet-spewing volcano of death, and "speed ups" to make your initially slothful ship really dance the hi-score watusi. If you're itching for some twitching in a style that we haven't seen since the 80s, spill some quarters in Dongleware's direction. Amiga, DOS, $19.00. Circle Reader Service # 1

DONGLEWARE PUBLISHING, INC., PO BOX 391 826, 35 HOWARD ST., CAMBRIDGE, MA 02139, (617) 497-1130

AWARD WINNING

WAR GAMES

Alternatively, this wargame collection could be called The Grigsby Files Plus One, since it includes three of Gary Grigsby's epic WWII designs. The scope is staggering; nearly every theater of war is covered, from Africa to Europe to the Pacific. WAR IN RUSSIA offers a second look at Operation Barbarossa, the largest land campaign in history, from the detailed-oriented eye of Gary Grigsby. CARRIER STRIKE has only 16-color graphics and a passable AI, but still offers the best operational-level campaign game of any wargame on the market. PACIFIC WAR is Grigsby's magnum opus, simply the most comprehensive strategic game ever created for the computer, and a past winner of CGW's wargame of the year. When you throw in CLASH OF STEEL, Martin Scholz' elegant and enjoyable European-theater WWII game (winner of CGW's best wargame for 1993), the deal SSI is offering seems more than enough reason to dive back into the trenches. DOS CD, $54.99. Circle Reader Service # 2

STRATEGIC SIMULATIONS, INC., 675 ALMANOR AVE., SUITE 201, SUNNYVALE, CA 94086-2901, (408) 737-6800

ECSTATIC

While the box art conjures images of European arcade games from days gone by, we realized there was much more to this game once we installed 18 to 70 megabytes to our hard drive. What you gain from this space sacrifice is smoothly animated characters in a detailed graphic world. Both the look and gameplay are very similar to ALONE IN THE DARK, but the ellipsoid technology used results in much more fluid and life-like character movement. While this is undoubtedly more realistic, it also means that until you get the keyboard controls down, your alter-ego will walk into a lot of walls. The plot? Well, you're a lost traveler who wanders into a deserted vil...
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Circle Reader Service #292
lage, where nothing is quite what it seems. There are lots of things that go bump in the night, hide behind doorways, and otherwise try to ruin your European vacation. But then, whoever said life was easy for adventurers in the 9th century? DOS CD, $59.95. Circle Reader Service # 4

Psionics, Ltd., 675 Massachusetts Ave., Cambridge, MA 02139, (617) 497-5457

EXPERT CHESS

Chess is a game eminently suitable for Windows, as this modest program demonstrates. The 2D boards are from the Sarcon II days, but the 3D boards offer some interesting chess battlegrounds. While they're nowhere near the visual splendor of the pieces in Chessmaster 4000, the alien set has an appropriate glow-in-the-dark look, and there are also cowboys & indians, medieval warriors, and glass chess sets. The teaching mode is pretty good for the novice, but the rating feature seems erratic. All the usual bells and whistles, including replay “VCR” functions, board rotation, chess clocks, move lists and sound effects are here in an easy-to-use format. The chess engine lacks the depth of its more well-known rivals (strong players won't have to wait long before printing out a “you beat the computer” certificate), but beginning-to-intermediate chess-masters might consider adding this budget offering to their opening repertoire. Windows, $14.95. Circle Reader Service # 5

Expert Software, P.O. Box 144306, Coral Gables, FL 33114-4306, (305) 567-9990

FANTASY FEST

Rather than the role-playing smorgasbord one would expect from an SSI fantasy collection, this bundle of four games is comprised of more strategic lore. Although the D&D logo rides proud above Stronghold, this game more resembles a medieval version of SimCity than anything else, with its focus on building a castle and running a kingdom. Likewise, Fantasy Empires is an out-and-out strategy game, despite the magical beings which populate its lands. The quests sometimes lack depth, but generally this game is fun to play, especially the combat sequences. Those wishing for a bit more adventure may be entertained by Unlimited Adventures, which allows you to build role-playing adventures using the time-worn “Gold Box” RPG system. Lest hack’n’slashers feel left out, Dungeon Hack offers endless randomized dungeons with a wide range of monsters for those times when all you want is to mindlessly slay beasts and demons. Who needs a plot anyway, when you have such a wide range of fantasy trips to choose from? DOS CD, $49.99. Circle Reader Service # 6

Strategic Simulations, Inc., 675 Almaden Ave., Suite 201, Sunnyvale, CA 94086-2901, (408) 737-6800

FLASH TRAFFIC

When an FBI agent receives a “Flash traffic” message, it means that terrorists have a nuclear device ready to unleash in the U.S. This full-motion adventure is live-action from beginning to end, taking up three CDs in the process. Producer/writer Chuck Pfarrer is familiar with the action/adventure genre, having worked on such films as Navy SEALs and Hard Target. Thus, the timing is very much that of a cinematic thriller, except that the player is required to make choices constantly to advance the plot, making this more of a truly “interactive movie” than what the genre has seen so far. While the video quality isn't yet TV standard, at times the letterboxed view draws you into the story better than the average movie found at the video store. Flash Traffic isn't the first interactive techno-thriller, but it stakes its claim on being the first with some degree of focus. DOS CD, $39.95. Circle Reader Service # 7

Time Warner Interactive Group, 2210 Olive Ave, Burbank, CA 91506, (800) 482-3766

FRONT PAGE SPORTS

FOOTBALL '95

The most recent incarnation of the award-winning football game features improved skill game profiles and coaching plans, with 10,000 different plays available on the CD version. Seasons with tons of stats may be simulated more quickly than in previous versions, and leagues are now a breeze to set up with the draft profiles included. Pro Bowl teams may even be selected from user-generated parameters. The '94 season NFL rules are implemented, and players going for a two-point conversion will be able to dive over the pile into texture-mapped end zones with authentic team logos. The increased variety of VCR functions and camera angles is nice, but the real scene-stealer is the new roto-scoped player animation, which would hardly look out of place on Monday Night Football. DOS 3.5" $54.95, CD $39.95. Circle Reader Service # 8

Sierra On-Line, Inc., P.O. Box 485, Courtesgold, CA 93614, (800) 757-7707

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Circle Reader Service #343
again and again. Fun N' Games has tried to make some sense of the confusion by placing a number of notable shareware games onto three separate CD-ROM titles. There are some real gems here, including DOOM, VGA PLANETS, CAPTURE THE FLAG and RAPTOR. Of the three packages, our favorite was the Windows-based BLOCKBUSTERS EDITION, which had a nice combination of arcade games, card games, board games, and war games. Keep in mind, however, that these games are shareware. If you plan on keeping a game on your hard drive, you are ethically obligated to pay the developer a registration fee, from $5 to $25. DOS CD, $24.95. Circle Reader Service #9

Fun N' Games Inc., 875 Willow Rd. NE, Redmond, VA 2012, (206) 556-9600

GENERAL ADMISSION BASEBALL/FOOTBALL

MicroLeague has added small windows of digitized film footage to spice up their animated football and baseball games, but the emphasis is still on statisti
cal accuracy. The graphic look, despite the enhancements, is a bit dated when compared to other games in the genre. Nonetheless, sports gamers looking more for realistic season replay than pretty playing fields will be able to manage their favorite teams at a bargain price. GENERAL ADMISSION BASEBALL was formerly known as MicroLeague BASEBALL 4, and is the most polished of the game line, although the FOOTBALL version offers quick stat-based fun in a solid "thinking man's" style. Other than the price, the biggest selling point is the new '94 Strikebusters disk (available separately for $9.95), allowing fans to play out the major league baseball season as it might have been. DOS, $9.95 each. Circle Reader Service #10

MicroLeague Interactive Software, University Office Plaza, Bellevue Bldg., Suite 201, 262 Chapman Road, Newark, DE 19702, (800) 334-6572

HITCHHIKING ON THE INFORMATION HIGHWAY

This innovative Windows CD-ROM product will have you one click away from Cyberspace. It combines interface software for CompuServe, GENIE, America Online, Prodigy and Netcom (an Inter

ternet access provider). Also included is SOFterM, a full-blown telecommunications program, which offers RIP graphics, SLIP TCP/IP support, and a database of 20,000 BBS and on-line provider listings. While the entire package may be a bit overwhelming to the beginner, the slide show demos, videos, voice-over narration, and the well-written hypertext database help to guide you along. Those who know just enough about the on-line world to be dangerous should find their on-line hitchhiking to be far less intimidating with this useful package. Windows CD, $99.95. Circle Reader Service #11


INTERACTIVE MUSIC GAME

Basically, this is Music 101, crossed with a parlor game and brought to a friendly Windows screen. Sixty-four spaces, arranged like musical keys around a square game board, must be traversed to win. To move to a particular key-space requires answering a musical trivia question, and there are "music chance" spaces which can add to moves, give extra turns and so on. As you learn about the number of lines in a staff, or

where the b-flat key is on a MIDI keyboard, you are treated to comments by jazz giant Oscar Peterson. If you need a break from game play, you may listen to brief concerts by Peterson, guitarist Lon

Cream, or the always-energetic Canadian Brass. Audio that was synched better with the video might have helped this product, as well as questions about the musical greats involved, so that kids (of all ages) might know that Peterson's classic composition "Cupcake" is more than just something you eat Windows CD, Circle Reader Service #12

Microforum, 1 Woodborough Ave., Toronto, Ontario, M6M 3A1, (416) 656-6368

JOURNEYMAN PROJECT TURBO

Although there's nothing new in terms of gameplay here, Sanctuary Woods "Turbo" update speeds up this sci-fi time travel title considerably over the original version. You'll think you're Everard Manse from Poul Anderson's Time Patrol series as you safeguard history from the perils of illicit time travel. Adventurers

have complete range of motion and a non-linear plot, although the game still has a jerky feel to it because of the node-based movement. Along with the cinematic elements, this CD-ROM only game has a surprising amount of detail and atmosphere, and even includes some (forgettable) arcade action. Despite the technological achievements, many

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Falcon AT artwork by Spectrum HoloByte.

Circle Reader Service #182
The reality of blind dates is that they usually aren't as great as you'd hoped or as lousy as you'd braced yourself for, which makes BLIND DATE rather true to life. The game features 22 characters shown in "live action video" that, in a small, choppy Quicktime window, looks neither live nor video-quality. Your date is Sandi, a lovely brunette in a little black dress, who can play Beavis much better than pool. Although quite engaging (she even loves the Three Stooges), she tends to lay a number of little traps for you to fall into. The dialogue is amusing and some of your potential replies are hilarious. If you survive the bar, and have enough money to buy her drinks and take her home, you may "get lucky." But not that lucky. Except for a little strip-tease (with the emphasis on "tease"), you won't see much (unless you find the Easter eggs). In fact, one of the oddest things about this game is that you'll be kissed by Sandi's large, frightening roommate for giving her $20, but not once will Sandi so much as peck you on the cheek. Much like a real blind date, BLIND DATE will only interest you for one night, which may leave you wondering whether it was worth it after all. Windows CD, $49.95. Circle Reader Service # 14

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SHADOWS OF CAIRN

What can you do with an honest thief? How about framing him in the assassination of a kindly Duke? That's the nasty situation Quinn, the thief too good for his own good, finds himself in as he begins the action/adventure tale of SHADOWS OF CAIRN. You control Quinn from a side-on perspective as he jumps, kicks, and punches his way through several levels of guards and riffians. The smooth, rotoscoped motions of Quinn will be instantly familiar to players of Jordan Mechner's KARATEKA and PRINCE OF PERSIA games. But while SHADOWS OF CAIRN has more adventure type puzzles and cinematic scenes than Mechner's games, it has de-
cidedly less quality in the art and overall feel. It does have some great music going for it, and you can hear the music in "high resolution" (44KHz), but you'll need a Pentium to run the tunes at that level. DOS, Windows, $49.95. Circle Reader Service # 18
Musique Publishing, PO Box 5223, Englewood, CO 80115, (303) 290-9853

**VIDGRID**

Billed as "the rock video moving puzzle game" and developed in conjunction with Geffen Records, VIDGRID wowed us with its addictive puzzles, great sounds, and live action music videos. As each of the nine music videos plays in almost crystal clear digitized video, puzzlers have to unscramble the mixed-up scene by dragging square puzzle pieces around the screen. Finish a level of VIDGRID video puzzles, and things get even more difficult as puzzle pieces are turned upside down and inverted. Popular videos by groups like Aerosmith, Guns N' Roses, Jimi Hendrix, and Van Halen, will keep MTV mavens rockin'. Our only complaint is that there are only nine videos in all, which meant that after we'd played through one level, we'd seen 'em all. Still, the addictive level of the play is high, and you'd never believe Jimi Hendrix could look so good on a computer screen. DOS CD, $34.95. Circle Reader Service # 19
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*Please see advertisement for contact information.

JANUARY 1995 • COMPUTER GAMING WORLD 265
DAWN PATROL

The First Air War

Dawn Patrol is a true flight simulation with the emphasis firmly on pilot control and ‘seat of the pants’ skill. Climb into the cockpit and prepare for the aeronautical experience of a lifetime.

- Take the controls of one of 15 period aircraft including the Sopwith Camel, SPAD 7, and the Red Baron’s Fokker Triplane.
- Leading Edge Technology provides fully image Mapped aircraft and landscapes.
- 640x400 SVGA mode gives 4 times the resolution of standard VGA flight sims.
- A myriad of viewing perspectives (View Matrix) including interior cockpit, multiple external and unique ordnance view.
- Over 150 missions to accomplish ranging from traditional dogfighting to balloon busting, each with full mission briefing and embedded hypertext.
- 64 pilot biographies allow you to create your own characters from Rookie to Flying Ace.
- Experience a complete account of the 1914-18 ‘War of the Skies’ and battle for either side of the conflict.
- Over 30 original anecdotes, speeches and wise words from Commanders and pilots of the era.
- The 1914-18 team spirit amongst the airmen is further emphasised through a number of authentic wartime ditties.
- A full range of realistic sound effects accompanied by Tchaikovsky’s “Capriccio Italian” add the final touch of authenticity.

Forget all other flight sims, Dawn Patrol tests your flying skills to the full against the real pioneer Aces of air combat.

Dogfighting will never be the same again!
Welcome to the Cooperstown of Computer Games.
Here, raised upon pedestals, you'll find the games that broke the records, established the benchmarks, and held gamers in delighted trances for hours untold.

HALL OF FAME

The Bard's Tale (Electronic Arts, 1985)
Battle Chess (Interplay Productions, 1988)
Chessmaster (The Software Toolworks, 1986)
Civilization (MicroProse, 1991)
Dungeon Master (FTL Software, 1987)
Earl Weaver Baseball (Electronic Arts, 1986)
Empire (Interstel, 1978)
F-19 Stealth Fighter (MicroProse, 1988)
Gettysburg: The Turning Point (SSI, 1986)
Gunship (MicroProse, 1989)
Harpoon (Three-Sixty Pacific, 1989)
Kampfgruppe (Strategic Simulations, 1985)
King's Quest V (Sierra On-Line, 1990)
Lemmings (Psygnosis, 1991)
M-1 Tank Platoon (MicroProse, 1989)
Mech Brigade (Strategic Simulations, 1985)
Might & Magic (New World Computing, 1986)
M.U.L.E. (Electronic Arts, 1983)
Pirates (MicroProse, 1987)
Railroad Tycoon (MicroProse, 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, 1983)
Ultima IV (Origin Systems, 1985)
Ultima VI (Origin Systems, 1990)
War in Russia (Strategic Simulations, 1984)
Wasteland (Interplay Productions, 1986)
Wing Commander I & II (Origin Systems, 1990-91)
Wizardry (Sir-Tech Software, 1981)
Zork (Infocom, 1981)

H.O.F. HIGHLIGHTS

F-19 Stealth Fighter
MicroProse, 1988
While its gloss is somewhat faded now when compared to more recent Gouraud-shaded simulators, F-19 Stealth Fighter still offers one hell of a fun ride. Published before the government's real-life announcement of the F-117 A, F-19 Stealth Fighter provided challenges unique to flight simulations of the day. The missions involved sneaking around through a variety of enemy defenses, surprisingly similar to actual Desert Storm sorties years later. Although the F-19 was adequately armed, the electronic profile and stealth elements were so well done that it was often more fun to avoid a dogfight than to engage in one.

Gettysburg: The Turning Point
Strategic Simulations, Inc., 1986
In the eight years since Gettysburg first appeared, no other game has managed to capture the feel of the Civil War's most famous battle quite so well. One of the first computer games that seriously challenged board wargames in terms of realism, Chuck Krogel and David Landrey's design placed an emphasis on leadership and the difficulties of command control on the 19th-century battlefield. The rules for melee, double-time marches, and visibility added to the fun, and also showed a good understanding of Civil War tactics. Replayability was helped by random "what-if" set-ups and a reasonably challenging AI. Still worth a look, if you can get past the dated CGA graphics.
## TOP ADVENTURE GAMES

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## TOP ROLE PLAYING GAMES

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## TOP SIMULATION GAMES

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## TOP STRATEGY GAMES

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<tr>
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**TOP ACTION GAMES**

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**TOP SPORTS GAMES**

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You've read our take on the latest games, now here's a chance to see what your fellow gamers think. The CGW Top 100 is a monthly tally of game ratings provided by our readers via the CGW Poll ballot found in each issue. Approximately 50 games are rated each month, and the results are added to the aggregate results from past months. This historical database serves as a terrific reference for what you, the gamers, feel are the best plays in gaming.

**The Computer Gaming World Poll**

A MONTHLY SURVEY OF THE READERS OF COMPUTER GAMING WORLD
Aces of the Deep V1.1: Updates floppy version of Dynamic's sub sim. Fixes reported problems, including random lockups, faulty time decompression, and others. 10/27/94

Blake Stone V3.0 Patch: Updates V2.1 to V3.0. Users must have Blake Stone 2.1 currently installed. Works with registered version only. 11/3/94

Colonization V 1.1 Update: The newest version of Sid Meier's latest strategy creation. 11/13/94

CyberRace V1.22P CD-ROM upgrade: Includes all previous fixes plus Pentium/PCI fixes. 11/8/94

Dark Legions V1.1 Update: Adds native sound support for UltraSound/UltraSound Max, AWE-32, ESS488/688 Chipset, and Ensoniq SoundSnake. CD and floppy versions available. 10/13/94

Dark Sun II: Wake of the Ravager Update: Fixes reported problems. Works with CD-ROM version only. 10/26/94

Detroit Patch 2.1: Upgrades this Impressions game to latest version. Make sure to consult the text file for info on saved game transfer to new version. 8/11/94

Falcon 3.0 V3.05: New Upgrade for floppy users of Falcon equivalent to the new Falcon CD release. See also MiG-29 and Hornet upgrades below. 9/29/94


Global Domination Update: Fixes modem play bugs and replaces Bismarck with Hitler, for those politically incorrect wargamers. 8/24/94

Harpoon Classic V1.54: CD-ROM update corrects reported bugs and uses less memory. Missiles launch against bases correctly. Works with all previous versions. 11/4/94

Hornet V1.02: Upgrades floppy owners, equivalent to Hornet included with Falcon Gold CD. 9/24/94

Legend of Kyrandia, Book 2, 1.04 Update: Fixes lockup problems on faster machines. 8/29/94

Lode Runner Windows Upgrade V1.02: Corrects problems listed in the Readme file of the initial release. For Windows versions only, not DOS. 10/7/94

Lords of the Realm V1.01: Update to latest version, allows for modem play, CD-ROM and floppy versions available. 11/1/94

Master of Magic V1.2: Latest upgrade to MicroProse strategy/magic game with numerous fixes, new features, and major AI enhancements. 12/1/94

MiG-29 V1.04: Upgrades floppy owners, equivalent to MiG-29 version included with Falcon Gold CD release. 9/24/94

Outpost V1.1: Fixes many of the problems of Sierra's science-fiction title. 10/3/94

1942 Pacific Air War Modern Patch: Provides modem play and fixes some bugs. 10/13/94

Pacific War V1.1 Update: The official update from SSI, this will not work with the Gary Grigsby "X" versions available on-line. 8/10/94

Quarantine V3.5 Update: Latest update for all previous versions of Quarantine, floppy and CD-ROM versions available. 11/1/94

Quarantine DOSGW.EXE update: Simply an updated DOSGW.EXE for commercial version owners. 10/21/94

Rebel Assault Macintosh Patch: Corrects "no CD in drive errors", and improves game speed when playing full screen. Also features direct PowerPC support. 10/19/94

SimCity 2000 for DOS V1.1: Fixes problems reported, including crashes, also includes some minor cosmetic fixes. 10/28/94

Tigers on the Prowl V1.15: Replaces all prior versions, including V1.14 update. Adds a number of new features, including improved AI, and an improved interface. TOP users who want to play the campaign scenarios must have V1.15. 10/28/94

U-Boat V1.5 Update: Latest version of Deadly Games' submarine game—Mac only. 8/11/94

UFO V1.3 Update: Fixes problem of captured Alien leaders dying en route to X-Com base. This patch is only for UFO import version, not the American X-COM release. 9/15/94

Ultimate Football V1.31 Update: Replaces previous update V1.3. Adds crowd noise, fixes reported problems. 11/8/94

Under a Killing Moon V1.04: For use with the Cyrix microprocessor. 11/8/94

Under a Killing Moon Update: Works with Gravis UltraSound and Gravis UltraSound Max. 11/8/94

Publisher BBS Numbers—Many of these patches are available direct from the publishers' bulletin board systems. Call with your modem parity settings at N-8-1.

Accolade CA (408) 296-8800

Apogee MA (508) 368-7036

Bethesda Software MD (301) 990-7552

Broderbund CA (415) 883-5889

Capstone FL (305) 374-6872

Creative Labs OK (405) 742-6660

Impressions Software MA (617) 225-2042

InterPlay Productions CA (714) 252-2822

LucasArts CA (415) 257-3070

Maxis CA (510) 254-3869

MicroPrese MD (410) 785-1841

Microsoft WA (206) 936-6735

Origin TX (512) 328-8402

Sierra Online CA (209) 683-4463

Spectrum Holobyte CA (510) 522-6480

SSI CA (408) 739-6137

Virgin Interactive CA (714) 833-3305.

270 COMPUTER GAMING WORLD • JANUARY 1995
For centuries, war has raged among the demons and fairies, devastating this mystical land. Two young knights, separated at birth and raised by mortals, chosen for the ultimate battle that will decide the fate of heaven and earth. Never knowing their true relation—or their own dark destiny—they are fated to meet and duel each other to the death. As Desmond, the Knight of Xentar, you will be striving with many a winsome enchantress to overcome menacing foes—and perhaps in victory, become the ruler of all.

So the challenge is on! An incomparable role playing fantasy game for your PC, with stunning, hand sculpted graphics throughout, humorous script and thrilling plots. But be warned—with its romance and intense action, Knights of Xentar is not for kids nor the faint hearted.

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Download the FREE demo by calling our 24 hour BBS 310 539 7739 (8 data bits, no parity, 1 stop bit, filename xkdemo.exe) or send $5 for the demo on diskette to Megatech, PO Box 11333, Torrance, CA 90510.
The Rumor Bag

Dances With Elvii

by Colonel Presley

Thirty miles away from the glitter palaces in Las Vegas, the empty desert surrounded me with scrub and dun-colored hills. I began to imagine the desert as a battlefield for mechanized units, when I realized that Gary Grigsby is working on Steel Panthers for SSI. Although related to Grigsby’s brilliant Panzer Strike series, Panthers has many new features, including individual pillboxes, smoke drifting via a wind model, built-in maps, and a scenario/weapon editor. A radical role-playing element lets you name leaders and watch their skills increase with experience through a full-scale campaign.

I had been waiting for two hours in the desert for an unknown informant to show up. Finally I began to hear the drone of choppers, and for a moment I thought it might be a promotion for Novalogic’s new high-tech Werewolf. Since Werewolf is supposed to connect with Armored Fist and allow several players to fly and drive cooperative missions, I got excited over the possibilities.

Suddenly a shadow loomed over me, and I heard the patter and flap of a parachute in the strong wind. Focusing on the ‘chutist, my eyes were dazzled by the glare of rhinestones, and I laughed out loud at the realization that my contact was a member of the Flying Elvis team. His chute sported a colorful version of the 7th Level corporate logo, and it was descending rapidly. Unfortunately, the more I tried to move out of the way, the more he seemed headed right for me. Finally, the inevitable collision occurred and we quickly stood and dusted ourselves off.

I fervently hoped that he wasn’t going to launch into a rendition of “Love Me Tender” when he spoke in a mumbling singsong. “Uh, huh, uh!” went the opening mantra. “Have you ever heard o’ Raymon’ Feiss?” Of course, I’d read the Riftwar Saga. “And you know what he’s gone and done, man?” Of course, almost any role-player knows about Betrayal At Krondor. “And ya know what eyelse?” I didn’t, but I soon found out that 7th Level is going to be producing the sequel to Betrayal At Krondor, as well as other products with the successful author. My guest finished his song and handed me a scarf with both the company’s logo and Raymond E. Feist’s name on it.

The pitch delivered, we got into my car to make the trek back to Vegas. I remember thinking that my informant looked so much like the real thing I half expected him to pop open a pack of diet pills and offer me some. As we talked, I soon discovered that he wasn’t headed for Vegas just to perform. He was upset because he had bet on the Mighty Ducks to take the Stanley Cup. To ease his frustration over the hockey strike, I suggested he play some computer hockey games, and told him that Time Warner had just signed Wayne Gretzky to endorse a new hockey game for 95.

When we arrived at the casino where he performed his act, he gave me a complimentary pass to that hotel’s quick-set concrete lunch buffet and joined me for lunch. I remarked that the food sank faster than the WWII subs in SSI’s Silent Hunter after they’d been depth-charged by the Imperial Navy. Then I had to explain that Silent Hunter is a simulation that looks like the Pacific Theater equivalent of Aces Of The Deep. I had seen the photo-realistic ship graphics and the distinctive harbors from the periscope view, and I was very impressed. The 3-D, light-sourced graphics make everything look appropriate for various times of the day.

Fat Elvis told me that he was a big SSI fan, and asked if I knew anything about Great Naval Battles 3. I told him it would have around two dozen fixed scenarios (from the latter part of the Solomon’s Campaign, Midway, Coral Sea and more) and about the same number of new ships in the mix. It will also have new planes and a built-in scenario editor. In keeping with our previous discussion, I even explained that you could establish sub zones in the new game and have subs patrol those zones without extra intervention on your part.

He seemed happy as he stood up and said, “One for the money, two for the show, ...” and passed out onto the floor. Before I knew it, the casino manager was chastising me for letting him eat at the quick-set buffet and demanding that I take his place on stage. “But I can’t sing in Fat Elvis’ key,” I protested.

Somehow he got me onstage, and I made the audience feel like the latest multimedia product without any real interactivity. When I came offstage, the manager said I got fewer boos than the “real” Fat Elvis, and to think of myself as “repurposed” content. Amused, I hoped multimedia producers would figure out the problem faster than he did.
PHOENIX
FLIGHT & WEAPONS CONTROL SYSTEM

Take control of your elevators, ailerons, throttle, rudder, and flight and weapon commands with this unique two-handed joystick – the Phoenix Flight & Weapons Control System.

Each of the 24 buttons can be programmed using a graphical interface, designed for simplicity. The Phoenix is compatible with all games and flight simulators that support a standard joystick and keyboard controls. No special support is required.
Let's face it — putting a truly great game on a floppy disk is like trying to play professional football in a bathtub: you really need more room. That's why the designers at ORIGIN are excited about creating CD-ROM games. Finally, we can roll up our sleeves and weave magic. • You want impossibly awesome graphics? Watch our fully detailed art blow you away. • Hunt down the meanest aliens in dozens of different galaxies — without having to guess at what they really look like. • You’re wired for sound, aren’t you? Then you should expect all your adventures to have it! We have dynamic, orchestral sound-tracks so phenomenal you’ll wonder where we’ve hidden the conductor. • Of course, for everything you gain, you’ve got to lose something. With a CD-ROM game, what you lose is the hassle. Forgot about corrupt disks, too little hard drive space or making back-up copies. It’s ancient history. Finally you can pop in a game worthy of the system you bought for it. ORIGIN creates worlds to take on the multi-media challenge.

Now it’s up to you to conquer them.