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Presenting the long-awaited third installment in LucasArts’ classic adventure series, Monkey Island. With features like 30-plus hours of gameplay, 8,000 lines of hilarious dialogue, oodles of challenging puzzles, high-resolution graphics, film-quality animation and a few surprise celebrity voices. Not to mention vegetarian cannibals and a guy named Snugglecakes.

So get ready to embark on a rollicking, swashbuckling graphic adventure where the seagulls have better aim than the pirates, and the sharpest weapon is your wit. For Windows 95 CD-ROM.

Check out the playable demo in select magazines or download it from our Web site at www.lucasarts.com.
You've waited long enough. Can the godfather of flight-sims deliver an experience you can't refuse? Simulations Editor Denny Atkin speaks with the designers and pilots who have been integral to the five-year project. He even got to log some airtime to test the game's physics modeling, avionics, graphics, and performance. If you've been waiting for the ultimate fighter sim, don't miss this preview!
THE NEW BREED OF WARRIOR.

Never before has a combat sim transported you to a universe so convincing. A 61st century piloting experience so intense, its character-based missions are frighteningly close to reality. Multiplayer combat so unreleenting. A global Internet server tracks war statistics, wins and casualties. Raw combat so brutal, only the producers of the #1-selling, 3-D simulator of all time could deploy it. Heavy Gear. Unleash the warrior within.

Confront an entire army of Gears, Striders, aircraft, infantry and even landscapes; deploy your henchmen and call in for air support.

Create your own character, and play via LAN/Internet as wins and casualties impact the front lines on a persistent online battle map.

Use weapons for specialized tasks: attack out-of-sight Gears with laser-guided mortars; destroy electronic systems with railguns.

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With Microsoft™ CART Precision Racing™ you will see, hear, and feel the same things real CART drivers do. You will race on all 17 official CART tracks, based on razor accurate GPS data. Your view will shift in anticipation of the curves ahead. Your pulse will rev at digitally sampled engine sounds and Bob Varsha’s track-side commentary. And with force feedback support, if you take the corkscrew at turn #8 too fast, you're not going to need a monitor to tell you. To improve your lap time, stop into the garage to tweak your set-up, analyze the Pi Research telemetry data or go back to Racing School where Bobby Rahal is instructor-in-residence.

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**BUSY GOING 140 mph AT LAGUNA SECA.**
ANCIENT TREASURES.

AN AGE-OLD MYSTERY.

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The first PC CD-ROM game featuring Video Reality™, the all-immersive technology that puts you in the game.
Juicy Demos
With 14 Playable Game Demos and Four Full Games, There's Something For Everyone on This Month's CD

You want some? We’ve got plenty! As this issue was going to press we received a bumper crop of good game demos to keep you busy over the holidays. And we have some extras that may interest you. For starters, you'll find our 1997 Article Index, which lists all of our 1997 articles—reviews (with ratings), features, previews, strategies, and hardware—by issue. The indexes have been saved in tab-delimited files, allowing you to open and sort them in whatever spreadsheet or word processor program you choose.

If you’re puzzling over Tirnwein's Odyssey, our six save games will push you past the toughest puzzles.

For the aspiring Lees and McClellans, there's a demo of Civil War Generals 2, with a special Ultimate Civil War contest (co-sponsored by CGW) to go along with it. The Grand Prize is the chance to be sent on a VIP tour to a U.S. Civil War reenactment. The winner will also have their picture in Sierra's Impressions' next wargame.

Contest Dates: The contest starts on January 5, 1998, and goes on for three weeks. Registration begins December 1, 1997; go to www.gamespot.com/promos/civilwar, or check your mailbox to see if you've been drafted already. Contest is limited to the first 500 entrants.

How To Use The Disc
The CD is AutoPlay enabled and should begin when you load it into the CD-ROM drive. Otherwise, select Run from the Program Manager in Windows 3.x, or Start Menu in Windows 95, and type D:\RUN-ME (where D is the letter of your CD-ROM drive) to run it from the CD. You may type D:\INSTALL to create a CGW program group on your Windows desktop for future use. Many demos require the disc to be in the drive to run; therefore, we recommend installing the demos from our disc.

IMPORTANT!
PLEASE READ THIS BEFORE ATTEMPTING TO RUN THE TOMB RAIDER II DEMO

Eidos UK erroneously data-stamped the Tomb Raider II demo on this month's CGR. You will need to change this to prevent a crash. To do this on a PC to play the demo. This needs to be done BEFORE attempting to run the demo. Select Settings -> Control Panel -> System -> Device Manager -> Display -> Settings tab, Select the drive for the device -> Set the Drive to the correct model. This procedure will need to be carried out each time you wish to run the demo. Eidos apologises for this inconvenience. If you desire a solution to this problem without the need to carry out the disk change each time, please see below. Eidos has set up a phone number to supply further details: (415) 547-1262.

Running the Demo: Try play the demo double-click on the Tomb2.EXE in the Tomb2 directory on the CD. You will now be taken to the Setup menu. Check that the options are set as you wish and proceed to the game. These settings will be saved and the next time you run Tomb2.EXE you will be taken straight into the game, so please be sure that the options you choose are the correct ones.

Eek, I've already run the demo before changing the date! There are two solutions. Either follow the instructions below in the section "Obtaining a patch to resolve the problem" or you will need to delete the Trial entry from your registry.

WARNING: EDITING THE REGISTRY IS FOR ADVANCED USERS ONLY. IMPROPER EDITING CAN CAUSE PERMANENT DAMAGE TO YOUR WINDOWS 95 SETUP. PROCEED WITH EXTREME CAUTION! Please contact Eidos Interactive at (415) 547-1262 if you have any doubts as to using this method. Eidos Interactive and Computer Gaming World cannot accept any responsibility for any problems caused by incorrect Registry changes.

Obtaining a patch to resolve the problem. If you prefer not to have to change the system date, Eidos can email you a small patch. This is also available from our FTP server. To receive the file by email, please send email to techsupport@eidos.com with the subject heading CGWTR. Please ensure that you use this exact subject heading. You may also obtain this patch from Eidos' Web site. Using your Web browser go to www.eidosisinteractive.com/hintspc.html. Please download the file "tomb2.EXE". This file, when run in accordance with the instructions, will allow you to run the Tomb Raider II demo without the need to change the date each time you play it.
STEEL PANTHERS III The scale may be different from earlier Steel Panthers, but the online database will steer you clear of battlefield headaches.

ULTIMATE CIVIL WAR GENERAL CONTEST
See how well you do in the demo and enter the contest to get the chance to reenact a battle.

JOINT STRIKE FIGHTER Strap yourself into an X-35 and admire the view in Eidos' graphically stunning sim.

DARK EARTH Learn all about the Light and Dark while hurling mighty French insults in this new adventure game.

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<thead>
<tr>
<th>TITLE</th>
<th>PLATFORM</th>
<th>DIRECTORY</th>
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<td>1997 Article Index</td>
<td>any</td>
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<td>97INDEX</td>
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SUB CULTURE Your mission is to rescue a class of geology students—not an easy task when you’re only one-inch tall.

ZORK GRAND INQUISITOR Play and appreciate the pure Zorkitude of this demo.
LORDS OF MAGIC

When the evil sorcerer Balkoth threatens the peaceful people of Urak with death and destruction, brave heroes with magical powers must rise up to stop the reign of terror and defeat the forces of tyranny. In Lords of Magic, the successor to the popular Lords of the Realm II, you enter a fantasy world where good and evil fight for primacy against a mystical backdrop of wizards, warriors, spells and storms, giants, gnomes, and Barbarians.

Building on the dramatic features that made Lords of the Realm II a breakthrough in strategy gaming, Lords of Magic combines turn-based exploration and resource management with real-time combat. Join forces with others (up to six players can compete on a LAN or over the Internet) or marshal your forces to take on Balkoth and his Barbarian allies alone. You'll command up to Eighty creatures, including elves, vampires, skeletons, and gargoyles, as you defeat evil and save the realm. Wielding the forces of magic through spells and artifacts of power, you can take multiple paths to victory: more choices, more outcomes, and unlimited replayability.

Lords of Magic features a true 3-D game map, with 16 bit SVGA Graphics and a powerful map editor that puts you in control of terrain height, topography, and texture.

www.sierra.com

S I E R R A
Impressions
select one of eight cities to be the center of your empire

In your library, wizards will research spells to overpower your enemies.

The magical world of fantasy and fury.

Keep inside your wizard tower, sorcerers practice their secret rituals to conjure magical creatures and train new acolytes.

When you confront the enemy forces of Malthor, "zoom in" to real-time combat.
CGW’s Home on the Web

If you’re looking for the fastest news and reviews in gaming, turn to the experts at GameSpot

If Davis has combined the talent and expertise of Computer Gaming World, GameSpot, and ZDNet to bring you the best gaming resources on the Web. Whether it’s the latest game demos, breaking reviews, detailed strategy articles, hot scoops, or online forums, you’ll find everything you need to stay on the cutting edge.

If you’re looking for the fastest news and reviews in gaming, turn to the experts at GameSpot. Here’s a brief overview of what you can expect on GameSpot over the next few weeks. To see these articles and others, point your browser to the ultimate gaming page at http://cgw.gamespot.com/january.

- Designer Diaries
  Have you ever wondered what’s going on behind the scenes while those much-anticipated games are in development? GameSpot’s latest Designer Diaries follow the progress of game designers Jane Jensen, embarking on her third Gabriel Knight game for Sierra On-Line, and Tim Schafer currently working on Grim Fandango for LucasArts. There’s also IGN’s Scott Grundy’s adventure Sea’s Quest for Glorath Dinosaur Fire, Accolade’s Jack Nicklaus’s, Activision’s Dark Reign and Zane Grand Inquisition, and more!

- Strategy Guides
  GameSpot strategy guides are unofficial game handbooks stocked with secrets and step-by-step instructions on how to defeat each level of your favorite game. Our strategy guides unlock those toungued hours of gameplay to help you get more fun for your buck. Here are four recent examples:
  
  Dark Reign Need some help with Activision’s new real-time strategy game? Allow Dosslock to give you a hand through all the missions for both the Freedom Guard and the Imperium and beware for all the secrets and units in the game.
  
  Riven The sequel to the best-selling game Msvr is finally here and GameSpot’s guide has everything you need to help you through those mind-boggling puzzles.
  
  Jedi Knight Jedi Knight lets you use the Force to fight your foes, but you may need more than the Force to get you through the game. GameSpot’s Jedi Knight guide can help you along your way with tips and hints and all the secret codes.
  
  Tomb Raider II It’s time to pull your gear out of the closet and go on another adventure with Lara Croft. Her quest is going to be long and hard and it looks like she might need some assistance. Check out GameSpot for the answers to all your Lara questions.
  
  Total Annihilation Could this be the surprise hit of the year? If you’ve had a chance to check out GT Interactive’s new real-time strategy game, you’re already know how challenging it can be. Let GameSpot be your guide.
  
  Age of Empires Microsoft ventures into the real-time strategy market with a game that is sure to stand out from the crowd. But just because it’s from Microsoft, don’t expect their tech support people to help you through the game. GameSpot comes to the rescue with another strategy guide.
As you read through your issue of CGW each month, watch for the CG Online bug, which points to a related online article at www.computergaming.com.

If you're interested in taking part in our discussions about gaming, check out the CGW Forums on ZDNet at www.zdnet.com or www.chatnow.com. CGW reviewer and columnist Dennis McCauley and CGW Sysop Ariane Levitan host ongoing discussions on ZDNet's Community Center.

- **Special Features**

Some publications appear to write previews of games based upon information that is available everywhere else. At GameSpot, we like to have hands-on experience with the game before writing a preview, so that we can give you a deeper look at what the newest titles are all about. Here is a sampling from this month:

**Lords of Magic Preview**

Impressions is known for creating entertaining and challenging strategy games. GameSpot was the first to cover Impressions' latest title, Lords of Magic, with an in-depth preview, providing everything you need to know about this upcoming game.

**Tomb Raider II Preview**

Will the alluring Lara Croft be enough to tempt fans of Tomb Raider back to play the sequel, or is Tomb Raider II just more of the same? Find out for yourself in GameSpot's exclusive look at Eidos' much-anticipated game.

**Zenon Grand Inquisition Preview**

It might not sound like fun playing a Frobozz Electric Parma-Suck salesman, but in the zany world of Zenon it sure can be. Check out GameSpot's firsthand look at the next title in Activision's long-running Zenon series.

- **Demos**

GameSpot has the most thorough and regularly updated game demo libraries on the Web. This month's demos include Daytona USA Deluxe, Links LS 1998 Edition, 3D Ultra Pinball: The Lost Continent, Pro Pinball Timeshock!, and many more!
You have:
Fast reflexes
Killer torque
Knobby tires
Iron will

You need:
Divine intervention

Hold on to your fillings. This is gonna hurt. Frame-shattering jumps, punishing whoop-de-doos, and switchblade turns rendered with real physics. Torturous tracks
DEFIANCE

"...an action/combat game that’s light years ahead of the competition."
ZDNet

"...real gameplay."
"...sharp 3D engine that looks like it could stand toe to toe with Quake..."
PC Gamer

AVAILABLE NOW!

- 3D acceleration for 3Dfx and Rendition and others plus MMX.
- Brilliant 640 x 480 Super VGA resolution.
- Compelling story. Solve baffling puzzles to advance between levels. Smooth 3D combat with TruFlow™ technology.
- 18 different horrific creatures attack you again and again from above, below and in your face!
- Death Match battle for up to 8 players in 4 challenging levels via the Internet or LAN.
- Cut-scenes merge the game’s 13 levels seamlessly while immersing you ever more deeply into the compelling story.

SUDDENLY, THE WALLS CAME CRASHING DOWN AND ALL HELL BROKE LOOSE.

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CIRCLE READER SERVICE #187
Who's Who in the Computer Gaming Universe?

Are You a Core Member of the Gaming Elite?

One of the most common questions that I'm asked is, "What's the biggest difference in Computer Gaming World prior to and after the Ziff-Davis acquisition?" My initial answer is, "You mean outside of bigger circulation, more pages, and a bigger editorial staff? Not much!" Then, I usually go into a litany of positives that ZD brings to the table. High atop that list is research. ZD believes that successful publications know the pulse of their target audience. So, we constantly commission studies to examine and reexamine those target audiences. The more we know about our readers and potential readers, the better we can construct a magazine that will both entertain and serve that universe of readers.

Earlier this year, we commissioned a third-party research company to find out the size of the core gaming universe. The company selected 16,000 PC-owning households from the Polk National Database. Each household was sent a screening questionnaire designed to find computer gamers. From the responses to the screening questionnaire, 1,700 gamers were selected to answer an eight-page survey. The survey was conducted blind with no reference to ZD publications or Ziff-Davis itself. The research company certifies that the results can be weighted to the overall U.S. population.

The study discovered that out of 41 million U.S. households with personal computers, 78 percent—or 32 million households—have games installed. Sounds like a big audience, doesn't it? Of course, the study then discovered that there is a great disparity between levels of gamers. The chart on this page lists some of the most glaring differences.

EXPLANATION

Notice that the number of core computer gamers accounts for only 14 percent of the total gaming population. Yet, when you figure out the buying power, they account for 54 percent of the total market. This means that if you fit into the core gamer category, you are important to software publishers for two reasons. First, your own purchases amount to the majority of the market (roughly $810 million of the $1.4 billion dollars worth of PC games sold in 1996). Second, your heavy rate of advice impacts the other 46 percent. Historically, software publishers who have tried to leapfrog core gamers and go directly to the mass-market have failed. Some games, like the enigmatic Mvst, have been able to reach the mass market without really trying, but they are extremely rare.

Notice that the casual gamer likes card games and puzzle games in which you get in and get out quickly (and no one gets hurt). Adventure probably comes up as a tribute to Mvst, since the puzzles are the primary form of interaction. Yet, the core gamer loves adventure, action, and role-playing games—genres in which the top rated games require a significant time commitment. This may explain why 22 percent of core gamers surveyed said that they play 11 hours per week or more and only 9 percent of casual gamers made that claim. Computer gaming is a hobby that requires a time commitment; if you play more than 11 hours per week, you're part of the hard-core gamers within the core gaming community.

The good news from this study is that more people than ever before are playing computer games. The sobering news is that most of these new gamers are casual gamers who do not have the same interests as our loyal readers. The hopeful sign is that core gamers, like our readers, give advice, and there is still an opportunity to draft new blood into the genetic pool for future opponents.

Computer gaming is a growing hobby, but it's also a changing hobby. Where do you fit in the gaming elite? 

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**Computer Game Players**

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<tr>
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<th>Casual</th>
<th>Core</th>
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<tr>
<td>Est. Population</td>
<td>27.2 million</td>
<td>4.48 million</td>
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<td>Rate Themselves As</td>
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<td>Give Advice?</td>
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<td>Give heavily</td>
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<td>Games Preferred</td>
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<td>Percent Playing Games Online</td>
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<td>Last Game Bought</td>
<td>Mvst</td>
<td>Quake</td>
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<tr>
<td>Games in Library</td>
<td>15</td>
<td>42</td>
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*January 1996*
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Balduar's Gate
Arriving Spring, 1998

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CGW'S DARK CONSPIRACY

I just picked up your November issue and enjoyed it as always, but was left with a nagging suspicion. There is an evil bias at work in the office of CGW! There is a deserving game withheld from your list of Top 10 Games From The Dark Side, and I fear I know why it isn't there: it's a (fablest) console game ported over to the computer. I, of course, am referring to Resident Evil from Capcom. Perhaps your noses are upturned at this game due to its lowly pedigree, but it is excellent.

The story slowly unfolds before you as you creep from room to room. Character animations are fluid and realistic and the character you pick to play and the decisions you make really do lead to different results. Management of your supplies is crucial as running out of high-powered ammo can leave you in very precarious situations. Plus, it's fun and the scariest game I have ever played!

I used to have a superiority complex about my computer, but Resident Evil made me purchase a PlayStation. Now your readers don't even have to do that. I don't know if anything has been lost in the port, but if it's the same game, you are depriving your readers, and yourselves, of a great experience. Try it, you'll like it.

And, if you can get off that high horse long enough, GoldenEye 007 is, even as we speak, attempting to persuade me to buy a Nintendo 64. Aaaahrrrrgh! Looking forward to the glowing review!

Bill Harrys, Phoenix, AZ

Unfortunately, as you'll notice in this month's review, the computer version of Resident Evil had lots of bugs (and we don't mean the kind in the Starship Troopers movie, either). We hope that any eventual computer versions of GoldenEye 007 will be spared such indignities, since it is truly a marvelous game, but we can't be sure. As for our anticonsol bias, we plead guilty, but consider this: Nightmare Creatures is in that Top 10 list and it had its debut on the PlayStation. So, I guess we've already fallen off that horse. (But, it was rocking very fast, and Jeff Green got caught in the rocks.)

OUT OF LINE ROLE-PLAYING

I have recently been playing both Dragon Realms and Ultima Online and I'm sad to say I have found both a rather off-putting experience. I have been playing RPG since Dungeons and Dragons appeared in around 1977 or 1978. I've played on computers since the C-64. I still found both of these games, as different as they are, to be quite a disappointment.

On the technical front, both have problems with lag, much more so with UO than DR (I presume because of its graphic intensive nature), To what extent it is also a function of totally inadequate server capacity is a
Combat Chess

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The stunning game of tournament level chess played with living battling characters

You’ve never seen chess like this. One moment you’re testing yourself at Grand Master level on a standard board. Then, with the click of a mouse, the pieces have taken on an awesome life of their own - and you’re locked into a battle between good and evil, where losing just isn’t an option.
NAME: Alec Beckett
HOMETOWN: Greshem, OR
RANK IN NET FIGHTER: 1st
DEGREES EARNED: 210,000, traded 27,500 to buy Quake in the HEAT store

"THE DOCTOR SAID I HAD A BI-POLAR PERSONALITY AND I NEEDED TO PRACTICE ANGER MANAGEMENT TECHNIQUES. SO I HURT HIM. NOW THAT I BEAT UP MY FRIENDS IN NET FIGHTER ON HEAT.NET, I DON'T HAVE TO DO THAT ANYMORE. I'M SORRY, DR. KREPLER!"

HEAT USER NAME: Stumpman
TOURNAMENT RECORD: 10-2

FAVORITE SPECIAL MOVE: swinging knife decapitation

TRASH TALK EXCERPT: "Sorry about your head."

OTHER FAVORITE GAMES ON HEAT.NET:
Quake,
Hexen II,
Outlaws,
Diablo,
WarCraft II

LOCALLY—get the HEAT internet game network box at your local computer store! GLOBALLY you can divert your anger off the streets and onto the net against real, live people
GLOBALLY ON HEAT.NET!

NAME: Bill Shultz
HOMETOWN: Portsmouth, VA
RANK IN NET FIGHTER: 2nd
DEGREES EARNED: 197,500, traded 17,500 to buy Scud: Industrial Evolution in the HEAT store

"I USED TO TAKE OUT MY BULLETS, AND ON EACH ONE I WOULD WRITE THE NAME OF EACH PERSON ON MY BUS. THEN A FRIEND SHOWED ME I COULD PURGE MY VIOLENT URGES IN NET FIGHTER ON HEAT.NET AGAINST OTHER PEOPLE. THANKS TO HEAT, THE PEOPLE ON MY BUS WILL NEVER KNOW HOW CLOSE THEY CAME!"

HEAT USER NAME: Thunderhammer
TOURNAMENT RECORD: 9-3
FAVORITE SPECIAL MOVE: forked lightning kick
TRASH TALK EXCERPT: "Stop hitting like a sissy girl."

OTHER FAVORITE GAMES ON HEAT.NET: Blood, Duke Nukem, DeathDrome, Shadow Warrior, Alien Race

GAME ON THE INTERNET!!

-log on to HEAT.NET NOW! Through HEAT.NET and the miracle of CyberDiverion, all over the globe! You'll feel better, the whole world will feel better!

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question that remains, although I suppose the fact that I am in the UK may make this worse than for you Yanks! On UO, there were several instances of my character being frozen in place, whilst other players went about their business, after which I might be able to move or might get dropped due to a lost connection.

Both games, however, turned out to have a quite unexpected drawback to this "newbie." I had thought that other real players would be great, and certainly in DR they were, by and large. In UO, I did not manage to stay alive and connected for long enough to really find out. The surprise is that the players in both are a real problem. Preying on newbies is a favorite tactic. In DR, thieves clean you out all the time, and in UO, other players will kill you. Worse, in DR, preying on others is a design feature. The thief class has no real choice and must prey on other players to prosper. Oddly though, you are not allowed to fight back, and unless you catch them at it, which you won't if you are much more skilled than you, you won't even be able to seek redress. You'll get dragged out by them and killed, or sanctioned by the GMs for causing trouble with another player.

I have no objection to taking my chances with a game. If you could not lose, it would not be fun, but I am afraid that in these there were no chances. Players of such great superiority prey on you that you cannot do anything about it. If, as a GM in a conventional game, did that to my players, they would rapidly stop turning up

In a real-death environment, where you cannot restore a backup and try again, I personally find this inequality very off-putting. Local calls are not free in most of the UK and spending hours and hours laboriously training up a character is expensive, given the time taken to get going. To have them abjectly frustrated leaves me mad.

Both games need to have a bit of a think about what they do with this problem. Lots of people clearly play and enjoy them immensely, but I seriously doubt that they can keep getting new players at a good rate with these problems. Lots may join but they will clam - cancel their subs and move on. I have already done so with DR.

Having bought the UO software for £40 in the UK I cannot as easily walk away from UO. Both games need nursery areas to allow new players to get going without having to meet unmatchable risks, and both game publishers need to rethink their policing policies. UO, in particular, seems to pride itself on being a real environment. That is not. Most of the cash in circulation in that economy must have come from the theft from new players!

Chris Arey

Designers who fail to learn the lessons of virtual history are doomed to repeat them. We've always known that online games need a beginner zone equivalent to a ski lodge's bunny slope. What we can't understand is why this type of environment isn't being designed.

FLIGHT LINE

How about a WWII fighter plane simulation with the option for a multiplayer crew for the big bombers? It would be just like what's being done on LOCKEY 2 with the pilot and gunner. I can remember back to a game for the Intellivision called B-17 BOMBER that I played as both pilot and bombardier, while my friend would act as gunner and take care of the guns. A few people logged onto the same plane, with friends flying escort and other Net players as the enemy fighters would be cool. Maybe you could throw in a...
Gold (Top Award)
Gamer Domain Online
9.1 out of 10
Ultra Game Players
9 out of 10
Computer & Net Player
Zestrap4l Online
4 out of 5
Computer Gaming World
Next Generation
Computer Games Strategy Plus
Adventurer Vault Online
CINet’s Gamecenter Online

"a complete blast to play"
- Computer & Net Player

"Tires screeching, motorists cursing, pedestrians dying – they're all part of the macabre vehicular-homicide-is-fun world of Carmageddon"
- Entertainment Weekly

"Vent Your Road Rage"
- Newsweek

"It's been a long time since a driving game has been as much fun as Carmageddon"
- Computer Gaming World

"Very playable and addictive."
- PC Gamer

"the most impressive racing game around, and the most original game I've played in ages"
- Games Domain Online

"Go out and buy it!"
- Ultra Game Players

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Circle Reader Service #067

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little FLYING NIGHTMARES 2 with a commander for the missions?

Robert Provenza
from the Internet

Several online games offer the features you desire. Check out AV WARRIOR II and WARRANTS for that kind of cooperative action, available now via the Internet. Since you're playing with real humans, you can decide on the commander.

IS JUSTICE SERVED?

I appreciated your article about gaming online. However, with www.zone.com (Microsoft), it would have been nice if you had noted that Microsoft has taken it upon themselves to snub Netscape users. When you use Netscape 3.0 or higher, the page dumps you (literally) to a page that tells you, as only Microsoft can, that you should dump that piece of crap Netscape and use the only browser in town, IE. And of course they give you a link where you can download it for free. How hard would it have been for Microsoft to

GUBBLE TROUBLE

Your review says several times that Gubble (CGW#160) is based on the game CRYSTAL CAVERNS. But, in fact, somewhat loosely based on CRYSTAL CASTLES, an arcade classic with coin-drop revenues over $100 million, released in 1983 by Atari.

Franz Langenburger
Chairman, Actual Entertainment

Corrections

HALF-LIFE FIASCO

In our December Sneak Preview of HALF-LIFE we indicated that there was a demo of the game on that month's CD. There wasn't.

An editor added the reference because the CD had QUAKE levels created by one of HALF-LIFE's designers. Unfortunately, the editor didn't specify the nature of the demo content. The party responsible has been taken to the woodshed for a thorough caning, and swears he will never make the mistake again! We regret the erroneous reference.

When we do get the HALF-LIFE demo, we'll be sure to tell you.
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MCI
The games network.
Blade Runner

Westwood Prepares to Ship Its Ambitious Adventure Game

Get ready, junior Blade Runners, the replicants are on their way. Westwood Studios' long-awaited adventure game, based on the classic science-fiction movie of the early '80s, is finally about to see the light of day.

We were able to play a late beta of the four-CD game, and all signs indicate that Blade Runner will be one of the hottest adventure games to come around in a long time.

The first thing to note is that Westwood has done something very interesting with the franchise. Blade Runner, the game, takes place at the same place and time as the movie—Los Angeles, 2019—but it is not the same story as the movie. Rather than focus on Harrison Ford's character, Deckard (whom you will hear about, but never encounter), the game puts you in the role of a rookie Blade Runner, Ray McCoy, whose assignment to an animal murder investigation leads to his own struggle against the replicants.

The game's designers have done a remarkable job of remaining faithful to the spirit of the movie, while fashioning something wholly original as well. As in the film, much of the gameplay involves trying to figure out just who is and who isn't a replicant, as well as making the moral decision of what to do once you do know.

Westwood has also taken the step of making sure that the answers vary upon repeated play: Many of the game's characters are randomly assigned the status of human or replicant, and they will follow a different agenda each time you play. Thus, the storyline, and your path through it, will constantly change.

As in the film, the game's visuals are stunning. The cut-scenes feature the best 3D modeled characters yet seen in a game, just a few eye blinks and body movements short of passing for human. The in-game graphics, while not quite as good, are still quite beautiful, with fog and smoke effects, colored lighting, and shadowing creating the same noirish, futuristic look as in the film. The game's engine is able to render hundreds of thousands of polygons in real-time without the need for a 3D accelerator card, according to Westwood.

Some of the film's most memorable scenes, such as the giant-screen geisha billboard, the humongous police station, and the Tyrell building, make it into the game. Even better, some of the Blade Runner's investigative tools, such as the ESPER image analyzer, look and even sound just like they do in the film.

Blade Runner, one of the most visually unique films of the past 20 years, looks to have found an equal match in Westwood's game. We hope the final version lives up to the great promise shown in the beta. Watch for it on retailers' shelves on or around November 15.

—Jef Green
MicroProse Takes Aim
Sneak Peeks at Its Hot Games Lineup

Guardians: Agents of Justice
Starship Troopers

G

T Interactive might own MicroProse now, but the folks in Alameda and their five development studios are conducting business as usual. We recently visited the company and took a peek at its holiday and early 1998 products, many of which will recall the vibrant and sophisticated games of MicroProse’s heyday.

Leading the lineup was Ultimate Civ II, which includes the original Civ II, the first expansion pack, and the long-awaited multiplayer mode. The mere idea of playing Civ II with friends is enough to make our mouths water. Unlike CivNet, there will be no simultaneous movement, but you will be able to manage cities, chat, and trade with other players when the primary player is moving his units.

Ultimate CIV II will support up to seven players, and gamers will be able to join games dynamically by jumping into an AI civilization’s shoes. MicroProse says that Ultimate Civ II will ship sometime around March 1998.

The other Civ product on display was the scenario pack, Fantastic Worlds, which includes a graphically based scenario editor and a collection of great fantasy and sci-fi scenarios. This product, which should be on store shelves by the time you read this, offers a dinosaur scenario, a Jules Verne map, in which the key to victory is discovery and exploration; and Master of Magic and Master of Orion scenarios. The pack includes all new units, buildings, and terrain.

Probably the second most-anticipated multiplayer patch is Magic the Gathering’s Mana Link, which was also shown at MicroProse. This multiplayer mode will be available in the Duels of the Planeswalkers bundle pack, which includes...

Continued on pg 74

Short takes on games and hardware released just prior to press time.

ZORK GRAND INQUISITOR

The Zork game from Activision returns to its roots, melding the technology of a modern adventure game with the Zorkitude of the classics. Featuring an updated Zork Nexus engine, the gameplay and storyline are vintage Zork, replacing the dark and disturbing Myst-like elements of the previous game in the series. The puzzles are mostly of the old-school adventure style, such as retrieving the Coconut of Queenada, but some—your visit to Flood Control Dam #3, for example—are reminiscent of Myst. Nevertheless, this is a good step towards the revival of the adventure genre, and it’s your last chance to visit the White House before its destruction.—Thierry Nguyen

Activision, (800) 477-3650
Win 95 CD-ROM
Reader Service # 301

News Flash

Simutronics Corp. and Universal Studios Online are teaming up to develop an online multiplayer game based on the Hercules: Legendary Journeys and Xena: Warrior Princess series. The game environment will feature the creatures and locations from the TV series, marking the first time a television property has been translated into an online fantasy role-playing game. The game is set to premiere in the second quarter of 1998. For more information, check http://xena.play.net

The release date of Douglas Adams’ upcoming graphic adventure, Simon & Schuster and The Digital Village, has been postponed until early 1998. Robbie Stamp, chief executive of The Digital Village, says the delay is necessary to ensure completion of essential quality evaluation and testing procedures. In the meantime, a novelization of Simon & Schuster written by Terry Jones—Monty Python alum and friend of Douglas Adams—is scheduled for a November release.

Virgin Interactive is offering gamers music tresses, when they purchase any of the new PC CD-ROM games from Virgin and Westwood Studios, including Labyrinth, Guardians of Destiny, C&C Assault Pack, The Total Football, and Dexterity: The Smoking Mirror. With each game purchase, consumers will receive a mail-in voucher for a free music CD from EMI-Capitol. The promotion is part of EMI-Capitol Records’ 100th birthday celebration.
Rabbit Rampage

Ballistic Bunnies Invade Earth in Pulse's 3D Action-Shooter

If you've played Pulse Entertainment's Kalka-esque Bad Mojo—an eerie adventure game that has you experiencing life as a cockroach—you'll agree that it was an unusually different take on your average adventure game. It is that same originality that will help raise Pulse's latest title, Space Bunnies Must Die, above the rest of the competition as the company ventures into the overpopulated third-person 3D action/ adventure genre.

The gameplay and look of Space Bunnies may appear similar to Tomb Raider, but the atmosphere and spirit of the game is completely different. Inspired by classic '50s B-movies, the premise is ludicrously wacky. Earth has been overrun by giant rabbits from outer space who are not only capturing and enslaveing humans, but are also dissecting poor, innocent earth animals, and sewing them back together to form bizarre mutations.

You play a tough truck-stop waitress, Allison Huxter, and you're out for revenge: These malevolent bunnies have kidnapped your sister, Jocelyn, and you're ready to do whatever it takes to get her back—and if you can save the Earth in the meantime, so much the better.

Buckaroo Babe

While the game offers plenty of opportunity for the trigger-happy to relieve their tension, your quest also requires you to take note and act upon all that's going on around you. Hidden throughout the levels are navigational aids—bridges, rocks to climb, a monkey bar to cross—and transporters that require carrot power-ups to function. The mutated menagerie will also be of great use to you: As queen of the rodents, riding atop of a giant goat/rabbit hybrid poses little problem for Allison.

Meanwhile, your sister, anxiously awaiting your arrival, leaves little parcels out for you, with clues or useful gifts to help you on your journey. Sometimes, the box will contain one of several outfits, each of which provides the wearer with a different protective power. The game maintains its tongue-in-cheek humor throughout, with the help of the smart-mouthed heroine, who throws out one-liners and breaks off into hilarious song and dance routines every now and then. When Allison changes into one outfit, for instance, she suddenly starts going dancing to "These boots are made for walking."

Although Pulse insists that Space Bunnies Must Die is not technically a Tomb Raider clone—it was actually in development long before Tomb Raider hit store shelves—opponents are bound to be drawn. However, as long as Pulse continues to build on its quirky cast of characters and play up the humor and the kitsch factors without sacrificing gameplay, Space Bunnies should be a winner. —Charlotte Panther
War of the Worlds
GT Interactive Revisits the Martian Invasion

Take one of the world's best-known science-fiction classics and mold it with the current fascination for real-time strategy. That's the formula for GT Interactive's War of the Worlds, which is based on the classic novel by H. G. Wells and uses the music of Jeff Wayne's best-selling UK album of the same name. The Martians have landed in jolly old England and must be stopped before they get off the island kingdom. Although the novel was told strictly from the human perspective, the game allows players to assume the role of defense coordinator for the Human forces or offensive coordinator for the invading Martians. Fortunately, for those who want to direct the Human forces, the weapons at the disposal of the "good guys" are considerably more effective than most of those used in the novel. Play balance is more important than faithfulness to the script, and the result is a fair amount of give and take across both the strategic map of the British Isles (used for planning) and the realistic tactical maps where battles actually take place. The game is due in the summer of 1998.—Johnny Wilson

MARS ATTACKS Marry the classic H.G. Wells novel with the current real-time craze and you'll find GT's War of the Worlds.

THE LUCASARTS ARCHIVES: VOLUME III

While previous LucasArts' collections had some decent games, this one leads the pack. It includes Full Throttle, Dark Forces, and both Monkey Island games. While the collection has a couple of mediocre games (Tie Dye, Afterlife), the rest of the games are well worth the price. With the recent release of Jedi Knight, the upcoming release of The Curse of Monkey Island, and the far-off Grim Fandango, it's time to get re-acquainted with these classics.—Thierry Nguyen
LucasArts Entertainment
(800) 985 8287

PC CD-ROM
Reader Service # 302

CH GAMESTICK
Diving into the market for action game controllers, CH's Gamestick is a relatively conservative joystick built to the CH tradition. The stick has a light, precise action and is actually designed to be held in your lap. The analog throtle is on the back, and is a sideways slider—perfect for the thumb of the hand holding the base of the stick. The stick itself is symmetrical, which should suit southpaws well. There are four buttons (but no hat). About the only downside is that the Gamestick is not programmable. Oh, and that weird marketing campaign that plays up the...er...suggestive shape of the stick.—Lynd Case
CH Products, (760) 596 2516
PC Joystick
Reader Service # 303

THIS JUST IN

In related news, fans of Cavedog's real-time strategy game, Total Annihilation, will be able to play the game free over TEN by installing the TEN software included on the Total Annihilation CD-ROM. TEN accounts act in this manner, however, will only have free access to the Total Annihilation areas of TEN.

Mplayer also recently announced its continued support for online tournaments, such as Red Annihilation. Mplayer will team up with ABC Interactive for the Quest for the Best Internet Championship, an intense tournament covering ABC's football titles.

The Software Publishers Association (SPA) recently filed a lawsuit against two individuals alleging that they were using copyrighted material onto the Internet. After issuing subpoenas to two ISPs for the names of the site operators, the service providers consequently removed or blocked access to the sites, which offered bootleg serial numbers for installing pirate software. The Web site under question are www.velocity.net/~overlord and chisel.totality.net/~overlord. More information on SPA's software piracy efforts can be found at www.spa.org/piracy.

JANUARY 1998
AT TEN MILES PER HOUR EVERYTHING IS QUIET.

AT THIRTY MILES PER HOUR ALL YOU HEAR IS WIND.

AT FIFTY, IT'S YOUR SKIS CARVING ICE.

AT EIGHTY, EVERYTHING BECOMES STRANGELY SILENT AGAIN.

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Yo Ho Ho and a Bottle of Fun

Sygnosis' Shipwreckers is an arcade-style action/puzzle game that balances light-hearted, cartoon-like graphics with addictive gameplay. At the helm of a pirate ship, you must navigate through mazes of harbors, locks, and jetties. Your objective is to find ports, wreak havoc upon them, and raise the Jolly Roger—all in preparation for a showdown with the hated pirate Blowfleet.

The levels are arranged as mazes made up of geographical features and obstacles. As you maneuver your vessel, power-ups, cannon balls, lock-opening buoys, and, of course, pirate's booty, become yours for the plundering.

Sailing is not smooth, however. Hindering you from pillaging ports are many obstacles, traps, and enemies—stationary flame-throwers, giant rotating buzz-saws, mobile cannon ships, and more. Defeating them requires a combination of accurate cannon-fire, swift navigation, and ingenuity. On top of that, ship fires, as well as the occasional alien abduction, can decimate your crew of hearty swabs.

One of the most impressive aspects of Shipwreckers is that none of the gameplay elements are overwhelmed by the cute, cartoon-style graphics. Taken from a top-down perspective, the 3D graphics consist of bright colors and humorous art. The whole artistic intent, in fact, seems to encourage players to focus their attention on the fun and exciting aspects of piracy. The innovative design of Shipwreckers! (both artistically and in gameplay) should help to make the game a winner this holiday season.

—Matthew Schaefer

Galapagos: Mendel's Escape

Here we have, wrapped in a deceptively innocent little package, complete with a cuddly mascot named Mendel, one of the most insistently addicting puzzle games since Tetris. You must help Mendel, an autonomous four-legged baby war machine (don't ask) escape from his evil masters by guiding him through a series of increasingly difficult, Escher-like 3D environments. One false move and he’s dead.

The trippy, psychedelic graphics are spectacular, especially with 3D hardware acceleration, but at times they’re almost too trippy, with moving platforms, rotating rooms, and shifting patterns making maintenance of your equilibrium. Gameplay is much harder than it looks, and it’s exacerbated by a scarcity of save points—by far the game’s biggest problem—but overall this is an awesome, unique experience.—Jeff Green

Electronic Arts, (800) 245-4525
Win 95/Mac CD-ROM
Reader Service #304

Now you see him. Usually you don’t.

Alexander “Checkmate” Bishop
Specialty: Stealth

www.vigilance.com
Quake II Demo Whets Appetite

The Quake II "test" is out, and once again, id Software has delivered a rich, compelling, and immersive environment, demonstrating its commitment to artistry as well as technology. More importantly, gameplay in this public beta is a step beyond Quake.

First, enemies aren't as stupid as in Quake. During firefight, the new adversaries will sometimes retreat under cover to hide, and several times I was hosed by a sneaky cyborg in an area I thought I'd cleared out—always count bodies! Second, the monsters in Quake II are more agile. They dodge from side to side, stopping only to fire unerringly. This made them much harder to hit than in Quake, which adds realism.

Unfortunately, though, enemies didn't strafe as expected. Instead, they executed full turns and took multiple steps to the left and right, even turning around and marching away, more focused on dodging than attacking. One wonders why id (or anyone else) still can't match the uncanny AI of Steven Polge's Resurrection.

Quake II Test played acceptably on a P133 at 320x240, although I also played on a 3Dfxed P200/MMX at 640x480, which looked good. The demo definitely takes more horsepower to run than Quake, and many gamers will need to sacrifice image quality to get an acceptably frame rate. Remember, though, that this is an early beta, and speed and gameplay may still improve.

Negatives aside, the demo was over all too soon. The arsenal and abundant power-ups stack the odds in your favor, and, playing on nightmare difficulty, I completed the demo my second time through without having to restore a saved game (though it was close). Quake II Test indicates that for Quake II, id has squarely addressed the dissatisfaction gamers felt with Quake's single-player game.

You can download Quake II Test at www.gamespot.com. —Dan Fitzpatrick

GOT 3D? Even on a P200/MMX, Quake II Test didn't run smoothly at 640x480 (1). Many gamers will have to reduce resolution (2) or use a blur-inducing 3D card (3).

A SCARY SITE

We weren't able to pay homage to Steve Gibson's Web site last month in our Scan preview, but his rich fountain of Quake information definitely deserves a mention. Steve "Scary" Gibson is Ritual's Webmaster, and in addition to maintaining the official Ritual Web site, also runs his Shuga Shack, which is updated daily with all manner of 3D action news, as well as a few irreverent and funny tidbits. Not only can you find the latest updates on Scan at his site, but even the developers at rival companies, such as Ion Storm, Epic, and id, feed him information and screens about their games. If you haven't checked out Scary's site yet, head to www.ritual.com/news.shtml. —Elliott Chin

POSTAL

Tired of fraggling science fiction and fantasy-style monsters in your action games? Frustrated that society trows upon exercising the psychotic side of your personality? Postal may give you the anti-social thrill you are looking for.

Taking its name from the actions of real-life horridial letter carriers, Postal offers the visceral satisfaction of ruthlessly murdering police, vigilantes, and innocent bystanders. From an isometric perspective, you navigate your enraged character through levels based on different locales in a small town, killing all "hostiles." While not providing any real gameplay innovations, Postal's thrill comes from whom you kill, not how you kill them. —Matthew Schaefer Ripcord Games, (888) 797-5967 Win 95/Mac CD-ROM
Reader Service #: 305

BLOOD PLASMA PAK

Getting a couple of pints low? Need a transfusion to tide you over? GT Interactive's expansion pack for Blood provides a whole new episode, new villains, and new weapons effects. The bad guys are more deadly, lathering plasma and wielding Tesla cannons. There are even priests who morph into gigantic werewolves. But don't start disconnecting your TV tubes yet—this one has a few antibodies missing. The new weapons effects aren't actually impressive and the new villains are just differently colored cultists with no other additions. If you love Blood, you'll get a kick out of it, but it's not exciting enough to compare to those two pints you've got drained in the fridge. —Rasheema Shamma GT Interactive (800) 469-5961 PC CD-ROM Reader Service #: 305
GunJam: bandits, 6 o'clock high!

HiTech: I'm done -- bingo ammo

GunJam: run low -- I'll cover you home

HiTech: roger that -- p51 closing fast!

GunJam: pull left! PULL LEFT!

GunJam: HiTech! ?!
Simutronics' CyberStrike 2 Shoots The Gap

When the original CyberStrike made its debut on GEnie, an online service which experimented with many early online games, it offered polygon-fill graphics and relatively nonstop action with a modicum of strategy. Its giant robots brought to bear plenty of action and mesmerized a hard-core group of adherents, but didn't set the world on fire. Unlike Multi-Player BattleTech, its closest competition, it offered no rich game universe, not group loyalties (beyond color-coded teams), and no persistent level of advancement. The graphics were crude (as were MBRT's) compared to the boxed games of the time, and no one thought it was revolutionary. It was a good game, but not a great one.

Today, CyberStrike 2 threatens to raise the bar. 3D-accelerated graphics with beautiful textures, brilliant special effects with light-sourcing, and extravagant pyrotechnics should not only compete nicely with packaged games, but draw new gamers into the competitive world of online games. Now, players can join ongoing clans and participate in full-blown campaigns, conquering the cyberlandscapes city by city. Obviously, there is a strategic side to the game—every city has an economic value and that economic value can be transformed into new weapons, cyberpods, and supporting forces.

Fans of giant robot games will love the impressive variety of weapons available in CyberStrike 2. Mortars and cluster bombs will enable you to assault cyberpods who have retreated beyond your line of sight. Deflec- tive weapons will allow you to fire at corners. Tracking missiles will enable you to create defensive perimeters. There are so many different tactical options in CyberStrike 2 that I didn't even begin to experience them all—even after spending an entire afternoon playing... or... researching the game at Simutronics' St. Louis headquarters.—Johnny Wilson

In the Works

Pipelines

Aces: X-Fighters Sierra Fall 98
Addiction Pinball MicroProse Spring 93
Air Warrior III Kesmill-Magic 3/98
Airsherson's Call Turbine/Microsoft Early 98
Battletech WangSpring 98
Daikatana Lion's Gate/Falcon 3/98
Deep Six: Virgin Spring 98
Duke Nukem Forever Apogee/3D Realms Fall 98
Earthrise 3 Sierra Early 98
European War MicroProse 3/98
Falcon 4.0 MicroProse 3/98
Fighter Duel 2 Ocean Spring 98
Final Fantasy VII Squaresoft 4/98
Freedom in the Galaxy Avalon Hill Fall 98
Golgotha Crack.com Early 98
Great Battles of Caesar Interactive Magic 3/98
Guardians: Agents of Justice MicroProse 3/98
HailFire Value/Sierra 3/98
Hidden Wars Ronin 2/98
IA-10 Warthog Interactive Magic Fall 98
IA-14 Interceptor Interactive Magic 3/98
Interstate '77 Activision 2/98
IPanzer 44 Interactive Magic 2/98
Jagged Alliance II Sir-Tech 2/98
Jane's F-15 E/A/Lane's Spring 98
Jenga Hasbro 4/98
King's Quest: Mask of Eternity Sierra 3/98
M-1 Tank Platoon II MicroProse Spring 98
MAX II Interplay Early 99
MechCommander MicroProse 3/98
MechWarrior III MicroProse/ASIA 6/98
Mid-Alley Empire Sum 98
Might & Magic VI New World/3DO Early 98
Panzer Commander 3DO 3/98
Populous: The Third Coming EA/Bullfrog Early 98
Prey Apogee/3D Realms Late 98
Quake II id Software Xmas 97
Quest For Glory V Sierra Early 99
Reach for the Stars II Microsoft/SSG Spring 98
Redguard Bethesda Early 99
Return to Krondor 7th Level Spring 98
Revolution Dennis Wolf/3DO Interactive Late 98
Sempter Fi Interactive Magic 2/98
Skies SimShift Mid 98
SimCity 3000 Maxis Spring 98
Sin AdVision 3/98
Soldiers at War SSI 3/98
Squad Leader Big Time/Avalon Hill Late 98
Stratego Hasbro Fall 98
Su-27 Flanker 2.0 SSI 9/98
TFX 3 DID 1/98
Trespasser: Jurassic Park DreamWorks Early 93
Utih Cryo 2/98
Ultimate Race Pro MicroProse 2/98
Uprising Cyclone Studions Late 97
WarBreedz Broderbund 2/98
WarCraft Adventures Blizzard 4/98
Warhammer 40K Chaos Marines SSI 3/98
Warhammer: Dark Omen EA 3/98
Wizardry VIII Sir-Tech Mid 98
Xlino Sir-Tech 2/98

CH Racing Wheel System

The CH Racing System combines the CH Racing Wheel with a set of smallish foot pedals. The wheel/pedal combo is built to CH's sturdy standards.

The real problem, though, is that the feel is much the same as the company's joysticks—light and quick. Therein lies the rub, because I want a steering wheel that requires some force. Also, the CH Wheel auto-centers; it has a very weak spring, so you can't just let go of the wheel and expect it to spin to center instantaneously. The foot pedals also have a light, almost insubstantial feel. The low cost and reliability will appeal to many gamers, but if you're looking for a more realistic driving experience, look to other products.—Lloyd Case

CH Products, (760) 598.2518
PC Racing Wheel and Foot Pedals
Reader Service No. 307

This Just In

CGW January 1998
Miller----Did you hear that?

ORTEGA----Yeah...
there's something back there...

Miller----Ortega...

ORTEGA!
Forget the box.
Forget limits.
Forget small.

Brace yourself for the future of games.

Populated by thousands.
Real people. Real battles. Real adventures.

This is the great unknown.
This is GameStorm.

Everything else is just practice.

$9.95 a month—all games unlimited play
first month free
www.gamestorm.com

CIRCLE READER SERVICE #244
Morgana: Listen! the dragon is close

Sir. Trent: What spells do you have left?

Morgana: NONE -- I used my last on the stairs

Sir. Trent: Then all we have is a sword . . .

I'll go alone

Morgana: No! Sir. Trent!!
Murphy’s Law?

World-weary Tex Goes From CD to DVD to the Big Screen

Access Software’s latest Tex Murphy adventure game is about to hit store shelves, and as gamers leap forward to the middle of next century to help Tex with another investigation, Access, too, is embracing the 21st century—at least as far as technology goes.

Gamers who purchase Tex Murphy: Overseer will find that they can choose to play the game using either four CD-ROMs or one DVD. Access is excited about the leap to DVD, believing it to be the best possible medium for their graphically heavy adventure games. Right now, though, they are anxious to accommodate all users, until the full conversion to DVD occurs.

Chris Jones, Executive VP and CFO of Access (who also plays Tex Murphy in the game) says that the move to DVD was a natural one for Access. First, the company has always been on the cutting edge of technology and wants to stay that way, and second, Access believes that the path that DVD technology is taking mirrors exactly what the company is striving to create in its games—a combination of “technology with artistry.” Jones believes that the new medium will allow Access to involve the audience at a level they’ve never been able to achieve before.

Jones works closely with screenwriter Aaron Conners, who joined the Tex Murphy development team for Under a Killing Moon, and later wrote the novel that became the Pandora Directive. The two of them wanted to include elements of film noir, along with gritty, compelling characters, in the game. Both are quick to agree, though, that, first and foremost, Overseer is a game, not a movie. Nonetheless, Access has managed to snag a Hollywood-caliber cast for Overseer, with Michael York (fresh from his Austin Power success) heading up the list, as a wheelchair-bound, billionaire recluse.

The first of these new Tex Murphy adventures, Overseer takes place directly after the Pandora Directive, but the storyline—a recounting of the events leading up to Tex’s first great case—is told in flashbacks by Tex to his “long-standing almost-girlfriend,” Chelsea. The story relates how Tex is hired by the beautiful Sylvia Linsky, his first client—later to become his wife—to investigate the apparent suicide of her father.

Access has also revealed that a feature film of the Pandora Directive is in the works. Tentatively titled A Black Sun Ascending, the movie, adapted from Conners’ novel, will cross three genres, incorporating elements of science fiction, PI movies, and Indiana Jones-type adventures. Adrian Carr, who directed the last two Tex Murphy games, will also be directing the movie, so Access can rest assured that the character of Tex and the general atmosphere of the games will remain intact. Carr promises that the movie will focus upon elements that were overlooked in the book and that it will have a different ending.

Look out for updates on the movie and on the next two Tex Murphy games over the next few months. —Charlotte Panther

RED ALERT: THE AFTERMATH

If you’ve played Red Alert all the way through 100 times, Westwood comes to your aid once again with yet another mission pack for their megahit real-time title. Titled, appropriately enough, The Aftermath, this expansion disk not only adds another nine missions for both sides of the conflict, but also gives players seven new units with which to experiment in both single- and multiplayer battles. The new missions are well done, but perhaps not enough to justify the cost for solitary gamers, although this package is almost a must for Net gamers, given the new units and a cornucopia of new battlefields, including 25 giant size maps.

—Martin E. Chun
Westwood Studios,
(800) 874-4807
PC CD-ROM
Reader Service #: 308

THE X-FOOLS

Is it a government cover-up? An alien invasion? An insatiable need to cash in on The X-Files? When you’re talking about Parrotty Interactive’s new spook, The X-Fools, I’m afraid it’s the latter. You play an agent trained working with two ex-agents, Muffy and Souldor, to uncover an alien plot that uses the X-Files show to control the world. The dialogue is usually funny (Souldor’s voice sounds a lot like Scully’s) and some of the interactive bits are laughable (albeit groaners), but the game doesn’t spoof the actual show enough, and focuses too much on generic conspiracy lore. It could have been better. Only for hardcore X-Files—Joe Vallina
Parrotty Interactive, (609) 910-2636
Win/Mac CD-ROM
Reader Service #: 309

News Flash

Empire Interactive recently announced that it has teamed up with master golfer Gary Player for its latest golf game—aptly titled The Golf Pro. Gamers can choose to play as Gary Player, or against him, and can receive golfing tips from the man himself. The Golf Pro will also feature an innovative mouse control, Mousestrike, which Empire claims will feel remarkably close to that of a real golf swing.

Mousestrike allows players to make the widest range of shots with just a flick of the wrist, instead of using the traditional three-click method of swing control. The Golf Pro will offer three major game-play types—stroke play, match play, and Stableford—all of which can be played multiplayer (up to 32 players) via network, modem, and Internet. Look out for a full sneak preview of Golf Pro in next month’s CCW.

Disney Interactive recently made a decision to drop its OT Sports division, developers of the Monster Night Football and Heroes of the Gneethin titles. Although two thirds of the OT Sports staff were laid off, General Manager Deborah Walter confirmed that a skeleton crew has been retained to finish in-game graphics, which will be released in time for the holiday season, and to provide support for MNF and Gneethin. According to Walter, this move follows a decision by Disney to concentrate on its core market of children’s and entertainment software. Check out Dennis McCouy’s sports column in next month’s CCW for the full story.
Men in Black Hits the Small Screen

It was inevitable: a summer sci-fi blockbuster starring Will Smith, and a game license was bound to follow. Last year, it was Fox's Independence Day. This year it's Men in Black: The Game, developed by Gigawatt Studios (formerly Chronic Entertainment) and brought to us by SouthPeak Interactive.

At least this game isn't just another piece of FMV/filler—there's actually a game intersect with comic-book style montage scenes that tell the story. Gameplay is similar to the classic Alone in the Dark or the recent Resident Evil, in that you control a character in the third-person perspective as you solve puzzles and engage in combat with a variety of enemies. In the first part of the game, you play Edwards (Will Smith's character). You move about in the game world, gradually learning about the MiB and about a global conspiracy that serves as the game's main plot. As the game progresses, you can choose to continue as Smith's character or become one of the other main players—Tommy Lee Jones' Agent K or Linda Fiorentino's character, the first "Woman in Black."

All in all, while the comic-book style montage is a bit strange, the gameplay is better than other movie-licensed games. Whether or not the final game will be more memorable than staring into the red light remains to be seen.—Theirry Nguyen

BYZANTINE: THE BETRAYAL

The road to gaming wisdom is paved with good intentions, and man alive, is Byzantine: The Betrayal full of great intentions. A Discovery Channel release, Byzantine aims to educate as well as entertain, brushing its lessons in geography, history and more in a traditional adventure game focusing on a mystery-filled hunt for an ancient diadem in Istanbul. While extensive full-motion video is good at capturing street life and landmarks, it feels as if the game is constantly interrupted by an average TV documentary. Lifeless acting, a limp plot, and an awkward and sluggish game engine further belaughter this well-intentioned, but forgettable, effort.—Robert Coffey

Discovery Channel Multimedia, (800) 760-6044
PC CD-ROM
Reader Service # 310

MAGESLAYER

What can you say about Mageslayer except, "Hrm, I wonder what's on TV.?" Raven has basically given its Take No Prizes a sloppy facelift by slapped on some half-baked fantasy elements. But with only one melee attack, half a pocketful of spells, and a tiny menagerie of monsters, Mageslayer's limited gameplay quickly deteriorates into a dreary, repetitive exercise in carnage, despite the frequently hectic action. Traps and puzzles are similarly lacking originality, coughing up the same old crazed walls and moving platforms games have been dealing with for years. Even four character types and three multiplayer games can't keep this game from being a ho-hum affair.—Robert Coffey

6T Interactive, (800) 469-9561
Win 95 CD-ROM
Reader Service # 311

PLAYING LATELY

CGW Survey

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<th>Game</th>
<th>Last Month</th>
<th>Months on Chart</th>
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<tr>
<td>1. Diablo (Blizzard/CUC)</td>
<td>1</td>
<td>9</td>
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<tr>
<td>2. Quake (id Software)</td>
<td>3</td>
<td>13</td>
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<tr>
<td>3. Civilization II (MicroProse)</td>
<td>2</td>
<td>20</td>
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<tr>
<td>4. Dungeon Keeper (GullFrog/EA)</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>5. Red Alert (Westwood/Virgin)</td>
<td>5</td>
<td>10</td>
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<tr>
<td>6. X-COM: Apocalypse (MicroProse)</td>
<td>6</td>
<td>2</td>
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<td>7. Duke Nukem 3D</td>
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<td>8. Daggerfall (Bethesda)</td>
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<td>10</td>
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<td>9. Heroes II: POL (New World Computing)</td>
<td>7</td>
<td>4</td>
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<tr>
<td>10. Heroes II (new World Computing)</td>
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* Check your mailbox: We mail a survey to 1,500 randomly chosen subscribers each month. The results of Playing Lately indicate which games readers are playing the most time on, as opposed to the reader's overall "quality ranking" in the Top 100.

PC Data Best-Sellers

<table>
<thead>
<tr>
<th>Game</th>
<th>Last Month</th>
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<tbody>
<tr>
<td>1. Microsoft Flight Simulator 98 (Microsoft)</td>
<td>4</td>
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<td>2. Myst (Brderbund)</td>
<td>3</td>
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<tr>
<td>3. Star Trek: Starfleet Academy (Interplay)</td>
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<tr>
<td>4. Dark Reign (Actvision)</td>
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<tr>
<td>5. Diablo (Blizzard/CUC)</td>
<td>2</td>
</tr>
<tr>
<td>6. NASCAR II (Papyrus/CUC)</td>
<td>3</td>
</tr>
<tr>
<td>7. Red Alert (Westwood/Virgin)</td>
<td>3</td>
</tr>
<tr>
<td>8. Hexen II (Actvision)</td>
<td>5</td>
</tr>
<tr>
<td>9. Monopoly Multimedia (Hasbro Interactive)</td>
<td>9</td>
</tr>
<tr>
<td>10. Links LS 1998 (Access)</td>
<td>9</td>
</tr>
</tbody>
</table>

** This list indicates what the top-selling PC games were, as calculated by PC Data, during September, 1997.
In the year 2144, we will have eliminated discrimination based on the color of our neighbors' skin.
DARKENS:
- Savage aliens
- Slow & stocky
- Overly armored
- Pack lots of firepower

SCORPS:
- Predatory aliens
- Operate scorpion-like vehicles
- Known for attacking in swarms
MERCs:
- half human, half alien
- 100% ruthless
- take no prisoners
- play by their own rules

Instead, we'll base our hatred on the number of ocular cavities, method of locomotion, and whether or not they have an external or internal breathing apparatus.

**Humans:**
- die-hard galactic soldiers
- highly adaptable
- weakness: they bleed easily

**DOMINION**
Storm Over Gifts
Real-Time Strategy

A TODD PORTER GAME
RULES MUST BE BROKEN. CATEGORIES MUST BE ERASED. EMPERORS MUST BE OVERTHROWN. THE STATUS QUO MUST BE SPANKED. AND CONTENTMENT MUST BE ROUTINELY TAKEN OUTSIDE AND SMACKED UPSIDE THE HEAD. IT'S A DIRTY JOB, BUT SOMEBODY HAS TO DO IT, AND WE'RE ALL READY TO APPLY FOR THE POSITION.

WE'RE ION STORM, A BUNCH OF MISFIT, ZEALOT FREAKS WHO TRIED TO REST ON OUR PAST SUCCESSES BUT JUST DIDN'T FIND IT COMFORTABLE. THERE WAS A GAP OUT THERE. A BIG FAT VOID, AND WE WERE HELL-BENT ON FILLING IT. WE HAD ALL LIVED ON THE EDGE, BUT WE WERE READY TO JUMP OFF. SO HERE WE ARE. NEW NAME. NEW IDENTITY. NEW GAMES RATTLING THEIR CAGES, WAITING TO BE LET OUT.

JOHN ROMERO: LONG-HAIRED SMART-ASS KNOWN FOR HIS FAST FERRARI AND HIS UNCANNY ABILITY TO SING THE THEME SONG TO THE SPIDERMAN CARTOON REALLY, REALLY WELL. OH YEAH, THERE WAS ALSO THAT DOOM AND QUAKE THING.

TOM HALL: A FUNNY GUY WHO WANTS TO GET ALL TOUCHY-FEELY WITH HIS GAMES. HAS SOME SILLY IDEA THAT COMPUTER GAMES HAVE TO BE STUFFED FULL OF PERSONALITY, INTERESTING CHARACTERS AND INTERACTIVITY. IN A PAST LIFE, HE CO-CREATED WOLFENSTEIN 3D, DOOM AND RISE OF THE TRIAD, AND WAS ONE OF THE ORIGINAL FOUNDERS OF SOME SMALL COMPANY CALLED ID.

JERRY O'FLAHERTY: HIGHLY TALENTED PAINT MONKEY WHO GETS INTO ANIMATION. EVERYTHING: ART, FILMMAKING, 3-D MODELING, AND CHARGE OF ALL ART. SO IF ANY OF YOU OUT THERE ARE DOING ANYTHING EVEN SLIGHTLY ARTISTIC, IT NOW NEEDS TO BE SUBMITTED TO JERRY FOR HIS APPROVAL.

IONSTORM

DAIKATANA WILL BREAK YOUR ASS DOWN.

NOT TO MENTION A BUNCH OF STUFF HE KEEPS UNDER HIS BED AND WON'T SHOW ANYBODY. HIS job DESCRIPTION NOW SAYS HE'S IN DOMINION, DOPPELGANGER, DAMN

EIDOS INTERACTIVE
THE EYE OF THE STORM

BOB "POPULAR" WRIGHT: A TOKEN GRAY-HAIR GIVEN THE TITLE CHIEF OPERATING OFFICER TO MAKE HIM FEEL IMPORTANT. KNOWN AROUND THE OFFICE AS "THE FINISHER" AND AS "THE GUY WHO GETS THINGS DONE." BIG IN THE MARKET. HUGE IN EUROPE.

ION STORM

IN THE FUTURE, ALL GAMES WILL BE ARACHRONOLOGY.

"WHO WANTS TO REVOLUTIONIZE THE GAMING INDUSTRY IF NOBODY'S WATCHING?!"

CAT DADDY/LIZARD KING, CEO MIKE WILSON: MANIACAL BASTARD WHO MADE IT POSSIBLE FOR ALL AMERICANS TO BUY QUAKE AND A SLURPEE IN THE SAME PLACE. RUMORED TO BE A PRESIDENTIAL CANDIDATE FOR THE YEAR 2000 BUT NOT LIKELY TO LIVE MORE THAN ANOTHER YEAR; HE BELIEVES THAT ALL THE BEST PEOPLE DIE WHEN THEY'RE 27.

TODD PORTER: A MANDOLIN-PLAYING, NATTY, GO TYPE WHO THINKS GAMES SHOULD BE AS STYLISH AS HE IS. GOES AROUND SAYING THINGS LIKE "IN THE GAMING INDUSTRY, THERE IS NO TOMORROW." THEN TURNS AROUND AND DESIGNS THAT WAY, DANGEROUS WITH A HAMMERED DULCIMER WHEN HE'S BEEN OUT DRINKING.

DESIGN LAW
4 A.M., TALLAHASSEE, FL—

TWO DRUNKS BATTLE IT OUT DOWN THE HALL. THE 38 EXPRESS SQUEALS TO A HALT EVERY HALF HOUR ON THE STREET BELOW. SLEEP DOESN'T COME EASY IN ROOM 23. BUT FOR 19 YEAR-OLD RAY COOPER, IT HAS NOTHING TO DO WITH THE NOISE. AS HE SAYS, "IT'S BECAUSE EVERY TIME I CLOSE MY EYES, ALL I SEE IS LARA CROFT."

Top: The Second Coming, slated for this fall. Bottom: Preparing for her return.
UNCOMMON
UNEXPECTED
UNRIVALED
UNPARALLELED
Flight Unlimited II is so real...it’s unreal.

- Man the cockpit of the legendary DeHavilland Beaver Seaplane and experience something you can’t with any other flight sim—land on water.
- Battle torrential rains and heavy crosswinds. Fly through the most hazardous, realistic weather conditions.
- Test your skills attempting to evade a pair of F-16s that are trying to blast your butt out of restricted airspace.
- Take off and land from any one of 48 different Bay Area airports.

Flight Unlimited II immerses you in the sheer thrill of flying like nothing you’ve ever experienced. Pull mind-bending G’s in your quicksilver P51-D Mustang. Play chicken with F-16s. Get on the horn with Air Traffic Control as you pick your way through skies filled with aircraft. Hurtle under the Golden Gate Bridge and around the TransAmerica tower. With Flight Unlimited II, you’re not just flying, you’re really flying.

EIDOS
www.eidosinteractive.com
CIRCLE READER SERVICE #089
Ultima Online Unleashed

Despite Its Many Problems, Lord British Says All Is Well In His Online Kingdom

After years of anticipation and hype, Ultima Online, Origin's long-awaited Internet-only RPG, was officially released to the gaming community on September 24. And, as anticipated, it has caused quite a stir—though not a uniformly positive one.

After forking over their $60, plus $9.95 a month to connect, early adventurers in the Ultima Online world have bombarded the Internet newsgroups complaining of a host of frustrating problems (experienced by CGW staffers, as well), including server crashes, slow log-times, overcrowded environments, lack of direction or objectives, poor NPC interaction, lack of a decent printed manual, and more—leading to cries that the game was released before it was ready.

Ultima über-lord Richard Garriott (Lord British) remains mostly unrepentant about the game's release, and displays great optimism about its continued future and viability.

"We're confident that we released it at the right time," says Garriott. "We thought about it very hard on a weekly basis, with much debate, and it was unanimous across the team that now was the time."

Garriott says that though they were well aware of problems when they chose to shrink-wrap the game, the public beta tests were simply not helping the team achieve any kind of real-play-balance.

"We felt that we were in a holding pattern, and that the only way to really balance the game was to let people in and play it," he adds. According to Garriott, the game's biggest problem is that there has been far greater demand for it than anyone anticipated, which is overwhelming the team and the servers.

Because of what was perceived as a prohibitive Internet requirement, early expectations put sales at around 25,000 copies, but by this summer, after gauging vendor interest and pre-orders, the number had swollen to over 150,000.

Says Garriott, "This had a profound impact on the development team," as it meant they had to rescale the game to meet the new expectations.

"Originally, we were going to run the world from here at Origin, with one server set and a couple T1 lines. Just a few weeks before the release, though, we realized that we needed three server sets, which proved insufficient even in the first week.

Now (as of October 27) we have seven servers, and we'll soon have 10 to 15," says Garriott.

Garriott argues that these kind of numbers actually point to the game's success. "We've had 10,000 new users a week since day one," he says. And the "average amount of play time is four to six hours every day per person. Sure there are people bitching, but there are a lot more people having a great time."

Regarding bugs, server crashes, and game balancing issues, Lord British has this to say. "People have to understand that this is a gigantic, grand experiment, with tons of new code, a new type of code, running around the world across a number of large servers. [Game balancing and bugs] will be issues forever, since we intend to add features forever. We have to educate people that it will always be this way. Our attitude is that everyone must be happy at every moment is changing. There are lots of people who get what we're doing and are having a great, great time, and that's who we're making this game for."

So, is Lord British worried about his longevity, ambitious project? "I'd be worried if there was this much complaining and the game was not selling—then I'd feel we were doing something horribly wrong. People are finding many valid things to complain about, but we're working to fix them as fast as we can. We want this to be a journey that we all take together." —Jeff Green

"We're confident that we released UOL at the right time. We thought about it very hard, and it was unanimous across the team that now was the time."

The Ultima Online Development Team

PHOTO BY ROBERT PACHA

Richard Garriott, a.k.a. Lord British

CGW JANUARY 1998
THE FUTURE NOW.

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CGW Holiday Gift Guide

Last month, in our Monster Buyer’s Guide, we gave you our top 100 picks for the games we thought would ship by Christmas. Well, for those of you still doing last minute shopping, or for those holding out to see if that long-awaited game makes it into Santa’s sack, here’s an updated checklist of the products that had shipped at press time. We’ve also included, in italics, a list of the games that had not yet shipped, but were still on schedule to hit store shelves before the big day. Lists are ranked in order of preference.

**Action**

- Jedi Knight
- Abe’s Oddysee
- Interstate ’76
- Hexen II
- Shadows of the Empire
- Quake II
- Tomb Raider II
- G Police
- Croc
- Nightmare Creatures

**Sports**

- NBA Live 98
- Baseball Mogul
- Links LS 1990 Edition
- Madden NFL 98
- ABC Sports College Football: Heroes of the Gridiron

**Adventure/RPGs**

- Fallout
- Blade Runner
- Zork Grand Inquisitor
- Curse of Monkey Island
- Tintin’s Odyssey
- The Last Express
- Dark Earth
- Hellfire (expansion for Diablo)
- Broken Sword: The Smoking Mirror

**Classic/Puzzles**

- Smart Games Challenge #2
- Lose Your Marbles
- You Don’t Know Jack 3
- You Don’t Know Jack TV
- Pictionary
- Monopoly: Star Wars Edition
- Boggle
- Microsoft Entertainment Pack: Puzzle Collection
- Chessmaster 5500
- Smart Games Word Puzzles
- Bookup

**Simulation**

- Longbow 2
- Jane’s 688(I) Hunter/Killer
- Sabre Ace: Conflict Over Korea
- Pro Pilot
- Armored Fist 2
- F/A-18: Korea
- Flight Unlimited II
- Flying Nightmares 2
- Red Baron II
- Jetfighter III: Platinum Edition

**Strategy**

- Total Annihilation
- Age of Empires
- Dungeon Keeper
- Dark Reign
- Red Alert Expansion Packs: Aftermath and Counterstrike
- Warlords III

**Wargames**

- Panzer General II
- East Front
- Achtung! Spitfire
- Sid Meier’s Gettysburg
- Close Combat II
- Alde de Camp 2.0
- Great Battles of Hannibal
- Tigers on the Prowl 2.0
- Prelude to Waterloo
- Civil War Generals

**Sports**

- NHL 98
- Microsoft CART Precision Racing
- Jack Nicklaus 4
- Rally Championship: International
- Off-Road Racing
- NBA Action 98

**Hardware**

- Diamond Viper 330
- Cambridge PC Works
- Saltek X36 125
- Microsoft SideWinder Force Feedback Pro
- Plextor 12/20PleX
- Diamond Stealth II
- 3Com Impact52 External ISDN Modem
- Canopus Pure 3D
- Hitachi Superscan Elite 751
- 19-inch Monitor
- ThrustMaster Rage 3D

**Space Sims**

- Wing Commander: Prophecy
- Heavy Gear
- Starfleet Academy
- Forced Alliance

**Pax Imperia: Eminent Domain**

- Incubation
- Netstorm
- 7th Legion
- StarCraft
- Myth

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The ground trembles... Flames erupt... Smoke and nitro fill the air...

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**Features**
- 20 unique cars on 20 unique tracks.
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- Compete in a single race, event, or endure an entire season.
- Multi-player support over modem and LAN.

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CIRCLE READER SERVICE #374
MicroProse: Back In Action

Continued from pg 41

Duel of the Planeswalkers  Civilization II: Fantastic Worlds  Worms 2  X-COM: Interceptor

Magic the Gathering, a host of new cards, and Mana Link. Mana Link will allow players to hook up over the Internet on the official Magic the Gathering site, www.gathering.net. There, they can chat and challenge players to online duels. Duel of the Planeswalkers will be available by Christmas.

Among the other games showcased by MicroProse were its Star Trek titles, which include two first-person action games using the Unreal engine—First Contact and Klingon Honor Guard—and a new turn-based strategy game, Birth of the Federation, which is like a Star Trek Master of Orion. Birth of the Federation allows you to take the reigns of five of Star Trek’s premier races—Federation, Klingon, Romulan, Foregi, and Cardassian—and take them from prepawn times to control of the galaxy. In addition to fighting and dealing with your neighbors, you’ll also have to contend with the Borg, who will appear from time to time to terrorize the inhabitants of the galaxy. First Contact is a late 1997 release, while Klingon and Federation are slated for mid-1998 releases. Look for a preview of these Star Trek games in an upcoming issue of CGW.

The other movie license MicroProse has is Starship Troopers. The game currently on display at MicroProse is reminiscent of MechWarrior 2. You run around 3D terrain in a power suit, but you’re blasting insectoid aliens instead of mechs. Starship Troopers will feature small tactical control of squad-mates, as well as a deathmatch mode for over 20 players. The game is listed as a Spring 1998 release.

Other games on show included Falcon 4.0, the revolutionary sim that is this month’s cover story; X-COM Interceptor, which is a 3D space sim that takes place in the X-COM universe prior to Apocalypse; Worms 2, a funny and irreverent game of duelling, armed worms that is a cross between Lemmings and Cannon Fodder; Agent of Justice, the X-COM-like superhero game that MicroProse says will ship by spring; and MechCommander, the real-time game based in the Battletech universe. Most of these latter titles are all slated for spring 1998, at the earliest.

So, while MicroProse has been quiet lately, the news is good for strategy and sim fans, as the company is hard at work on bringing back big names, such as Civ, Falcon, Magic, and Star Trek to the gaming community. —Elliott Chin

www.minegames.com

go deep

Klingon: Honor Guard

You’ll no longer find 3D Iron Works in READ.ME, but if you turn to page 194, you’ll find it in its new home at the beginning of the hardware section.
A STROKE OF GENIUS

"The Golf Pro is the first sim to truly challenge the current thinking in this genre – and it has the potential to make a real impact." PC GAMES

A long drive into the wind. A fade with a six-iron round a tree. An explosion shot from a deep pot bunker? You have the technology.

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"The Golf Pro could genuinely revolutionize the way you look at all those three-click games." PC GAMES

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PC Gamer Online
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Uncover the Shocking Secrets Behind The Original Vulcan/Romulan Conflict.

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- Adrenaline Vault

"Interplay's attention to graphic detail has resulted in a stunningly lifelike synthetic revival of the classic Star Trek players."
- PC Gamer

"A "One-Click" Interface Offers Immersive, Fast-Paced Action."
Highlight of the Gods

POPULOUS: THE THIRD COMING Has What It Takes to Be a Religious Experience

by Scott A. May

Time sure does fly when you're busy ruling the universe.

POPULOUS: The Third Coming, the long-awaited, third installment in Bullfrog's breakthrough franchise, is finally nearing completion. And not a moment too soon. While veteran gamers grow misty-eyed just thinking about the beloved original, a new generation of players is clueless to the whole phenomenon. For those unfortunate souls, here's a brief history lesson.

POPULOUS 101

Originally released in 1989 and since ported to 20 different formats, POPULOUS sold more than three million copies worldwide and launched the career of then-fledgling British developer Bullfrog. The title also introduced a brand-new gaming genre: the god-sim. Its premise, both simple and ingeniously clever, cast players in the role of gods, nurturing a primitive race of mere mortals. As gods, gamers could raise or lower land, and trigger earthquakes, floods, and volcanoes, all with a single click of their mighty mouse.

Lead by programming virtuoso Peter Molyneux, Bullfrog followed the success of POPULOUS with POWERMONGER, arguably the forerunner of today's real-time multiplayer strategy games. A year later, POPULOUS II: TRIALS OF THE OLYMPIAN GODS appeared. It attempted to merge the best elements of the two previous titles. Despite strong sales, neither game captured the imaginative qualities of the original POPULOUS.

In recent years, Bullfrog has emerged as one of the leaders in cutting-edge game design, with titles such as SYNDICATE, MAGIC CARPET, and DUNGEON KEEPER. Molyneux recently split with the company to form LionHead with Steve Jackson. Does this mean an end to the Bullfrog we know and love? Not hardly.

POPULOUS: THE THIRD COMING, the first Bullfrog game since Molyneux's departure, promises to recapture the flavor and simple purity that made the original such a ground-breaking hit.

THEOLOGICALLY SPEAKING

In THE THIRD COMING, gamers are cast in the role of gods, each competing for control of a plan. Your alter ego on this mortal coil is the Shaman, a spiritual leader through whom you cast all spells. Upon entering the world, the Shaman creates a Reincarnation Site. This stone circle provides magical powers and cannot be destroyed. Elsewhere, a rival god's Shaman has created a similar structure. The race for world conquest has begun.
Wildmen also populate this world. In their primitive state, they are simple pagans found roaming about the landscape, drinking from streams and eating fruit from trees. Your first task is to send the Shaman into a trance. While in this state, she converts Wildmen into Braves—devoted followers of your cause. You can then use Braves to gather wood, construct houses, guard bases, and fight rival factions.

You can also create special training facilities to turn Braves into new characters, including Disciples and Warriors. Disciples can be sent to mingle among enemy ranks and preach to their Braves, distracting them from their work and (you hope) converting them to your cause. Warriors behave like Braves, but are much stronger in battle. Until weapons technology evolves, all battles are fought hand-to-hand.

Another vital character class is the Super Warrior, who has the ability to hurl magical fireballs at the enemy. The most intriguing character, however, is the Infiltrator. Trained in the art of subversion, he can disguise himself as a native of an enemy camp and spy inside the settlement. From there he can report on the enemy’s forces and building advancements. Infiltrators can also be ordered to dismantle enemy buildings and burn wood supplies.

RELIGIOUS FOUNDATION

The game features a wide variety of building types that fall into three categories: training, construction, and defense. Much of the game’s early strategy involves completing training exercises while avoiding attacks from rival tribes. If you are interrupted (to defend your homestead, for example), you must start training again from scratch. To minimize enemy intrusion, construct your buildings near impassable terrain (water, steep cliffs) or behind man-made walls.

Much of the land separating your tribe from others (both enemy and uncommitted Wildmen) is impassable. To expand beyond your borders and convert new tribes of Wildmen, you need to cross the mountains, oceans, and rivers blocking you from the rest of the world. Braves can help in that respect by building boats for navigating bodies of water and balloons for crossing the mountain ranges. Once these vehicles are at your disposal, you will delight in discovering the size and scope of the Porous game world.

GOD-GIVEN POWERS

Sounds good? We haven’t even explored the realm of spell-casting yet. Unlike those in the original game, gods here can’t simply cast spells on a whim. Instead, you must channel spells through the Shaman, so she needs to be carefully maneuvered to within spell range and then guarded well. Besides incantations to raise or lower land masses, her spell repertoire includes Burn (for destroying your enemy’s wood resources), Blast (for nuking all enemies within a certain radius), Lightning Bolt, Volcano, Earthquake, Whirlwind, Erosion, Plague, Firestorm, Invisibility, Hypnosis, Ghost Army, and Angel of Death.

Spells don’t come cheap, however. Each spell costs a specific amount of Mana, the game’s spiritual currency, and you obtain Mana only by converting Wildmen and keeping your people busy and happy. Should your Shaman die, she can be reborn.

1. BEACHFRONT PROPERTY This section of coast was originally a rocky cliff, but it was leveled by the Shaman to create a strategic port of call.

2. JOIN OR DIE You’ll convert tribes of Wildmen to your cause, but beware enemy troops ready to die to prevent the diluting of their faith.

3. TOOTH AND CLAW Combat is a given when you’re battling for religious supremacy, but early battles will be hand-to-hand until magic and training improve.

4. BOAT PEOPLE You’ll appreciate just how faithfully Bullfrog reproduces the feeling of our own planet’s vastness when you travel around in the boats or balloons.

GREAT BALLS OF FIRE Magic becomes a big part of Pop 3, as the Shaman can wreak havoc with some destructive spells, such as this Fireball.
Not just Gettysburg. Not just Shiloh. The Whole Civil War.

Grant - Lee - Sherman

Civil War Generals 2

Sequel to the best selling Civil War game of 1996
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• Even more artwork from Mort Kunstler.
• New unit types include siege mortars, horse artillery, frigates and gunboats.
• New terrain includes forts, walls, swamps, water, major roads and coastline.
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Impressions

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at the Reincarnation Site, though at a high cost to Mana. If no followers exist at the time of her death, the game is over. When the enemy is completely wiped or converted to your side, the Shaman enters a special portal, which transports her to another world to conquer.

**WHAT RENDERS A WORLD?**

Graphically, the game is spectacular, playable in 10 different resolutions, from 320x200 to 1280x1024, although you'll need an oversized monitor and a surgeon's eyesight to appreciate the latter. Whereas the first two games in the series featured a three-quarter isometric view of flat terrain maps, Pop 3 offers full, spherical rotation of its 3D game world, spun along multiple axes. As players shift locations on the globe, mountains, valleys, oceans, and inlets untold in 3D topographic glory, along a curved horizon line, Bullfrog used this same technique in Magic Carpet, but here the textures and colors are much more vibrant and—nearly—photorealistic.

Pop 3 features a series of icon bars on the left and bottom of the screen with which you cast spells, issue commands, construct buildings, and track your characters' activities. A scanner in the bottom-left corner provides a quick overview of the planet. Although most of the game is played from slightly above ground level, you can also switch to god-view, which provides a fully playable global perspective. Gamers can use this view in the final version to plot long-range strategies, especially when equipped with boat or balloon travel.

As of this writing, Pop 3 doesn't support 3D accelerated video cards, although it does employ DirectX components for sound and multiplayer games. Up to four gods can duke it out using modem, LAN, or TCP/IP connections. One of the game's best features, however, is the computer intelligence model used in single-player mode. It's so good, in fact, that lead programmer Alan Wright touts Pop 3's computer AI as the project's crowning achievement. The AI was designed to incorporate the same variety of play strategies found in human multiplayer games, in order to provide the utmost challenge for solo gamers.

**The Gods Must Be Vengeful**

Blame it on centuries of human misery, but the gods that created us—or vice versa—are not a happy lot. Faced with the two-listed powers of salvation and retribution, lowly humans must either go with the flow or be drowned in a flood of vengeance. Free-will simply will not be tolerated.

**What's this? Theology in a computer game?**

Outwardly, Populous: The Third Coming skirts the issue of religion, but you can bet your pagan deity it's there, and it's not shown in the most favorable light. The game's basic premise follows the fundamental nature of the human species: Join us or die. Believe what we believe or die. Convert to our way of life or die. Not much of a choice.

Are gods, by their very nature, vengeful? Why do they create life, only to exterminate it? While it's doubtful that players of Bullfrog's latest masterpiece will find divine insight, they are unconsciously dabbling in the meaning of life: Destroy all who are not like you. It's inescapable. It's in your nature as a god. Left unattended, the lifeforms in Pop 3 might starve or freeze or become bored to death, but they won't intrinsically create weapons or lure at each other's throats. It's up to us gods to command them to act, well, more human.

Sounds outrageous, but think about it. Nearly all action-and-strategy-oriented computer games involve violence and killing. And in one case, the player is a god, because he controls the process of creation, destruction, and eventual absorption of his enemies. We justify this, of course, by labeling the other side as evil. And the only way good can defeat evil is by scratching, clawing, or blasting evil to smithereens. Pop 3 simply devolves these actions down to their most primitive level.

Would anyone buy Pop 3 if the object of the game were to foster a harmonious civilization that worships you, the god-like player? Not bloody likely. No more than they would buy a dungeon exploration game without monsters to slay, or a space game without hostile aliens. As gods, we need murder and mayhem.

The bottom line, for computer gaming gods, is that it's more fun to kill than create. It's more challenging to wipe out civilizations than to build them.

Because of this, Populous: The Third Coming might be the ultimate reflection of life, in all its primal glory. But don't feel bad—it's in our nature.

**CONGREGATION** Religion isn't all it's cracked up to be in Pop 3. Those with faith are good guys. Pagans are evil. At least that's the message here.
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-Gamespot

"...will impact the way we play games forever."
-Next Generation

Lop off heads, sever limbs and bring your enemy to his knees (literally).

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Time Travelogue

There's More Time-travel Magic in JOURNEYMAN PROJECT 3

by Terry Coleman

I have a confession to make. I didn't much like Myst— though I did grudgingly respect it as a form of art—and I like the dozens of bastard children Myst has sired even less. The original at least had a certain Twilight Zone quality to make up for its lapses in plot, its predictability, and its empty, sometimes barren, environment. Most Myst-clones lack in atmosphere (and basic coherency) almost as much as they do in characters with which you might converse.

It's only fair to point out that there are two sides to every story, even mine. You see, much as I hate to admit it, there's one Myst-alike I truly enjoyed: BURIED IN TIME, the second of the JOURNEYMAN Project series from Presto Studios. I wanted to loathe that game just as I did the first overhyped and overrated JOURNEYMAN Project, but I couldn't. It was too nicely constructed, too gorgeous, and well... it was actually fun.

Now, two years later, Presto seems ready to pull another rabbit out of its magic hat. JOURNEYMAN PROJECT 3: LEGACY OF TIME is bigger, more mysterious, and much more beautiful than any previous PC time-travel trip. And, irony of ironies, this well-traveled JOURNEYMAN will be released this time around by the publisher of Myst itself, Red Orb. I'm really worried. Could I possibly be forced to admit a fondness for two Myst clones?

TIMING IS EVERYTHING

While time travel is a sci-fi staple, its uses for both plot and characterization have varied widely over the past century. LEGACY OF TIME tries to position itself squarely between the social commentary of H.G. Wells' The Time Machine and the crowd-pleasing frivolity of Robert Zemeckis' Back to the Future. In reality, the game is closest to Paul Anderson's Time Patrol novels, which is not at all a bad thing.

As in BURIED IN TIME, here you portray Temporal Agent Gage Blackwood, whose dashing, handsome brand of heroism fails to hide his ignorance of the majority of events from the previous game. The confused Gage is hardly to blame; after completing his mission, Gage was brainwiped. This is, admittedly, a novel way to ensure that any Legacy gamer unfamiliar with BURIED IN TIME will be on an even footing with veterans of the series. Still, such treatment of heroes—especially one who overcomes being framed, then manages to preserve the proper flow of history—can hardly give you confidence in this particular sci-fi future.

If this isn't bad enough, you find that the Temporal Security Agency is being shut down while the government investigates a danger from beyond the solar system. Just when you begin to contemplate a respite from 24th-century sitcoms and processed soy/meat products, what could possibly be sighted but a temporal rift?

But what can you do? Your timesuit's power coil is under government control along with all the others! There's no time to cut through the red tape, but luckily, your head technical officer is as much a maverick as CGW's. He sneaks you into a hidden alcove, straps you into the top-secret Chameleon timesuit (while he gives you a quick tour of the interface), and tosses you into the temporal breach.

MY OWN PRIVATE EL DORADO

The source of the temporal rift is none other than your old nemesis, the beautiful and deadly Agent 3, still at large after BURIED IN TIME. She leads you on a wild chase through the past, where you see the fabled cities of Atlantis, El Dorado, and Shangri-La. The problem is, all of these mythic lands have been destroyed. And what's more, they have been left without a single survivor.
As in any good sci-fi mystery, the questions begin to pile up. What news could be so terrible that Agent 3 would turn herself in to share it? Who was that mysterious man fleeing the destruction of Atlantis? Were those truly spaceships belonging to your alien allies, the Cyrollans, that you saw firing on the temples at Shangri-La? Why, with all of this going on, is the Earth's government willing to shut down the Temporal Security Agency?

Since the beta is almost totally complete, I could give you all the answers. But that would be even more cruel than causing Atlantis to once again sink beneath the waves, because JOURNEYMAN 3 looks to be one of the true sleepers of this year. The game's new 3D engine alone is a vast improvement over that of BURIED IN TIME. While you don't get the sense of vertigo that experiences looking over a precipice in Jedi Knight, JOURNEYMAN 3 does have a sense of visual depth that is sorely lacking in most adventure games.

When you add in the well-constructed puzzles that derive from the game's plot, and the taut sci-fi/mystery storyline, this game has the potential to be not only the best Myst-alike in some time, but also one of the best adventure games of the year. If there's any justice, the game will sell well enough that a year or two from now, we'll get a fourth time-travel tale. What a true LEGACY OF TIME that would be.

Under a Blood-Red Sky

1 Your trusty Chameleon timesuit lets you store images from different time eras, so you can disguise yourself as a native. This is important, because unlike most Myst-alikes, JOURNEYMAN 3 actually has nonplayer characters.

2 Arthur returns as your Artificial Intelligence sidekick. While he is, if anything, more annoying than in BURIED IN TIME, Arthur is informative and a great source of hints. Plus, you can control the number of comments that he makes.

3 For all its visual style, JOURNEYMAN 3 still carries some traditional adventure-game baggage. At least when you bring up your inventory by clicking here, it looks as though you're accessing data from inside a timesuit.

4 The view from the inside of your timesuit is similar to viewing a movie in wide-screen, or “letterbox” format. Sure, it's a little corny, but it's a visual metaphor that we're all familiar with—and it works well here.

5 This bar, inactive now, is your interface with the timesstream. While it's really just a fancy pull-down menu, it looks neat, and it is simple to use.

6 Puzzles in JOURNEYMAN 3 are varied: Unlike those in most Myst-alikes, however, almost all of these puzzles derive from the plot. Here, you must repair the rope and get aboard the hot-air balloon above.

7 Terrain is more than just pretty pictures. Looking directly into the sun or walking through the volcano's mist will obscure your vision.

8 Your Chameleon timesuit won't shield you from some horrific sights: in this case, scattered debris that comprises the remains of the beautiful, mythical city of El Dorado.
INTRODUCING THE FIRST GAME YOU CAN PLAY WITH THIS JOYSTICK
Better grab your lightsaber. Jedi Knight™ Dark Forces® II confronts you with the joys of Jedi knighthood. Inter-galactic assassins abound on single and multi-player 3-D levels, each with the singular intent of putting your skull on a stick. And there's no joy in that.
Fifteen richly detailed island-worlds with a lush digital soundtrack.

Four distinct species with unique appearances, skills, and tactics.

Unique blending of real-time strategy and puzzle-solving adventure.

Cooperative multiplayer system allows four players to work together to destroy a common enemy.
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Brains and Beauty

Air Warrior III Gets Intelligence and Graphics Updates

by Denny Atkin

Kesmai's Air Warrior set a number of precedents. It was the first online multiplayer flight simulation, one of the first high-resolution flight sims, and the first World War II sim to attempt realistic flight modeling. By the time Interactive Magic published Air Warrior II in 1996, however, the program had a "retro" feel, with graphics not much improved from its late 1980s incarnations. Although the program had lots going for it, many gamers wrote it off because of its outdated look.

Soon, Air Warrior will be back in both boxed and online versions with a whole new look—so good that you'll spend enough time with it to notice its interesting personality. Air Warrior III's most obvious enhancement is its support for 3D graphics cards. If your system has a Direct 3D-compatible graphics card, you'll be treated to fully textured aircraft and terrain. And between its hardware graphics acceleration and its use of fewer polygons in objects when texture maps provide additional detail, you should see a frame rate that's much improved over the earlier version's. (The original unmapped polygon graphics will still be available if you don't yet have a 3D card.)

Pilot Training

Air Warrior II had one glaring deficiency: the single-mindedness of the computer-flown aircraft. Pilots would almost always engage in turning fights—which wasn't much of a challenge when you were flying a Zero and the computer was an energy fighter such as the P-40.

In the updated version, Ace-level AI pilots who are energy fighters will examine the energy-state differential between their planes and yours. If they have the energy advantage, they'll use proper boom and zoom techniques, taking a shot and then extending their range before coming around for another pass. Turn-fighters, of course, will take advantage of their maneuverability.

In addition to the new graphics and better AI, the boxed version will feature some 150 new missions along with the 250-odd missions from the previous game. Many of the new missions will take place in the Pacific theater, an area neglected in the first release.

Campaign Promises

AirWear's online component will see big improvements as well. In the past, most Air Warrior online play involved pilots flying for three imaginary countries in a constant battle for territory. At times, historical missions would be organized, but they would take much planning and constant involvement from scenario organizers.

Now, historical play has been automated. While the free-for-all battle arenas will still be available, there will be ongoing historical campaigns as well. You'll be able to go online, view a briefing, and then join others on organized missions with concrete goals. The mission editor will support branches for outstanding victory, success, partial victory, and failure, so that a campaign can take variety of turns depending on the performance of each able. These missions will be much like those in the solo campaign, but with humans flying each plane.

The boxed version of Air Warrior III should be available in January 1998. The online only version is slated to go into beta testing in late November 1997 and should be available as a free download, with free play during the beta period, at www.bigweek.com.
Set course with Captain John Sheridan, Ambassador Delenn and the dwellers of Babylon 5 for a tour unlike any other. Created with J. Michael Straczynski and Babylonian Productions, this interactive reference guide is loaded with hundreds of photos, sound and video clips from the inner workings of the space station to the outer reaches of the galaxy. You’ll learn so much about the ships, weapons, inhabitants and history of "Babylon 5", that you’ll be ready to sign on for a tour of duty.

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“When [the team] started FALCON 3.0, this was what they wanted to do. But what could you really do on a 386? They had to say, ‘Okay, this is what we can do.’ So this is the continuation of that dream.”

—Tom Nichols, MicroProse
Falcon 4.0 Finally Flies
Test-Flying the Long-Awaited Sequel to the King of Jet Simulations

BY DENNY ATKIN
For a long time, it seemed as if Falcon 4.0 was just a concept for a future flight simulation, not a product that would actually ship. I first saw a demonstration of the program way back in the fall of 1994, when Spectrum HoloByte gave everyone a "sneak peek" at a party the company held to unveil Top Gun. A lot has happened since that time. Spectrum HoloByte became MicroProse, which then became a division of GT Interactive. Numerous members of that original Falcon 4.0 development team have moved on to other places ("worked on Falcon 4.0" is a common entry on résumés throughout the simulation industry), and the design, which originally featured a trendy (at the time) full-motion-video interactive airbase, has seen a number of revisions and at least one "ground-up" code rewrite. With all that under the bridge, many gamers became concerned that Falcon 4.0 would never make it to market. And even if it did, they feared that it might either be outdated or just a mess. After spending some quality time with a late development version of the game, I'm happy to say that neither of those is the case. In fact, despite the sim's troubled gestation, the version I've been flying gives every indication that Falcon 4.0 will advance the flight simulation genre at least as much as Falcon 3.0 did.

Gestation

The development team's goal with Falcon 4.0 was a simple one: Build the greatest air-combat sim, "just like Falcon 3.0," says MicroProse's Tom Nichols. Of course, part of accomplishing that was to upgrade the graphics, sound, and flight models to—and past—the current state-of-the-art. In addition, the sim now focuses on the latest-technology Falcon, the F-16C Block 50/52, including its new engine and avionics.

Leon Rosenshein, who developed F-16 simulation technology for the U.S. Air Force before joining MicroProse three years ago as the technology lead on Falcon 4.0, said another initial goal was finally to bring the "electronic battlefield" concept—in which different simulations can hook up and battle over the same terrain—to life. The beginnings were there in Falcon 3.0, which could share a networked battlefield with the Hornet and MiG-29 add-ons. But that integration was via add-ons; this time the team wanted ed to design the sim from the ground up to fully realize the electronic battlefield.

"Looking back at Falcon 3.0," says Nichols, "one of the things that kept it on the shelves and selling was the campaign. It wasn't the same 30 missions over and over again. The dynamics of the campaign kept changing. We knew we had to do that again, and we had to do it better. We started with the assumption that there will be a real war in the background—full-blown strategy covering the whole theater, and you're a part of that. Not branching trees or prescribed decisions—it's all dynamic. At any given point the tanks could be anywhere, and your mission could change in the middle."

Not that any of these ideas are really new to the creators of the Falcon series. "When they started Falcon 3.0," Nichols says, "this was what they wanted to do. But what could you really do on a 386? They had to say, 'Okay, this is what we can do.' So this is the continuation of that dream."

The Plane

Falcon 3.0 was the first simulation to make a serious attempt to accurately model a real jet fighter's systems and flight characteristics. And although the F-16A portrayed in that sim flew more like an F-15, its modeling set new standards. But the competition in those days would be considered arcade today. This
Falcon team has to stand up to much more serious challengers.

In fact, there's already been a sim that did a very good job of modeling the F-16C Block 50's systems and performance: MSI's Back to Baghdad. But while that sim did a great job modeling the plane, its canned "you against the world" mission structure didn't capture the environment of an F-16 pilot.

Although Falcon 4.0's F-16 still had some incomplete cockpit systems in the version I took home from MicroProse, it was evident, even at that late-alpha stage, that it would match or better the systems modeling in Back to Baghdad.

The team is very concerned with making the cockpit experience as accurate as possible. In addition to Rosenstein's defense simulation experience, MicroProse has enlisted the help of F-16 pilot Pete Bonanni (see the sidebar "Expert Advice"). Even Gilman Louie, who founded the company when it was known as Spectrum Holobyte, can provide some expert input, since Bonanni took him for a ride in the back seat of an F-16D.

The detail and push for authenticity in the Falcon 4.0 cockpit is evidenced nowhere better than in the radar system. Bonanni explains: "The way modern radars work, a pulse goes out, but another pulse goes out before that pulse will return from a target that's beyond seven miles (that seven miles is called "the ambiguous range"; this is true of F-18s, F-15s, and F-16s). The way Leon has it, if he detects a target, he puts it in a slot. The beam has to hit a target a certain amount of times before it will actually display the target, just like in the airplane. If it doesn't get the target a few times, it'll say, "That's not a target, that's a false target." He's got it modeled just like the airplane does it, as far as how the airplane sweeps. What it gives you is a really good, accurate radar."

All of the useful modes of the real F-16C's radar will be modeled; only a few esoteric modes such as the rarely used ground-mapping mode are omitted. If you don't have an interest in learning about radar azimuth, ambiguous ranges, and other aspects of realistic radar, fear not. In addition to realistic radar, a "God's eye" radar and a simplified U.S. Navy Fighters-style display will also be available.

The original attempt at a simplified radar didn't go over too well with the less hard-core team members. "They told Pete and I that we weren't allowed to do a simple radar," Rosenstein says.

"We did a simple radar," Bonanni adds, "but nobody thought it was simple. So somebody else is doing it."

One aspect of the Falcon 4.0 that will sport unprecedented detail is the radar warning receiver (RWR). Real-life RWRs don't just display a contact, they emit a tone based on the frequency of that radar's emissions. Although real-life F-16s don't automatically identify what's tracking you—they simply show a symbol—pilots can often determine what has them locked up by the tone of the RWR.

Riding the Maverick: Both IR and TV Maverick missiles are modeled in Falcon 4.0.

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The sim's Tactical Reference module—the section that allows you to examine aircraft, ships, tanks, and so on and read about their real-life capabilities—also allows you to listen to the RWR frequencies given off by those craft. Each sound is unique, so with some study time you should be able to get pretty good at identifying the sources. (Again, for more casual gamers, you can have plane types pop up right on the HUD.)

"The sounds are based on real data," says Rosenschein, "but nothing illegal! There are no waveforms from 'undisclosed sources.' Knowing the energy, the frequency, and the power, you can take a good guess."

In fact, RWRs aren't very complicated devices. "All it does is shift the (radar) frequency into the audible range. It doesn't really do any thinking," Rosenschein adds.

**Rabid Dogs**

You'll also see a boost in realism in the area of weapons delivery. Take Maverick air-to-ground missiles, for example. Both infrared and TV Mavericks are modeled, with three delivery modes: preplanned, boresight, and slave. Preplanned mode takes your Maverick and ground-stabilizes it at each steer point, as you reach the IP (initial point of attack) and make a run toward the target, the Maverick will automatically slave to that target. If you look down at the multifunction display, you should see the target and be able to quickly lock it in. Slave mode simply follows your radar lock, while boresight lets you manually target the missile.

The missile performance is realistically modeled. When Bonanni fired a Maverick—a missile that doesn't have terrain-following capabilities—it smashed into a foothill between the F-16 and the target. You should find similar realism in the performance and targeting of laser-guided bombs and HARM antiradiation missiles.

The HUD has as much detail as an unclassified simulation can. This includes the oft-ignored AMRAAM display. If you fire a missile from a far enough distance, you'll see an "A" on the HUD, with a number counting down. This reflects the time until the missile goes active. Once the missile's own radar goes active, this changes to a "T" and a number counts down the time until the missile reaches the target.

Knowing when the missile is going to go active lets you know when it's safe to break lock from the target and still have a reasonable chance of hitting the target. "With active missiles, there's an uncertainty boundary," Rosenschein says. "It's saying, 'Guide to this box in space' and it does that. If you still have the target locked, it'll keep tightening that boundary. Then the missile's own radar comes on and finds the target."

But if you've broken lock and the target has maneuvered out of that "box in space," the missile's not going to lock it. And this is a bad thing for a number of reasons.

"AMRAAM is not, even in our simulation, a good dogfight weapon," Bonanni says. "That is, unless you hit what you're shooting at, because if you don't, it will kill something. We shoot our Sidewinder and it's got a maximum life of 8-25 seconds. But the AMRAAM's going faster and farther, and it can go up to a minute and a half."

During that time, you don't want a friendly target to wander near the AMRAAM. That's the danger," Bonanni says. "You shoot that off and you don't hit something, and now you've got a rabid dog out there."

Of course, Sidewinders are realistically modeled, complete with the "angry growl" sound that
Expert Advice

While much of the game’s realism comes from the experience and research of Leon Rosenshein and his team, they also had “professional” help. F-16 pilot Pete Bonanni (whom long-time F-16 fans will remember for his Falcon AT book and the Art of the Kill strategy book and tape) has been around from the start.

“We were doing high-speed handling stuff this morning,” Bonanni says as he joins us. “And maneuvering in the vertical, watching the plane fall off.” Listening to Bonanni and Rosenshein compare notes, it’s evident that they’re concerned with all aspects of the plane’s handling, even outside the envelope where you’d normally fly in combat.

“Pete’s primary role is the sanity check,” Rosenshein says. “We do our best estimates of the way things are, and Pete checks it and says, ‘Well, mostly, but it’s really like this.’”

“Also, [Bonanni] has access to unclassified, but hard-to-find, material,” Rosenshein adds. “There’s a lot of stuff that’s open-source, but nobody will tell you where it is. He can find it easier than we can.”

Bonanni got an early taste of high speed flight as an F-16 pilot in 1981. He also has two years of F-4 Phantom experience, and what he refers to as a “five-year sentence in the A-7.” He’s flown over Bosnia and Iraq, although he missed the actual shooting. Today he flies the F-16 for the Air National Guard.

Mission Critical

So now you have this authentic model of a multimillion-dollar weapons system. What are you going to do with it?

In Instant Action mode, you start in the air and the basic goal is to blow up everything in sight. Two modes are available, Fighter Sweep and Moving Mud, and you can choose from five skill levels. You can also choose whether to have SAMs and AAA complicating things. This is your basic “two-to-five clicks and go” mode.

The Dogfight mode pits up to four groups of four fighters against each other. These can be human-piloted F-16s or computer-piloted fighters of a number of types. You can choose Furball mode, in which the pilot with the most kills wins, or Match Play. This mode is ideal for dogfight ladders, as you can play, say, the best three out of five.

Tactical Engagement is where you’ll find training missions, as well as a number of “canned” missions that can, by nature, have more plot twists than those generated by the dynamic campaign. Although a number of missions are included, this mode is likely to get the most use, as a result of its powerful mission editor, which lets gamers create their own missions by setting down ground and air targets, defenses, waypoints—you name it. These missions will also

CAPTAIN'S LOG The logbook keeps track of your accomplishments and medals, ignoring the rules of engagement and your Ace Factor will drop.

AGGRESSORS Flashy paint schemes are included for the dogfight mode so you can tell the good guys from the bad.

PETE BONANNI
The author of The Art of the Kill has provided the viewpoint of a real F-16 pilot to the Falcon team.

LEON
ROSENSHEIN
He worked with Bonanni to do a simple radar: but the rest of the team branded it "not simple."
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mission choices will vary dramatically as time passes. You can join a mission as it's coming together or hop into an F-16 that's already en route to the target. A wide variety of status screens lets you check what's going on with various strike packages, as well as survey the current air power, ground power, air defense, and naval power status on each side. If you choose a mission that hasn't yet launched, you'll be given the opportunity to change your aircraft's loadout.

Although you can go mercenary and just take out targets at will, you won't have much effect on the campaign that way. But if you take out your assigned targets, all your side's units will do well in that geographic area for that time period.

The missions are realistic, and Combat Air Patrol (CAP), Search and Destroy, Escort, and Strike missions are common. The frag orders are realistic; the one concession to gameplay is that you won't be sent on any missions in which there are no enemies present—take a CAP mission and you can count on encountering enemy planes.

Hostile Environment

While the hard-core flight-sim crowd will appreciate the systems realism and the depth of the campaign, the graphics environment should blow away gamers of all types. Falcon

The Hot Seat

As with most aspects of the sim, the cockpit is designed to please all types. A traditional full-instrument panel mode is available, or you can go to a full-screen HUD view with two pop up MFDs if you want a larger field of view. There's also a virtual cockpit mode. As is the case in many newer sims, buttons and switches in the 2D cockpit will be clickable using the mouse.

Two cockpit modes are available to track targets outside your cockpit. There's an updated version of the Falcon 3.0-style "edge" cockpit, as well as the more common virtual-cockpit cockpit. A third cockpit type, which used small boxes that floated around the window to show the direction and aspect of the target (similar to the Hawkeye view in Back to the Future), has been dropped from the sim design.
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4.0's 16-bit color graphics are dazzling with all the details cranked up. Realistically, while a P133 is recommended as the minimum system, you'll want a fast 3D card if you want to run in high detail on anything slower than a P200MMX. A P166 with a 3D card should do nicely, but without 3D support, you'll probably need a Pentium Pro or better to get a good frame rate with all the details maxed out.

All the graphics options are adjustable, however, so gamers with slower systems can turn off textures, Gouraud shading, haze, and other effects individually until they get acceptable performance. The sim can end up looking a lot like Su-27 Flanker once you turn all the details down, but it's good that MicroProse gives that flexibility to gamers for whom frame rate is more important than eye candy.

Sometimes you won't be able to see your nicely rendered targets, thanks to Falcon 4.0's weather rendering. Clouds actually move across the landscape as the campaign progresses, complicating some strike missions. The clouds look very good here, much better than those in Flight Sim 98, for example. They're not perfect, but are probably as good as they can be without running the game's frame rate.

Objects have realistic sizes, so you'll need to use external views to get close up looks at most of them. If strikes are taking place at the periphery of your vision, you may see SAM trails or smoke on the horizon. This is a good way to find a target if you want a little more action after leaving the target area.

The sim will directly support 3Dfx, Parmeda 2, 3D Sage Pro, and a few other 3D chips. Direct 3D support is also available for unsupported chipsets. Resolutions up to 1280x1024 are available; 3Dfx owners will be able to run in 800x600 mode, since Falcon 4.0 doesn't use a Z buffer. If you have a fast enough system, 3D hardware support becomes less of an issue; on a Pentium I 266, the game runs about the same speed with or without hardware 3D support. You can also get a speed boost if you're running under Windows NT—the game supports multiple processors under that OS.

The Works

There's much more to Falcon 4.0 than I've had room to cover, including the first-ever support for "flying boom" air-to-air refueling, AWACS control, a 500-page spiral-bound manual, multiple "aggressor" paint schemes for Dogfight mode, and a pilot scoreboard that is affected by how well you follow rules of engagement.

It's easy to see why Falcon 4.0 has taken so long to develop—it's no exaggeration to state that this is easily one of the most ambitious flight-sim designs ever attempted. Yet despite the "kitchen sink" approach, the team seems to have a firm handle on gameplay issues. They want to keep the Instant Action players hooked long enough to bring them into the full, realistic campaign. Unless something goes terribly wrong between the version I've been playing and the final release in February or March, they have a very good chance of accomplishing this goal.
Q: Because of the origin of the phrase “Five-O,” what would be a logical name for “Hawaii Five-O” in Alaska?

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14:42 You learn the hard way in the outer sector... Like never get into a drinking match
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swaps of shruggel. And never go to bed with a
fahual no matter how many breasts she has.

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eminent blastmasters more than ever before."
—PC Gamer

www.idsoftware.com

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<th>LINE NO.</th>
<th>EVALUATION</th>
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<td>1</td>
<td>Large, complex missions</td>
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<tr>
<td>2</td>
<td>Superior artificial intelligence</td>
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“Quake II, without a doubt, the game of E3.”
— Computer Gaming World

Coming Soon on Windows® 95/NT
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$2500 CHALLENGE

We Test 9 PCs Under $2,500 to Find the Best for Gamers

Grand Prix race cars cost upwards of several million dollars a pop. That puts them out of reach of most normal humans. On the other hand, there is a class of cars out there that folks call "pocket rockets." No, not that kind of pocket rocket. These cars are generally small, with a high power-to-weight ratio, sticky tires, and stiff suspensions. Aspiring Andretti's on a budget could buy a pocket rocket and have a car that accelerated handily, turned on a dime, and gave them the illusion that they were in a high-priced sports car.

So if the silicon Lamborghinis we wrote about last month seem too exotic (and too expensive) for your needs, here are our takes on the gaming version of the pocket rocket, all of which are available by mail order or right off the shelf of your local computer superstore.

We told the systems vendors to send us their best shot at a system for a dedicated gamer who had only $2,500 to spend. That's still a lot of moohah, but at least it's in the realm of reality for many people.

Decisions, Decisions...

To stay within our maximum $2,500 price point, the vendors actually had to make more interesting choices than they did with their high-end systems. At this price, compromises are necessary. Do you give the user a somewhat faster CPU or better game graphics? How much memory do you install? And what type? Do you ship separate speakers or "multimedia" monitors with built-in speakers? These tradeoffs and others make for an interesting set of systems.

We saw a lot more variation in both performance and "flip-and-finish." Some systems worked great, right out of the box. Others required a little tweaking (okay, in a couple of cases, a lot of tweaking) to get working. Let's take a look at their choices so we can help you make better choices. After all, it's your $2,500, not theirs.

by Loyd Case and Dave Salvator
Dell has established a reputation as the leading player in the fast-growing business of selling PCs direct. Having invented the large-scale direct sales model, Dell has refined and polished its business to a shining T.

Lately, Dell has even been outselling longtime market leader Compaq in certain market segments. On the surface, this Dimension physically resembles the Micron system we tested last month, but the component list is more like that of the Gateway G6 street racer.

It takes a two-step process to open the Dell case: Just remove two thumbscrews and then, using all three of your hands, slide open the side panel. There are four free PCI slots, but all the ISA slots are filled. Although the lack of free ISA slots is somewhat troubling (you can’t add a dedicated game card, for example), the four PCI slots just beckon to be filled. (Let’s see, 3Dfx, PCI audio, PCI Ethernet...). The graphics card, an STB Velocity 128, took up the lone AGP slot. There are three free 3.5-inch drive bays and one free 5.25-inch bay. The internal layout of the case is clean, and most components are accessible. As in several other systems, the power supply is a paltry 200 watts, so there’s a danger if you add too many power-sucking components. Saving a few bucks is one thing, but the difference in cost between a 200-watt PS and a 235- or 250-watt unit amounts to pocket change.

The XPS system proved to be a very polished performer, well-balanced in many respects. Graphics benchmarks all ranked close to the top in both the 3D and 2D arenas. The hard-drive benchmark was the fastest real metric in the roundup (you have to discount the Soft Computer benchmark due to the bus-mastering EIDE driver anomaly). The CD-ROM performance proved exceptional, especially the very low CPU utilization. The system could be configured for DOS pretty easily, except for the need to hunt up a DOS CD-ROM driver for the Toshiba 24x drive, a curious oversight, considering that the DOS setup for the mouse and sound card were present.

As we expected, game performance was very good, indeed. Scores for Terramark, Werewolf XL, and Moto Racer were particularly good. DOS numbers were also good, though not as high as in some of the other systems.

Assessing the Dell is pretty easy: It’s faster than the Falcon Northwest system, but not as polished in the gaming arena. For example, the Mach V system includes a 3Dfx board, and the Dell doesn’t. Even so, this is one speedy system for under $2,500. —LC

Dell Dimension XPS D233
Price: $2,379
(800) 999-3355
www.dell.com

PROS: It’s fast;
it’s affordable.
CONS: Lacks polish; needs better DOS support.
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"So freakin' real, your victims will actually beg for mercy and scream for their lives."

"Brutal shooter/strategy combo challenges you to keep one eye on your target and the other looking over your shoulder all times."

"Real-time 3D characters rage against beautifully hand-painted 2D killing fields."

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Micron Millennia MME

Externally, Micron's $2,500 Millennia MME resembles the Millennia XRU hot rod we reviewed last month. In this case, however, beauty is truly only skin deep. Lurking under the hood is a 233MHz Pentium MMX CPU—in itself, not too shabby, but it's hobbled by the Diamond Stealth 2000 Pro. The S3 VIRGE GX chip is, to put it mildly, not a stellar performer. Still, it does perform without any complaints, unlike some of the other systems we tested.

Micron is a direct-sales supplier of PCs, meaning that you buy from them over the phone (or, increasingly, on the Web). Most direct-sales vendors, including Micron, use a "build to order" model for manufacturing. This means you may not get exactly the same system as we reviewed, since most direct suppliers often substitute components. Also, the expertise of the sales staff tends to vary. In at least two instances, users were told that 3Dfx equipped add-on accelerator cards would not work in Micron systems—this is definitely not the case. Perhaps Micron doesn't want to impinge on sales of its higher-priced Fusion3D systems, which, oddly enough, come with 3Dfx boards.

Micron's other choices for components were pretty standard, but we were pleasantly surprised at the inclusion of an internal Zip drive. Internally, the Micron's layout was clean and accessible. There were three free PCI and two free ISA slots (one PCI/ISA pair is shared). Two 3.5-inch bays (one front-panel accessible) and one 5.25-inch bay were free. Although you only have to loosen a thumbscrew to open the case, actually removing

the cover requires a combination of dexterity and strength that would challenge the average circus contortionist. The power supply is a scant 200-watt unit. The only bummer were the two memory DIMM slots, both of which were occupied, albeit with 48MB. No DOS real-mode drivers (mouse and CD-ROM) were installed or present on the system, but they were available on accompanying media. With all the support calls that companies get about DOS CD-ROM and mouse support under Windows 95, you'd think they'd have figured out this problem by now.

Performance was mixed. As expected, the 2D Windows and DOS performance was pretty darned good. DOS Quake scores averaged 177fps—very good, indeed. However, 3D acceleration rated near the bottom of the heap. Disk performance was ho-hum, but the CD-ROM CPU utilization ranked second-lowest.

The 3D game benchmarks were telling. Not only were the scores low, but in some cases, the image quality generated by the S3 chip was mediocre.

Overall, the Micron Millennia MME is a fairly conservative system that would have been a top performer a year ago; in today's torrid market, however, it's merely an also-ran. —LC

Micron Millennia MME
Price: $2,288
(800) 209-9686
www.micronpc.com

PROS: Lots of RAM; good 2D scores.
CONS: Poor 3D performance; overly conservative component choices.
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*Take strategy to the front lines.*

www.activision.com
Last month, Falcon sent us a “burn, baby, burn” box that redefined “over the top.” This month, because Falcon can build to suit, it put together a rig that just squeaked under the $2,500 price point for this roundup. But don’t let the price tag fool you: This box still packs a pretty serious punch, including Canopus’ new Pure3D, a 3Dfx Voodoo-based 3D-only board with 6MB of RAM.

The externals of the box very much resemble those of its beefier sibling, and getting inside the box is a breeze after you remove two thumbscrews. The Award BIOS is a tweaker’s dream, though in the hands of the uninitiated it could spell big trouble, so look before you tweak. DirectX 5.0 was pre-installed and configured, as were real-mode drivers for audio, mouse, and CD-ROM. This Mach V also detected the USB joystick with no problem.

When you look at the numbers, Falcon performed, by and large, solid as usual. But because some competitors are using Pentium II 233MHz chips, Falcon wasn’t quite at the head of the class on all tests. In 3D WinBench 97, Mach V does well, but because 3D graphics are very CPU-dependent, it isn’t as fast as systems with P-II CPUs. Falcon’s 2D numbers are the best of the lot in Windows and DOS, however, and its storage subsystem fared well, both in Disk WinMark and CD-ROM WinMark testing. Its CPU usage when reading the CD-ROM was pretty high at about 42 percent. The Mach V, despite not having the fastest CPU, did turn in first-place finishes running Quake and WinQuake TimeDemo tests. Direct3D game test results were, again, respectable—though not the fastest of the lot.

Because this Falcon packs a one-two punch in the graphics department, it can ably run Direct3D and 3Dfx Glide titles, as well as GL Quake. The package includes CH Products’ new FlightStick, which lacks a view-hat, but does have a throttle and is an adequate stick for flight-sim neophytes. Falcon has built its reputation by sweating the details for gamers and by delivering boxes that will be ready to roll from the first power-up. Unfortunately for Falcon, the larger vendors in the roundup—Dell and Gateway—can serve up P-II systems with AGP for about the same price by virtue of the sheer volume that they ship. And while they may lack the Falcon’s polish in terms of game-readiness, their faster CPUs and AGP architecture translate into longer system life before you need to upgrade, and will make them more extensible over time. The Falcon is a fine box to be sure, but its core components—CPU and graphics architecture—may need to swapped sooner than those from other competitors in this roundup. The good news here is twofold: The current performance gap between this box and the AGP/Pentium II boxes isn’t that large, and through an upgrade program Falcon will do a motherboard graphics swap if you send in your box. —DS

Falcon Northwest Mach V
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www.falcon-nw.com

PROS: Everything preconfigured; consistently solid performance.
CONS: Not quite the fastest horse on the track; SGI CPU.
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- Rolling Stone

“Makes Quake look like Family Fare”
- Score 5 out of 5
- Computer Life

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- PC Games

“Raucous Action and Hysterical Graphics”
- Score 9
- Computer & Net Player

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ROUTE 66
Solid Computer Game Duke

Solid Computer is pretty typical of many smaller systems integrators. These folks build systems from off-the-shelf components with very little customization. This isn't necessarily bad. For one thing, do-it-yourself upgrades are much easier. Adding a new CD-ROM drive to a Gateway PC's sculpted case is an exercise in futility, while adding one to the Solid case supplied with the Game Duke is pretty straightforward.

At first glance, a Pentium II/233 complete with Monster 3D accelerator and 17-inch monitor sounds like a good deal. We thought so, too, until we turned it on. The first portent of trouble was the CD-ROM drive. There wasn't one. Well, it was installed, but Windows 95 didn't see it. After much wailing and gnashing of teeth, the problem turned out to be a loose IDE cable. The second problem loomed when we ran our 3D benchmarks. The Monster 3D's drivers weren't installed. The Diamond driver CD showed version 1.04, a fairly old rev. The techs at Solid had installed the latest set of generic drivers from 3Dfx, but hadn't thought to install Diamond's latest official release (1.08 at the time of testing). DOS real-mode drivers were not installed, nor present on the system.

To pop open the case, you have to remove four screws. The interior layout looked clean and uncluttered. Two 5.25-inch drive bays and a pair of 3.5-inch bays were free, as were two PCI and two ISA slots. But when we opened the case, another problem fell into our laps—literally. One of the motherboard screws had worked loose and was rattling around inside.

Once we got over these hurdles, the Game Duke performed pretty well. The only anomaly was the ridiculously high Business Disk WinMark score. Solid had installed the Windows 95 bus-mastering IDE driver. The problem? This driver behaves incorrectly, caching data even when the application (WinBench 97 in this case) tells it not to. The IDE drive in the Game Duke should get around 900-1000.

The 3D WinBench score of 177 was among the highest in the roundup, reflecting the added oomph given to geometry generation by the Pentium II. It also had the highest 32-bit CPUMark in the review. The Game Duke was the only Pentium II system for $2,500 that shipped with a 3Dfx card.

Game benchmarks were crisp, posting solid 3D scores due to the Monster 3D. However, the DOS scores were a little weak, probably due in part to the 440FX chipset on the motherboard. Windows 2D scores were pretty good overall.

Overall, the Solid system delivered good value for the price. We're concerned, though, about the fit and finish issues—check your system for any loose screws. The problems with the CD-ROM and Monster 3D would mystify many users. Solid's Web site currently shows some updated components available, including AGP, so make sure you know what you're getting before you buy. —LC

Solid Computer Game Duke
Price: $2,350, (888) 324-4984
www.valuepc.com

PROS: Nice setup for gamers.
CONS: Fit and finish and setup problems are worrisome.
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Rod White PCME

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On-line Gaming Review, Paul Bannister

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Game Briefs

“The dynamic campaign and mission editor give the product more replay value than any other W.W.I simulation we've ever seen.”
Gameslice

“Attention to detail translates into atmosphere, and with period photographs, 16 mm film style briefings, period maps and excellent sound, RBII has atmosphere in spades!”
Hardcore Gamer

“Success flourishes only in perseverance—ceaseless, restless perseverance.”
Baron Manfred von Richthofen.
Gateway 2000 G6-233

In many ways, the G6-233 mirrors the higher-end Gateway system we reviewed last month. However, it has a somewhat better CD-ROM solution for gamers, rather than a DVD drive with iffy performance. But like its high-priced cousin, it has problematic DOS audio performance.

Gateway has made a reputation for aggressively priced systems, and the G6 series is no exception. It's one of the three Pentium II systems in the roundup. Like the Dell system, it's AGP enabled. Gateway is another direct marketer, so if you buy, make sure you get exactly what you specify. It's not that Gateway will try to shortchange you, but rather that the company tends to offer what components it has in stock at any moment.

The G6 is one of the new breed of "sculpted" PC cases, which usually means that replacing front-panel components (the CD-ROM drive, for example) is a chore, since the tray bezel is custom designed. It's a big case, though, so the internal layout is quite accessible. There are three DIMM sockets for memory, one of which was filled. There are two free PCI slots and one shared PCI/ISA pair. Despite the fact that it has such a large case, the G6 has only three drive bays free: one 3.5-inch and two 5.25-inch. Opening the case involves removing a pair of thumbscrews. Cables are color coded, but there were no matching color-coded connectors on the test system. The power supply is a skimpy 200-watt unit.

As you might expect, the performance was pretty solid. The 3D performance of the STB Velocity 128 was exceptional, edging out the Dell system for top 3D WinBench honors. Windows and DOS 2D benchmark results were also top-notch. The system's relatively poor Business Disk benchmark results were about the only problem.

Game performance was typically very good, which is to be expected from the AGP RIVA 128/Pentium II pairing. We're eagerly anticipating the release of Windows 95 OpenGL drivers for the STB card, but until then, no GL Quake for Gateway.

One of the problems with the Gateway system was the absence of DOS drivers, particularly for the PCI audio card. We managed to get hold of Gateway, which supplied us with a set of drivers, but it took a lot of doing to get real-mode drivers working reliably from the DOS prompt. While it's true that pure DOS games are becoming fewer in number, there are still many high-profile DOS games emerging, such as X-COM Apocalypse and Armored Fist 2. While most current DOS releases can be played from a DOS window, there's always a performance penalty that some people are unwilling to pay.

The bottom line is that Gateway's G6 is a nice, speedy system, but be aware that the sound card is more of a Windows 95-only solution. – LC

Gateway 2000 G6-233
Price: $2,414 (800) 846-4208 www.gateway.com

PROS: Speedy performance; cool-looking case.
CONS: Cool-looking case makes it hard to add new components; DOS driver support is subpar.
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- 3.5” Diskette Drive
- Ensoniq® Waveable Audio
- harman/kardon® Home Theater Surround Sound System
- TelePath® Modem for Windows with x2™ Technology
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- Cordless Keyboard with Integrated EZ Pad® Pointing Device
- Cordless Field Mouse Remote
- MS Windows 95
- Microsoft Choice Software®
- 3-D Gamer’s Bundle®
- Gateway Gold Service & Support® for Digital Media Computers

$4999 As low as® $174/mo.

*Please ask your sales rep about your software options. You tell us which Microsoft Choice software suite meets your needs and we’ll pre-install it for you!

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“3-D Gamer’s Bundle includes Ultimate Rave™, Virtual On™, and Action Soccer™.

*Destination 31-inch and 36-inch monitors are covered by a one-year limited warranty. Call or write for a free copy.


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IBM Aptiva L31

Big Blue has certainly had a bumpy ride through the PC revolution. Now wiser for the mileage, IBM is making PC systems that use open-market commodity components, and it has even managed to show some flair for design with its Aptiva line.

The unit's monitor features an embedded Bose speaker system, a USB port, and jacks for headphones and a microphone, as well as a volume knob. Getting into the system is fairly straightforward, thanks to a side panel that comes off sans tools. The Aptiva detected the USB joystick without incident, though Direct3D was nowhere to be found on the system.

Despite the high-profile name, Aptiva's Bose speaker system was unable to produce much in the way of volume, and the speakers seemed strained at higher volume settings—unfortunate considering the presence of Crystal Semiconductor's beefy PCI-based 4610 chipset, a high-powered audio DSP capable of producing impressive 3D-positional audio.

This Aptiva posted unimpressive numbers. IBM is using Trident's 3D Image 975 chip, but with only 2MB of video memory, which made for glitchy performance. Its 3D WinBench 97 performance was among the slowest. Its 2D Windows numbers and its Business Disk WinMark numbers were also unremarkable. CPU performance ranked on par with other P55C 233MHz systems, and its CD-ROM WinMark numbers were competitive. Quake and WinQuake numbers were the slowest of all the boxes we tested.

Its Direct3D game scores were also lackluster, and because the system comes with only 2MB of video memory, several games had graphic or performance problems. The only game that ran reasonably well was Microsoft's Flight Simulator 98, but even it suffered serious texture aliasing. We'd suggest you look elsewhere with your $2,500.—DS

IBM Aptiva L31
Price: $2,398
(800) 426-3333
www.us.pc.ibm.com/aptiva

PROS: Interesting monitor design; heavy-duty audio chipset.
CONS: 2MB video memory; shaky Trident graphics drivers; uninspired overall performance.

Hewlett-Packard Pavilion 8160

The Pavilion 8160's components are fairly typical, though HP's choice of ATI's newaging Rage II + 2D/3D chip hurt it in several key performance areas. Getting into the box is relatively easy; getting back out is another matter. That old adage about things being much easier to take apart than reassemble applies here. With a little gentle brute force, we managed to get the unit's side panel back in place.

Motherboard layout is clean, and parts are readily accessible. One good piece of news is that the ASUS motherboard will automatically disable the on-board ATI graphics chip if another PCI graphics card is present in the system. The 8160 arrived with Direct3D 3 installed, but not Direct3D 5.0. However, real-mode drivers for audio, mouse, and CD-ROM were present and configured. The unit also detected our USB joystick without any trouble and installed its driver.

Put to the test, the Pavilion was an underachiever. Like the IBM Aptiva, the HP box was dogged by problems owing to its slim 2MB of video memory. Its 3D WinBench 97 performance was last among systems with 3D accelerators. Its 2D Windows performance was also unimpressive, as were Disk WinMark, CPU16, and CPU32 numbers. HP's CD-ROM WinMark numbers redeemed the unit somewhat, and its Quake and WinQuake TimeDemo scores were certainly competitive. But Direct3D games caused more than a few headaches: Wipeout XL did not run at 640x480, and Moto Racer delivered a frame rate of only 10fps, with incorrectly drawn palm trees. Pavilion did manage 18fps on the Terrawark test, but only after we reduced the texture resolution.

Despite a few highlights, we can't recommend the Pavilion as a gaming rig.—DS

Hewlett-Packard Pavilion 8160
Price: $2,298
(800) 426-3333
www.hp.com/hpdp/hp-at-home.html

PROS: Real-mode drivers ready to go.
CONS: Poor overall performance; Direct3D games don't run well.
SEPT. 28
CHARLOTTE

IF BULLDOZERS
HAD BRAINS THEY'D
BE LINEBACKERS.

Madden 98
www.easports.com

It's called Liquid AI, chief, and you better get a heads-up on what it is before it crushes you like a little ant.
Performance Tests

How We Tested

It's always a challenge to test systems. We assembled quite an arsenal of benchmarks and games to exercise all the systems we gathered. General system testing was performed with WinBench 97; we used the Business Graphics WinMark, Business Disk WinMark, CD-ROM WinMark, CPUMark 16, and CPUMark 32. Benchmarking 3D graphics began with 3D WinBench 97 and continued with a host of games, including Microsoft Flight Simulator 98, EA's Moto Racer, Psygnosis' Wipeout XL, Eidos' Terramark, and Quake (DOS, WinQuake, and GL Quake where appropriate). We also benchmarked DOS performance using CBench.

We conducted the synthetic tests with each system just as it came out of the box, since most people don't tweak with BIOS settings or defrag the hard disk to move all the applications to the outer tracks. The Graphics WinMark tests were conducted at 1024x768x65,536 colors and 800x600 true-color (24-bit color for some systems, 32 bit color for others). In addition to the CD-ROM WinMark, we measured the CPU utilization for the CD-ROM. Be aware that we did only overall CD testing, not outer-track testing, but since most of the drives were either CAV (constant angular velocity) or partial-CAV drives, the outer
track performance will be better. Since most CDs aren't full, though, you'll rarely see the maximum performance possible on some systems.

Many system tests are performed out of context, to stress a single part of the system. While we did our share of these kinds of tests (3D WinBench 97, for example), game testing was performed with audio enabled and, where appropriate, joysticks connected. After all, you wouldn't play Flight Simulator 98 with the keyboard and no audio, would you? Ultimately, we wanted to see how the systems behaved with realistic loads.

We conducted all the game tests at 640x480, unless otherwise noted. The Quake numbers are collected using Quake's built-in TimeDemo feature. We ran TimeDemos 1, 2, and 3 and averaged the results. We ran Microsoft Flight Simulator 98 with detail features cranked up and in full-screen mode. You enable the frame-rate counter by pressing shift-Z twice when in flight mode. We captured the frame rate using the supplied "new features" VCR replay that comes with the title. To enable the frame counter in Moto Racer, start the game from a DOS Window and type "motoc -ijjinknoj". Then, in the racing screen, hit Shift-F1 to turn on the frame counter. Wipeout XL's frame counter is enabled by simply typing "framerate" at the race screen. The Terrarank benchmark, based on Eidos Interactive's Terrarace game engine, was supplied to us by Eidos; it's not available for wide release. —LC

<table>
<thead>
<tr>
<th>TerraMark Test</th>
<th>Wipeout XL Initial Frame Rate</th>
<th>Microsoft Flight Sim 98</th>
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</thead>
<tbody>
<tr>
<td>42</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>37</td>
<td>37</td>
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</tr>
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<td>37</td>
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<td>11</td>
<td>8</td>
<td>18.8</td>
</tr>
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<td>14</td>
<td>n/a</td>
<td>won't run at 640x480</td>
</tr>
<tr>
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<td>n/a</td>
<td>won't run at 640x480</td>
</tr>
<tr>
<td>12</td>
<td>n/a</td>
<td>won't run at 640x480</td>
</tr>
<tr>
<td>18</td>
<td>n/a</td>
<td>no 3D Accelerator</td>
</tr>
<tr>
<td>n/a</td>
<td>16.1</td>
<td>No Software</td>
</tr>
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<tr>
<th>WinBench 97 Business Disk WinMark</th>
<th>WinBench 97 CPU32</th>
<th>WinBench 97 CPU16</th>
<th>97 CD-ROM WinMark</th>
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<td>417</td>
<td>444</td>
<td>1220</td>
</tr>
<tr>
<td>893</td>
<td>387</td>
<td>394</td>
<td>1280</td>
</tr>
</tbody>
</table>
Why merely possess a game when you can OWN IT?

Simply put, games are meant to be dominated, not merely played. And though practice may eventually get you to perfection, the Microsoft® SideWinder® Precision Pro will get you there a lot quicker.

And with the new ergonomically designed stick, buttons are at your fingertips and right under your thumb. You know, the same place you wish your games were.

With Microsoft SideWinder Precision Pro you get:
- patented digital-optical technology
- unbeatable accuracy and reliability with no actual wear and tear
- shift button to double functions
- map specific keystrokes, maneuvers, and strings
- 30 pre-loaded game profiles
- on-handle rotation control

Microsoft

Where do you want to go today?®  www.microsoft.com/sidewinder
Packard-Bell Platinum 3000

Packard-Bell has been a dominant player in the retail PC arena for several years, and now it’s casting an eye toward the gaming hardware market. For this roundup, along with Dell and Gateway, Packard-Bell assembled a Pentium-II based system that uses Trident’s 3D Image 975 chip. But unlike Dell’s and Gateway’s, Packard-Bell’s box uses Intel’s 440FX chipset, so AGP support is lacking.

Setting up this box is pretty straightforward, with a large step-by-step installation guide and color-coded cables to help you along the way. It’s a bit tricky getting into the box at first: You have to undo two screws located on the bottom of the box to release the side panel. Once you’re inside, the motherboard layout is clean, with all parts easily accessed. The Phoenix BIOS lets you tweak basic system settings, but doesn’t expose more detailed settings.

Real-mode drivers for audio, mouse, and CD-ROM were all present and ready to go, and the USB joystick was detected hiccup free. The box arrived with DirectX 3 preinstalled, though DirectX 5 drivers weren’t included anywhere.

Looking to the numbers, the Platinum showed decidedly mixed performance. While the 3D WinBench 97 score helped bring up the rear, there were a few highlights in WinBench 97 testing. 2D Windows graphics numbers were lackluster, as was Business Disk WinMark. But CPU scores on both 16- and 32-bit tests were solid, and the CD-ROM WinMark score was also impressive. However, the Platinum posted the slowest overall TimeDemo scores from Quake and WinQuake, and its Direct3D game performance wasn’t much better, with all frame rates coming in under 20fps. In Microsoft Flight Simulator 98, we saw the same shimmering effect we saw with the IBM Aptiva, which also uses the Trident 3D Image 975 chip.

Although Packard-Bell managed to deliver a system with a P-II CPU for under $2,500, it had to cut some fairly serious corners to get there. Most notably, by using a 440FX-based Intel motherboard in lieu of the newer AGP-equipped 440LX chipset, it limits performance. The LX chipset better handles system traffic cop chores for memory access, and AGP allows 3D games to make better use of system memory as well as use more textures and polygons for more realistic scenes. The Trident 975 graphics chip turns out to be not such a great choice for gamers, especially with better offerings like the NVIDIA’s RIVA 126 proliferating the market. For about the same money, either Dell or Gateway can deliver a P-II system with AGP, and because both use the RIVA 128 chip, Direct3D performance will also be better. For a first outing in the gaming space, Packard-Bell has delivered a decent system, but until some of its kinks are smoothed out, we would recommend taking a pass on this one. —DS

Packard-Bell Platinum 3000
Price: $2,395
(888) 474-6772.
www.packardbell.com/

PROS: Easy installation; embedded headphone/microphone jacks in monitor.
CONS: P-II CPU, but still PCI-based; spotty performance; Direct3D headaches.
Attack Points

Continuous rapid blows to protrusions on back can impair creature’s balance.

Powerful but inefficient neck exploit by changing direction of attack often.

Vulnerable pressure point between fifth and sixth rib.

Weak abdominal tissue.

New character class: The Monk.

8 new randomly generating dungeon levels.

12 new weapons to wreak havoc with.

23 powerful new demons from hell.

5 mysterious new spells.
A LONE MONK WALKS INTO THE DEN OF THE DEVIL HIMSELF. MAY GOD HAVE MERCY ON THE DEVIL.

An arcane monk from an unknown land, endowed with immense physical and spiritual powers, finds himself on a path that leads into the very bowels of hell. Highly skilled in hand-to-hand combat and versed in ancient magic, the monk winds up in a battle to the death with Na-Krul, an unspeakable demon capable of limitless destruction. If he walks away the victor, he must then take on the unboly master of all evil himself, an even stronger Diablo.

HELLFIRE
SINGLE PLAYER EXPANSION PACK FOR DIABLO

FULL REGISTERED VERSION OF DIABLO REQUIRED.
The Only Authorized Diablo Expansion Pack

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www.sierra.com/hellfire
Compaq Presario 4814

This is Compaq's second year in our UGM roundup, and this year the company brought in its Presario 4814, a 233MHz Pentium with MMX rig that, though a decent performer, is missing a key appendage: a 3D accelerator. Though a curious omission, Compaq has adopted a "3D-agnostic" approach with this Presario, figuring that users can pick and choose the 3D solution they want. While perhaps a sensible business decision, it seriously handicaps this Presario in a roundup against systems that feature the latest 3D IR. Not even opting for S3's Virge 2D/3D chip, Compaq has instead implemented S3's aging 2D-only Trio64V2 chipset, which showed its gray hairs in 2D-intensive tests.

Compaq has come up with some interesting design twists, some better than others. The Presario's monitor features a large volume knob and side-mounted JBL speakers that sound pretty good considering their lack of a woofer. The top-front panel of the tower CPU case features a variety of controls: sleep mode, audio CD transport controls, and more. There's a slot for inserting/ejecting CD-ROMs, rather than a CD caddy or a tray. A front panel opens to reveal the Goldstar CD-ROM drive and a Zip drive.

Compaq has a penchant for overengineering its systems, and this Presario is no exception. To get into the box you need a special screwdriver that fits the three screws that hold the side panel in place. And once you're inside, the fun's not over yet. Compaq has come up with an inverted mezzanine bus. We've seen this before and we don't like it any more the second time around. To get at system backdoors, you have to first remove the entire ISA/PCl mezzanine bus. Compaq's BIOS seems to be there more to tell you what Compaq has decided the system settings are, rather than to let you get very deep into tweaks. The system arrived with Direct3 installed, and two out of three real-mode drivers—mouse and CD-ROM (but not the sound card)—ready to go. It did find the USB joystick and installed its driver without incident.

Presario's numbers are, not surprisingly, not impressive. The unit was able to run 3D WinBench 97 in software emulation owing to its lack of 3D hardware. Its WinBench 97 Business Graphic WinMark scores were just about the slowest of the lot, as was its Business Disk WinMark score. About the only favorable bump for Compaq came in CD-ROM WinMark, CPU16, and CPU32 tests, where it was competitive with other Socket 7 systems. Its Quake and WinQuake TimeDemo numbers ranked in midpack, and it was unable to run any of the Direct3D games accelerated.

To Compaq's credit, the Presario 4814 ran through our battery of tests without a complaint, and the 3D tests executed fine in software, just very slowly. This box came in $100 under our $2,500 mark, and with the addition of some 3D iron, it might be a good system for home/multimedia users who moonlight as gamers. But its lack of 3D acceleration coupled with otherwise unremarkable performance make it very hard to recommend. —DS

Compaq Presario 4814
Price: $2,398
(800) 345-1518
www.compaq.com/athome/showroom

PROS: Easy installation; caddyless/trayless CD-ROM drive; good system stability.
CONS: Complete lack of 3D hardware; overengineered; unremarkable performance.
Pray to the motorcycle gods. Manx TT, the killer arcade game, is now on PC. Pick from 8 custom built SuperBikes. Gun it down one of the most treacherous race tracks on the planet, England’s Isle of Man. And try not to scrape your knees off through the turns. Just so you can feel it all in your gut, we’ve recreated every last bump and dip on the road. Equipped with 8 player Network Play over IPX and TCP/IP so you can race other speed freaks across the country. Get down on your knees.
Some people go to extremes to show NBA Action 98. They should. In this game, you're up against huge, huge, nothing better than to send your puny little torso packing. We're talking real NBA players, every NBA team, all 179 Arenas. Team-specific plays. Behind-the-back passes. Alley oops. It's all here. Chuck Head even calls the plays. NBA Action 98. See how you measure up.
As stock car racers say, "If you can’t beat ‘em with skill, beat ‘em with a root vegetable." Welcome to the white-knuckled world of Daytona® USA Deluxe, the phenomenal 3D sequel to the hit arcade game, now on PC. 8 different stock cars, 6 heart pounding courses, an all new track. And network play means up to 7 of your buddies can eat your rubber at once. Plus with Force Feedback support, you’ll feel every bumper kiss and wall bounce. Gentlemen, start your engines. If you can.
## Features

<table>
<thead>
<tr>
<th>Vendor System</th>
<th>Compaq Presario 4814</th>
<th>Dell Dimension XPS D233</th>
<th>Falcon NW Mach V</th>
<th>Gateway 2000 66-233</th>
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<td>CPU</td>
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<td>233MHz Pentium with MMX</td>
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<td>ASUS</td>
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<td>RAM (Amount/Type)</td>
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<td>STB Riva 128, AGP</td>
<td>Diamond Viper V330, PCI</td>
<td>STB Riva 128, AGP</td>
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<td>3D Graphics (chip, AGP/PCI)</td>
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<td>Diamond Viper V330 and Canopus Pure3D</td>
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<td>Hard Drive (Size/Type)</td>
<td>6GB IDE</td>
<td>8GB IBM Deskstar</td>
<td>4GB Western Digital IDE</td>
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<td>CD-ROM or DVD</td>
<td>Goldstar 24x</td>
<td>Toshiba 24x IDE</td>
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<td>Mitsumi 12x/24x</td>
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<td>Monitor</td>
<td>Compaq</td>
<td>Dell 17-inch</td>
<td>Optional Quest V773 17-inch</td>
<td>Gateway 17-Inch</td>
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<td>Audio Subsystem</td>
<td>ES1887 PoP AudioDrive</td>
<td>Creative AWE 64</td>
<td>Creative Labs Sound Blaster AWE 64</td>
<td>ENSONIO Audio PCI</td>
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<td>Speakers</td>
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<td>Altec Lansing ACS-90</td>
<td>Altec Lansing ACS-90</td>
<td>Boston Acoustics</td>
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<td>Modem</td>
<td>Compaq Presario 56K-VSC</td>
<td>Sportster 56K Fax Internal (x2)</td>
<td>U. S. Robotics Sportstar 56K (x2)</td>
<td>Telepath for Windows (x2)</td>
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<td>Game Controller(s)</td>
<td>NONE</td>
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<td>CH GameStick</td>
<td>Microsoft SideWinder Pro</td>
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<td>BIOS</td>
<td>Compaq</td>
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<td>USB Supplemented?</td>
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<td>Phone Number</td>
<td>(600) 345-1518</td>
<td>(800) BUY-DELL</td>
<td>(888) FALCON-1</td>
<td>(800) 846-4208</td>
</tr>
</tbody>
</table>
adventurer wanted. inquire within.

attention all adventurers. by edict of the grand inquisitor, the great underground empire of zork has been sealed off and the practice of magic declared punishable by totemization (a very bad thing). only a true adventurer can stop the grand inquisitor and restore magic to its rightful place. can you save the underground?
ZORK
GRAND INQUISITOR

GRAND OPENING NOW
WINDOWS® 95
Long Story Short...

If the nine boxes we looked at this month, your best choice boils down to three, and among those three, it comes down to polish versus power. Dell and Gateway both delivered P-II AGP systems powered by RIVA 128 graphics accelerators, and they turned in very solid numbers for $2,500 systems. Both boxes, however, leave it to you to "tighten the last few screws": installing real-mode drivers, getting a game controller, getting the latest rev of DirectX. Falcon Northwest, on the other hand, delivered a 233MHz Pentium with MMX PCI-based system with a PCI RIVA 128 board and 3Dfx's Voodoo graphics chipset to boot. And because gaming rigs are Falcon's bread and butter, it sweats the details to make this version of the Mach V ready to roll.

The difference in performance between the Falcon and the two P-II/AGP systems bear out the P-II's superiority, however the Falcon includes the 3Dfx Voodoo graphics that will run all 3Dfx/Glide titles. The Dell and Gateway units are pretty much Direct3D-only boxes until a GL-miniport driver to run GL_QUAKE becomes available later this year from NVIDIA. Over time, however, both the Falcon's Pentium MMX CPU and the PCI bus will run out of gas before the P-II/AGP systems do, making major component swaps necessary sooner. If you're leaning toward out-and-out performance, consider the P-II/AGP boxes, but if you're a serious Quake-head, or want to run 3Dfx or OpenGL titles, then we'd give the nod to Falcon.

As for the other six systems we evaluated, each either had serious trouble running our test applications or had some glaringly weak components that kept them out of consideration. Compaq forgot about 3D graphics altogether, whereas Micron shot behind the duck in opting for S3's unimpressive VIRGE 2D/3D accelerator. Solid Computer arrived with too many rough edges despite good base components. HP, IBM, and Packard-Bell were dogged by driver issues and sub-standard performance.

To be fair, it gets harder to produce a killer system as you lower the price-point bar. But we found three systems that will serve you well in your gaming exploits, none of which requires a Las Vegas jackpot to cover the bill. Of course, system prices are always a moving target, and by the time you read this, the systems featured here may have new (and it's hoped, upgraded) components for about the same amount of money.

Check with each vendor to see what kind of system you can have built for your hard-earned $2,500.

What's Cool/What Sucks

What Sucks:

Sculpted Cases
To paraphrase Indiana Jones, "Why'd it have to be a sculpted case?"
Take a standard case and leave it in the sun for a while to round the edges (you need to have that hot-rod rig streamlined, right?). Guess what: Adding components that are exposed in the front panel becomes a royal pain. If you want it to look good, you need to buy it from the same vendor—if it's available. Imagine the phone call: "I'd like the new Pledor 30x CD-ROM drive to fit in your drive bay!"
Sales rep: "Hu?"

Uneasy Access
Opening cases should be as easy as opening the hood on a car. In some cases (Falcon Northwest), the tool-free case is a snap to open and close—we're all for that. Out come the thumbscrews, off comes the side panel. In the Dell and Micron systems, opening the case requires either another person or the growth of a third hand. Then there's the IBM case, which doesn't have any screws, but does require an advanced degree in jigsaw puzzles to put back together. Finally there's the Packard Bell, which requires you to remove two screws from the bottom (that's right, the part that sits on the floor) to open the case.

Mezzanine Buses
Opening up the Compaq presents you with a high-tech version of a Rubik's cube. First, the cards are mounted in a different direction than in most tower cases. Second, getting to them is a challenge. While it's nice to have a welfare program for unemployed mechanical engineers, this is ridiculous.

What's Cool

More Zip
The Micron and Compaq systems come with a built-in Zip drive. You get 100MB of removable storage, perfect for storing those pesky patches and driver updates for that inevitable day when you have to reinstall Windows 95—not to mention backing up all those save game files.

Color-Coded Cables
Inside the HP system are so many cables that it looks like two squids mating. Luckily, all cables and receptacles are color-coded. It makes setup much easier.
Our Next Generation Has Arrived!

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Put real Space Shuttle technology into your hands with the latest in next generation 3D gaming. Millennium's 3D pitch-over, fast action grip allows players to wipe out opponents like no other joystick. 100% digital technology for precise control and instant setup makes this a killer stick.

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CIRCLE READER SERVICE #185

THRUSTMASTER
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“NASCAR® PRO Racing Wheel is officially licensed by NASCAR.”
Two months ago, we promised to revisit six 3D graphics accelerators that were not yet available, but were getting very close to release. Since then, we've gotten even more hardware, so what was planned as a minor skirmish has instead turned into a major showdown. We've also received final releases on some AGP hardware and had the opportunity to put those cards through their paces. There are some surprises here, both pleasant and otherwise.
Who's Got the Fastest 3D Card in the West?

We Rate 24

The two new RIVA 128 boards are the biggest surprise. Canopus 3D, which made a splash last year with the Rendition-based Total3D, has shipped its Total3D 128V. Another shock came from motherboard manufacturer ASUS, which got into the retail graphics card fray with its RIVA-based 3Dexplorer. And Creative Labs surprised us with its Permedia 2 board. There are 17 new pieces of hardware here, so hang tight until the end—and let the showdown begin.
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Experience the outer limits of 3D gaming with the new Matrox m3D upgrade for games.

Matrox m3D delivers over 30 frames per second of non-stop, arcade-action game play. Its extensive set of 3D special effects offers breathtaking, realistic graphics for a more immersive gaming experience. You'll be able to play Tomb Raider, Wipeout XL, Terracide, and other hot 3D games titles at resolutions up to 1024 x 768 for superior image quality.

What's more, Matrox m3D comes with Ultim@te Race™, Hexen II™: Continent of Blackmarsh, and over 20 game demos. For only $99*, Matrox m3D is the most cost-effective, full featured 3D upgrade for your PC. Visit our Web site for more information!

3D games included:

Ideal upgrade for PI33 (or higher) PCI and AGP systems with compatible PCI slots
Works with all 2 MB PCI graphics cards, and Matrox Mystique®, Mystique® 220, Millennium and Millennium II graphics boards
PowerVR PCX2 3D controller with 4 MB of SDRAM memory
3D features include perspective correct texture mapping, bilinear filtering, MIP mapping, fogging, alpha blending, and transparency

Matrox m3D

Over 30 3D game demos included:

* Estimated street price. Ultim@te Race is a PowerVR Extreme™ software game. PowerVR and PowerVR Extreme™ are trademarks or registered trademarks of Videologic Ltd. (UK). All rights reserved. Used with permission. NEC Electronics Inc. (NEC) and Matrox Graphics Inc. (Canada) are authorized distributors of Ultim@te Race. NEC Electronics Inc. is a worldwide distributor and licensor of PowerVR software graphics developed by Keio Entertainment S.A. (France). ©1997 Haven Software Corporation. All rights reserved. Id Software, Inc. software code contained within Hiven II™ is 1995 Id Software Corporation. All rights reserved. Developed by Raven Software Corporation. Published by Id Software, Inc. Distributed by Activision, Inc., under sublicense. Haven II is a registered trademark and Hiven II is a trademark of Haven Software Corporation. The Id Software name and the Id logo are trademarks of Id Software, Inc. Activision's is a registered trademark of Activision, Inc.
2D/3D COMBO CARDS

Jazz Adrenaline Rush 3D

Jazz Multimedia's Adrenaline Rush 3D continues Jazz's tradition of shipping low-cost graphics hardware. At $215, the Adrenaline Rush 3D is priced lower than any other Voodoo Rush board we've seen. It's also a bit slower. Like other Voodoo Rush boards, its 2D Windows performance is probably its weakest link, but if you're not running heavy Windows business applications, it's not that important.

Recently, there's been a lot of ink about the 3D performance of the Voodoo Rush chipset. Voodoo Rush has some problems with applications that use simultaneous alpha blending and z-buffering. If so happens that GL Quake uses—you guessed it—simultaneous alpha blending (for lighting effects) and z-buffering. The engineers at 3Dfx are aware of the problem. We saw beta drivers that significantly improved GL Quake's frame rate, though at press time they had not yet shipped.

The Jazz Adrenaline Rush Scores lower across the board than the Intergraph Intense 3D Voodoo we tested in November. Of course, it's also less expensive, so that's a consideration. The software bundle is nice, too, with 3Dx-enhanced versions of Interstate '76, MediaWarrior: Mercenaries, and Turrican: Dinosaur Hunter. But for a few dollars more, you can do better.

Hercules Thriller 3D

About two years ago, Rendition made a splash with its Vérité graphics processor, but since then it has been steadily losing mindshare among gamers. Hercules has just begun shipping the Thriller 3D, which uses the Rendition V2200. Though a little late to the party, the V2200 has the potential to start Rendition down the road to redemption.

The Thriller 3D posted very good performance numbers across the board. The 3D scores were up there with the RIVA 128 boards and 3Dfx Voodoo graphics—slower in some case, faster in others, but very close overall. In some respects, the Thriller 3D is a litter more polished than the RIVA 128—we saw none of the polygon cracking that's evident in the current release of RIVA drivers.

One other factor is Rendition's RRRedline Windows 95 3D API. Games such as Flying Nightmares II, which use RRRedline, offer serious performance gains.

The 2D Windows performance was adequate, but unspectacular. DOS SVGA graphics performance looks pretty good, too. At press time, the software bundle hadn't been finalized. The Thriller 3D comes in either 4MB or 8MB versions, and supports video in, video out, and stereo shutter glasses at up to 150Hz due to the 230MHz on-board DAC. At the time we tested the card, a mini-GL driver for GL Quake was just around the corner. We tested the old, V1000 version of VQuake and got around 27fps in some informal testing.

Overall, the Thriller 3D looks to be a very interesting board. By now, the AGP version should also be shipping; based on our look at the Rendition AGP reference board, it should be quite speedy.
“Half-Life may very well redefine the standard for action games.”
—PC Games

“The best first-person shooter we’ve seen.”
—Gamespot

“Half-Life has some of the best adversaries in the entire action game genre...[it] eclipses the enemy AI in any other action game to date.”
—Computer Gaming World

“Gorgeous dynamic textures and intricate levels.”
—PC Games

“Valve’s skeletal animation system provides gamers with some of the most eerily life-like opponents they’ve ever seen.”
—Computer and Net Player

www.sierra.com/halflife
ATI Xpert @ Play

Two months ago, we said that ATI should get the award for most improved vendor. Since then, it has continued to tweak its drivers. The shipping version of the Xpert@Play we tested performed pretty well. The beta drivers we saw in October posted around 70 on 3D WinBench, the current, shipping drivers are scoring just shy of 92. However, we got hold of some beta drivers that boosted the 3D WinBench score to a sizzling 121, putting it within shouting distance of 3Dfx. After the shortcomings of the Rage I and II, ATI has redeemed itself with the Rage Pro.

Alas, all is not yet perfect. We saw some annoying texture defects in Flight Simulator 98, particularly in dense scenery. Flying over Paris, we noticed the terrain textures flickering on and off. ATI is aware of the problem and is looking into it.

The 2D performance is respectable, and the SVGA-graphics performance is a definite improvement over the Rage II. The only oddity was the unusually low score for Duke Nukem 3D. ATI’s performance with digital video playback is stellar, and the company has recently begun shipping the All-in-Wonder Pro, which couples the Rage Pro with a TV tuner. The software bundle is a bit different, with Psygnosis’ Formula I, Terrain, and a VRML browser. The Xpert series comes in either 4MB or 8MB versions.

Price: $229 (4MB, expandable to 8MB); TV tuner optional
Contact: ATI Corp., (865) 882-2600; www.atitech.ca

APPEAL: Those looking for an expandable general-purpose graphics card with fast 3D and good video.
PROS: Good—and improving—3D performance; up to 4MB RAM; good video.
CONS: Drives are still works in progress.

Elsa Victory Erazor

Not to be left out, ELSA has jumped on the RIVA 128 bandwagon. Unlike most vendors (save for Canopus), ELSA has put its own spin on this hot chip du jour. Like the Canopus Total3D 128V, the Victory Erazor supports video capture, not just TV out. One nice feature of the video setup is the breakout cable. Rather than having a plethora of connectors right on the card, ELSA supplies a breakout cable that attaches to the card; the other end of the cable has the video input and output connectors (both composite and S-Video are supported).

The performance is what you’d expect from a RIVA card. There’s still some visible cracking at the texture seams, but 3D WinBench reported that fog table is supported, which indicates that the Erazor (who thinks up these names?) has drivers based on the latest build from NVIDIA. However, ELSA has undoubtedly tweaked the drivers a bit. The Erazor’s 2D WinBench scores were slightly better than those of the Canopus or ASUS cards.

While its 3D WinBench number was about the same, its Flight Simulator 98 frame rate was a bit higher.

There’s not much of a software bundle—a video-capture application and a sampler disk—but the price is right. ELSA’s spin on the RIVA 128 looks to be a pretty positive one.

ELSA Winner 2000 Office

ELSA has built its reputation on delivering high-end graphics boards for demanding applications such as CAD or 3D modeling. Its drivers are known for exceptional stability. The Winner 2000 Office is ELSA’s foray into the more general-purpose graphics card market, and it’s something of a mixed bag.

The 3D performance is decent, though nothing to write home about. Although the 3D WinBench score was the highest posted by any of the PCI Permedia 2 boards we’ve tested, its DOS performance is actually pretty good, too, although the card lacks VESA 2.0 and couldn’t run DOS Quake at 640x480. It also didn’t have Windows 95 OpenGL drivers, an odd oversight for a Permedia 2 card, since the ICD for this chip is widely available. However, it was the only Permedia 2 card we tested that could run Duke Nukem 3D at better than 320x200.

Price: $179 (4MB, MSRP), $165 (4MB, estimated street price)
Contact: ELSA, (488) 919-9100; www.elsa.com

APPEAL: Gamers who already have games and want a really fast accelerator.
PROS: It’s fast, it’s cheap, it’s polished, and it captures video.
CONS: Limited software bundle; doesn’t run GL Quake yet.

ELSA Winner 2000 Office

Other than a virtual reality (3D) conferencing package and a huge assortment of drivers, the Winner 2000 Office has no software bundle. Its Windows 2D scores were subpar, though in reality, you probably wouldn’t notice it in real use. With expandability to MBF and fairly aggressive pricing for a Permedia 2 board, this card could be a sleeper for professional 3D users who want to do a little gaming. Let’s hope that the OpenGL ICD for Windows 95 will be available soon.

Price: $199 (4MB), $229 (8MB)
Contact: ELSA, (488) 919-9100; www.elsa.com

APPEAL: Professional graphics users looking to do a little gaming on the side.
PROS: Good price for a Permedia 2 board; decent 3D performance.
CONS: Relatively low 2D Windows performance; no VESA 2.0 support in hardware.
How Do You

TOP

The

PERFECT

Strategy

Game?

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Editors Choice Award
**PC GAMER**

★★★★
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**COMPUTER GAMES STRATEGY PLUS**

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Unlimited waypoint settings for sneak attacks

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- Complete Scenario Editor
- Multiplayer Capability (LAN, Modem, Internet) With Alliance Building
- Simultaneously view multiple Areas of the map With The Spy Cam
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Longer range fire from higher ground

Move and change formations with one click
A. Initial formation
B. In transit
C. Final deployment

Automatic secondary targeting when primary target is destroyed

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MECHANIZED ASSAULT & EXPLORATION
## PERFORMANCE TESTS

### How We Tested

We used the same test-bed for the PCI cards that we used in our November reviews: a 200MHz Pentium with MMX technology in an ASUS TX97-XE motherboard and 32MB of SDRAM. For the AGP reviews, we used an ASUS P2L97 motherboard with 64MB of SDRAM, running a Pentium II at 266MHz. (This is the same board that Falcon Northwest uses in its AGP rigs.) Both systems ran Windows 95 OSR 2.1 with the USB supplement installed. AGP systems had the updated VGARDF.VXD file as well.

The refresh rate for the P5SC system was set at 75Hz; for the AGP system, 85Hz. Both settings are typical for similar systems. Refresh rate is an important factor when running 3D, so we had to be consistent for test purposes. You might play around with your refresh rate to get a few extra fps. (Note that a higher refresh rate doesn't necessarily equate to a higher frame rate.)

We also used the same test software as before, with the addition of WipeOut XL. On the AGP systems, we also ran the 3D WinBench large texture scene, but the test ran inconsistently (even

### Tested This Issue

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from one test to another), so we don’t report formal results here. Besides, the FireGL Pro AGP board has 8MB of fixed local memory, so the large texture scene, which uses only 5MB of textures, would not have tested its AGP behavior. The testing software we used included the following:

**Synthetic Benchmarks**
- 3D WinBench 97 (final score)
- WinBench 97 Business WinMark (2D Windows GDI performance)
- TerraMark by Eidos Interactive (version 2)
- CBench SVGA test (DOS performance)

**Game Tests**
- FIGHT SIMULATOR 98
- WIPERO XL
- MOTO RACER (the Delphi shipping version, not the EA version)
- QUAKE at 640x480 (GL QUAKE where applicable; WinQUAKE for DirectDraw testing, and DOS QUAKE)
- DUKE NUKEM 3D

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ATI Takes Xcitemen to Xtremes

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Diamond Stealth II

We reviewed the Stealth II in December, but wanted to mention it again here for completeness' sake. We also ran the WinBench XL frame-rate test to complete the benchmark suite. The Stealth II uses Rendition's V2100 2D/3D accelerator. It is strictly a graphics card, without bells and whistles (no TV out, for example), but it's cheap and fast (except for 320x200 VGA graphics mode, which is almost irrelevant at this point in time). If you're on a tight budget, this is the card for you. Adding a Pure3D with this baby would give your system a terrific 1-2 punch: fast Direct3D performance, fast 3Dfx performance, and support for Rendition's RFdx API.

Price: $119 (4MB)
Contact: Diamond Multimedia, (800) 489-5946; www.diamondmm.com

APPEAL: Gamers on a budget looking for a solid performer.
PROS: Fast in 3D, 2D Windows, and DOS.
CONS: Slow in stock VGA graphics; no bells and whistles.

Canopus Total3D 128V

The Total3D 128V arrived in our offices unboxed, like a baby left on a doorstep. As with last year's Total3D, this year's model applies a few enhanced twists to a familiar formula. In this case, the RIVA 128. The 128V offers highly enhanced video capture capability. It's not really a substitute for a Targa board, but it does do high-resolution still captures (à la Play's Snappy frame Grabber) and software compression on the fly. There's no TV tuner, though, so you need to supply the NTSC source.

As with other RIVA 128 boards, this is one fast card—fast in 3D, fast in 2D Windows, and fast in DOS VGA. The only downside is RIVA's 4MB limitation.

Game performance proved to be stellar, too, though the V2200-based Thriller 3D and the ever-evolving drivers of the ATI Rage Pro are closing in. The only 3D oddity occurred in Flight Simulator 98, which showed some of the solid gray distance haze texturing evident in earlier RIVA drivers. According to Canopus, that problem has been fixed with recent driver releases. We also ran into a problem with WinBench 97:

Price: $229 direct from Canopus
Contact: Canopus Corp., (488) 964-4500; www.canopuscorp.com

APPEAL: Users wanting to capture snapshots from video in addition to having wicked fast 2D and 3D performance.
PROS: Fast 2D and Direct3D performance; nice video capture tool.
CONS: Drivers are a little silly; slightly more expensive than other RIVA boards.

ASUS 3DexPlorer

Another surprise this time out is the 3DexPlorer from Taiwanese motherboard giant ASUS, which also uses NVIDIA's RIVA 128. Whereas Canopus has delivered extra features for extra cost, ASUS uses its manufacturing prowess to bring to market the least expensive RIVA 128 board yet.

Perhaps in keeping with its price tag, it is a stripped-down board in terms of software. There's no software bundle and no fancy control panel. It's just an incredibly fast 2D/3D board, as we've come to expect from the new NVIDIA part.

But ASUS' relative newness to the graphics-card scene could be a serious concern. The 3DexPlorer isn't the first graphics card from the motherboard manufacturer, but it is the company's first foray into retail. Given the basic nature of the drivers, we wonder whether driver updates will be delivered in a timely manner. Already STB and Diamond have delivered several driver releases, while ASUS has released only one—and that still clearly based on an older driver drop from NVIDIA.

Still, it's 10 bucks less than the next-cheapest board, it's faster than Jeff Gordon at the wheel, and it does the job.

Price: $169; Contact: ASUS Computer International, (488) 474-0587; www.asus.com

APPEAL: People on a budget looking for a RIVA 128 board.
PROS: Fast, less expensive.
CONS: Support is a concern.
Creative Labs Graphics Blaster Exxtreme

The Graphics Blaster Exxtreme uses the TI implementation of the Permedia 2 chip to deliver decent, albeit unspectacular, 3D performance. As with the other Permedia 2 boards, the Exxtreme doesn't support alpha blending in Direct3D. The Windows 2D performance is no great shakes, however.

The overall 3D performance is relatively good, but the real news is that Creative delivers a full Windows 95 OpenGL driver. It's not perfect, though. For one thing, you need to run GL Quake with some options: glquake -Im 4 -pipcimp 1, and then it works only with an 8MB board. Running GL Quake with these options yielded a frame rate of around 20fps at 640x480. That's not great, but it's better than the DOS or Windows executable. It looks pretty good, but doesn't measure up to the image quality of the 3Dfx or PowerVR versions.

Other Direct3D tiles ran reasonably well, but like all the other Permedia 2 cards (except the ELSA board), the Graphics Blaster Exxtreme can't run DUKE NUKEM 3D at high resolutions.

The board comes in either 4MB or 8MB versions. It uses the same mini-DIMM memory expansion as the ATI board and will even accept the same SGRAM modules. Overall, it's a nice board for the pro user and occasional 3D gamer, but it's otherwise unspectacular.

Price: $129 (4MB fixed), $149 (8MB upgradeable), $169 (8MB)
Contact: Creative Labs, (408) 426-0600; www.creativelabs.com

AGP BOARDS

AGP (Accelerated Graphics Port) is Intel's new standard for connecting 3D graphics accelerators. It allows texture storage in main memory and currently exists only on Pentium II systems. (For more information, see Dave Salvator's sidebar on page 217 in CGW #160.)

One note about AGP graphics cards: You will have problems finding one on your retailer's shelves. Currently, most AGP graphics cards are going right into systems from big vendors and mail-order companies. If you hunt around, you may find the OEM versions, but check the feature set (the Diamond OEM Viper doesn't have TV out, for example). The ASUS 3DexPloerer is the only AGP card we know of that is shipping retail at the moment.

ATI Xpert@Play AGP

Installation and software for this ATI board is identical to the PCI version's. Boards with ATI's Rage Pro are the only graphics adapters currently shipping that use full AGP 2X side-band and AGP texturing. The Xpert@Play's AGP texturing mode doesn't work consistently, even on a properly configured system (you need OSR 2.1 with the USB supplement installed and a new version of VGARTD.VXD). Using 3D WinBench 97's large texture scene, we saw frame rates on a 4MB board increase from roughly 1.6fps (for the PCI board) to 20fps. However, sometimes it just didn't work—and we still saw 1.6fps on the AGP board at times.

If you ignore AGP texturing (you can always expand to 8MB of RAM), the Xpert@Play is a faster version of the PCI card—except that it couldn't run TerraMark. The flickering texture problem is still evident in FIGHT SIMULATION 98, as well. The 3D WinBench score of 170 isn't much behind the Diamond Viper 330 AGP. And when we used a new beta driver, the 3D WinBench boosted from 171 to 212.

We're looking forward to the shipping version of this driver. Overall, our comments about the PCI Xpert@Play apply here as well.

Price: $229 for 4MB (expandable to 8MB). TV tuner optional
Contact: ATI Corp., (605) 882-2800; www.alltech.ca

APPEAL: Those looking for an expandable general-purpose graphics card with fast 3D and good video.
PROS: Good—and improving—3D performance; up to 8MB RAM; good video.
CONS: Drivers are still works in progress.
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**ASUS 3DexPlorer**

This is the AGP version of ASUS's PCI card. Like the PCI version, it takes a stripped-down, minimalistic approach, but unlike other AGP cards, you can get it retail and through mail-order. Unlike its PCI counterpart, it choked on **TERRA**Mark, indicating that it had an earlier BIOS. Note that **TERRA**Mark is the only program with which we've seen early RIVA boards exhibit this behavior—even the full version of **TERRA**Mark doesn't exhibit the squashed image behavior. This is a fast board—the fastest RIVA 128 board (by just a bit) that we've seen. We experienced some lockups in **FLIGHT SIMULATOR 98**, but they disappeared when we switched to ASUS's 1.01 driver release. Our only concern is ASUS's driver releases—but it's still about the lowest cost AGP board you can get currently.

**Diamond Viper 330**

Diamond's PCI Viper 330 ranked as our CG Choice card in our November roundup, and the AGP version is virtually its equal. Throughout our testing the Diamond and STB cards stayed neck-and-neck in terms of benchmarking (once we turned off the cleverly hidden GDI bypass switch in Diamond's control panel). The Diamond driver is a bit older than the STB version, so it doesn't support fog table. Conversely, the Diamond BIOS doesn't have the problem with **TERRA**Mark—and if it did, we could update the BIOS on the Diamond card easily, since it has a flash BIOS. On the flip side (again), the STB card had active TV out, whereas the Diamond card did not.

**Diamond FireGL Pro**

We tested only one Permedia 2 AGP board: the FireGL Pro from Diamond. Some of its behaviors were much like other Permedia 2 boards (inability to run **DUKE NUKEM 3D** at high res, and no VESA 2.0 support in hardware). However, the 2D performance—in excess of 100 WinMarks—makes this a much better 2D board, even if you take into account the differences in CPU. The 3D performance was pretty good, but it was the slowest of the boards we tested.

Although the board ostensibly ships with a set of OpenGL drivers, we couldn't get GL **QUAKE** to run in Windows 95, even with the options that worked for the Creative Labs Permedia 2 board. Direct3D tiles ran quite well, and the board overall seems fairly smooth and polished for a Permedia 2 board. Now if only we could get GL **QUAKE** working....

**STB Velocity 128 AGP**

We've seen this board in various iterations in off-the-shelf computers from Dell and Gateway. The PCI version we tested two months ago got edged out by the Diamond board. The AGP version still does not have a flash BIOS, but aggressive driver releases have fixed many of our other concerns.

**Price:** $199 (4MB)  
**Contact:** STB Systems, (972) 234-8750;  
www.stb.com  
**APPEAL:** Gamers looking for an easy-to-use, very fast 2D/3D combo.  
**PROS:** Fast 3D; fast 2D; very fast DOS.  
**CONS:** 4MB limit.
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DEDICATED 3D ACCELERATORS

Matrox m3D

The very existence of the m3D amounts to acknowledgment from Matrox that its Mystique line of 3D accelerators is feature-poor relative to the competition and getting somewhat creaky on the performance front as well. Matrox has applied a bit of driver-writing talent to NEC's PowerVR chip to eke out a bit more performance than the Videologic version we reviewed last time around. Still, it generated the lowest 3D WinBench score in the roundup. This is indicative of the mixed performance we've seen with the PowerVR in Direct3D. The Direct3D games we tested ran relatively slowly on the m3D, at least compared to the competition. When you move away from Direct3D, though, the Matrox add-on begins to show some spunk. While the Direct3D version of Wipeout XL managed to pull only 20fps, the PowerVR-enhanced version chugged along at 25fps. The custom GL Quake driver got around 28fps, but the PowerVR's image quality wasn't quite as good as that of the 3Dfx.

Matrox has simplified the control panel: You can turn the D3D HAL either on or off—that's it. This enables the m3D to coexist with other 3D accelerators as needed. Installation is quite easy: You don't need a pass-through cable, just a free PCI slot and the installation CD.

The real kicker is the m3D's price: $99. If you're looking for a reasonably fast GL Quake card but are on a tight budget, the m3D could be for you. At this price, it's worth a close look.

Canopus Pure3D

With this 3Dfx add-on board, Canopus continues its strategy of enhancing products beyond what the competition offers. The Pure3D has 4MB of texture RAM, compared to the 2MB on most boards (the Diamond Monster 3D, for example). The board also features TV out (supporting both NTSC and PAL) for those big-screen deathmatches.

There's no software bundle, but the price is right: $179 for 6MB of RAM (2MB is for the frame buffer). The control panel is intuitive, allowing you to explicitly set the clock rate for the chip, and the Pure3D conveniently ships with 35ns EDO DRAM, which is capable of clocking up to 65MHz. Bear in mind, however, that the 3Dfx chips themselves are officially rated for only 50MHz speeds, and the Pure3D defaults to 50MHz. The panel also lets you specify the Pure3D as the primary 3D device.

Other than that, there's not a lot to say about the Pure3D. It delivers 3Dfx performance, with the added benefit of a bigger texture space, which can prevent the occasional pauses you sometimes see as additional textures are loaded in a game. Conversely, game developers could deliver bigger, richer textures for better image quality. Its Direct3D and GL Quake performance was as fast as we've come to expect from a 3Dfx add-on board. Canopus has put out a real winner in the Pure3D.

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Strictly Experimental

Here's a little toy that was rough around the edges when we played with it, but it is otherwise very, very cool. We advise leaving your credit cards at home, however.

Obsidian 100SB

The Obsidian 100SB from Quantum3D is the living, breathing embodiment of "over the top" for 3D gaming. At $800, it's not an impulse buy for most of us. The 100SB is basically two complete 3Dfx boards on one PCI board with a PCI bridge chip connecting them. It's the single-board equivalent of the dual-board setup we first saw in Falcon Northwest's high-end rig.

At testing time, the drivers were still unstable. For example, the board couldn't run 3D WinBench 97, possibly due to how it combines the dual texel processors. There are two texel processors, each with 4MB of dedicated texture memory. However, there's effectively only 4MB of texture memory, since each individual 3Dfx chipset renders every other scan line. This allows the board to have an incredible fill rate of around 75 megapixels per second.

Take GL Quake, for example. Imagine GL Quake at 65fps. Egads. Then, there's TerraMark, in which we saw frame rates no less than 70fps and as high as 130fps (100fps at the start of the scene). Warez XL clocked in at 84fps. Did we say this was fast?

The 100SB is a big board—an honest-to-God full-size board, which we haven't seen in an eon (measured in computer time). Whether you get one or not is up to you, but if you do, it will require some care and feeding. But then, so does a racehorse.

Price: $795
Contact: Quantum3D
(400) 919-9999; www.quantum3d.com

It's a Wrap

Given the boards we reviewed in November and this crop of cards, the choices are tough. If we focus just on this month's set of boards, there are some clear standouts. The Canopus Pure3D is a hands-down winner, offering 3Dfx image quality and speed at a great price. The Permedia 2 boards proved interesting, but ultimately didn't seem really well suited for gaming. The Voodoo Rush boards work pretty well, but their 2D performance is far behind the others. Of the 2D/3D combo boards, our pick is the Thriller 3D from Hercules. Its image quality seems a bit better than that from the RIVA gang, and you can get it in an 8MB version. The extra time Hercules has taken to polish the board has paid off. Of the RIVA 128 boards, the ELSA is probably your best value, while the Canopus offers slightly superior video capture (if that's your thing). ELSA has a good record of developing robust drivers and supporting its products.

Of the AGP crowd, the STB Velocity 128 stands out; newer boards will probably have a more recent BIOS, but the effort STB has put into its drivers definitely shows. The ATI card strikes us as quite interesting, and once the driver situation stabilized, it could also be a compelling choice. The Diamond does offer a flash BIOS, but Diamond hasn't quite matched STB's pace on releasing new drivers. Our nod on the AGP front goes to STB—for now.

Finally, the matched pair of ASUS boards, combining fast RIVA 128 performance with low prices, are interesting choices, but their relative lack of polish and support gives us reason to pause.

If you want the Ferrari of 3Dfx accelerators, there's always the Obsidian 100SB. It's priced accordingly, and will require some patience. Just remember that a year from now, there will be something faster and cheaper.

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Processor Wars

AMD, Cyrix, and Intel unveiled plans at the recent Microprocessor Forum that could dramatically affect the PC market in the coming years. AMD and Cyrix are developing new processors to increase floating-point performance—an area where Intel has long dominated.

AMD's upcoming K6 3D and K6+ 3D chips will add 24 instructions that, like MMX instructions, will use the CPU's floating-point registers to help accelerate the CPU portion of the 3D pipeline. But unless games are written specifically to take advantage of these new instructions, the benefit may not be that great. The K6+ 3D will have an onboard 256KB Level 2 cache that will run at the processor's core speed. In addition to speeding up access to the L2 cache, having it onboard takes that traffic off the main memory bus, allowing other tasks to execute faster. The K6 3D is due in the first half of 1998, and K6+ 3D is due in the latter half of the year.

AMD's other announcement was for its Super 7 CPU socket to help further boost performance of their CPUs. This new socket's main highlight is that it boosts main memory's bus speed to 100MHz.

For its part, Cyrix is working a new CPU based on its current 686X/MX architecture, code-named Cayenne. Like AMD, Cyrix has implemented its own unique instructions, dubbed NMKFP. And while these new instructions will help accelerate 3D graphics, the benefit to gamers may not be appreciable unless the game is written to use those new instructions. Unlike AMD however, Cayenne will feature a dual-issue, pipelined floating-point unit that should also improve floating-point performance, and is slated for a late 1998 arrival.

AMD made other news with some initial information about its next-generation K7 processor. Intel, despite Federal Trade Commission inquiries into antitrust practices, has opted not to license its Slot 1 CPU bus interface to other x86 CPU makers. The move has left these other players—AMD, Cyrix, IDT/Centaur—to seek out their own higher-performing CPU interfaces. AMD seems to be going it alone in licensing Digital's new 21264 CPU interface for its K7 processor. Meanwhile, all the non-Intel x86 CPU makers are in discussions about a single standard for Slot 1 or an alternative for their next-generation processors. This new design could very well spurn the motherboard market, perhaps creating more problems than it solves.

Intel also made a splash in unveiling details about its IA-64 architecture being co-developed with Hewlett-Packard. It will implement a new technology termed EPIC (explicitly parallel instruction computing). The first CPU, Merced, is slated to ship sometime in 1999. —Dave Salvator

Faster Storage

For those of you who still aren't satisfied with your 24x CD-ROM drives, performance CD-ROM specialist Plector is prepping its UltraPlex CD-ROM drive. The UltraPlex is a CAV (constant angular velocity) drive that runs at a minimum 14x and maximum 22x speed. It's also the first CD-ROM drive to support Ultra SCSI speeds—up to 20MB/sec burst data transfer. With an average access time of 85 milliseconds, the UltraPlex's specs make it nearly as fast as hard drives of only a few years ago. In a new twist, Plector will be offering a caddy model alongside a tray model. Customers had demanded the return of the caddy after Plector dropped it in its 12/20Plex.

Plector is also shipping the PlexWriter CD-Recordable drive, which can burn CDs at 4x speeds. Unlike most CD recordables, this drive can act as a 12x CD-ROM reader as well. Plector is shipping the drive with a one-button backup tool that will even create a bootable CD-ROM. Look for the UltraPlex to be around $225 on the street and the PlexWriter to come in under $500.

Until now, most computer users could only eye high-performance, 7200RPM drives with envy. Hard drives that spin faster than 5400RPM have long been expensive and available only to those with SCSI interfaces in their PCs. Hard-drive giant Seagate recently announced a pair of 7200RPM UltraATA (a.k.a. UltraDMA/33) hard drives: a 9.1GB model and a 6.4GB drive.

Rounding out the mass-storage news is Iomega's announcement of the Jaz 2. Building on its successful Jaz 1GB removable hard-drive technology, Jaz 2 boosts capacity to 2GB and performance to over 7GB per second over the SCSI bus. The list price will be around $650 for the external version.

—Loyd Case

ACRONYMO' THE MONTH

BEDO
Burst EDO: a type of EDO (Extended Data Out) RAM that's been advertised by motherboard makers. Trouble is, BEDO never really got off the ground. What's more, new systems shipping with Intel's 430VX, 430TX, and 440LX chipsets now support SDRAM.

HARDWARE PIPELINE

Product | E.T.A.  
--- | ---  
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S3 VIRGE GX3 | Q2 '98
Freedom of Choice

A Wee Bit of Fire and Brimstone

Kat, people, listen up. Today I'm climbing on my soapbox to rant about freedom of choice (no, not that—this is about DirectX). Then I'm going to climb off and talk about how to remove, delete, eliminate, and otherwise yank DirectX 5.0 from your system and start over. Then I'll climb back on my soapbox and rant some more. Got that? Now that we're locked and loaded, let's move on.

MEA CULPA

Last month, I wrote about the new DirectX 5.0 that's been shipping with some new games and graphics hardware. I wrote at length about the DirectX 5.0 control panel. Practically before the ink was dry on the paper, I got email from users asking me where the control panel was—they didn't have it. Guess what—most of you don't. I had installed my copy of DirectX 5.0 from a Microsoft FLIGHT SIMULATOR 98 beta disk. It turns out that the FS98 beta release came with the DirectX developer's kit (SDK). I had the full SDK installed on a separate system, but had assumed that the FS98 came with only the normal user binaries for DirectX 5.0. Silly me. It seems that the control panel is for developers only. God forbid that users should have control over their own systems.

WHERE IS IT? There's a good reason most of you couldn't find the DirectX Control panel discussed in last month's column.

Continued on pg 196

Voodoo 2 News

To celebrate the IronWorks' new home here in the Hardware section, we've got a big one for you. So here it comes.

We've all heard rumblings about 3dfx's much-anticipated Voodoo 2 chipset. Well, the first board using this chip is on its way from Creative Labs. Called the 3D Blaster Voodoo 2, this 6MB board will feature one pixel engine and two texture processors, which will combine to deliver a fill rate of 50 Mpixels/second of trilinear filtered pixels, roughly twice that of the Voodoo chipset. The 3D Blaster Voodoo 2 will be a PCI, 3D-only part, priced around $249 that should be shipping in January. Bundled game titles with the new product were still unannounced at press time. Diamond Multimedia, which leads the Voodoo charge with its Monster 3D, is rumored to also be working on a Voodoo 2 part, due sometime in the first quarter of 1998.

NVIDIA: Bumps in the Road

Problems have surfaced with NVIDIA's new RIVA 128 chip. Some users have reported polygon "cracking" problems, where small gaps appear between connected polygons with cards based on NVIDIA's RIVA 128 chip. In our 3D WinBench 97 testing of a wide variety of these cards, we noticed small amounts of polygon cracking, though we also noticed this behavior on other 3D chipsets. NVIDIA states that it has identified the problem in its drivers, and will be distributing updated drivers to all its boardmaker customers. Check your graphics board vendor's Web site for updated drivers that remedy this problem. Another downside to the RIVA 128—the inability to run GL QUAKE—should soon be a thing of the past. NVIDIA has been hard at work on an OpenGL miniport driver to run GL QUAKE and all its derivatives. The driver is expected sometime in December. Again, keep checking your board-maker's Web site for updated drivers that include the new miniport driver.

Want the skinny on the legion of 3D offerings currently out there? Tune into our second 3D graphics this month, in which we tear into 17 new boards. —Dave Salvador
including the ability to remove or reinstall DirectX at will.

It seems that the computer business, as it explores the "consumer" market, is going through a rather odd thought process. You see it on off-the-shelf systems, which have all manner of resource-sucking friendly shells over Windows 95. You see it in the attitude of the developer who informed me that users could "get into trouble" with the DirectX 5.0 control panel. The computer companies, in collusion with the boys in Redmond, have decreed that computers should be as easy to use as toasters.

Get real. Computers are not toasters. However, there is a device that's analogous. Almost everyone in America has one, and it costs a bundle—many years' income for some people. It takes several weeks just to learn the basics and years to master. Some people never get it right. Some people become so fascinated with them, they delve into the innards and share their nifty discoveries with anyone within earshot.

It's called the automobile.

There was a trend 15 or so years ago to "dumb down" the manuals you got with a new car. About the only thing the car manual would tell you was how to turn it on. Car dashboards were similarly dumbed down, too, with idiot lights replacing more informative gauges. I mean, geez, all that oil pressure and temperature stuff was too confusing for most people. The manuals, well ... my goodness, who would want to change their own oil, anyway?

The drivers (users) certainly didn't appreciate this dearth of information. Some new car manuals actually discuss oil changes, and a rare couple actually discuss changing items such as air filters and spark plugs.

Microsoft and the hardware manufacturers need to take a cue from the car companies, who learned through bitter lessons that people want more information and control, not less. Most people will never take advantage of it (just as many will never actually look at an oil pressure gauge or even check their own oil level). But it's certainly comforting to know it's there. Can you get into trouble? Sure you can—even much around with a carburetor? Talk about trouble....

So what if you do want the DirectX 5.0 control panel? You can get it. First, try the Microsoft Web site's DirectX page—www.microsoft.com/directx. Look for the SDK download section. The smallest download you can get is a file called www.microsoft.com/directx/Resources/downloads/idxSDK.exe. It contains all of the DX 5.0 driver binaries and the control panel. Unfortunately, it's 8.8MB. Another way is to do a Web search for "directx control panel." Some enterprising people have already begun putting up just the control panels on the Web.

UNINSTALLING DIRECTX 5.0

If you don't have the patience for an SMB download, you can attempt to uninstall DirectX 5.0 yourself. This will allow you to start over with a fresh DX 5.0 (or even DX 3.0a) install. Here's how.

First, back up your registry. There's several nifty tools on the Windows 95 CD that can assist you in this, such as CPBGBACK or ERU. You can find them in the root directory on your Windows 95 CD-ROM. You need to back up your registry just in case something gets really screwed up, because you're going to hack the registry.

Now run REGEDIT (Figure 1).

You want to go to HKEY_LOCAL_MACHINE\Software\Microsoft\section and delete the DirectX, DirectDraw, DirectPlay and DirectX entries (Figure 2).

Now either reboot to the DOS prompt or use Explorer to delete the DirectX 5.0 files, which are in the WINDOWS\SYSTEM directory: ddraw.exe, dssound_d.exe, dinput.dll, dinput8.dll, dinput8.lib, dinput8.dll, dinput8.lib, and dinput8.dll. Also make sure to delete the joystick control panel and joystick driver: xvidyadrv and joystcpl. One warning: Some newer graphics cards install DirectX 5.0 and seem to want it present. Your system may be unstable, so be wary. I've found you can usually reinstall DirectX and then be off and running even with these newer cards.

Now you can restart the system and reinstall whichever flavor of DirectX you want.

BACK TO THE BULLY PULPIT...

In the process of writing the various hardware reviews that grace the pages of this magazine, I go through a lot of gear. Being a reviewer has one key side benefit: I get a pretty good idea of what I want to spend my money on—a luxury most folks don't have. So it really annoys me when I come across a hot new graphics card like the new RIVA 128 boards—and I can't run GL HEXEN. (Nothing against 3Dfx—I just want to have a choice, dammit.) I'm not taking sides in the DirectX versus OpenGL fight for this. I just want to be able to use any graphics card I want to play the games I want. That's what standard APIs are all about.
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Windows® 3.1 or Windows™ 95

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Windows® 3.1 or Windows™ 95

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Instead, I'd like to offer some concrete suggestions that would make things a lot better:

- Microsoft could release its Direct3D wrapper for the GL. QUAKE engine. It doesn't want to do this because it would be a support headache... as if Microsoft really supported DirectX users. Alternatively, the company could release it to the graphics card manufacturers, who would probably be willing to absorb a lot of those support headaches. Or release it to some other third party, along with source code.

- Microsoft could allow developers to release OpenGL MCDs for Windows 95. Yeah, it would be slower than a native mini-GL or even a full OpenGL ICD, but it would at least let me use whatever damned card I want.

- Silicon Graphics, the original inventors of OpenGL, could aggressively support OpenGL ICD and MCD hardware driver development under Windows 95. It would certainly make for a nice marketing coup.

As it stands, the hardware guys have to do either their own mini-GL port (a la 3DFx or PowerVR) or a full ICD (installable client driver) a la NVIDIA's RIVA T&2, which is a time-consuming process.

That's all I want—freedom of choice. That's what a free market is supposed to be about.

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This is the 125th Anniversary of Arbor Day, the tree planters' holiday. This year, The National Arbor Day Foundation asks you to plant Trees for America, and provide for their care.

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A Gamepad for Grown-Ups
by Dave Salvator

Finding the right gamepad is a difficult proposition. The ThrustMaster Rage 3D gamepad is notable not only for its larger size (to accommodate adult hands), but also for its "lizard-eye" thumb dish, which has two settings: one with a more relaxed throw allowing for more subtle "3D" control, and a 2D setting, in which the throw is greatly reduced to allow for much quicker movements.

Installation is a breeze. Plug the unit into your joystick port and feed the driver CD-ROM, and the unit is good to go. Rage 3D features ThrustMaster's proprietary DirectConnect technology, which allows multiple ThrustMaster controllers to be simultaneously connected, and you can then pick and choose which controller(s) will be active. The downside is that DirectConnect works only with ThrustMaster digital controllers. ThrustMapper, Rage 3D's programming front-end, is pretty straightforward to use. If you have several Rage 3Ds daisy-chained together, mapping will then apply to all of them.

The unit's overall feel is pretty good, though I found myself liking it almost exclusively in the more responsive 2D mode to get quick enough response. NBA Live '97 could use only buttons one through four, but on the more twitch-sensitive Virtua Fighter 4, I could execute just about all the moves I knew. And after a couple of hours of testing, my left hand felt tired, but not as sore as after a marathon session with traditional gamepads.

All told, Thrust has come up with an innovative design twist on the conventional gamepad, and bundleware includes F1s Moto Racer and PowerPlay '98. The larger size makes for less fatigue after prolonged usage, and for gamers with large paws, this is one to check out.

> **APPEAL:** Gamers with larger hands tired of "post-game claw syndrome."
> **PROS:** Good feel; easy programming; comfortable in larger hands.
> **CONS:** May be too large for gamers with smaller hands; daisy-chaining works only with other ThrustMaster devices.

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Did Someone Say "NASCAR"?

by Greg Fortune

ThrustMaster, no stranger to the driving controller market, has got a new offering to serve up in its NASCAR Pro Racing Wheel. The ThrustMaster software installs easily under Windows 95 and provides support for multiple game controllers. You can easily calibrate the unit through the ThrustMaster Panel, which configures the Windows 95 joystick control panel for you. The wheel holds its calibration fairly well, and needs calibration only at the beginning of each session.

The setup features a slide lever, a two-button wheel, and gas and brake pedals. The pedals support combined and separate modes, which determine whether or not the two pedals are mapped as halves of the same joystick axis; some games prefer one over the other. The biggest annoyance here is that to change the pedal mode, you have to power down your computer, make the change, and then restart.

The layout of the controls works well, but the wheel feels a bit small and the buttons could have been placed slightly farther out on the spokes. The pedal positions are also awkward, extending almost vertically from the base, and can be uncomfortable and cumbersome to use if you don't have much leg room under your desk.

One final note: This setup worked flawlessly with every game I used for testing, except one. Yes, the NASCAR Pro Racing Wheel doesn't always want to be recognized by... get this... NASCAR Racing 2. I eventually got it working, but I almost dubbed it the "NASCAR No Racing Wheel."

I expect a lot from ThrustMaster gear, but sadly, this wheel doesn't quite make the grade. It's a good system, but several shortcomings keep it from being great. It will serve you pretty well, but be aware of its rough edges before you buy one.

Appeal: Those who just have to have ThrustMaster.

Pros: Solid design; holds calibration well; everything's included.

Cons: Size and layout not optimal; that NASCAR irony.

Price: $179.95
Vendor: ThrustMaster
(503) 615-3200
www.thrustmaster.com
Reader Service #: 317

Netgear Network Starter Kit

One-Stop Network Shop

by Loyd Case

Most strategy and simulation games these days have built-in multiplayer capability. While playing with anonymous strangers on the Internet has its charms, there's nothing quite like fragging your best friends in an up-close-and-personal way. If you have a second computer, or want to get together with friends for some network gaming, then the NetGear Network Starter Kit may be right for you.

The starter kit is a complete "network in a box" solution, and is pretty representative of a number of similar products out there. NetGear's starter kit comes complete with a pair of PCI Fast Ethernet cards (capable of either 10Mbps or 100Mbps); a 4-port, 10Base-T hub (100Mbps); two CS, Category 5, twisted-pair cables; a floppy with drivers; and documentation.

The manuals are a bit sparse, but are relatively complete. Installing the 2 PCI cards is straightforward, but you do need to read the manuals. NetGear's PCI cards use an Ethernet chip made by DEC; Windows 95 recognizes the chip and would install the drivers for said chip—but NetGear's docs specifically say not to let Windows 95 install the drivers. Windows 95, being the orneriest creature it is, did list a DEC chip network card in the Device Manager, which I had to delete. Once past that little hurdle, both cards worked quite well.

The four-port hub is very compact, not much larger than a paperback book. The supplied twisted-pair cables had sturdy connectors at each end and were reasonably flexible (some Category 5 cables can be very stiff and hard to manage).

Once Windows 95 networking was configured, gameplay proceeded without any apparent performance problems. The floppy disk also included DOS IPX/ODI drivers (including LSL for out-of-the-box IPX support), Windows NT, Windows 3.11, and Netware drivers.

The NetGear Network Starter kit is a solid value and is perfect for the gamer interested in network gaming.

Appeal: Anyone interested in trying network gaming with a minimum of fuss.

Pros: Everything you need for a LAN in one box.

Cons: Setup is a little tricky; sparse documentation.

Price: $149 (street)
Vendor: Bay Networks
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www.baynetworks.com
Reader Service #: 316

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Dash Away MFD Blues

by Loyd Case

In modern combat airframes, one thing that's used to simplify the plethora of controls is a panel of buttons that usually lies close to — or in some cases surrounds — the multifunction displays (MFD). I've always yearned for a setup like this, but didn't want to go to the length of building a virtual cockpit in my basement.

And then along comes Saitek, with its PC-Dash. Using the same technology featured in the chess boards in the company's stand-alone Chess computers, the PC-Dash is a fully programmable device that plugs into your keyboard port with a pass-through cable. There are 36 touch-sensitive hotspots and three "shift" toggles. You can have more than 180 controls in all. There's also a gamepad-like 8-way control and two buttons that can be set up as fire buttons.

The programming tool is a straightforward, Windows-95 app. While its relatively easy to use, some of the controls are not entirely intuitive. For example, when you enter keystrokes, the PC-Dash defaults into an automatic mode that makes it impossible to backspace or correct an error. There's a manual entry mode, but that switch is buried in a submenu. You can assign each hot-spot multiple keystrokes, as well as Control and Alt combinations. You can download programs, as well.

One cool feature of the PC-Dash is the ability to print out your own control sheets in color, if you're a color printer. The PC-Dash also has a built-in barcode reader, which allows you to program the controller without downloading the whole program. Every control sheet you print includes a barcode to ease reprogramming. Saitek will make additional setups and printable images available for free on its Web site.

Other than the somewhat awkward user interface on the programming tool, there are few downsides. It does take up a healthy chunk of desk space. There are tilt-up feet that let the PC-Dash sit at an angle, but they don't have rubber suckers. Still, the ability to have a complete control setup — labeled, no less — is pretty appealing.

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Reader Service #: 319

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REVIEWs

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“Massive splatter and gore, astoundingly bad voice acting, inconsistent graphics, clumsy interface, noisy sound, and rampant sexism. And despite all of its failings, it's actually fun.”

—Mark Clarkson, reviewing **Resident Evil**

HOW DO WE RATE?

We review only finished products, not prerelease versions. The ratings are as follows:

- **Outstanding**: The rare game that gets it all right. The graphics, sound, and gameplay come together to form a Transcendent Gaming Experience. Our strongest buying recommendation.
- **Very Good**: A high-quality game that succeeds in many areas. It may have minor problems, but is still worth your money, especially if you're interested in the subject matter or genre.
- **Average**: A mixed bag. It can be a game that reaches for the stars, but falls short in several ways. It can also be a game that does what it does well, but lacks flair or originality.
- **Weak**: A game with serious problems. Usually buggy, seriously lacking in play value, or just a poorly conceived game design—you should think long and hard before buying it.
- **Abysmal**: The rare game that gets it all wrong. This is reserved for those products so buggy, ill-conceived, or valueless that you wonder why they were ever released in the first place.
A Hex on Quake

A Competent Conclusion to the Serpent Rider Trilogy

by Ron Dulin

Raven Software has made a name for itself using id Software's technology to create competent shoot- ers with a slight role-playing flair. It altered DOOM for HERETIC and did the same with DOOM II for HEXEN. Now, it has revised QUAKE (and bits of the QUAKE II engine) to create HEXEN II. HEXEN II is the third game in Raven's Serpent Rider trilogy, and it tries to deliver the single-player experience that many felt was lacking in its progenitor. It's a commendable effort, one that at first glance appears to break from the traditional blueprint. But there are some problems that keep it from standing alongside the classics.

ROLE-PLAYING LITE

HEXEN II doesn't claim to be a role-playing game, and no one is going to mistake it for DUNGEONS & DRAGONS. There are no nonplayer characters, no quests (in the traditional sense), and, except for the fantasy theme and four classes, no real role-playing elements.

There are four classes: Paladin, Crusader, Necromancer, and Assassin. Each has slight advantages and disadvantages, and as they gain experience, they also gain new abilities, such as the Necromancer's ability to collect health-restoring soul-spheres from dead enemies and the Assassin's ability to hide in shadows. The weapons-set differs for each of the classes, both in appearance and in performance. The Paladin's weapons are primarily close-range implements, while the Necromancer relies on spells.

The one drawback to the weapons-set is that it is very limited — each character has only four weapons in his arsenal (or eight, if you count the fact that these weapons have different effects when "powered up" by the Tome of Power). Offsetting the meager weapons selection is the wide range of power-ups, which range from offensive supplements, such as the Stone of Summoning (which invokes a huge imp to fight at your side) and the Glyph of the Ancients (an explosive device that works differently for each class) to more basic power-ups such as the Ring of Flight, the Invisibility Sphere, and the Boots of Speed.

The story itself does little to further the role-playing elements. The accompanying book, The Chronicle of Deeds, lists plenty of cliché fantasy origins for items and characters (the Ring of Flight was originally commissioned by "King Yasvin the Unruly"), but these tidbits have little or no impact on the game. Apart from some sporadic notes left around the levels, you'll have no contact with any plot elements whatsoever. The story is little more than a loose thread tying together the game's diverse locations.

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THREE YEARS OR 26,280 HOURS. WHICHEVER COMES FIRST.
WHAT'S THE HUB, BUB?

Like its predecessors, Hexen II is divided into hubs—groups of interrelated levels that the gamer must traverse in a nonlinear fashion. Hexen II has five hubs, each with its own theme. There's a medieval village, a Meso-American temple, Egyptian ruins, a Greco-Roman environment, and a gothic cathedral. The first four hubs end in a confrontation with one of the Four Horsemen of the Apocalypse (famine, death, pestilence, and war), and the final hub ends in a confrontation with the Serpent Rider Eidolon.

The theory behind hub design is that it will help remove the linear key hunt that plagues most single-player action games. Players must go back and forth between levels, hunting for objects and opening passages that grant access to new areas.

Multi-Role-Play

After Quake's release, many people were protesting its uninspired single-player component. The game was geared for the multiplayer experience from the beginning, and it showed. Hexen II falls into the opposite trap. The single-player game was obviously the focus, and the multiplayer options seem like an afterthought.

Hexen II offers the basic options, including 2–16 player deathmatches and cooperative play over the Internet or on a local-area network. Unfortunately, there are no modem or direct-connect options. The five multiplayer maps are decent for deathmatching, but the majority of the game's single-player maps aren't suited for all-out fragfests.

The distinct elements of Hexen II have varied effects on deathmatches. The idea of character classes and experience points make things a little more interesting—players become more powerful as they roll the heap over the bottom. Those on the bottom of the heap also get more experience for taking out advanced players.

Unfortunately, the power-ups that help add diversity to the single-player game have an adverse effect on the balance in multiplayer. The game basically deteriorates into a race for the most powerful items, and those with a good supply of Glyphs of the Ancients, Stones of Summoning, or Force Cubes will usually emerge victorious against even the most powerful adversary.
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IF DOGS FAIL, BRING IN TEAR GAS.
IF TEAR GAS FAILS, BRING IN HELICOPTERS.

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Experience extreme Rapid Eye Movement in this visually spectacular 3DFX action-adventure game. Dreams to reality... live out your wildest, most vivid dreams... if you dare.
The design has its benefits. The hubs are certainly nonlinear, and the ability to move from one level to the next with complete freedom creates the sense of a huge environment.

But the use of hubs, especially in Hexen II, has drawbacks, too. Most notable is that once you clear a level on your first pass, subsequent passes are much too boring. Also, the puzzles in Hexen II aren't very notable; most require you to push a few buttons in a certain sequence. Even the attempt to break from the traditional key hunt is only partially successful. While Hexen II has you hunting artifacts like a Serpent's Heart or Canopic Jars, these items simply replace keys as the objects you use to move on.

When the hub design works—as in the Meso-American levels, where your goals are clear and the levels follow a logical progression—it shows that an action game can go beyond the blueprint set by Wolfenstein 3D. When it doesn't work as well, as in the Egyptian levels, the hub design is confusing and frustrating. There isn't enough guidance or information to allow you to understand how your actions are affecting the environment. Nor is there any clear indication of what you need to do next.

A SPORADIC AFFAIR

Without question, Hexen II is the most visually striking action game of its kind to date. There is more visual intricacy in one of Hexen II's Greco-Roman murals than in all of Quake's levels combined. As with much of Hexen II, though, every great feature has a downside. The detail comes at a price. The levels take a great deal of time to load sometimes as long as a minute or more. The rich textures also cause some slowdown during gameplay, drastically reducing frame rates if you turn too quickly in certain areas.

The enemy animation is as impressive as the environments. Mummies crawl along the ground after their limbs have been rent, and War's massive Clydesdale rears up as his master throws axes at you. As with the weapons, though, there isn't much variety in the animation. There also isn't a wide variety of monsters; each hub has one native enemy, and the rest are just different-colored versions of the spiders, scorpions, and archers you've seen before.

There are also numerous other technical glitches—not "bugs" per se, but issues that left me feeling that the game was released in an unfinished state. The haunting soundtrack is defaulted to the "off" position, which, for the first few levels, led me to believe that the game had no music. Certain hololys don't work as described, and accidentally "quickloading" when you haven't "quicksaved" is a one-way ticket back to the Windows desktop. Many of the technical problems are fixed in the 1.09 patch, but the sheer number of fixes in the patch indicates that the game was released before its time.

Despite its problems, Hexen II is a solid choice for the Quake fan looking for a slightly more substantial single-player experience. It's not going to change the face of action gaming, but it does offer enough diversity and challenge to keep things interesting.

**APPEAL:** Quake fans looking for a slightly more substantial single-player experience; gamers who want to show off their 3Dfx card.

**PROS:** Intricate and diverse environments; excellent animation; occasionally inspired level design.

**CONS:** Lengthy load times; mediocre puzzles; lack of variety in weapons and monsters; lack of guidance in some hubs.

WHOA, NELLIE At the end of each hub awaits one of the Four Horsemen. War is pictured here.

Think of him as an anti-terrorist tour guide.

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Console Cornucopia

LucasArts' Gorgeous N64 Port Illustrates the Good and the Bad of Console Gaming

by Martin E. Cirulis

These days, it seems like you can't swing a dead Ewok without hitting a Star Wars product. Toys, books, magazines, comics, and games have now turned into a mythology into our faces daily, and all this with the new movies only a couple years away. Besides delivering high-quality Star Wars computer games (not counting that Yoda face, of course), LucasArts has a history of courting the hideously rich console market, most recently with Shadows of the Empire, its graphically stunning Nintendo 64 game. Now for the first time, LucasArts has translated one of its console titles to the PC so that even us gameplay elitists can get a taste of Shadows' action.

ENTER: BIFF RIPROCK!

Shadows loosely follows the book of the same name, which fills in the blanks between the second and third Star Wars films. We follow the adventures of a Han Solo wannabe, Dash Rendar (Ok! What a name!), as he tracks down Boba Fett, so that our regularly scheduled heroes can retrieve the Solo-sicle on schedule in Return of the Jedi. In terms of the game, this translates into a series of 10 arcade sequences, loosely linked to form a storyline, though the only actual continuity is the number of spare lives you bring from one sequence to the next.

Roughly, there are three types of games offered here: a simple flight sim, a first-person shooter, and a rail shooter game. Of the three, the flight-sim portions, especially the game's initial offering, in which you fly a snowspeeder in defense of the Rebel Base on Hoth, are the most satisfying in terms of action. The Doom portions look great and have some nice twists, like the train-leeching sequences on the Junkyard world, but they're too sparsely populated and dawn

DEAD END? The least exciting parts of the game are the average first-person sequences.

STAY ON TARGET The flight sequences are the best part of the game. The Battle of Hoth, in which you take down AT-ATs with tow cables, is particularly fun.

THE ROOT OF THE PROBLEM

The only real problem for most PC gamers is that Shadows is what it is: a console port. It thus brings with it all the limitations of its original form: lousy game-save options, limited freedom in gameplay, nonboss opponents that act more as flashy targets than dynamic and dangerous enemies, no multiplayer options, and nonexistent replay value (three difficulty levels don't count). LucasArts has done nothing, outside of upping the graphics a bit, to take advantage of a more open-ended PC platform.

On the other hand, Shadows of the Empire is far superior to the last two attempts (Rebel Assault 1 and 2) that LucasArts made at bringing console sensibilities to the PC market. It's a good action game, and the 10 sequences are large and offer a lot of gameplay. This is an excellent introduction to some of the best things the console market has going for it—but it's just not much more.

Price: $49.95
Minimum System Requirements: Pentium 90 for 3Dfx machines (P120 for all other 3D cards; P133 recommended for all chips), 16MB RAM, 3D accelerator, 4x CD-ROM drive, Windows 95-compatible 16-bit sound card.

Multiplayer Support: None.

Developer: Jon Knobles
Publisher: LucasArts
San Rafael, CA (888) 532-4263
www.lucasarts.com

DR

CGW

JANUARY 1998
Drive too loose, they'll call you wild.
Drive too fast, they'll call you reckless.
Drive too slow, they'll call you gutless.
Win, and they'll say much worse.

IT'S NOT JUST A GAME.
Samurai Bored
3DRealms' Newest Action Game Is Too Little, Too Late
by Thierry Nguyen

SHADOW WARRIOR has been getting much publicity—including from writers in this publication—for its racist characteristics. Well, let's put the racism card on the table now: Some among you will be offended by the game, from its use of a mock-Chinese accent and Himishima cracks to its "Coolie Mines" levels. Others will not. You make up your mind about the stereotypes, this article is about whether the game itself is worth a look.

SHADOWY STORY
The plot for SHADOW WARRIOR can only be described as paper-thin. As Lo Wang, you hunt down the evil Zilla through 20 levels of zombies, ghosts, and ninjas to avenge the death of your mentor, Master Leep.

This game, as does Blood, offers interconnected levels that flow together logically, which makes it an improvement over Duke: Navigator in terms of continuity.

But the actual level design is a mixed bag. While a few levels are well designed in terms of game flow and enemy placement, others suffer from the "hard-to-find-key syndrome." A few of the levels have puzzle elements, such as pushing tiles or manipulating remote-controlled drones, but they are too few and far between.

FURY OF THE NINJA
Enemies sunder from inconsistency as well. Most of the time, you'll fight zombie ninjas (who look nothing like ninjas but actually have decent AI). They duck to avoid your blasts, and some will blind you with flash bombs and pummel you with magic napalm. These ninjas, the game's basic grunt units, turn out to be the most interesting of a dull bunch of enemies.

The ripper ranks as the most disappointing enemy. Maybe the monster designers at 3DRealms played a little too much DOOM or Quake, as the ripper is just another sloth-loving beast that jumps at you and hacks away with its claws—much like Quake's Bend or DOOM's demon.

The infamous cookie is none-too-impressive. It just basically runs around and explores when it's near you, and the resulting cookie ghost is hardly threatening. The female ninja is the only other enemy worth mentioning, not because she uses Sticky Bombs (as you do), but because she looks more like a dominatrix than a ninja.

SWORD OF THE SAMURAI
The weapons don't raise the excitement level much; the only weapons worth noting are the katana blade and the ripper heart. The katana blade is the most powerful default weapon I've ever seen. While many other games have pathetic fists or knives that are never used, the katana blade inflicts about 100 points of damage per swing and can serve as your weapon of choice for most of the game. The other worthwhile weapon is the ripper heart, which conjures a "Shadow Wang" to fight alongside you for a while.

Many of the new BUILD engine features have already been featured in other 3D games. Rooms over rooms? Done in ABANDERATOR and Blood. Controllable tanks and turrets? Think CyberMage. However, SW's transparent water is more realistic than that of CI: Quake.

SHADOW WARRIOR is an average action game. While there are some good enhancements to the BUILD engine and some good level design and enemy AI, the rest of the game is mediocre. If this is the last game to use the BUILD engine, then may it rest in peace.

Price: $49.99
Minimum System Requirements: Pentium 75 or better, 16MB RAM, 40MB hard disk space, CD-ROM, VGA graphics, Sound Blaster-compatible sound card.
Multiplayer Support: Modern, serial (2 players), LAN, TEN (2-8 players).
Designer: 3DRealms
Publisher: GT Interactive
Buffalo, NY (800) 469-3691
www.gtitinteractive.com
Reader Service #: 323

HERE WE GO AGAIN SHADOW Warrior's depiction of women is only slightly better than Duke's: at least some do talk or shoot back.

APPEAL: Action gamers who need every first-person game.

PROS: Nice enhancements to the dying BUILD engine; a few quality enemies and levels.

CONS: Average fare; a bit late; some "new" features already appear in other games; stereotypes may offend some.
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WORMS2
The cult classic is back!
Death From Above

A Bird’s-Eye View Isn’t Enough to Distinguish This Latest Shooter

by Robert Coffey

Why is it that Take No Prisoners—with more than 20 different enemies, more than 20 different weapons, more than 20 different combat items, and more than 20 different levels—isn’t...more different? Probably because, in spite of all its efforts, TNP comes up short as a shooter, delivering mildly enjoyable yet unengaging play.

TNP makes a lot of noise about the freedom of its “nonlinear” territories, which discard the traditional concept of sequential levels, but the claim is misleading. True, many of the environments can be explored in any particular order, but completing them is another matter—you’ll need passwords from some levels to finish others, and some areas won’t open until others are completed. Territory design is adequate, but lacks any real flair or personality. A few puzzles spice up what’s offered, but most of the game is a by-the-book affair. Since the vast majority of levels lack bosses or any clear goals, you’ll often find yourself wondering if you missed something that prevents you from opening a door later in the game. When that happens, you’ll find yourself experiencing a base that adventure gamers know all too well: retracing your steps to hunt for some unidentifiable something.

FUN WITH GUTS

Reducing the villains of TNP to a mess of blood and gore on the pavement is as satisfying as the huge arsenal you’re provided, which includes plasma guns, radioactive grenade launchers, three types of thrown grenades, and more. Useful items like health packs and energy shields, as well as three types of vehicles, also ensure that you’ll have plenty to keep you entertained.

Graphically, TNP looks pretty good, with rich color and lots of detail—provided you have a 3D card. Without 3D acceleration, you’ll be saddled with chunky, sluggish, ugly graphics—even on a P50.

TNP’s top-down perspective is hardly the revolution Raven would like it to be, and it works against the action. You can’t see much of your surroundings, so off-screen enemies can suddenly show up at you. It’s easy to lose your bearings, and the game’s lane mapping feature does little to help. Worse, the depth of the perspective can put upper levels squarely on top of Slade when he’s fighting, obscuring the gameplay.

TNP offers six different multiplayer games with a friendly handicapping feature. The variety of games is welcome, especially since the game lacks the immersiveness and speed of multiplayer giants such as Quake. Unfortunately, you’ll need access to a LAN to get the most out of the team games since Internet and MPlayer play support only two players.

In the end, Take No Prisoners is an also-ran. It’s a little fun and diverting, but certain to get lost among the slew of new 3D, first-person shooters on the horizon.

Price: $50
Minimum System Requirements: Pentium 90 (P133 recommended), Windows 95, 16MB RAM (32MB recommended), 35MB hard-drive space, 4x CD-ROM drive, SVGA graphics card, Sound Blaster 16-compatible sound cards, 28.8Kbps modem for Internet or modem play; supports most major 3D accelerator cards.

Multiplayer Support: 28.8 modem, direct connection, Internet, MPlayer (2 players), LAN (2-8 players).

Designer: Raven Software
Publisher: Red Orb Entertainment
Novato, CA
(800) 474-0405
www.redorb.com
Reader Service #: 324
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Virtua Perfection
A Fighting Masterpiece Finally Comes to the PC

by Kelly Rickards

Sega's superlative VIRTUA FIGHTER 2 has made the transition to the PC, and while its not the perfect translation it helped for the tight, balanced gameplay of the arcade version has, thankfully, been preserved. VIRTUA FIGHTER first made its coin-op appearance as a flat-shaded, polygonal fighting game featuring motion-captured characters and real martial arts moves. Although all the action in VF1 took place on a 2D plane, the sweeping camera angles and 3D characters gave the game a look that continues to inspire 3D fighters to this day. These days, VIRTUA FIGHTER has moved into its third iteration in the arcade, while the second edition in the series lives on in Sega Saturn consoles and has now come to the PC.

IS IT LIVE OR IS IT MMX?
Running on a Pentium at 640x480 resolution, VF2 was a virtual (no pun intended) clone of the arcade/Saturn game. All 12 characters have every single move, counter, throw, and special move from the arcade game. Unlike the Saturn and arcade versions, this PC version does not run at 60fps in high res. Because of this, VF2 on the PC does not have the lightning-quick control response that either the arcade game or the Saturn conversion can boast. But compared to other 3D fighters on the PC, it is on another plateau entirely.

VIRTUA FIGHTER 2 on the PC is truly VF2. Despite a slight sluggishness to its play (it's still faster and more involved than other polygonal fighters on the PC), VF fans and novices alike will find themselves immersed in a fluid, well-crafted gaming experience. It took just a few minutes to get used to the speed of play, and once I did, I discovered I could use the same techniques and strategies I used in the arcade.

In fact, VIRTUA FIGHTER 2 (which is the most complex of all fighters) was easier to play using the keyboard than any other 3D PC fighter I've sampled, though I recommend using a good gamepad.

GRAPHICS WITHOUT PUNCH
Fighting games may live or die by the quality of their gameplay (or lack there-
of), but eye candy sells games, and today's top titles need good graphics to complement their gameplay. This is especially true in the case of modern 3D fighters. Sad to say that while VF2 looks great, it could have (and should have) looked even better than the arcade game. VF2 PC supports only Direct3D, and as such, the game looks only slightly better than the Saturn conversion, even on a P200 with MMX. These days, almost all 3D fighters on the PC support Direct3D and can use the power and features of a high-end 3D accelerator (such as 3DFX or PowerVR). For me, this was the game's biggest disappointment, since the visuals on the PC port could have surpassed those on Sega's coin-op Model 2 architecture (which lacks features such as bilinear filtering and antialiasing).

Other than that, VF2 establishes a new benchmark for 3D fighting gameplay on the PC and further solidifies Sega's reputation as the master of 3D fighters.

APPEAL: Anyone who wants to sample the greatest 3D fighting series of all time.

PROS: Exquisite and deep 3D fighting gameplay; supersmooth character animation; great game balance.

CONS: Somewhat dated graphics; poor sound balance between effects and music; no Direct3D support.
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Pinball Wizardry

Empire Gives Jaded Pinball Players Shock Treatment

by Denny Atkin

Pinball is a simple game, but it can be a disaster on the PC. Real pinball is a very tactile game, with serious players using precisely timed flippering and gentle machine nudges in order to post their initials on the high-score board. On the PC, though, if the developers get the ball physics a little bit wrong or screw up the angles off the bumpers, pinball devolves into a simple (and dull) arcade game.

PRO PINBALL: TIMESHOCK! is a pure, natural pinball simulation. It doesn’t try to do anything that you wouldn’t see in the arcade. It focuses on realistically re-creating a pinball table, and it succeeds wonderfully.

HOW DO YOU THINK IT DOES IT?

TIMESHOCK! isn’t based on a real table, but if Bally created a real-world pinball machine from this design it would probably do well. It has all the popular features: three flippers, scoops, ramps, and multiball play.

It also has an interesting “plot” for those gamers who actually want to do more than just keep the ball in play indefinitely. A time-travel experiment has gone horribly wrong, and you must save the world by collecting crystals and Tachyonium. As you make various challenge shots and bonuses, the machine sends you (using cues on the dot-matrix display at the top of the screen) through the past and future, giving you the requisite point bonuses for completing various tasks.

This culminates in the TIMESHOCK! Frenzy mode, which sends you back to the dawn of time, at which point you have 120 seconds and five balls to save the universe.

Along the way, you’ll also occasionally be treated to simple games on the dot-matrix screen, in which you use the flipper buttons to navigate a series of obstacles in order to gain bonus points. The designers exercised admirable restraint here, creating simple monochrome games that you’d expect to see on a real pinball machine, instead of going hog-wild with 24-bit, 3D graphics.

WHAT MAKES IT SO GOOD?

The physics in TIMESHOCK! are top-notch. The only time I questioned its realism was during some shots when the ball seemed to move more speedily than it would in real life. Empire explained that this was because its physics simulation assumes a perfectly clean table, while a real ball on a real machine is often slowed somewhat by the natural accumulation of dust.

Perhaps we’ll see a “dirt level” setting on the next game. Flipper and tilt controls are good; my only disappointment was that Empire had modeled an electronic plunger rather than a manual one that would allow you to alter your launch force.

The game supports resolutions from 640x480 all the way up to 1024x768, with color depths from 256 to 16 million. Even at 1024x768 resolution with 16-bit color, movement was silky-smooth on my P666 Sound Blaster compatible sound card recommended. Multiplayer: Hotseat (1-4 players); Internet play to come in patch.

The appeal: Anyone who enjoys real pinball, or anyone who wants to practice real techniques to avoid being embarrassed next time they play at the local bar.

Pros: Superb ball physics; good table design; top-notch graphics and sound; amazingly detailed machine setup mode.

Cons: Some old-time pinball players will miss the mechanical plunger.

Price: $39.99
Minimum System Requirements: Pentium 60, DOS or Windows 95, 8MB RAM (16MB for Win 95 version), 1MB SVGA local bus video card, 20MB hard disk space, CD-ROM, Sound Blaster compatible sound card recommended.

Multiplayer: Hotseat (1-4 players); Internet play to come in patch.

Design: Adrian Barratt
Publisher: Empire Interactive
San Francisco, CA
(415) 439-4854
www.empire-us.com

MINIBALL You’ll use the flipper buttons at certain points in TIMESHOCK! to play mini-arcade games on the table’s dot-matrix display.

JANUARY 1996
CCW
Reader Service #: 326

241
Loaded

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SIMULATION: FALCON 4.0

Online Qualification Online League Play LIVE Finals

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Online Qualification Online League Play LIVE Finals

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Online Qualification Online League Play LIVE Finals

SIMULATION: FALCON 4.0

Online Qualification Online League Play LIVE Finals
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Resident Evil Goes House-Haunting on the PC

by Mark Clarkson

I tried not to like Resident Evil, with its massive splatter and gore, astoundingly bad voice acting, inconsistent graphics, clumsy interface, noisy sound, and rampant sexism. This third-person action-adventure game, set in and about a creepy old mansion, features every plot device that The X-Files ever rejected. There are mutants shambling about, killer guards patrolling, acidsplintering zombies roaming the halls, and giant snakes crawling out of holes in the attic. There are even man-eating sharks swimming around in the flooded basement, and they seem the most believable part of the game. I wanted to hate it all—but I couldn’t. Despite all its failings, Resident Evil is actually fun.

SWING BOTH WAYS

You can play the game as one of two characters: Chris (a man) or Jill. Kudos to the game’s designers at Capcom for making the game play differently depending on your choice. You’ll see different cut-scenes, find different items—when Jill discovers a bazooka, for example, Chris finds only an ammo clip for his Beretta—and experience different endings.

As either character, you must explore the mysterious mansion, collect items, and uncover secret doors (the usual in games of this type), while blasting zombies, giant tarantulas, and such. Keep your health up by eating the herbs you find growing around the house.

A BAD CASE OF PORT

Resident Evil originally came out for the PlayStation, and the PC port makes few allowances for the game’s new platform. The manual recommends you buy a gamepad to play it, as did tech support. With a keyboard, simple operations such as manipulating the game’s menus and option screens were much more trouble than they should have been.

You can save your game only at certain key locations, by using a typewriter, and you can only drop items at a few special locations.

My favorite interface oddity, though, is the stairs. It took me quite a while to figure out that I had to “step” the stairs with the action key, rather than simply walk up them.

The camera views are preset, and change automatically as you move from place to place, so you have no control over your view. This means that as you move from one side of a room to another, you sometimes inadvertently walk right into the arms of a zombie.

Character control is often clumsy and at times infuriatingly difficult, especially when precise positioning is called for, such as when you have to line up to push a statue of the balcony.

The prerendered movies are maddening, and minor clipping problems and disappearing textures plague the game. And don’t get me started on the voice acting!

Still, there’s lots of challenging gameplay here, for those who like their adventures splattered with gore. Although dedicated gamers can probably hack their way through it in a weekend, multiple endings and multiple characters give it good replay value. If you like it the first time, you’ll want to play again.

APPEAL: Fans of Dark Shadows looking for a gorier Tomb Raider.

PROS: All-in-good fun bloodfest; good replay value; gameplay varies according to character choice.

CONS: A slew of interface problems and inconsistent graphics; terrible voice acting; excessive violence may offend some.
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CIRCLE DELETED SERVICE 1973
Nuclear Blast

Interplay's New RPG Is A Post-Apocalyptic Dream

by Jeff Green

In the world according to Fallout, Los Angeles is going to be an even more hellish place to live in the year 2101 than it is right now. And there will be far worse problems than morons talking on their cell phones while driving. Try nuclear radiation, And giant scorpions. And human mutants — big, mean ones with rocket launchers.

This is the setting for Interplay's edgy, highly entertaining new role-playing game, a game that emerges — after a long, often torturous three-year development — as quite surprisingly, just about the best RPG to be released in years. With a compelling plot, challenging and original quests, and, most importantly, a rich emphasis on character development, Fallout's the payoff for long-suffering RPG fans who have survived the genre diluted in recent times by an endless stream of half-baked, buggy, uninspired duds.

**GLOW TIME**

The game's outstandingly evocative opening cut-scene sets up the story. In the year 2077, with the earth's supply of petroleum and uranium running low, a devastating world war breaks out, wiping out most of civilization in just two hours. The story picks up about 80 years later, as the focus shifts to you, a lifelong resident of an underground nuclear shelter housing hundreds of people. You are told by the vaults overseer that the controller chip for the vault's water purification system has died. He gives you just 150 days to leave the shelter and find a new chip before the water supply runs out.

This is Fallout's first, main quest, and it will take gamblers a while to solve it, but it is far from the end of the story: You'll find yourself getting mixed up in the various exploits of those living above-ground — including raiders, gangsters, religious cults, and radioactive mutants — while fighting critters (of course) and avoiding nuclear radiation.

The water-chip quest is timed — if you don't find it in 150 days, you lose — but after that, the game is non-linear. You can embark on any sub-quests at any time, but as you keep playing you begin to learn that there is a larger plot at work that's a clever, creepy amalgamation of Mad Max, Dawn of the Dead, and The X-Files.

**PARTY OF ONE**

Fallout's greatest asset is that it is truly character-based, with every decision you make affecting the world around you — and affecting the endgame as well. As such, the game rewards multiple play and experimentation.

You begin the game by creating your character to your own specifications (see sidebar), and from then on, every decision you make will have far-reaching repercussions. Throughout the game, as various NPCs try to enlist your help, you'll be forced into moral dilemmas — you'll have to choose between peacekeeper or assassin, team player or lone wolf, altruistic do-gooder or selfish bastard. Your choices will determine how the game plays out.

If you walk into a store with guns blazing, killing everyone and stealing everything, don't expect to be very popular. But, on the other hand, you'll walk away with a lot more loot at a much cheaper price. In the tradition of the greatest RPGs, no two people will have exactly the same experience with Fallout, because every player will follow his own agenda. In the two times I played through, once as a good guy and once as a heartless murderer, it felt as if I had played two different games. As a bad guy, it was me against the world, destroying everything in my way. As a good guy, I was a beloved champion, with a party of four faithful NPCs on my quest to save humanity.

**SHOOT ME, SHOOT YOU**

Fallout uses a third-person isometric view, a la DIABLO (the only feature these two games share), and the overall graphic design, which evokes the kitschy feel of 1950s Cold War Americana, is richly inspired. Everything in the game — from the load screens to the interface to the truly brilliant manual (a spiral-bound "Vault Dweller's Survival Guide," complete with recipes) — contributes to create a consistent atmosphere and mood.
The game's combat system is turn-based, which might bore or disappoint Diablo fans, but will be welcome to most hard-core RPGers. Each turn you are allocated a number of “action points” (depending on your character's stats) which you can use to move, fire or reload a weapon, engage in a melee attack, or check inventory. Any action points not spent on a particular turn will roll over into your armor class, increasing your defensive capabilities for that turn.

The only real problem I had with combat involved a suspension of disbelief. You and most of your enemies are usually carrying some sort of high-powered weapon—ranging from small pistols to laser rifles to rocket launchers—and, given the close distances at which fighting occurs, many battles seem to go on for what often feels like a ludicrous amount of time. One rocket down the throat ought to be enough.

ATOMIC WASTE

Although Fallout's interface is excellent overall, the inventory system is way too cumbersome, forcing you to tediously scroll through a single-column vertical list every time you try to locate an item.

Fallout's quest log is also flawed. Although its purpose is admirable—to automatically keep track of your various quests—it doesn't do so consistently, failing to add some quests or clear them when you've finished.

The game's many dialog trees don't fully take into account the randomness of how you might play. Sometimes you can ask NPC things you shouldn't know about yet. Characters you've encountered already will act like you've never met them every time you go back. For example, Killian, the store owner in Junktown, could never remember me, even after I rescued him from an assassin. Eventually I just shot the ingrate and looted his store.

If you play your cards right, a few NPCs will join your party, and while they're nice to have around, they can also be more trouble than they're worth. You don't control them—the CPU does—and many times, they'll get in the way, blocking your path or shooting you instead of the enemy. They also don't gain experience or pick up items. You can give them better items to use—but the method for doing so is a complete kludge. More player control over other party members would be a big improvement for the sequel.

GROUND ZERO

Don't mistake these glitches for big problems, however. Fallout is easily the best role-playing game released in the past year, and maybe longer. It's a game that clearly was a labor of love for the design team, with humor, style, and brains to spare, and with a wonderfully refreshing emphasis on character development and decision-making. For role-players it's a must have, but anyone with even passing interest in the genre should check it out as well.

Fallout is—what do the kids say now?—da bomb.

APPEAL: All role-playing fans, especially those who thought the genre was dead.

PROS: Compelling, original story rewards multiple play; strong emphasis on character development; tons of sub-quests; excellent graphic design.

CONS: A few aspects of the game—such as the NPCs, inventory system, quest log, and combat system—are a bit flawed and buggy.
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Myst Again

With its Familiar, Lever-yanking Gameplay, RIVEN Emerges as the Ultimate Myst Clone

by Robert Coffey

You don’t mess with success, you don’t kill the goose that lays the golden eggs, and if you’re Cyan Productions, you don’t screw with the best-selling adventure game of all time when you design the sequel. RIVEN is basically Myst all over again — only more so. All the trademarks of the earlier game are there: the unbelievably beautiful images, the evocative sound effects, and the strange and wonderful worlds, along with the same button-pushing, lever-cranking, puzzle-solving in the same sterile, noninteractive, slide-show environments. The legions of Myst fans will love it while the legions of Myst foes will find the five discs ideal for skew.

ONE-WAY TICKET TO PARADISE

If anything, RIVEN supplies even less plot than the first game. At that game’s end, Myst veterans will recall, the writer Atrus was concerned about the welfare of his missing wife, Catherine. As RIVEN starts, Atrus gives you one of his famous linking books so that you can travel to Riven to find his spouse. Unlike the others, this book is strictly one-way, standing you in the lash archipelago of Riven until you find Catherine and send word that you’re ready to return. Unlike Channelwood and the other ages from Myst, RIVEN has native fauna and people as well as an actual enemy, Gehn. Unfortunately, all this plot is merely back-story. Once the game proper begins, storytelling gets thrown out the window — rather odd for a game that features a godlike writer as its central character.

It should be no surprise that RIVEN is the most gorgeous game you’re likely ever to see. Somehow Cyan has found a way to improve Myst’s legendary graphics, with each screen hewing the one before it in use of light, color, and simple beauty. The exquisite rendered textures of veined rock and rough metal are so beyond real, you can practically feel them through your monitor. The result is a game world of eye-popping splendor.

The game handles sound and music with similar finesse. Evocative noises ranging from thundery volcanic rumblings to subtle beetle buzzes add to the sense of wonder that RIVEN creates. As in the original, sounds provide clues as well as ambience.

GAME ENGINES AND STEAM ENGINES

While these enhanced carryovers from the first game are admirable and desirable, other returning features of Myst are less welcome. For one thing, the game engine — the Mother of All Point-and-Click Interfaces — has changed little, except in speed. Movement is still a step-by-step, slide-show affair, rendering

WE GOT YOUR INTERACTIVITY in a nod to increased interactivity, Riven includes this hangman type minigame. Playing the game won’t help you progress, but it provides valuable clues.

Price: $54.99
(average street price)
Minimum System Requirements: Pentium 100, Windows 95, 16MB RAM, 75MB hard-disk space, 4x CD-ROM, 640x480 16-bit display, DirectX-compatible sound and video cards, mouse.
Macintosh Requirements: 90MHz PowerPC, MacOS System 7.5, 9MB RAM, 65MB hard-disk space, 4x CD-ROM, 640x480 16-bit display, mouse.
Multiplier Support: None.
Designers: Cyan Productions
Publisher: Red Orb Entertainment
Novato, CA (415) 382-4745
www.redorb.com
Reader Service #: 328

POD PEOPLE Riven’s incredibly rich graphics are obvious in this cluster of earthen huts. The painstaking detail, fastidious lighting effects, and almost tactile textures create a game world like no other.
Myst Conceptions:

One Reviewer’s Rant

Game reviewers such as myself are often accused of having some sort of vendetta against Myst. Invariably someone asks, “If Myst sucks so much, why has it sold millions of copies?” Well, if public acclamation alone denoted worth, Dirty Dancing would be great cinema and Citizen Kane wouldn’t even make it to public-access cable. So why is Myst every game reviewer’s whipping boy?

As a game, Myst is okay. But as a wildly successful game, Myst has wreaked havoc on adventure gaming. The gaming industry is a lot like Hollywood, churning out copies of whatever does great box office. Piranha followed Jaws, Ice Pirates followed Star Wars, and so on. What these pale imitations failed to understand was that the models they were striving to equal succeeded because they were original, not because they had killer fish or star fighters. When Myst first hit store shelves there was nothing quite like it. And like Doom and WarCraft II, it spawned a slew of imitators.

Unfortunately, most of them sucked. Humorless, self-important, and trumpeting their artistic worth, these games focused on the worst aspects of Myst, resulting in an agonizingly dull succession of pretty and pointless clones. That Myst was just an okay game only compounded the problem. Imitating a quality product is a better strategy than imitating a middle-of-the-road one—and that’s why lackluster fare such as TimeLapse is appearing in a closeout bin near you. Sure, there are worthwhile clones, ones that even surpass Myst (Amber and Buried in Time, among them), but these games integrated story and puzzles to create an engaging whole—something that Myst itself failed to do.

That so many of the Myst clones fall despite their faithfulness to their inspiration points to a last reason why Myst remains so many of us: How did such an average game get to be so dang popular?
Falcon Too, Oh
An Entertaining F-16 Sim That Brings Nothing New to the Party
by Robin G. Kim

Digital Integration has followed the herd. The company's Tornado was certainly unique — a hard-core ground-attack simulation, and one that's still a benchmark for its niche. Next was Apache, which almost single-handedly resurrected the combat helicopter sim genre. Hind, the follow-up, gave gamers a chance to fly for the "bad guys" in a decidedly uneasy aircraft, and set standards for helicopter flight model realism. And now there is iF-16, a product so derivative that you have to wonder if the developers simply ran out of ideas. Not only is it an F-16 Fighting Falcon sim — something of a cliché in itself — but despite the new plane and a few incremental improvements, its gameplay options, graphics, and battlefield environment are almost identical to iHind.

As with its two immediate predecessors, iF-16 includes an instant-action mode, a set of 20 training missions, and 10 single missions, plus one campaign in each of three theaters (Israel, Cyprus, and Korea). The campaigns all share a linear structure with 10 stages. Win, and you progress to the next stage; lose, and you take a step backward. At each stage, your mission is randomly selected from two prescribed possibilities. This adds variety over multiple playthroughs if you consistently win. Throw some losses into the mix and you could face the tedious prospect of flying the same missions over and over again.

Multiplayer modes consist of the usual free-for-all deathmatch, two-player cooperative single missions, and team play (you must destroy the opposition's headquarters). Given how much iF-16 has in common with Hind and Apache, it's a shame that it can't interconnect with them.

Winged Swiss Army Knife
The missions may be canned, but they offer excellent variety — befitting the F-16's flexibility as a true multirole aircraft. Assignments include precision strike, air superiority, photoreconnaissance, close air support, mine laying, and more. A full-featured mission planner lets you zoom in on target areas, check for holes in the

CLOSE CAN COUNT The CBU-87B cluster bomb is accurately modeled, scattering hundreds of bomblets over a wide area, with devastating effects.

Diminishing Returns
The graphics engine in iF-16 is based on the one used in Hind, which itself evolved from Apache's. The designers have dipped into this well one too many times. Though the landscape looks nice enough at maximum detail, with an impressively high visibility limit, it isn't exactly eye-popping compared to other sims. That would be easier to accept if this game rendered terrain at a high frame rate, but it is actually quite jerky on all except the fastest hardware. Reasonably smooth updates are attainable with most Pentiums if you dial back the detail far enough. However, on anything slower than a PS-166, the results will not be pretty. There's no 3D card support, although a Digital Integration support rep said a patch to support 3Dfx cards will be available around January. DOS and Win 95 frame rates are comparable, with the former having a slight edge on some systems.

Performance issues aside, the terrain graphics are certainly functional.
enemies' air defenses, and map out flight plans for you and your wingmen. Using the attractive loadout screen to customize your armament configuration is a snap, and it presents you with no less than 20 types of ordnance to choose from, plus drop tanks and an ECM pod, to name only a few options.

The sim's avionics are somewhat simplified, so not every radar function has been modeled, and targets are automatically identified as soon as you designate them. Gameplay is far from simplistic, however. The air modes allow limited control over the scan pattern and include a Raid Cluster Resolution mode, which simulates the real AFG-66 radars ability to distinguish between closely spaced air targets. However, the use of this and a few other functions caused the game to crash on rare occasions.

Inclusion of LANDTRN (Low-Altitude Navigation and Detection Infrared system for Night) pods is probably the highlight of the sim's systems modeling. Although the real-life terrain following autopilot is not modeled (nor is the more traditional autopilot), the navigation pod can project a monochrome green image of the upcoming terrain onto the HUD, which makes low-altitude night missions a blast to fly.

The game manual and tutorial booklet do a good job of describing how to operate these systems and the various weapon-delivery modes. However, background information on your F-16 and the many threats you will face is conspicuously absent. Also, several features are documented only in the README file on the CD.

**FLYING ON RAILS**

Performance-wise, the F-16 flight model is fairly accurate, despite its being a little overpowered. Its main drawback is that it lacks fluidity. Engine spool-up lag, the afterburner's voracious appetite for fuel, and energy bleed in hard turns are well represented, however, making dogfights a challenge. Though the enemy AI is up to this task, its zombielike in BVR (beyond visual range) combat, and it rarely maneuvers to avoid missiles. Your wingmen are no better.

Maintaining sight of bandits in a knife fight is easy thanks to the game's comprehensive view system. Its smooth 2D view panning is either too slow or uncontrollably fast, but it is supplemented by a complete set of fix sites and an intuitive autotrack/padlock view. Padlock can latch onto a target selected on radar or toggle between aircraft within visual range (using the "V" key—the command listed in the README file is incorrect for U.S. keyboards).

Grimes of friendly and enemy units (air and ground) slug it out all around you as you endeavor to complete your assigned tasks. Digitized radio messages from friendly AI pilots enhance the atmosphere further, but become repetitive—you will quickly tire of your wingman exclaiming, "Let's go kick some ass" at the beginning of every sortie.

While the high level of enemy activity may be immersive enough to get your adrenaline pumping, it isn't particularly realistic. In real life, going up against the wall of air defenses present in most of the missions would be positively suicidal. The designers drastically reduced the effectiveness of enemy missiles; at most difficulty levels, they are trivially easy to defeat by using chaff, flares, or ECM, or by just turning.

**SAME SIM, DIFFERENT PLANE**

IF-16 is essentially a marriage of the most often simulated combat aircraft in history with a slightly tweaked version of the Apache/Blackhawk engine. It brings almost nothing new to the table. This is not to say that it is a bad game—originality isn't everything, and the game can be fun to play. But at a time when every new flight sim promises to be bigger and better, if-16 must resign itself to having mediocrity as its defining trait—it is neither especially good nor especially bad at anything.

**APPEAL:** Die-hard Apache and Hink air forces needing a fixed-wing fix. Flight simmers looking for moderate complexity and vibrant battlefield environment at the expense of some realism.

**PROS:** Fairly good flight model and variety of mission types; ultra-short mission load times; clean graphics.

**CONS:** Canned missions and no mission builder; potentially repetitive campaign structure; inefficient graphics engine; skimpy manual; incredibly dense enemy force concentrations detract from realism.

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The visuals in IF-16 may not be much to write home about, but they get the job done—if you have a fast enough PC.

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Five-Star General

This Panzer Is Anything But a Retreat

by Tim Carter

Every once in a while, a well-constructed sequel puts to shame all of the cheap, greed-inspired knockoffs and exploitation products. Panzer General II is such a sequel, capturing perfectly the flavor and challenges that made Panzer General so popular. Moreover, the game sacrifices none of the simplicity that made the original so engaging, yet manages to add enough depth and nuance to give gamers a fundamentally new product.

No Waiting for Allied General II

Panzer General II, unlike its predecessor, lets you control any of the three major Allied armies in addition to the Germans. Game mechanics, however, are fundamentally unchanged from Panzer General. You still execute orders by pointing and clicking, but now you have much greater flexibility in controlling your troops. Units can be activated and deactivated at will, and become “done” only when they exhaust their movement points. Most units can still attack only once per turn.

Visually, Panzer General II is stunning. The 3D perspective makes it easy to recognize most units, and the background scenery is great. The designers have rationalized the map and unit scales for Panzer General II, keeping the scenarios consistent across longer campaigns (which sometimes reach 15 battles).

The consistency of scale adds several interesting nuances to combat. For instance, heavy artillery now may fire at greater ranges (up to five spaces), and high-velocity tank and antitank cannon can now fire from two spaces’ distance.

Heavy artillery now provides covering fire for many defensive units, and interlocking artillery networks can make defensive lines much more difficult to crack. Long-range fire from tanks or those deadly 88s gives you more flexibility in planning attacks. For

Price: $49.99
Minimum System Requirements: Pentium 90, Windows 95, 16MB RAM, 30MB hard-disk space, 1MB SVGA video card, 2x CD-ROM (4x recommended), mouse; supports Windows-compatible sound cards.

Multiplayer Support: LAN or Internet (1-4 players); email (2 players).

Designer: Rick Martinez and the SSI Special Projects Group
Publisher: SSI (a Mindscape company)
Sunnyvale, CA (800) 691-7529 www.ssilonline.com

Reader Service #: 333
example, in 1943, most Soviet tanks lack long-range guns. The Germans, out-classed at short range, must play a delicate game of fire and move to hold off their numerically superior enemy. One thus learns why the Allies feared the German 88, particularly early in the war.

RECON IS NO LONGER A LUXURY

The spotting and visibility rules have also changed, making reconnaissance units absolutely essential. Air units no longer have a huge range of vision and are almost useless in bad weather. Movement of any kind becomes highly dangerous without proper recon, and it's possible to set traps and ambushes for your opponent.

Air power in general has been down-graded considerably. The German Stukas are still fearsome when attacking ground units, but on the whole it's no longer possible to steamroll defensive positions with air power alone. Purists will be glad to hear that the distribution of antiaircraft units has been scaled back to more historical proportions, particularly in the early British, French, and Soviet armies. The German fighters are especially weak early in the war, and you will have to work much harder in the Blitzkrieg campaign to attain air supremacy.

While some scenarios remain walkovers, many are genuinely difficult, a welcome change from Panzer General, in which only Norway and France offered a serious challenge. When you play the Germans on the attack, the final two scenarios against the United States can be very intimidating — though I think it's a dirty trick for the designers to give the U.S. access to 1945 equipment while restricting the Germans to 1944 models (and less prestige, to boot). This objection aside, the campaign paths are fun, challenging, and diverse.

In another change from PC, there's no apparent limit here to the size of your core force. You are greatly limited, however, in the prestige you have available, meaning that you won't have the resources to build your army too quickly. Over time, you must decide between buying new units and upgrading those you already have.

All this gives force management a more dynamic feel, and you must plan

Allies on the March

The addition of Allied campaigns stands out as one of the highlights of Panzer General II. As each Allied army comprises different units with dramatically different abilities, each campaign presents different challenges and opportunities.

The Americans, for instance, benefit from impressive heavy artillery and tactical air power. U.S. tanks are weak, but even they can blast through defenses by using combined arms. Generally, the U.S. campaign (which begins, as does the British, at Salerno) involves repeated races against time, rather than difficult opposition.

The British came equipped with wimpy aircraft and guns, although upgrades are available. British tanks improve quickly, however, giving them a fighting chance in the slugfests around Caen. Because their tactical bombers are so weak, the British must be more creative and persistent to destroy the Panthers and Tigers that stand between them and victory.

The Russians have some great equipment in close, but suffer from a tragically weak air force and a lack of long-range firepower. Speed and multiple attacks in the face of heavy losses will usually carry the day, but as the Russians you must be willing to lose many more units than as any other army.
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Carefully to meet the demands of upcoming battles. With the need for more recon units and the overall weakness of fighters (as the Germans and Soviets), you will have to build and use units that were completely unnecessary in *Panzer General*. On my way to world domination as the Germans, I had three mobile antiaircraft units and two recon units in my core as early as the first battle in France, circa 1940. I also made good use of one or two SS antitank units.

You Will Follow My Orders, Ja!

Unit leaders constitute another interesting addition to the game. Some units start with leaders, while others gain them after winning a particularly difficult engagement. Leaders give units additional special abilities or strengths, many of which significantly improve their combat and movement.

*Panzer General II* isn’t entirely without glitches. On my computer it had a tendency to freeze momentarily during play. It never crashed completely, but it did get stuck for 10 or 15 seconds every now and again. There is also a bug in the Soviet campaign that allows the Russians to build T-34/1s free of charge. Now, I know these tanks were used en masse, but...

At least one leader attribute — reconnaissance movement — can also be a detriment. Recon units in *Panzer General II* move in phases, allowing them to scout and retreat as they would in real life. When one of my infantry units acquired a leader with this skill, it was able to move like a recon unit but was unable to use its motorized transport. Infantry on foot, regardless of their skills, are of minimal use in a blitzkrieg.

Also, could they possibly have found winnier bagpipe music for the British background score? Yuck.

As you might expect, these admitted minor quibbles hardly detract from an otherwise fantastic game. As if the single-player options weren’t enough, *Panzer General II* comes with a scenario generator and extensive online and email options for two-player games — promising would-be Guderians and Pattons endless hours of entertaining and challenging play. Now, if you’ll excuse me, I think I hear the General Staff calling my name...
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CivCraft Too

The Evil Empire Delivers a Smart, Sophisticated Real-time Game

by Elliott Chin

It's games like AGE OF EMPIRES that cause reviewers problems. We want to recognize the great design and vision behind such games, but are also obligated to criticize a less-than-perfect execution of that vision. I really wanted to award Microsoft and Ensembles' AGE OF EMPIRES a perfect score, but I just couldn't. It brings much-needed depth to the real-time genre, and adds more complex gameplay. It gets so many things right, but is also just a few problems shy of perfection.

THE GOOD

To begin with, AGE OF EMPIRES is a perfect blend of familiarity and innovation. The interface and basic gameplay is similar to WARCRAFT II, and is thus easy to pick up for any real-time gamer who has ever touched the Blizzard classic. Age also makes controlling your units easy with group saving, hotkey building, and waypoint movement.

Where Age introduces gamers to a greater depth of gameplay in its age advancement. You begin play in the Stone Age as one of 12 civilizations. In this age, you grow your civilization by harvesting a variety of resources (food, wood, stone, gold), while also establishing a large village population and a few Stone Age buildings. Upon building a sizable town, you advance to a new age of discovery. The game has four ages—Stone, Tool, Bronze, and Iron—and advancement to each successive age gets progressively harder. It's not enough that you just build enough buildings to advance an age; you also have to stockpile huge amounts of food and other resources.

On a basic level, this age advancement is similar to upgrading your castle in WARCRAFT II. In that game, you upgrade from a castle to a keep to get the ogre mound and ogres. In AGE OF EMPIRES, you upgrade from the Stone Age to the Tool Age to get the stables and eventually, cavalry.

However, in addition to more military units and military buildings, new ages offer weapons and unit upgrades, as well as non-military technology and buildings. Imagine WARCRAFT II with many more research and infrastructure options from which to choose. It's not enough to just harvest resources and build farms in order to support enough barracks for massive grunt production. There is more to this game than just military build-up.

While the first two ages lean heavily towards military advancement, the next two really show the game's depth by providing gamers with a wealth of research options, including such discoveries as writing, irrigation, nobility, and polytheism. Of these four discoveries, only nobility actually affects military units, while the other three affect your map knowledge, farming, and priests' conversion effectiveness. What these branches of discovery provide are different strategies for winning the game, as well as a depth of gameplay that just isn't present in more military-minded games, even those as excellent as TOTAL ANNihilation.

In AGE OF EMPIRES, you can win in a variety of ways. Sure, you can win via military conquest, but it is so much more satisfying to snatch victory away from a big bully by building a Wonder. You can also achieve religious victory by collecting all the game's artifacts (several small carts that lie about the map) or claiming all the world's ruins (Stonehenge-like monuments). Of course, you also have to hold these religious icons for two thousand years before your are declared victory. You can also play until one player reaches the most points in a set time period.
PLAY IT ALONE

These victory conditions are applicable for multiplayer, but single-player games also have well-designed goals and missions. Admittedly, CCW editors have been guilty of playing too much multiplayer AGE OF EMPIRES, but the solo campaigns are good as well. There are four campaigns, each more difficult than the last. The first campaign is an extended tutorial, and is incredibly well-done. Beginners will learn the nuances of the game's strategy as well as the game's streamlined interface in no time with this first campaign. The next two campaigns provide more of the linear missions you see in C&C or Warcraft-clones. The last campaign is devilishly hard (maybe too hard) with many specialized missions.

The campaigns feature some good map design, as well as some frustrating stacked odds in the later scenarios.

OR WITH FRIENDS

While I like AGE OF EMPIRES single-play, I am hooked on multiplayer AGE OF EMPIRES. The game's depth shines in multiplayer battles, where human players can indulge in a variety of valid strategies. Some players will frantically compete to advance to the bronze and iron ages first, others will quietly wall themselves off and amass resources for Wonder construction, while others will just crank out a massive army of children in the stone age to club their berry-picking opponents to death.

Multiplay also highlights the differences between the 12 cultures. Each culture has its own special ability, so that some are better suited to naval campaigns, while others are better at getting the jump on food and villager production. Each culture also has only limited access to the discoveries in the game's technology tree, meaning each culture's tech options dictate a different strategy. A Yamato player will try to defeat his opponents on the seas since he has access to all the naval discoveries, while a Shang player might commit to a war of conversion since he has access to all the religious discoveries.

ONE POP LIMIT SHY OF PERFECTION

AGE OF EMPIRES has great depth, and when compared to its real-time brethren, it is the most sophisticated of the bunch. However, after pouring hours into this game, especially in multiplayer battles, you start to notice some frustrating problems that detract from ACE's fun factor.

The most serious grievance is the population limit: you can create a maximum of 50 units. In solo play, the scenario design demands constant engagement, so you don't often encounter this population limit. In multiplayer battles, especially if there...
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is a tendency for all players to build up an ultimate army before attack, this population limit can present a frequent problem.

Although the delete ability lessens the negative effect of the population limit (Ensemble should have included a dismiss button on the interface, though), it still would have been nice if gamers were allowed to tweak the limit in multiplayer setups. It also would have made sense to at least give population bonuses for, say, building additional town centers or advancing to a new age.

Aside from the population limit, there are few other problems. AGE should have employed the innovations that DARK REIGN and TOTAL ANNIHILATION did—unit queues and 3D terrain, for example. Also, the walls in AGE are too strong, especially the heavily fortified ones with 800 hit points (your massive Wonder doesn't even have that many). I also wish Ensemble had included the ability to place gates in walls (even though it is possible to delete them). Also, the interface for the scenario editor, although powerful, isn't very intuitive.

The game is usually stable, but network games suffer occasional crashes. As for AI, I do wish the computer opponents in random maps would sometimes fight each other rather than always ganging up on you. However, in general, the AI of your opponent is good. Whereas other games will often send enemy units at you piece-meal, AGE will wait until it's amassed a large enough force to get the job done right. One annoying AI glitch is that your villagers will tend to get stuck in tight spaces.

I can forgive these small annoyances, though I really think population limit should have been fixed. However, even with AGE OF EMPIRES' few problems, the game is great. I can heartily recommend it to both turn-based and real-time strategy gamers who are looking for a good mix of depth and intensity in their strategy games.

**APPEAL:** Strategy gamers looking for a deep real-time game with complexity.

**PROS:** Deep gameplay courtesy of age advancement and wealth of discoveries, emphasis on empire-building, races with different abilities and strategies, excellent graphics.

**CONS:** Population limit is annoying, walls too strong, different looks for different culture's units would have been nice.

---

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Gettysburg Addressed

Gettysburg is unique among real-time games: It's historical and fun

by Bob Proctor

Wargames have rarely attempted to re-create the atmosphere of the battlefield, and for good reason. The earliest technologies—small metal military figures on a sand table, more recently, cardboard counters on paper maps—could not begin to convey the sights and sounds of combat to someone who had never experienced it. As purely analytical tools, however, these old standards have much to recommend them. In traditional wargames, you have godlike knowledge of what is happening on the battlefield. You know how your forces will behave (because they have precise ratings), exactly what the risks (odds) are at any part of the engagement, and, therefore, how adding or removing forces will affect that risk factor. No officer in the field was ever so blessed, of course: The absence of this knowledge, usually called the fog of war, is the reality that commanders live with.

In this sense, Sid Meier's Gettysburg is the most realistic wargame ever. It puts you in the action as a general commanding a brigade or corps. It provides only the information that such an officer would have, and to the greatest extent possible, it gives you that info in a realistic manner. It's not a game you'll ever play well with the sound turned off; your subordinates report to you verbally and you can tell what the enemy is going to do by listening to his bugle calls.

The map is as beautiful as any from TalonSoft's Battleground series. The 3D view takes a low enough angle, and it seems as if you're on a nearby hill rather than flying overhead. You can zoom in and out and rotate the map freely. Sizable standing reveals differences in elevation, and prominent buildings are drawn realistically, though everything is slightly oversized for easier visibility. When you scroll the map (by moving the cursor to an edge), the trees and buildings disappear so that you can easily see your troops—a really nice touch. A second after you stop scrolling, the scenery reappears.

"The enemy is there..."

Enemy units are hidden except when directly viewed by your forces, and even then you can't identify them or judge their strength except by their appearance. Each soldier icon represents 35-40 men, so a large regiment of 600 appears as 15 or 16 soldiers, enough that you can clearly see their formation.

Each regiment carries a flag, held at an angle that roughly indicates their morale. Success in combat is determined as much by morale as by numbers, and units are almost never eliminated, they just reach a "breaking point," at which time they run away and refuse to follow orders. A leader can talk them back into action, but more often he will be needed to give a "confidence boost" (higher morale) to units in the thick of the fighting. Morale bonuses are also gained by favorable terrain and having flanks guarded by friendly units.

There are four levels of difficulty, the easiest being very easy indeed. Learning to play Sid Meier's Gettysburg well at any higher level requires good judgment that can be gained only through experience. Once you decide on a plan and give all units their initial orders, you must...
1. Pickett's Brigade charges the Union line. Kemper, in the center, is currently selected, and you can see the destination markers for the five regiments in his brigade.

2. Kemper is a competent brigade commander, but that won't be enough to prepare him or his men for this carnage.

3. Confederate artillery batteries desperately lay down a torrent of fire in an attempt to cover the Rebel infantry as they advance.

4. The four buttons to the left of the toolbar allow you to change formation easily. Right now, all units of Pickett's Division are in Battle Line.

5. The buttons to the right of the toolbar are useful at other times, but afford the Rebels here no relief, as they advance over open terrain under fire.

6. The Union forces are on good ground to repel the assault. Notice how the victory point sites are in blue, to show Union control. Their total point value (85) is the equivalent of 6,500 infantry casualties.

7. One of the great things about the real-time engine is that everything doesn't go exactly as planned. There are gaps in the Confederate line, and the troops to the north aren't properly positioned to support the troops in the center.

---

"I HAVE LOST THIS FIGHT..."

So, does this mix of flexibility and playability in Sid Meier's version of the Civil War mean that I'll be removing TalonSoft's BATTLEGROUND: GETTYSBURG from my hard disk anytime soon? No, I still need it if I want to construct my own "What If" scenario. There's just no way to do this with Sid Meier's GETTYSBURG. Nor is Meier's design perfect; there are a few rough edges with the interface. For example, it's impossible to select an object near the edge of the screen (including the menus at the top) without scrolling the map. Turning off scrolling completely is a bigger problem; what the game needs is a key that turns off scrolling as long as the key is held down. There are also minor problems with oblique movement (which sometimes reverts to normal movement) and casualties—infantry losses are made good the following day, but dead leaders never get replaced.

On the other hand, nit-picking Sid Meier's GETTYSBURG feels a bit like criticizing Robert E. Lee's career because his side lost the war. Sid Meier's GETTYSBURG is a landmark, a real-time strategy game whose unique treatment of its subject matter points to a direction for the whole genre. The graphics and sound alone combine to create a visual treat akin to a movie. The user interface—elegant despite its quirks—lets you interact meaningfully, while the degree of difficulty and game speed can be adjusted to suit your tastes, allowing a broad audience to have fun playing the game. The tutorials make it easy to start playing: you learn as you go from voice-over and small text boxes. You can play six different scenarios in tutorial mode without ever reading the manuals. Sid really understands human nature, doesn't he?

---

APPEAL: People who liked the movie Gettysburg but find wargames tedious, or anyone who wants a different real-time strategy game.

PROS: Superb battlefield feel; excellent sound and graphics; Internet play; strong tactical AI; great tutorials.

CONS: Minor problems with oblique movement; some interface and scrolling quirks.
Where the hell...

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“MicroProse’s game offers weeks to months of gameplay.”
Computer Gaming World, June '97

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Cavedog Takes You Where No Real-time Game Has Gone Before

by Martin E. Cirulis

After playing endless variations on the COMMAND & CONQUER theme, it's probably safe to say that it takes quite a bit to impress me. Sure, it's obvious the way to win this real-time clone war is to be bigger, better, and flashier, but exactly how you pull that off is not an easy question to answer. Enter TOTAL ANNihilation from Cavedog Entertainment. This game takes almost all the new standards of the genre — 3D graphics, visible terrain, and advanced multiplayer options — and takes them to a higher level than anything else so far. While all the contestants have yet to be seen, I suspect we are looking at this year's high water mark (or very close to it) in the real-time genre.

OLD IDEAS, NEW SPIN
At the outset, TOTAL ANNihilation is nothing we haven't seen before: Gather a couple of resources (in this case metal and energy), build a base, and create enough units to kick your opponents butt all over the high-res terrain. But once you actually get this puppy up and running, you begin to see that even the basic game elements have just enough of a twist to make this overworked genre seem new.

The first thing that strikes you is the stunning difference that a true 3D graphics engine makes. There is literally no comparison between the terrain in TA and the shaded 2D attempts at elevation levels found in games such as DARK REIGN and KKND. Here, hills look like hills, canyons like canyons, and subtle differences in elevation are clearly visible and eminently usable. You can now see which terrain makes a hot more useful than a tank.

More important, vehicle movement and weapons effects are modeled in true 3D as well, so that the terrain affects all aspects of combat in realistic ways, instead of just the simple higher-equals-farther firing models used in other games. When your artillery shot strikes a treetop instead of going over the hill to paste the target, you'll know the real world is uncomfortably close. For the first time in this sort of game, I have found myself fighting hard to take a strategically important hillside in order to command an advantageous firing position. And despite all this detail, TA offers larger battlefields than most games out there. Those of you with 32MB machines can get truly lost on some of the multiplayer maps.

CALL OUT THE FIRE DEPT
The attention to detail in TOTAL ANNihilation is amazing, especially the flammable trees and ability to start forest fires.

WHERE AM I?
In addition to a slew of air, land, and sea units, TA offers a variety of map types, from desert to metal worlds. Too bad there's no map editor.

Price: $50
Minimum System Requirements: Pentium 100 (P133 recommended), Windows 95, 16MB RAM (24MB recommended), 35MB hard disk space, VGA graphics, 4x CD-ROM drive, Sound Blaster-compatible sound card.

Multiplayer Support:
Modem, null modem (2 players), LAN, Internet (2-10 players).

Designer: Cavedog
Publisher: GT Interactive
New York, NY
(800) 469-5651
www.cavedog.com
Reader Service # 336
Cavedog has even modified the traditional construction rig to make it more interesting. Instead of the usual tumbling and vulnerable derrick we see in so many other real-time games, TA gives some sense of realism and tactical importance to this icon. Your alter ego is actually in the construction rig, and it's not just a building prop but a very powerful robot, built around a matter/energy converter device. This not only gives you a halfway reasonable excuse to build stuff out of raw materials fairly quickly, it also lets you throw yourself into battle using your converter as a powerful disintegration gun. Of course, should the enemy blow you up, it's all over for you.

The combat units in TA also show greater diversity and realism. Not since Interplay's M.A.X. has a base-building game offered this kind of variety in land, sea, and air units. Without even counting the possibility of accessing new units (see sidebar), TA gives you enough unique units to bring out all the tactical potential of the terrain engine. And each behaves realistically enough to make it interesting. Ships leave wakes and sink; tanks must blast their way through a forest or else go around; artillery shots are spoiled by firing from uneven ground; and bombers must make wide turns to set up for an attack run, leaving themselves vulnerable to ground fire.

BUT NOW, A WEASEL REPORT...
Oddly enough, it's all this quality and attention to detail that makes the worst part of this game—the documentation—such a mystery. A game like this merits a MicroProse-style tome in order to give you your money's worth. Instead, you get one of those slimy pamphlets that barely covers the basics of the game—and even then, they're covered in a confusing and disorganized manner. In a game that stresses realism, it's ridiculous that you can't even find a table telling you how much damage the various weapon types do. Even worse is the extremely cheap and tawdry attempt by Cavedog to cash in on this shortcoming by asking you to order the strategy guide directly from them. Who ever had the brilliant idea to scam the public on this otherwise fine game needs a serious slap.

Other than this and a handful of minor bugs (due mainly to the variety of 3D cards out there), TA suffers only from the lack of a map-builder. Given the incredible variety of tactical situations the terrain engine allows, it would have been nice to enable us to create a few. Perhaps this will be rectified in one of the promised expansion disks.

Despite these minor strikes, TOTAL ANNIHILATION is still the best real-time game so far. If you are looking for something that will keep you occupied in single-player mode, as well as have the legs to guarantee a long life in the multiplayer arena, your quest is over. Just don't fall for that strategy guide trick until they patch the manual.

**APPEAL:** Any strategy fan looking for a deep, realistic, and intense real-time gaming experience.

**PROS:** Truly useful 3D engine; incredible terrain; large number of cool units; great combat effects; huge battlefields; original implementation.

**CONS:** Dismal documentation; a few bugs; no map construction kit.
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Dying for Dollars

For a Different Take on Real Time, Join the 7TH LEGION

by Gavin Hachiya Wasserman

With the current glut of real-time titles on the shelves, you might have noticed by now that most of these games are a bit too similar. Real-time strategy games often breed duplicate strategies: Hide out, gather resources, develop advanced weaponry, and then attack with numerically and technologically superior forces. MicroProse and Epic Megagames' recent collaborative effort, 7TH LEGION, tweaks those strategies with an element of randomness and a strong imperative for constant engagement.

First, the hunt for resources, a time-honored fixture of develop-and-destroy games, is simply not present. No mining gold, chopping wood, or harvesting spice. This is an up-front, tactical clash between two somewhat similar human forces — the 7th Legion and the Chosen — for domination of the Earth. At regular intervals, command HQ allocates a certain amount of credits to your mission. This cash flow is continuous and requires no special structures or units to maintain. Sure, you still have to have your field command base, but if you don't have that, well, it's all over anyway. So even if that expensive force you fielded gets chewed up by enemy assault chassis and tanks, payday will come around again and you'll be back in business... probably just in the nick of time.

GETTING PAID

Of course, while making it possible to fend off defeat, this salary isn't really enough to fund a serious drive to victory. So where does the money come from? Simply stated, kills equal cash. Troops collect bounties of credits and experience for each enemy unit that they destroy (talk about adding insult to injury: "I killed your guy and I got paid"). As a unit gains experience, it also gains hit points, deals more damage, and (supposedly) gets smarter. Even so, killing an infantry unit for a 100-credit bounty won't get you that far when it costs 500 to field your own infantry. The 100 credits also won't server you well when your now-damaged unit that just scored a kill is about to become a bounty for your opponent. That's where the timed sub-missions come in. Their special bounties give you an incentive to make otherwise crazy headlong assaults. The sub-missions are usually something simple, such as "Destroy eight enemy units" within six minutes for 50,000 credits. That's hard to pass up, because destroying eight measly infantry for such a huge payoff seems like an easy way to boost your war effort.

Other sub-missions ask you to destroy particular enemy structures, such as barracks or gun emplacements. These sorts are often more difficult because your troops must fight past defending units to reach their objectives. Besides boosting your production with bounties, the sub-missions increase the pace of gameplay because they give you big incentives to engage the enemy.

This emphasis on speed leads to smaller assault forces. Smaller forces are easier to manage because they are less likely to get in each other's way while traveling. When units block each

LITTLE WARS

Because of the timed missions and randomness of Battle Cards, 7th Legion tends toward more immediate action and smaller forces.

Price: $39.99
Minimum System Requirements:
- Pentium 100, Windows 95, 16MB RAM, 15MB hard-disk space, 4x CD-ROM drive
- 2MB SVGA video card, DirectX 5.0-compatible sound card

Multiplayer Support:
- Modem (2 players)
- IPX, TCP/IP LAN
- Internet (2–4 players)

Designer: Epic Megagames/Vision
Publisher: MicroProse
Address: Alamada, CA
(510) 522-1164
www.micropeso.com

Reader Service # 337

January 1998
Play Your Cards Right

Don't be so sure that your perfectly planned strategy will work against your nearly down-and-out opponent. MicroProse has taken a cue from popular card games and added Battle Cards, with which a player can really surprise an opponent. You begin with four Cards and you gain another every two pay periods. These Cards add randomness to play. Your enemy can play a Battle Card and change the tide of battle in an instant. Your big bad force might end up Cursed, Confused, and Immolated before it gets anywhere near its objective. Your legions of Infantry could be burnt to ash, your tanks could take a thunderous pounding, or your assault robots could go mad and start shooting each other. Suddenly you are out one expensive army with nothing to show for it.

In a way, the Cards are a disincentive to massing a single large force, because units grouped together become much likelier targets for area-affecting Cards. If you use smaller groups, you won't be able to sweep a field clear without heavy casualties, but your opponent may exhaust his reserve of Battle Cards while affecting fewer of your units. Or your opponent might choose not to use Battle Cards against such a small force, which will allow you to use your Cards to support your assault. A small attacking force may be Blessed or enter into a killing Psychosis, suddenly mowing down forces twice its size. Yes, you could do the same with another's path or run into an obstacle, they stand still or look for a new route, spreading out and struggling. Some never get to the battle. This calls for close management of large forces, which is a bother and another push toward using more small groups of forces. The dangers and benefits of Battle Cards (see sidebar) also drive the pace of battle. Overall, the use of small forces and time-constrained missions causes players to engage often, and with more balanced forces. The result: heavy casualties and bounties all around.

Pick a Card

Unfortunately, some mission scenarios leave the standard game and ask you to lead a small band of "marines" into an enemy base to capture or destroy something that advances the story line. These levels are totally different from the rest of the game and are absolutely unredeemably boring. You have only three marines, so — unlike in the main portion of the game — you really don't want to engage the enemy unless you absolutely must. The only special Battle Cards you have are medkits to heal those marines. Also, if your units were stupid on the land map, they are tragically so here. It really doesn't serve much purpose to shoot barrels and walls when enemies are in the next room, especially if shooting all day won't put a dent in anything that isn't flesh and bone. Luckily for your intrepid "elite" units, the enemy is just as stupid. In some cases, guards won't even notice you mowing down their compatriots if you can place your gunners just far enough away. These infiltration missions could just as well have been left out for a purer strategy game. Luckily, these missions are short and you'll soon be back in the fray.

While it's true that 7th Legion doesn't nearly have the depth of a game such as Total Annihilation, it also doesn't present itself as anything other than a fast-paced, action-oriented real-time game. Although it suffers some AI deficiencies and poorly crafted indoor missions, 7th Legion deserves points for its refreshing "kills for cash" and Battle Card features.

APPEAL: Real-time commanders looking for something light, fun, and a little different.

PROS: It's a good, simple, fast-paced real-time game; cool Battle Cards randomize gameplay.

CONS: So-so storyline; few throwaway missions; bad AI.
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3D Hatchling

X-COM-lite—a New Breed of 3D Wargaming?

by Loyd Case

In always mystified why huge numbers of real-time strategy games monopolize store shelves while good turn-based combat games have few, if any, imitators. Sure, COMMAND & CONQUER spawned a host of imitators, but you'd think that X-COM and JAGGED ALLIANCE would have done the same. Along comes German developer Blue Byte to the rescue with its new Windows 95-based, science-fiction combat game, INCUBATION. It might just have more than its turn-based novelty going for it as it battles for shelf space.

BIOHAZARD WITH A BITE

INCUBATION takes place in Blue Byte's BATTLE ISLE strategy games universe. The game's story is smaller and more personal, though, following the adventures of a squad of space marines trying to make sense of a growing phenomenon. Apparently, the inhabitants of the planet Scala are rapidly mutating into killer aliens (are there any other kinds?). A small detachment of marines under Captain Rutherford has been assigned to defend the remaining healthy population while a cure is developed. The plot thickens as the cause of the mutations are discovered, and the integrity of higher command becomes suspect. It's all classic space opera fare.

In the game's missions, you carry out Rutherford's orders as Corporal (and later Sergeant) Bratt.

I NEED PERSPECTIVE

One of the unique features of INCUBATION is its use of the 3D technology. There's even a 3D isometric version of the game. You not only have the classic isometric view so common in games such as X-COM, but you also can see the view from an individual squadsman's perspective. The isometric view can be rotated a quarter turn and moved to a ground level or a higher perspective. You can also have the camera follow the marines around during their moves, which is entertaining enough, but also

gives you clues as to their position.

The combat animations are nicely done, with different motions for different weapons. The voice-overs are effective, though simple. The lead narrator, who plays Bratt, does a nice job of playing the combat-ready veteran, and for once, the writing isn't overly hyperbolic. The cut-scenes are all 3D animations and are graphically awful. This is the first game I've played in some time in which the gameplay animation is far superior to the cut-scene graphics. The 3D characters in the cut-scenes look as if they were created with about six polygons (okay, now I'm being hyperbolic). We're talking about square necks and square heads, folks. Still, they do a nice job of moving the story along.

THE CAMPAIGN

The campaign is the main single-player story, with as many as 30 missions. The campaign does branch occasionally, but only to present alternative paths through a linear story. Each battle represents a slightly different tactical challenge, but the variety of mission types is fairly small—clean out an area, escort a civilian, get to an exit point. You choose battles from a nicely rendered view of the city, with hotspots identifying locations. A location may be a cut-scene, an armory, or the next battle.

JUMPING JUPITER Movement is a bit restricted in the game, though jump jets can improve your tactical options somewhat.
Let's Make a Deal

In larger missions, assign one character to be "Monte Haul," and open all the equipment cases he can find. Equipment points are used to "buy" better weapons and gear between missions.

Marines are rewarded with skill points, which are a scarce resource. You need both skill points and equipment points to buy some of the more exotic hardware. Commendations can be used to add to a marine's skill-point pool, but those are also scarce.

Save skill points and commendations to get better firepower and armor. It's tempting to get stimulants for that extra movement point, but the servo system is a permanent enhancement. Reserve enough points for at least two grants to get jetpacks; they greatly enhance tactical flexibility.

Save-game support in the campaign is robust. You can save between, and during, battles. In the heat of a fight, there's a quick-save button that allows you to capture any moment in a fight, but be warned: the quick save disappears if you lose a battle and start over. Using one of the normal save slots as a temporary save is a good idea.

Each marine has his own set of statistics, including different weapons skills, leadership, and so forth. The experience interface is purely graphical, but is easy to grasp. Certain weapons or gear can't be used until a grant gains enough experience. Units can gain commendations in some battles, and these commendations can "jump" an individual soldier's experience up a notch (nice for getting that next good weapon).

CHESSMASTER 40,000

The actual tactical combat is a little simplistic. Each squad member has a set of action points that are used to move, fire, and perform actions. Action points can be slightly modified — permanently by the use of the servo system or temporarily with stimulants. The characters can move and shoot, up to their action-point limit. Action points can be reserved each turn for opportunity fire, but there's no permanent reserve setting as in the X-COM games.

Combat occurs on a square grid with no true diagonal movement. Characters cannot move through squares that contain other soldiers. Unlike in X-COM: APOLLOCYCLE, you can't crouch or go prone. You also can't climb or jump off even small obstacles — it seems silly to come to a ladder and not be able to climb it. The exception is when your grant becomes advanced enough to get a jetpack; however, jumping with a jetpack uses all action points, which makes jumping into a furball a little dicey. You also can't use a jetpack to jump directly to an exit point; you must land at least one square away.

Each combat level presents a maneuver or tactical challenge. Some are tactical puzzles akin to a chess problem. The monster AI is adequate, but doesn't concentrate fire on single targets, nor does it coordinate attacks well.

There are a nice variety of weapons, and you'll definitely need the more advanced hardware later in the game. The combat graphics are spectacular, but gristy, with exploding gobbets of bloody flesh, nice lighting effects, and great explosions.

The user interface is nicely done. To move, you click on a square, indicate the facing (which is critical — armor is weaker in the back) and release. There's a "take back this turn" button and a save button. You can alter the view camera at any time.

To sum up, combat is entertaining, but not particularly realistic. It's much like playing chess with ranged weapons — but somehow it's more satisfying blowing a monster to smithereens with a plasma gun in 3D.

TURN-BASED FRAGFEST

Like almost every new game, INCUBATION has a multiplayer mode. You can play over the Internet, either directly through TCP/IP or an MFLayer. Local area network play and play-by-email are also supported. I couldn't get the IPX network game to work at all, but changing over to TCP/IP cured those blues. Up to four players can "buy" squads of marines. You can't change gear on the fly, but there are a large variety of specialist marines with different equipment mixes. It's quite a hoot, and a refreshing departure from real-time games.

FINAL REPORT

Although not without flaws, such as the somewhat chesslike tactical combat system, INCUBATION is a nice change of pace from the frantic mouse-clicking of the C&C set. The story works fairly well and keeps your interest, though it will never be mistaken for great literature. The voice-overs and character advancement give each marine a personality, though not to the level of detail of, say, JAGGED ALLIANCE. If your hands are getting sore from all the mouse action in the real-time games, check out INCUBATION.

APPEAL: Strategy gamers who may be getting tired of real-time clickfests; X-COM and JAGGED ALLIANCE fans.

PROS: Gorgeous 3D graphics add to the "you are there" feeling; interesting story; easy interface.

CONS: Tactical combat is chesslike and unrealistic.
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AND GRAB THE ROCK-BOTTOM RATE OTHER GAMERS WOULD VIRTUALLY DIE FOR!
Failed Conquest

New C&C Wanna-be Falls Way Short

by Mark Clarkson

CONQUEST EARTH has so much going for it that it's hard to imagine how it could fail to please. Although the game is one of many real-time strategy games currently glutting the market, it offers so many original ideas and nifty features that it's hard to decide where to begin.

WHAT'S GOOD

The back story, featuring aliens conquering the Earth, is familiar, but CONQUEST EARTH gives it a neat tilt by offering you the choice of playing as the Earth's human protectors or as the invading Jovians. Better yet, the difference between CONQUEST EARTH's forces is actually significant. While the humans develop the usual assortment of guns, tanks, and airplanes, the Jovians learn to morph into a variety of forms, from the humanoid Walker to the scorpion-like Gilder to the seemingly innocuous rock.

CONQUEST EARTH's 64,000-color graphics feature hand-painted backdrops, nighttime lighting effects, semi-transparent explosions, and more. In addition to head-to-head play, CONQUEST EARTH offers two single-player modes for each species: Mission mode — similar to solo campaigns in WARCRAFT — or Command & Conquer — or Campaign mode, where you must manage resources, research and develop technology, and move troops across the globe between missions.

You can even take control of individual units and drive them around. It's hard to imagine how a game could offer all that and still fail to please, yet this one does.

INTERFACE WOES

If any among you still aren't using hotkeys, this game will convert you. CONQUEST EARTH's point-and-click interface is impossible to use. While the human interface is relatively familiar, despite its European accent, the Jovian interface looks like a small dog turned inside out: a moist, throbbing mass of pink, red, and brown with protruding control icons and yellow liquid bubbling through a small section of what looks like intestine.

I think this genuinely alien interface is a cool idea. I really do. But still, somebody should have killed it — not all cool ideas actually work in the real world. The labels are... well... alien: a little yellow ball, a little green ball, something that looks like a fly's eye. Not exactly intuitive, but the worse part is that their clickable area is so small. The little things you click to issue orders have an active area that is a whopping 20 pixels tall. Accidentally move past it and the screen scrolls. If you're on a fast machine, it scrolls really fast. Trying to hit those damn icons in the heat of battle is actually one of the game's biggest challenges.

The human interface is little better; you have to hold the space bar down in order to keep the controls visible. In either case, the controls obscure the battlefield when they do pop up.

ARTIFICIAL UNINTELIGENCE

 Thankfully, there are hotkeys. Learn them well, because your units do nothing without explicit orders.
The upside: WENCHES.

The downside: THE FLANK.

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Their default mode is to stand still, without returning fire, while they're being gunned down. Troops won't defend themselves unless you specifically tell them to do so. And those defensive orders don't stick; tell troops to do anything else—move or fire, for instance—and they drop back into their default catatonia.

I found the direct control of little use. More useful is your ability to manually direct the fire of selected units with the left mouse button. Most early missions can be won by simply selecting a big group and manually moving them around while using their concentrated firepower. But even this simple action is harder to do than it should be.

If you manually direct fire to a specific location, selected units will just stop in their tracks and fire in that direction. If they're spread out, it means most of them are out of range. If they're in a clump, they'll shoot each other.

Fortunately for you (but unfortunately for realism buffs), troops don't take damage from friendly fire. That's good, because when you give orders for a group of units to escort another unit, everyone invariably fires a round or two at him first.

**THE NEED FOR SPEED**

On my venerable PS3 system (now retired), the game ran fairly smoothly when things were quiet. But once the action heated up with lots of those nifty semi-transparent explosions and whatnot, my system started choking—scrolling was choppy and I had trouble selecting troops, assigning waypoints, and so forth.

The game ran quickly enough on my new Integraph P2/266...too quickly at first. When I finally located the controls to adjust game speed, they slowed down the entire program. As you turn down the game speed, scrolling gets jerky, mouse response degrades, and so forth. I want the game's speed reduced, not the game's performance.
It's Not Just For Aliens Anymore.

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WAR WIND II: HUMAN ONSLAUGHT offers new, larger vehicular and mechanized units. All-new maps with improved terrain graphics. Streamlined gameplay in building and promoting your units. All this, plus the unpredictable human element, makes WAR WIND II much more than just a sequel.

It's a whole new game.
THOSE LITTLE EXTRAS

The 64,000-color, hand-painted backgrounds range from nice-but-blurry to ugly-but-blurry. The music is loud and repetitive. The human dialogue is limited and uninspired. The alien dialogue seems to have been recorded by actors with their heads submerged in a toilet.

You can save games between missions, but, as far as I can tell, you can only load a game by selecting “quit game,” retreating to the main menu, and coming back in again.

I never got to try CONQUEST EARTH head-to-head. Although the game comes on two CDs, all players still need their own copies. The advertised free play on MPlayer wasn’t available during my review.

NOT ALL BAD Conquest Earth does have redeeming qualities, such as truly different sides and some nice attention to detail, including tire-tracks left by passing vehicles.

UGLY LANDSCAPE Despite 65,000 colors, some of Conquest Earth’s hand-painted landscapes fail to please.

AN EXHAUSTING ENUMERATION

I could go on — about the 200MB “minimum” install; the lack of basic options; the mistakes in the manual; the mouse problems; the innovative, yet ultimately aggravating implementation of the fog of war — but I’m getting depressed just talking about it.

Playing a game is supposed to be a challenge, not a chore. There’s a big difference. Suffer it to say you should skip this one.

APPEAL: Real-time fanatics with quick reflexes and a very tolerant nature.

PROS: Some nice graphics and plenty of original ideas.

CONS: A quirky, nearly unplayable game that fails in its execution.

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CIRCLE READER SERVICE #090
Sea Quake?

A Third-Person Wargame/First-Person Action Hybrid—With Mixed Results

by Bob Proctor

If you believe things always come in threes, then you aren't surprised by the fact that 1997 has produced three games on sailing ship battles: Avalon Hills' Wooden Ships & Iron Men: Trafalgar's Ace of War, and now, Strategy First's Man of War. As with the others, Man of War has scenarios for some of the great battles of the Revolutionary and Napoleonic wars.

What makes MOW different? It is the only game of the three to use a first-person perspective. That is to say, you are right there on deck, with the sea, sky, and other ships all around you. This is a common format for simulations, including every submarine sim ever made, but it's the first attempt to bring the idea to sailing ship warfare.

SIM OR STRATEGY GAME?

Forget the marketing. MOW is, at heart, a turn-based strategy game. You give orders to all your ships for the next four-minute turn; then the clock starts and you watch as movement and combat occur. At the end of the turn, the clock stops and it's time for orders again. Orders are given using an overhead isometric view of the ships on an ocean that looks like an old parchment map. Only instead of watching the action from this view, you are transported to the deck of your flagship.

For me, this attempt at first-person point-of-view falls short. It never gives me the "you are there" feeling that the back of the box claims. There are two reasons for this: a lack of realism and impotence. Let me explain that last one first. From the game's perspective, the "Action Phase" is really a time of inaction; you have nothing to do for four minutes except watch. Oh, you can use the arrow keys to move around the deck of your flagship, but there isn't a single order you can give until the four minutes are up. If you're like me, you'll quickly have the clock on 6x (the fastest setting) or be hitting the Skip button to get on to the next orders phase— that's where the real action is.

As for the realism aspect, you'll find the deck a lonely, surrealistic place; there isn't another soul on deck! No helmsman, no lookout, no midshipmen waiting to carry orders below decks where all those cannon go off every few minutes. I think I understand why. It's a huge programming effort to put a crew on deck when they're just a decoration in game terms—you couldn't give them an order if you wanted to. On the other hand, they spent time depicting a dozen or more different weather and lighting conditions (and the sea and the sky are beautiful), so why not include some crew members as well? At night, the gun flashes reflect off the sails nicely, although all the ships look the same. That is, there are about six different classes and all the ships of a class look alike, even in regard to color. The largest class is "Ship of the Line," so all these appear as three-deckers, even though most are 64s and 74s and should have only two decks. Large Frigates are all two-deckers, even though no Frigate ever had more than one full gun deck.

Smoke is one thing MOW gets right. When your broadside fires, a huge cloud of white smoke obscures your vision until it dissipates in the wind. The cannon also boom realistically, with sound attenuated by distance. When a man goes overboard, there is the sound of splintering wood and snapping cordage. Other than these, sound is an area badly neglected—why do I never hear the wind or the sails above me? Where is the whistle of cannonballs flying by or the sound of the splashes (which I can see) when they fall short? And why can't I hear the sounds of

WHERE'S MY CREW? Though you seem to pilot a ghost ship, the quarterdeck view of this large warship does give a good view of the action. Notice the compass across the bottom and the four-minute timer (with controls to set the clock at 1x, 2x, 4x, or 8x speed).

Price: $49.95
Minimum System Requirements: Pentium 60, DOS 5 with 8MB RAM or Win 95 with 16MB RAM, 50MB hard-drive space, SVGA graphics, 2x CD-ROM; supports Windows-compatible sound cards.
Multiplier Support: Hot seat, modem, null modem, or IPX local network (1-2 players).
Design: Strategy First
Original Boardgame
Design by: Simulations
Canada
Distribution: Virgin Interactive Entertainment
Irvine, CA
(800) 874-4607
www.vic.com
Reader Service #: 340

JANUARY 1998
CCW
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my crew, even if I can’t see them? Many events should be reported to the Captain and Admiral, as they were never expected to see everything. Realism is all-important in any first-person game, as the development of 3D shooters demonstrates, but it’s also subjective in that what is realistic “enough” for some will not work for others. For me, MOW falls short (with a splash).

**HOW DOES THE ENGINE RUN?**

Okay, so half the chrome is missing; how does MOW compare as a strategy game? Both the sailing model and the combat model are simple. I don’t mean that as criticism; I’m just stating fact. If you found either **Wooden Ships and Iron Men** or **Age of Sail** too complicated, then MOW may be just the game for you. There are six points of sailing, which I suspect is the result of a hexagonal grid, but otherwise, there’s no clue as to how impossible it is to order every ship individually, so you have to learn to give general orders to the fleet and divisions.

This brings up another innovation that I really like: Naval Doctrine. This is something you set at the beginning of a scenario and consists of general orders to each class of ship. Should they close the enemy or stay at long range? At what range(s) should they fire? Should they use full sails or battle sails? It’s like programming the AI to do things your way. Some of the flag signals, such as “Engage Enemy More Closely” and “Make More Sail,” have the effect of changing doctrine for a ship or division and must be used carefully to avoid unwanted results.

You might wonder if Doctrine also includes things like when to shoot grape shot and when to fire at the enemy rigging. It does not, but then the combat model doesn’t represent these factors. Every ship blasts away with such excellent accuracy that ships are often dismantled and sunk within two or three turns. That’s 6–12 minutes of fighting! Because of this, you’re very unlikely to see an inconclusive battle—a point reinforced by victory conditions that make draws impossible.

**HOW ABOUT “QUAKE WITH CANNON”?**

In the Designer Notes, Justin Przedwojewski fears that Gehgards might avoid MOW, fearing that it will be “DOOM with ships.” MOW has a way to go before it’s as involving as DOOM, but it is going in a good direction. Most wargamers will be put off by the lack of realism in the combat model as much as the graphics. But MAN OF WAR might just be the ticket if you are trying to interest a young person in our hobby.

**BEAUTIFUL SUNSET TONIGHT** From the foredeck, you can look back at the fleet following. MOW models fog, night, and partly cloudy conditions as well as clear skies, though I have yet to see a storm.

**APPEAL:** People looking for an introductory wargame with some eye-candy.

**PROS:** Nice treatment of naval doctrine in the Age of Sail; early attempt to marry turn-based strategy to real-time first-person game.

**CONS:** Nice try, but the marriage doesn’t work.
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Ground to a Halt

Napoleon's Last Campaign Marks the End of an Era

by Bob Proctor

June 16, 1815. France is threatened by two armies: one British, one Prussian. Napoleon, hoping to defeat each enemy in turn, moves quickly to block the roads that would allow his enemies to join forces. The rapid march of Napoleon's army surprises the allies (whose officers are attending a ball in Brussels). Sensing that Wellington's forces are less than prepared, Napoleon hopes to stall the British at the crossroads of Quatre Bras, while simultaneously smashing the Prussians near the village of Ligny. This bold plan—which came very close to succeeding—is the subject of PRELUDE TO WATERLOO, last of the famed BATTLEGROUND wargame series.

NAPOLEON VS. ROBERT E. LEE

PRELUDE, the third BATTLEGROUND game covering the Napoleonic Wars, uses a slightly different set of rules than those dealing with the American Civil War. In the ACW games, cavalry can be mounted or dismounted, but they can fire only while dismounted. They are, in effect, infantry that can use horses for greater mobility. In PRELUDE, the cavalry fights from horseback with swords and sabers, so each turn has an additional phase—the Cavalry Charge. Cavalry gains powerful bonuses by charging into a melee. It’s so effective that an infantry unit of comparable size cannot stand against them unless it uses a special defensive formation—the square. The square allows you to shoot in any direction (albeit with reduced firepower), but it’s less mobile than either line or column formation.

Also, infantry units in PRELUDE can split off groups of 100 men as skirmishers. Some units can do this once; light infantry can do it repeatedly. Cavalry likewise can split off squads of 10 riders. These small units have no facing (thus, they may fire in any direction) and they serve many uses as forward scouts, guards for your flanks, or harassers of enemy artillery. You can also sacrifice skirmishers to blunt an infantry assault. They generally give as many casualties as they take, and every turn the enemy spends fighting skirmishers is another turn you can reduce his numbers with ranged fire. And you had better reduce him because Disorganization does not keep an infantry unit from melee (unlike the ACW games).

Given these differences, PRELUDE adds more complex, much richer tactics, harder to play well, and therefore more rewarding. Unfortunately, it also means it’s harder to program the computer to play well. Once you’ve mastered the game, you should be able to beat the AI in any scenario playing either side. I guess that means the scenarios are balanced, at least!

THE NEW ART OF WAR

One new idea in PRELUDE is Art of War scenarios with the same setup as the historical battle, but with highly variable release times for reinforcements. They are intended for head-

EXTREME ZOOM-OUT Here’s a portion of this viewing mode. It’s useful if you want to see the terrain approaches to Quatre Bras without units getting in the way.

Price: $54.95
Minimum System Requirements: 486DX,
Windows 3.1 or better,
8MB RAM, 5MB hard-disk space, SVGA graphics card, 2x CD-ROM; supports Windows-compatible sound cards.
Multiplayer Support: Hotseat, modem, null modem, Internet, or email
(1-2 players).
Designer: Joseph Hummel, Bob McNamara, John Tiller, Jim Ross
Publisher: Talossoft
Forest Hill, MD
(410) 821-7282
www.talossoft.com
Reader Service # 341
to-head play using the Extreme Fog of War optional rule. Extreme FOW hides the identity and quality of enemy units as well as hiding the data that "normal" FOW hides (exact strength and fatigue). While they might be of little interest to those who want to analyze history, both Extreme FOW and the Art of War scenarios make head-to-head play much more interesting. Maybe Talonsoft will bless us with Art of War scenarios for earlier games?

Napoleonic games take longer, turn for turn, than the ACW games because there are more choices to be made and because there are lots of units, especially when skirmishers can double the number. Thus, PRELUDE comprises a wonderful variety of long scenarios, but only four (of 23 total) can be played in a single sitting (see the sidebar for details).

If, like Wellington, longer battles are your cup of tea, then PRELUDE has a unique feature. Owners of BATTLEGROUND: WATERLOO can save their results from PRELUDE as the starting setup for a Grand Waterloo campaign game. Nice as this feature is, though, with such extremely long games, I'm disappointed that Talonsoft hasn't improved the user interface by adding player aids. For example, artillery is more accurate after it has acquired a target. However, it can be really hard to remember which target a particular unit shot at in its previous fire phase.

Another useful tool would be some way to remember which units need to change formation. A common example is artillery that needs to unlimber. Normally, this can happen only during the Defensive Fire phase, but the "Next Unit" tool will find only units that can fire, which never includes limbered artillery. If you don't remember to do it, you lose two more fire phases before your next chance.

### Prelude to a Short Scenario

Interesting parallels exist between this game and Bull Run. Both have enormous maps with terrain well suited for head-to-head play, both include historical coverage of two major battles, and both have a wealth of long scenarios, but only a few short ones.

The two short Quatre Bras scenarios are hypothetical events on the evening before the historical battle. The Vanguard is a gem. Half a dozen French regiments try to capture Quatre Bras from a similar number of British units. The French units are all cavalry and the British are all infantry; both sides have two artillery units for support. At a mere eight turns, the scenario can be played in an hour and is a great introduction to cavalry tactics.

Fifth Corps at Frossigny is a 12-turn scrap in which the French must press the attack against superior numbers. While you can win this scenario versus the AI, it's doubtful you'll be so fortunate leading the French against a competent human general.

By contrast, the two short scenarios for Ligny are historical. They portray the initial French attacks on two different salients of the battle. Ligny is just 6 turns in length, so you might conceivably hold that town. St. Amant, at 12 turns, is another story, however. A river separates the village from the majority of the Prussian army, and all of the Prussian units across the river are fixed. What's worse, the Prussian units around nearly Ligny are also fixed in place, but the French are not! I suspect this was just a mistake, but the result is a somewhat unbalanced scenario indeed.

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### BATTLEGROUND series, Talonsoft has maintained its high standard of wargame design. We can only hope the company's next venture will be as successful.

#### STRIKE THE COLORS

While there are more than a few points about which to quibble, PRELUDE TO WATERLOO still ranks as a very good game. It's historically accurate, challenging (especially in multiplayer scenarios), and still as attractive as a tabletop miniatures game, despite the age of the engine. With this grand finale of the

#### APPEAL: BATTLEGROUND series fans and students of the Napoleonic Wars.

#### PROS: New "Art of War" scenarios for head-to-head play; campaign links with BATTLEGROUND: WATERLOO; still the best on its subject.

#### CONS: Only four scenarios can be played at one sitting; no scenario editor; engine and interface starting to show their age.

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The Business of War

A More Profitable Twist on Real-time Strategy Gaming?

by Patrick C. Miller

Ever since President Eisenhower warned Americans about the influence of the military-industrial complex, the idea that business interests controlled foreign policy and manipulated us into war has been a mother lode for conspiracy theorists. In War Inc., a real-time strategy game from Interactive Magic, corporations not only supply the materials for wars, they also field their own armies and commanders to fight them.

The year is 2020, and you play the role of an up-and-coming executive in an international tactical reaction corporation. Of course, you know that's just a more businesslike way of saying that you kill people for profit. Your employer, the Granite Corporation, is a mercenary service that specializes in solving the problems of world governments with military forces of its own creation.

**PROFITS R US**

But make no mistake, the almighty dollar and the bottom line are first and foremost in everything you do. Your business acumen is just as important as your military mind, if not more so. The decisions you make about which technologies to research, in which stocks to invest, and which companies to take over all have a direct bearing on your ability to wage war. And waging war is by far your most profitable activity.

War Inc. can be played in quick combat, campaign, or multiplayer mode. Quick combat offers instant combat with all technologies immediately available to you. Multiplayer options include modem, serial, and IPX network, although they were not tested as part of this review. There are no tutorial missions and no levels of varying difficulty. There are, however, a number of options that can be tweaked to make the game easier.

The campaign game begins in an executive suite where you can play the stock market and choose the technologies you want your hired scientists to research. In perhaps War Inc.'s best feature, you can design and name your own units or customize existing designs. From the office, you can choose to advance time by the day, week, or month while you monitor the status of your stocks and the progress of your research.

**HAVE NANITES, WILL TRAVEL**

Eventually, you will be offered a mission in some far-flung corner of the world. You might quell the militia in Canada, monitor alien abductions in Guatemala, or lay siege to pirates in the Bermuda Triangle. Before deciding whether or not to accept a mission, you will receive a detailed briefing about its nature. If you accept, you're taken to a strategic map where you can check out your headquarters. Missions have

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**Price:** $39.95

**Minimum System Requirements:** Pentium 90, Windows 95 or DOS 5.0, 16MB RAM, 60MB hard-disk space, 2x CD-ROM drive, SVGA graphics, Sound Blaster-compatible sound card.

**Multiplayer Support:** Modem, serial connection (2 players), LAN (2-6 players).

**Publisher:** Interactive Magic Research Triangle Park, NC (888) 299-0972

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— Edge

"Excalibur 2555 is one of the most unique 3D games ever... a really, really cool game"
— Diehard Gametfan
WAR INC. REVIEW

primary, secondary, and tertiary objectives that must be completed before you get paid.

At the start of each mission, you're provided with a headquarters to construct basic units. You use ore-sniffing vehicles to locate minerals, which, when mined, give you the necessary resource units to construct more facilities, infantry, and vehicles. You may also build solar power plants to generate energy for your facilities. Strike teams are assembled and then moved (on the strategic map) to the objective areas. However, as you move toward

the improvement over the older game. Combine that with an excessively micro-management-heavy combat system and an incredibly nonintuitive interface, and suddenly sitting in the office designing new vehicles is the most entertaining aspect of the game. While recent offerings in this genre make it easier for gamers to command large numbers of units by providing queued commands and unit behavior settings, WAR INC. stubbornly refuses to move ahead in this area.

You can't order facilities to build more than one type of unit, and there's no way to automatically send a new unit to a location. Artillery units won't fire at the enemy unless specifically ordered to do so, and units ordered to move will too often remain stationary if they can't trace a path to the location. A feature that supposedly lets you move units in formation doesn't seem to make a discernible difference. All this, and the clumsy interface, adds up to a tremendous amount of micromanaging. Not fun.

WAR INC. tries hard to be a cross between X-COM and COMMAND & CONQUER, but the weak combat system brings the whole game down. Without C&C's hard-edged personality or X-COM's immersive tension, there's little to recommend it.

APPEAL: Real-time strategy fans looking for a game with a slightly different twist.

PROS: Ability to create and customize units; multiplier capabilities; between-mission strategic elements dealing with research and money management.

CONS: A clumsy interface, unappealing maps, and the need to heavily micromanage individual units render combat unappealing and tedious.

MARKET CRASH

The battlefield maps are vintage COMMAND & CONQUER mazes, and the graphics and artificial intelligence offer lit-
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Under the Jolly Roger

Buccaneer Sinks Under the PlayStation Flag

by Johnny L. Wilson

Buccaneeer gives a bad name to more than one type of port. A conversion of SSI's adventure strategy game, originally designed for PlayStation, it is to Sid Meier's Pirates! and Impressions' High Seas Tr arder what former Vice President Dan Quayle was to John F. Kennedy. "To wit: "I know Pirates! and Buccaneeer is no Pirates!"

"Oh, I command a sturdy band of pirates bold and free. No laws I own, my ship's my throne, my kingdom is the sea."

All quotations from "The Pirate of the Isle," an American sea chantey.

Buccaneer starts out as a good idea. In addition to tactical real-time combat with 3D ships and shifting wind direction, it has better graphics than either Pirates! or High Seas Trader and music that exceeds all but the Amiga version of Pirates! Buccaneeer also gets kudos for having multiple campaigns - each with its own unique objective. Do you take to the high seas to rescue your lost love, avenge your late brother, clear the family name, save your brother, restore your fortune after a betrayal, or find a particular treasure? There are twists in some of the campaigns, but the gameplay is the same, whatever you decide. The limited, almost skeletal, narrative unfolds with slight differences and victory screens each time, but anyone who bothers to listen to the voice-overs will immediately wish that the actor be forced to walk the plank.

It's when you start to play that you discover how dry the bones are beneath the skull on your flag. Want to name your ship? It's not an option. Since the PlayStation has no keyboard, the port doesn't need one either. Want to add a little splash to your battle as you slice your rapier deftly through your opponent's visor? You don't control your fencing or shooting during the tactical combat. It is a more animated portrayal of the program's calculations, while you watch as an innocent bystander. Your one valid interaction is to retreat.

Amazingly enough, though the ship-to-ship combat offers real-time action, the man-to-man combat doesn't.

Even the smallest matters bear a negative legacy from the PlayStation interface.

Want to restock your ship with food and water? You'll have to click on the cursor for every unit (one for each day you expect to be at sea). Want to replace the cannonballs you used in the last battle? You'll have to click for each and every one. If you just spent 200 taking down a fortress, you'll have to click 200 times. You can't simply click and type "200." You didn't have a keyboard with the Sony version of the game, and Divide by Zero, the developer, didn't think it was important to clean up the interface for computer gamers.

"I no quarter show where e'er I go, but soon the prize we'll take in tow."

Unfortunately, things just get worse. Want to

Price: $39.95
Minimum System Requirements: Pentium 120, Windows 95, 16MB RAM, 60MB hard disk space, 4x CD-ROM drive, 1MB SVGA graphics (2MB recommended), mouse, Sound Blaster-compatible sound cards.
Multiplayer Support: Modem or Serial (2 players); LAN or Internet TCP/IP (2-4 players).
Developer: Divide by Zero Software
Publisher: SSI (a Mindscape Company)
Sunnyvale, CA
(800) 601-7529
www.ssionline.com
Reader Service #2: 330
send a prize party over to take that ship you've just defeated? You can do it, but you'll lose the ship you already had. Imagine my chagrin when I captured a heavily laden Dutch Flute in my first campaign and subsequently discovered that I had left behind my fast, maneuverable sloop forever. PIRATES! allowed you to take that prize to the next port, unless you were defeated by another ship en route. BUCCANEER expects you to scuttle either your current ship or the valuable prize at sea.

Also, while the tactical combat at sea is the best part of the game, it's also lacking. You set the course for your ship from an overhead oblique perspective — standard, adventure-game three-quarter view. Then you hastily hit the Insert key on your keyboard (obviously an analog for one of the Sony gamepad buttons) and get the gunner's view. You use the Plus key to raise the cannon and the Minus key to lower it.

Unfortunately, the on-screen perspective doesn't let you know how many rounds you've used to raise or lower the gun. Although there is a place on the screen to show the approximate elevation, it doesn't actually show what you've done to adjust the gun, so you are forced simply to fire and hope you've remembered correctly. Still, it's painful to think you've raised the cannon to a certain height so that you can bombard a fortress from a safe distance, only to discover that you haven't raised them as high as you thought you had. Such a small change would have made a big difference.
Конфликт.
Лидеры.
Самолёты.
Пилоты.

Ваш выбор.

JETFIGHTER FULL BURN

Полёт как рассказ.
"I LOVE TO SAIL IN A PLEASANT GALE ACROSS A DEEP AND BOUNDLESS SEA."

Still, the ship-to-ship tactical battles are more interesting than those of PIRATES! The 3D ships really matter as you try to take the wind gauge on your foe and put his ship under your lee in order to sail faster. The wind shifts realistically and offers an extra challenge: You have to watch the direction in which your flags are flying. The graphics shown as the other ship takes damage provide better clues for how the battle is going than those in PIRATES! and slightly more than those in HIGH SEAS TRADER. This will save you from sinking ships that you intended to batter and board.

Frankly, it's good that the ship-to-ship battles work, because that's all there is to the multiplayer game. You can connect with one other player by modem or serial port, three others by LAN or TCP/IP. You get to choose from the six ship types, but you'd have to be really good to try a flute in this quick-combat mode.

Sadly, BUCKANEEER doesn't feature different types of ammunition. You're stuck with round shot — there is no sign of grapeshot or chain shot. Fortunately, however, the game doesn't simulate fortresses using heated shot, so ships don't catch fire quite as easily.

There are a few nice touches. Fortresses, for example, are tough enough that you will gladly fool them by flying a foreign flag instead of your pirate's flag whenever you can. Flying a foreign flag will allow you to sneak into port, sell your cargo, and restock the ship — unless you have achieved such notoriety with the country controlling the port that they recognize your ship on sight. Of course, knocking down the walls of the fortress with cannonballs is both more satisfying and a bigger visual payoff.

But in the end, BUCKANEEER provides far too few of those payoffs. It is true that in BUCKANEEER you don't meet the fate of the pirate in the sea chantey. You lose your men, but you get another ship to try again. Problem is, you probably won't want to.
The conflict.
The leaders.
The planes.
The pilots.
Your choice.

JETFIGHTER FULLBURN
THE FLIGHT SIM WITH A STORY.
It's Puzzling

PUZZLE CHALLENGE 2 Is the Best Bunch of Brain-Busters Ever

by Charles Ardai

Until the summer of 1996, most people who weren't die-hard puzzle freaks thought of puzzle collections as the lowest form of computer game. This was because puzzle collections, with a very few exceptions, were dreadful little things, assembled with a minimum of care for presentation, playability, novelty, or anything else that might lead to player satisfaction.

Then, along came Smart Games with its CHALLENGE 1: This breakthrough collection featured intelligent, varied puzzles, designed to meet the needs of beginners and experts alike— and was as close to endlessly replayable as any game could want. The inevitable spin-off titles—WORD PUZZLES and STRATEGIES—were nice games, but they were merely variations on themes from CHALLENGE 1, leaving real puzzlemasters wanting. Well, the wait is over: 20 new puzzles, neatly wrapped up under the PUZZLE CHALLENGE 2 title, should hit the stores just in time for Christmas.

Bank It Off the Green Even the combinations of traditional games are fresh, such as Pool, which combines bumper pool and golf.

Something Old, Something New Fans of CHALLENGE 1 will feel right at home here. The bouncy music and lively graphic design are the same as ever; only the icons representing the individual puzzles are new. No individual puzzle type has been repeated, although, on a broader level, you still have a couple of word puzzles, a couple of numerical puzzles, a couple of spatial relationship tests, and so on. Many of the puzzles feel brand new, such as Mirror, Mirror, in which you have to fill a grid with reflecting and beam-splitting mirrors and angle them just so to carry a beam of light from an emitter to one or more targets. Others are more familiar: Leapfrog is really just a heavily disguised variation (though a greatly enjoyable one) on Marble Jump from CHALLENGE 1, and Ice House is a frictionless version of the original game's Warehouse.

Every player will have his favorites. One CGW editor found himself quite taken with Pool, a combination of pool and golf in which you use cue sticks of various weights to sink shots on a golf course filled with sand- and water traps. I fell in love with Say What?, a jigsaw puzzle in which the pieces you have to fit together are tiny audio snippets that combine to form a familiar speech or piece of classical music.Trivia buffs will enjoy Gates of Tivian, the Smart Games' spin on their favorite pastime (closer in spirit to Jeopardy! than to YOU DON'T KNOW JACK), and fans of wordplay will devour It's A Wrap, a particularly elusive bit of cryptic crossword-style clue solving.

In this stellar package, not every star shines equally brightly. I could have died happily without seeing another version of Tangrams, the Chinese shape-building classic, but Smart Games has robbed me of my chance. However, it has more than made up for that by the quality of the other puzzles and the panache with which it has pulled off this truly satisfying sequel. Where else will you find a reverse word search (the grid is empty, and you have to fill it with letters), much less one in which the words you have to insert are from the mock first sentence of Albert Camus' existentialist novel L'Etranger? ("Mother died today, or maybe it was yesterday. I can't be sure.")

No, this is brain food of a very high order, caviar for the cranium. It may not make anyone smarter, but, by heaven, it will make a lot of smart people happier.

Price: $34.95
Minimum System Requirements: 486/33, Windows 95, 16MB RAM, 9MB hard disk space, SVGA graphics, supports Windows-compatible sound cards.

Multiplayer Support: None

Designer: Smart Games, Inc.
Distributor: RandomSoft
New York, NY (800) 788-8815
www.smartgames.com
Reader Service #: 343

A
PPEAL: Those with limber brains and a taste for ingenious puzzles.

PROS: Hundreds of puzzles in 20 new categories, the best of which are irresistible.

CONS: Some puzzles are more variables than really new; the "You have won!" screen is bigger and more irritating.

RATED
Why You Should Care

Do Stories Matter In Action Games?

I think Quake will be the zenith of the jam-packed, adrenaline-pumping action game, the kind that relies solely on awesome technology and graphics to win favor. Quake had that intangible quality that vaulted it over other action games; part of it was its inspiring 3D engine and atmosphere, the other part was its addictive multiplayer. For the single-player experience, though, I think action games have reached an epiphany: Things must change soon, and I think in Jedi Knight and Hexen II we are seeing the baton being passed in the action world, from the sensory overload package to the more compelling, story-driven experience.

"What a minute," you might be saying, "Hexen II and Jedi Knight are both story-driven, role-playing-like action games." However, without trying to diminish the excellent artistic work at Raven and id, I think Jedi is a shining example of a story-driven shooter, while Hexen II, by not getting everything right, shows you what not to do when you're trying to meld story and gameplay.

What set me on this contemplative path on the future of action games were my gaming choices over the past few weeks. To be honest, I've been immersed in a variety of games, but what I've been playing most are Final Fantasy VII on the PlayStation (don't tell our Editor-in-Chief or I'll get fired!) and Jedi Knight on the PC. Both games, especially FFVII, have great stories that unfold bit by bit, as if they were movies. These games have been monopolizing my time, despite the fact that I very much wanted to play Hexen II because of its fantastic artwork and Quake heritage.

THE VANGUARD

The more I tried to play Hexen II, though, the more I turned to Jedi Knight. Then it hit me. While Hexen II has great graphics and some incredible puzzles, I just didn't care enough to keep booting up the game. On the other hand, Jedi Knight, which to my eyes doesn't look quite as good as Hexen II, compelled me to return again and again, with its story and tantalizing promise of learning Force Powers. In a nutshell, I cared about playing Jedi, and I didn't care about Hexen II.

Why did I care? First, I was role-playing the main character, Kyle, and he had a story to be told, one that unfolded the more I played. By creating a story, LucasArts has made Jedi a must-play title on three levels: in the general sense, on a per-mission basis, and on a personal (player/character) level.

All you learn in the beginning is that the dark Jedi Order is after the Valley of the Jedi, and that this is somehow connected to your father's death. The more time you invest in the game, however, the more you learn about your character and his story. Cut-scenes reveal key plot elements, and the missions themselves are tightly interwoven into the story.

In addition to uncovering more of the story, I play Jedi to improve my character's abilities. When I learn a Force power, it's a big event because I am learning an ability that directly affects the gameplay. I can jump farther, for example, or previously unreachable areas are now

UPPING THE ANTE

Hexen II is a good game, but Jedi Knight, with its successful narrative, is better.
offensive powers on enemies; and heal myself when health packs are nowhere to be found.

On a per-level basis, I play each mission not because I need to kill all the monsters and find the exit, but because there is a story-driven reason to do so: finding a droid, decoding a disc. Basically, having a reason to play a level is always better than not having one.

THE OLD GUARD

If JEDI is an example of how to make a game compelling with story and role-playing, HEXEN II is a good illustration of a game that falls short of that goal.

HEXEN II has the role-playing elements and great puzzles, but it has no over-arching story to tie it all together. The story is there only to serve as an introduction to the game. You don’t care about your character because you’re just a walking weapon-rack whose sole mission is to run through the levels until you find the end boss. Nor do you learn more by playing more. In HEXEN II, you get no sense that you are making progress. People will keep returning to a game if it rewards them regularly throughout the gameplay. JEDI KNIGHT does this well—with its cut-scenes, mission briefings, summaries, and unfolding story—but HEXEN II doesn’t.

Another area where the lack of a binding story hobbles HEXEN II is in direction. There is much to do in the large levels, but the game offers you little direction. In JEDI, you get direction via mission briefings, but in HEXEN II you simply spawn in a new level and are challenged with finding the exit. There is nothing inherently wrong with this type of gameplay, but there’s nothing too compelling about it either.

On the role-playing front, while HEXEN II’s different character classes are a nice touch—especially in multiplayer—in single-player, your character never grows enough to feel as if he is embarking on new paths of discovery. You remain essentially the same character with a few more hit points.

By these comments, I don’t mean to say that HEXEN II is a bad game. It’s pretty good, but because of the great disparity in the narrative experience, it just isn’t in the same league as JEDI KNIGHT.

OTHER EXAMPLES?

Some of the most compelling games of the past year—OUTLAWS and INTERSTATE ’76—are also story-driven. These were games that had mediocre-to-good action, but presented deep stories and goal-based missions to hook gamers. In both these games, you felt immersed in the universe and eager to continue playing to learn more about the story. INTERSTATE ’76 did a successful job with its goal-oriented missions, which made you feel as if you had a role to play in the universe. You weren’t there just to kill, but to make a difference in the world, whether it be saving schoolchildren from auto-villains or racing to find—and save—a friendly gas station. OUTLAWS did a fantastic job of piquing your interest and compelling you forward with its spaghetti Western theme, plot, and music.

It isn’t story alone that makes a game great, because OUTLAWS was otherwise a mediocre product. But when in-depth story combines with excellent level design and immersive gameplay, as in JEDI, you get that ultimate action game.

WHAT DOES THE FUTURE HOLD?

Aside from JEDI, where’s the proof that the best action games are moving toward that story-driven goal?

Zack Norman, lead designer on INTERSTATE ’76 and MEGA WARRIOR 2, agrees that story-telling makes a better game: “There are any number of ways to immerse the user, but story probably happens to be the most compelling one. There will always be a place for disposable experiences [such as QUAKE and HEXEN]. Personally, I prefer to play games that have narrative. I don’t think I could make a game that doesn’t contain story and 3D characters.”

Other game designers agree. Ritual is making SIN mission-based, with specific goals per level, and will attempt to offer an unfolding story as well. DAIKIANA’s designer, John Romero, has also been very vocal about making it a story-driven game. You can also bet that LucasArts action games will continue to have strong stories, as will Activision’s in-house games, such as the INTERSTATE and HEAVY GEAR franchises. Even id is trying to add a few in-game cut-scenes and a story to QUAKE II.

As Norman says, there will always be a place for games that offer instant gratification via straight-up action. The games that will earn a place in gamers’ hard drives as classics, though, will be those with deeper stories. These will be the games that lure players along, using the promise of more story, information, or deeper character growth, as the enticement. By doing so, and by making the gamer’s progress translate into tangible results, action developers will finally make their audience care about characters and about what they play.
WHO WANTS SOME MORE WANG?

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Let's Get Small
Overloaded, Overhyped Sports Games Got You Down?
Try These Smaller Games Instead

Since most issues of CGW find this space filled with hot news, juicy gossip, and my own shoot-from-the-hip opinions on sports offerings from the industry's big dogs, I've made a New Year's resolution to give the little guys a chance. Now, it's only natural that I get to ramble on each month about the likes of EA Sports, Sierra, Accolade, ABC Interactive, Acclaim, and Microsoft. After all, I like to rant, you like to read, and they're the major players who sell the most—and the most popular—titles. But keep a place in your heart, and occasionally in your budget, for the hit players of the gaming world. After all, what would you and I be doing for fun—don't answer that—if two guys named Steve hadn't slapped together the first Apple computer in a garage nearly two decades ago?

LOW BUDGET

I know what you're thinking. Why would anyone piss up a loud, gory, action-oriented sports game in favor of some text-based stat sim hand-distributed by a guy who works out of a spare bedroom? Well, you've answered your own question. Some of us don't like our sports gritty, loud, and action- (read: arcade)-oriented. And who says a guy in a spare bedroom can't have an idea about how a sports game should work? Don't forget those two guys named Steve.

There are, of course, other good reasons why some gamers prefer the small releases over major titles. Reason No. 1 is a medical condition recently identified by the Centers for Disease Control as Upgraditis. Symptoms include turning green at the thought of spending $3,000 for a gaming system that will be obsolete within two years. You can administer a safe, easy, home test for this condition. If you'd rather go underwear shopping with Marv Albert than replace your present system, you've got upgraditis. See your doctor and immediately discard those lingerie catalogs.

However, I don't mean to imply that you have to be sick in some way to enjoy smaller sports games. As a matter of fact, quite a few warrior types opt for stat-based sims. Real warriors that is. Deal-closing, laptop-toting corporate gun-slingers by day, after dark they take their pleasure where they find it—in sports gaming. Text- and stat-based sims are a perfect fit for folding computers, since even the higher-end laptops are beginning to balk at the 3D acceleration requirements and ex cessive demands for hard-drive turf made by the newer sports titles. Microsoft's upcoming 3D BASEBALL, for example, insists on a 3Dix video card. Who's got one of those in their laptop? And Accolade's LEGENDS FOOTBALL '98 consumes 125 megabytes for a

If you'd rather go underwear shopping with Marv Albert than replace your present system, you've got upgraditis.

THE UN-MADDEN Dave Koch's Action PC won't wow you with its graphics, but the game provides some of the most realistic football action around.
basic installation. As Jeff Goldblum said in Jurassic Park, “That’s a really big pile of . . .” But it’s especially so on the cramped hard-drive of a laptop.

**ACTION, JACKSON**

Back in the Cro-Magnon era, when home computers were just a line in a science-fiction novel, sports gamers had to settle for card-and-dice-based football sims. In those days we wished for a game that would manage the stats and the rosters for us, and autogap all those boring Saints vs. Falcons games. We didn’t know it then, but ACTION PC from Dave Koch Sports was the game we were dreaming about: a stat-based sim that covers both the latest NFL season as well as a healthy smattering of past campaigns. Lately I’m having a blast with the 1972 season disk, trying to match the perfect 17-0 record compiled by Don Shula’s ’72 Dolphins.

A flexible program, ACTION PC will sim the games or allow you to watch as you like. The AI makes a reasonably good opponent, and there’s a fair number of play options on both sides of the ball. The game’s roster management system allows for trades, waivers, and player editing. Play consists entirely of calling formations and ball carriers, and watching as the computer generates results by moving the pigskin along a small football field at the top of the screen. While it’s not Monday Night Football ’98, ACTION PC does have some nice touches. In league play, for example, it informs you when new records are set during games. Perhaps most impressive is a stat sim, quarterbacks occasionally throw to secondary receivers, a trick that some of ACTION PC’s bigger brothers have yet to learn.

As good as it is, you have to wonder how ACTION PC and its small-time brethren manage to survive on mail-order and word of Net. Surprisingly, designer Dave Koch told me that sales of his game have been steady, and actually show a slight year-on-year increase. How does he compete against the MADDENs and the FRONT PAGES? That’s easy. He doesn’t. Gamers who opt for ACTION PC like it just the way it is. “My customers plead with me not to have any games running around in the game,” Koch says with a laugh.

Although ACTION PC is DOS-based, Koch is toying with a conversion to Win 95 for upcoming editions. Such changes are big issues in small-game land, however. The learning curve for 32-bit code is steep, and Koch runs two sports apparel shops as his main occupation. So why does he do it? Can you say “labor of love”? I knew that you could. Other small choices for football fans include APBA’s Pro Football for Windows, and Lance Haffner’s 3-in-1 Football.

**HOOP IT UP**

With hoop season starting up, I’m excitedly waiting to see NBA Live ’98, but when it’s time to get small, I turn to Strat-O-Matic Basketball 4.0, Cactus League’s Pro Basketball, or Lance Haffner’s Courtside College Basketball. Strat-O-Matic’s game is a brand new version, which includes the ’96-97 NBA season, along with a healthy set of utilities to swap or create players. STRAT-O-MATIC BASKETBALL 4.0 employs the same DOS-based interface that the company formerly used in its baseball game (which has since migrated to Win 95). It isn’t pretty, but it does provide a framework for Strat-O-Matic’s realistic statistical engine. STRAT-O-MATIC rates NBA players in 10 distinct offensive and defensive categories and allows you to manage strategy, fatigue, and lineup decisions.

**RINGSIDE SEAT**

Gamers who feel the need to reach out and touch someone may want to consider APBA Pro Boxing for Windows. The “sweet science” has been lovingly detailed in this sim, which not only lets you match your favorite fighters, but allows you to do so at different stages in their careers. Pick the weight class, the corner men, the referees, and even the location of the bout. Ring fans will love the opportunity to create an all-time tournament. Joe Louis vs. Evander Holyfield? Go for it! If you love the strategy of boxing and don’t mind a relative lack of visual stimuli, this one is a winner. About the only thing missing is a bite rating for Mike Tyson. &
Desperate Hours
Or, Why Winning at Computer Games Is More Important Than Life Itself

I am a man with a mission. It's a simple one really, but one that obsesses my waking hours and haunts my dreams. This is my mission: I want to kick Features Editor Denny Atkin's butt in a multiplayer game of AGE OF EMPIRES.

I know, I know — I could have loftier goals. I know there are more important things to worry about. My daughter's education might be one, I guess. Those land mines in Bosnia. Global warming. But I can't help it. Ever since Denny began cleaning my clock in AGE OF EMPIRES — regularly, soundly, and with cold, warlordlike precision — I've been longing for the moment when I could exact my revenge. And, look, my kid is only three anyway. That leaves her 15 long years to learn how to talk and read before she has to enter the workforce to support me. So stop judging me.

... The funny thing is, before I came to Computer Gaming World, I never considered myself to be very competitive. Part of the reason is genetic. Despite the fact that I'm CGW's sports editor, I am not — to be completely honest — very good at actual, real-life, physical sports. I blame this mainly on my mother and father, who bestowed upon me the DNA of your prototypical skinny, droop-shouldered, Yes-Id-Be-Happy-To-Give-You-All-My-Lunch-Money wuss.

Here's how bad it was. You know how some people like to complain that they were the last person picked for team sports when growing up? I wasn't even that guy. I was the guy after that guy. The left over who ends up on the second team by default, after the first team makes the final what-difference-does-it-make pick between the only two people left — the two hopelessly uncoordinated future marching band members. (I played the trumpet.)... I wasn't exactly thrilled to be that guy, but there was one guy I wanted to be even less. Because I wasn't particularly good at sports, I channeled my energy into pinball and video games. One of the defining moments of my youth came when I saw a grown man cry over a pinball machine. It was at the Silverball arcade in Berkeley, the machine was "Tommy," and this pathetic 30-year-old wretch was actually shedding tears — cursing and hitting the machine — because the game wasn't going his way.

This, I thought, is a sign. This is someone telling me something. Don't be that guy, Jeff. Stop now. It's not that important. Then I promptly got $5 worth of quarters, marched over to Missile Command, and played until the grimly faced clerk who ran the place told me I'd have to leave if I wouldn't stop banging on the machine.

Today, I wouldn't dream of hanging on my machine; computers don't tilt, and there's nothing much worse than getting on the bad side of the fiend dominate from our IS department. But, I have to admit it: my game lock — my utter fixation to beat whatever game I'm currently playing — is as strong as ever. I'm a grown man who can't stop thinking about games.

... Right now, it's AGE OF EMPIRES. On the train, at home, at my desk, my brain keeps swirling with thoughts like: How does Denny — that freakin' flight sim geek — keep getting to the Iron Age while I'm still fritzing around with cave-men?? He must be cheating!!! I can't stop thinking about this stupid game. I walk around in public, oblivious to the world around me, saying "ercatus" and "hommus" out loud, working myself into a rage over the idiotic 50-character population limit, and of course, scheming about how to crush Denny the next time we play. I study the game's growth chart like a desperate fool — looking for the key that will ensure my future victory. I hear the drums and attack horns in my dreams, and have nightmares about being stuck in the Stone Age forever because I can't find any food, while Denny, in the meantime, is researching rocket science and nuclear power and has begun inhabiting other planets.

Somebody help me, please. Hommus. I'm serious. Ercatus. I have game lock. Abadakus. It's begun to take over my life. Ercatus. I'm afraid I'm losing my grip. Hommus. Mornny...\n
What Jeff doesn't realize is that, while he's finally learning AGE OF EMPIRES, Denny has already moved on to TOTAL ANNihilation, where he plans on humiliating Jeff all over again. You can send your condolences to jf@green@z6.com.
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Sim Year in Review

In 1997, Flight Simulation Had Its Ups and Downs

As the year draws to a close, it's time to look back at the year in flight sims and see who did things right -- and who blew it. So, (drumroll, please) I hereby announce the first-ever Eagle and Buffalo Awards for Flight Simulation.

The F-15 Eagle is still a premier air superiority fighter more than 25 years after its first flight. With an unmatched combat record as a fighter (96.5 kills with no air-to-air losses), enviable performance as an attack plane, and sleek good looks, it's a clear example of a top-notch design. So for the companies who set the performance standards, we present the Eagle award.

The unwieldy Beech F-31 Buffalo, on the other hand, was a massive failure for the Allies, proving only marginally more effective in aerial combat than its furry, grounded namesake. So the Buffalo awards go to the folks who just didn't quite get it right.

FLY LIKE AN EAGLE

An Eagle to MicroProse for holding focus groups with a variety of simulation fans to make sure that the long-delayed FALCON 4.0 will satisfy gamers' desires. Even if implementing the groups' input makes the sim take a little longer to finish, the delay will be worthwhile if it results in a better game.

Eagles go to DID, Mission Studios, and Empire Interactive for releasing free patches to add 3D-card support to EF2000, JET FIGHTER III, and FLYING CORPS.

Eagles to Virgin/Eagle Interactive and Empire/Rowan for bucking the "me-too" trend and doing something original -- Korean War simulations.

Another group of Eagles goes to Eidos, Activision, and Jane's Combat Simulations for creating combat sims which can be easily played over the Internet (FLYING NIGHTMARES 2, FIGHTER SQUADRON, and FIGHTERS ANTHOLOGY, without joining an Internet gaming service. Paying for an Internet gaming service should be an option -- for those who want to take advantage of the latency reduction, matchmaking, and other value-added services -- not a requirement.

An Eagle to Eric Parker and the crew at Russoft for creating the Open Plane Interface for FIGHTER SQUADRON: SCREAMIN' DEMONS OVER EUROPE. Allowing open access to the data format for creating aircraft means that technically savvy third parties and end-users will be able to create new planes for the sim -- opening the possibilities for some really obscure planes to be created for the sim. (Let's give credit where credit's due: Microsoft's FLIGHT SIMULATOR has long allowed third-party aircraft. However, that sim no longer has combat, and its flight models don't handle high-performance aircraft well.)

Eagles to Jane's Combat Simulations, DID, Empire, and every other company that included thick, paper reference manuals with their sims. An Eagle Award to all the companies that included thick, paper reference manuals with their sims.
Interactive Magic has delayed the IA-10 Warthog game it announced at E3 until late 1998. The company's next game, which is due around May, will be based on the F/A-18 Hornet. The sim will be built on the engine used in F-22, with numerous improvements based on gamer feedback from that game. Of course, the new game will feature the addition of carrier operations.

ON THE RADAR

who promise complete paper documentation with their upcoming sims.

FLY LIKE A BUFFALO?

A Buffalo to the legal goons at Lockheed Martin who tried to make a buck at the expense of the gaming industry by exclusively licensing the name and likeness of the F-22 Raptor to software companies, and an Eagle to the sensible folks at the company who backed down and promised nonexclusive licensing.

A Buffalo to EA’s Jane’s Combat Simulations for releasing ATF GOLD only a few short months before releasing FIGHTERS ANTHOLOGY. Unlike US NAVY FIGHTERS 97, which added new aircraft and a new campaign, ATF GOLD simply bundled Windows 95 ports of ATF and NATO FIGHTERS. This was followed a very short time later by the surprise release of FIGHTERS ANTHOLOGY, which incorporated all the improvements of ATF GOLD and more. It’s as if EA kept FIGHTERS ANTHOLOGY a secret so as not to cannibalize ATF GOLD sales.

A Buffalo to Microsoft for the fan they put in the Sidewinder Force Feedback Pro joystick. The stick is great, with precise effects, easy programmability, and an all-in-one design. My only complaint is that the usage is lacking the lack of compatibility with two pedals, but there are technical excuses for that. But despite its qualities, the Sidewinder FFP evaluation unit Microsoft sent me sits lonely on the floor gathering dust, used only when I want to test force feedback in a new title.

Why? The noisy fan! This thing is so loud I can’t hear the fan in the computer that sits directly behind it. The stick has no power switch, so the only way to quiet the fan when you’re not playing a game is to reach down and unplug the giant wall-watt transformer. (A bonus Buffalo for that one, Microsoft: check out the CH Force FXS transformer, which sits in the center of the power cord and doesn’t block three sockets.)

A Buffalo to Microsoft for including only an online manual in FLIGHT SIMULATOR 98. This package fails to even include a keyboard reference card. A realistic sim should have thick, paper documentation — nobody wants to slog through poorly indexed help files while learning how to fly.

And a final Buffalo to Microsoft for the glitchy DirectX. DirectX 5.0 does much to make this API less painful to install, but there are still plenty of problems. When I reported an odd bug that caused Windows not to recognize a properly installed joystick in late September, the company apparently hadn’t heard that the problem existed. Yet I’ve seen numerous reports of the same problem on the Internet ever since DirectX 5.0’s release. It’s true that creating an API that works with thousands of machine configurations is a daunting task, especially with third parties doing the drivers. But whatever the excuses, the fact remains that with the need to install DirectX to play Windows 95 games, gaming on the PC is far from the auto-play experience Microsoft claimed it would be.

A Buffalo to Apple for its lack of direction and fear of competition. Apple has been in and out of the game market more times that I can count; anyone who’s seen QUAKE running on a Power Mac under the Games ecosystems API knows there’s plenty of potential for Mac gaming. But, for many Mac skeptics, Apple’s decision to kill Macintosh clones instead of trying to compete with them was the final sign that the company’s days are past.

A universal Buffalo to every software company who released a simulation that required a patch to address major gameplay and performance issues.

A big Buffalo to the flamers, whiners, egotists, and spammers who just don’t understand the spirit of the Internet (not to mention basic civility), and who’ve made it harder for enthusiasts gamers to use the Net as an information resource.

But to end on a high point, an Eagle to every online flight sim pilot who’s helped a newbie, shared troubleshooting information, reviewed a hot new game, or posted interesting combat stories on the Net and online services. It’s these folks who still make logging on worthwhile.
SO YOU THOUGHT
SHOOTING DOWN BOGEYS
WAS HARD.

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CIRCLE READER SERVICE #655
**Twinsen's Odyssey**

A World-Spanning Roadmap for Activision's Epic Journey

by Robert Coffey

You triumphed over evil in RELENTLESS, and you're finally enjoying a well-earned break, peacefully awaiting the birth of your first child. But adventure seems to seek you out no matter what you do, and as Twinsen, the hero of Twinsen, it's your duty to answer the call. Take a look around your house and then get down to it.

**Rainy Days and Mondays**

With Dino-Fly hurt, a fact-finding trip to town (especially the pharmacy) is in order. A stealthy recovery of the customer's umbrella will point you toward Desert Island. But don't rush off quite yet, because there's more to do in town, such as liberating your tunic from the museum. Is there another way to reach those controls?

Now that you're properly dressed, it's time to do something about this nasty weather. A series of conversations should have you leaping across the cliffs and into the caves in no time. You'll have to take the long way around to free that prisoner, but start by finding a switch and experimenting with throwing your magic ball at it in different modes. Once you off the Trah, free the lighthouse keeper and take a stroll with Zoe to the lighthouse.

**Traveling Man**

There, isn't that better? But what's up with these aliens? Well, it's time to fix up Dino-Fly; these Shoos seem okay — for now. Take the ferry to Desert Island and look for the heater. Sure, the maid says he's not home but that doesn't mean there isn't anything there for you. Now find Jerome Baldino and get that car part Zoe mentioned.

Return and give Zoe the part. Someone, somewhere must want that Gallic Acid you brought back — find them and get something in return. Head back to Desert Island and Baldino's for that radio. Zoe should deliver your vehicle about now, so pick it up and drive over to Temple of Bu Park for some darts. Keep playing until you've pocketed at least 275 kahs.

Time to find this School of Magic you've heard about. Someone at the hacienda might know something. Engage in a little bad behavior to get to the top of things, then follow the snake charmer's instructions. When you arrive, the front door is locked, but there's another way in. Dodge the blue ghosts and sneak the key out of the chest.

Well, it wouldn't be a school without tests. The first is fairly easy, but finding a flower in the desert isn't. Once you hear of a likely place to look, make like Evel Knievel and return the flower to the School. A Horn of Healing! Now you can fix up Dino-Fly and your little friend trapped in the clam outside.

Ride Dino-Fly to the Dome of the Slate. Pay close attention to the sign outside before entering the building and passing the last test. Fly back to Desert Island, get your license, and buy a wizard costume from a traveling salesman. Return to the hacienda and prepare for a long trip.

**Space Cowboy**

The alien base is in Temple of Bu Park. Redirect the cart through the mines, get a key from a chest you eventually find, then climb down the nearby ladder. Whack everyone in
the barracks and thoroughly search the area. Ignore the spaceship and head upstairs, kill some guards and get the token from the chest that looks like a big, orange golf ball. Get in the shuttle and blast off.

On the moon, don the spacesuit and head to the small isolated building. Take the spacesuit off in the airlock (you'll be doing this a few times) then kill some guards. Is that a map over there? Turn all the switches green, then leave and enter the big building so you can free Baldino and his dissident pal. Now... run away!

Somewhere, you'll learn how to pilot these things. Round up some zilots from trash cans and barrels then enter the casino. When you've won a little more than 100 zilots, head back to the docks and pay the old salt for info and a ride. Once you talk to the heavily bandaged salesman it's time to return to Orting to find Rick. You'll have to kill the guard to get into Rick's office. Since you can't reach the part of the island with the hotel, let's get Baldino to stop whining about that gazogem.

Going Down?

Reenter the refinery and blast your way through the harbor base to the boat beyond. Arm your laser and prepare to face your first assassin—hopping left and right in Aggressive mode between shots should keep you alive long enough to off this age. Get the key, go down the elevator and through the building, then dodge the Franco while crossing the bridge.

Welcome to the Island of the Wannies. You'll be doing a lot more fighting from here on out—for self-preservation and to get keys. Ignore the buildings and enter the first cave after them. Make frequent use of your jetpack while exploring the mines and collecting all six gems and the glove you find there. Kill the big Wannie for a key to another fragment then leave the mines.

Enter the cave at the end of the path. After fulfilling the mole-man's request you can enter the chapel and be directed to someone who can help you call the ferryman.

After the ferryman drops you off at the Island of the Mousquibee, make a beeline to the Queen, who'll demand proof of your political position before testing your worthiness. When the Emperor's forces invade, escape through a hole in the wall. Keep an eye open for gems as you work around to a platform with a nasty flying walrus. Swat the fireballs back at him and

The Great Escape

Go...
you'll get a key to another fragment. Now go back to the Mouquinice platforms, climb down the rope, and ferry to the Island of the Volcano for some harrowing jumps and information regarding the Queen's whereabouts.

**Busting In**

Hop on the conveyor belt in the mines to go to a packaging room. Smash the guard around, then jump into a box, making sure both switches are up. Climb the ladder in the next room, jump to the next building, and you'll be talking to Her Highness in no time. Look for a far-off switch to open the cell, then it's back to the Queen's throne room and a new assassin. Use the Queen's key on her throne and you're on your way to Island CX.

Fight your way out and up, knocking off one of the guards for a key to the center tower. Inside, work your way to the Emperor. After he activates the rockets, use the key to get the sword from the trunk — this is the only weapon that hurts the Hussars. After getting a key from the Hussars in the next room, climb to the top of the tower to get a shuttle token for your escape.

Finally — a soft landing. Bash your way into the Otrinal palace, then make your way through the rooms by carving out a large right angle. After another boss monster you'll get the final fragment and complete the key. Head to Celebration Island for the big showdown.

**It Was You! All Along!**

Use the key in the temple to finally come face to face with your nemesis. Follow the villager by jumping from pillar to pillar into the cave. Inside, you'll await your toughest adversaries so far. Since the stream of robot elephants never ends, avoid fighting early on and concentrate on freeing the wizards (by clearing the monitor screens) and on chasing your rival. Later, you will have to kill a few elephants to move into the final confrontation with your arch-enemy. With luck (and enough extra lives) you just might save yourself, the children, and the planet of Twinson.

---

**Fuel Shortage**

Talk to the station attendant, then take the water taxi. Look for a low spot on the fence and jump into the gas refinery grounds. Inside the refinery you'll have to dodge scalding gas jets while you collect keys from guards and little red boxes. Remember, you can use your ball to collect dropped keys from a distance. Once you have the gas, hop the fence using some convenient barrels and go into the charming Franco town.

Buy yourself a pickax and find out why everyone's digging up town. When you find the doggone key that the owl hid, open the Burgermeister's safe for a clue to the missing fragment — find a grassy part of the shore and follow the note's instructions to dig out the fragment.

Now take the gazogem to Baldino for a new, improved protopack. Go back to the casino and play the slots until you win a key. Inside the locked casino room is a game-show host that's more crook than crot. Beat him and his mugger buddy to the punch with your magic ball. When the new area opens up, use the jetpack to cross it, and the subsequent ravine, on your way to the hotel.

Bash the snotty bellboy, then find Johnny Rocket. He'll direct you to the dissidents, who'll give you a nifty, if unloaded, gun. To get some ammo, go to Celebration Island and work your way around the volcano via a series of challenging jumps. Eventually you'll have to use the protopack to jet over to the crystals. Crack it with your pickax and... voila! You've got a laser!
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CIRCLE READER SERVICE #233
Dark Reign
These Mission Maps Point the Way to Victory

Dark Reign is a cut above the usual real-time strategy game, with an adaptive AI, true waypoint-based paths, and a host of terrain effects. The following detailed maps show you step-by-step paths for victory in two tough scenarios—Prison Break and Teron Occupation—and offer general tips for success in any scenario.

Courtesy of Brady Games Strategy Guides

Freedom Guard: Mission 3—Prison Break

An Imperium prison in the uninhabited planet is holding Commander Jeb Radec and several other key Freedom Guard personnel. We must liberate these prisoners and level the compound, showing the Imperium that we will no longer be subject to their imprisonment.

1. Morph your Scout into a piece of landscape, then move north to spot the guards around the first stockade. Follow up with Raiders, eliminate the guards, and set the liberated Medics and Mercenaries to High Independence.

2. Move your Scout northward, avoiding Imperium Scouts, through the clear area to the ridge overlooking the next stockade.

3. Follow to this stockade with other units and sweep down off the ridge, taking Imperium guards by surprise. Liberate the Skirmish Tanks and Mechanics, holding your forces in a tight group outside the stockade.

4. After you eliminate the rush of Imperial Infantry, move your Scout east along the northern edge of the map. Watch for patrolling enemy Plasma Tanks; get used to their patterns and move while they are out of range.

5. Position your Scout to see the guards in front of the next stockade. Slowly move your main force forward, eliminating the Plasma Tanks and liberating the Construction Rigs. Build an HQ and Water Facility Plant, and guard them until they are complete.
**FREEDOM GUARD: MISSION 4—TERON OCCUPATION**

Imperium forces are slaughtering citizens on Teron, where we have key covert resources. Assemble a force and remove the Imperium from Teron, liberating her citizens.

1. Keeping the Imperium forces at bay while you build your base is the toughest part of this mission. Immediately build a Water Launch Facility, HQ, and a Taelon Generator. Use your units to cover the structures, focusing their fire on anything that comes within range. Meanwhile, send a morphed Scout westward along the river banks to spot the bridge and Imperium Plasma Turrets.

2. Have your Skirmish Tanks shoot from the bank if possible. Don’t damage the bridge too much, or you’ll have to replace it.

6. Build more Construction Rigs, Taelon Generators, defensive Laser Turrets, and Assembly Plants. Then assemble a large force and move it into the natural choke point to the south.

7. Build a Repair Station between your base and the skirmish line you have established in the prison compound. Set your tanks’ damage tolerance to medium and advance closer to the prison compound walls, but stay outside the Imperium Plasma Turrets’ range. Once you have the prison entrance covered, you can safely deploy Freighters to the other water spring.

8. You will find Jeb Radec in a stockade toward the middle of the compound. Thin the Imperium forces and then rush in a unit to liberate him. Jeb’s laser rifle will burn through most enemy targets, but he is still vulnerable, so make sure to eliminate most of the Imperium units near the entrance before liberating him. After Jeb is safe, systematically eliminate all remaining Imperium units and structures.

3. After reinforcing your tank platoon, roll it across and set up a skirmish line along the road leading north. Add a Laser Turret or two at this location to hold it.

4. Run a Spider Bike into the city, so that the citizens will begin revealing terrain to you. Then, when you’ve assembled a sizable force, roll into the city and level the Imperium HQ. Afterward, you can mop up the other Imperium structures, saving the Plasma Turrets for last.
Imperialism
We'll Make This Overwhelming Game Easy for You

by Tim Carter

Ah, to be the perfect micromanage: To wear thick glasses, carry a pencil pack, and derive ecstasy from seeing the trains run on time. Warriors might win Empires, but managers must ensure the conquest isn’t wasted. SSIs IMPERIALISM requires warfare to win, but you won’t get very far on the battlefield without a solid understanding of economics and the skills to make your economy fly. The perfect IMPERIALISM player would combine the diplomacy of Otto von Bismarck, the military logic of Carl von Clausewitz, and the economic skills of Adam Smith. In fact, it feels like the game’s designers had all three in mind when they created the model for IMPERIALISM.

The March of Progress
Perhaps the most interesting aspect of IMPERIALISM is that everything happens at once. Unlike in many grand strategy games, in which you have ample time to explore the world and build your economy before encountering opposition, in IMPERIALISM you are in the thick of things from the start. Don’t fall into a CIV mindframe, wherein otherwise reasonable gamers attempt to make IMPERIALISM play like CIVILIZATION. You must get off to a fast start in all aspects of the game (see the “Quick Start Guide” sidebar).

Also, don’t panic when things go wrong. Unlike in many strategy games, a single setback here is not an indication of your inevitable doom. Good military planning can keep much stronger enemies at bay, while a punitive strike or two can turn a negative situation into a positive one very quickly. Also, your economy will always be short of something, and just because you failed to secure one trading partner doesn’t mean that the same resources cannot be acquired elsewhere.

Early in the game, you must rush the development of your economy at the expense of everything else. Invest heavily in infrastructure rather than spending money on consumer goods.

The Adam Smith Company
Begin trading right away. Use the info keys in the diplomacy screen to discover which minor countries have a good assortment of raw materials for export and aggressively pursue one or
two of these countries. You should be able to build and sell finished goods periodically, but all surplus cash should be invested in your diplomatic efforts. Don't rush to increase the population of your capital city. Early in the game you will need more money than workers, and it will be useful to hoard as much food as possible for the middle game, when pressure on your railway network becomes intense.

If you can spare the timber to create paper, you may want to upgrade your work force. Don't forget to build docks or ports in every city in your empire. As your economy grows, these cities will begin to produce materials independently, a great bonus to your overall production. Regardless of your domestic production, you should buy every scrap of raw material you can. All of them can be put to good use or stored for later consumption. Trading in raw materials is important, and should be limited only by your shipping capacity, which you must increase as much as possible.

**Onto Clausewitz**

While military measures must take a back seat to economic growth, you have to build a few military units to keep the other players off your back. If you are fortunate enough to be an island nation, concentrate on ships. Even if a small deterrent force doesn't keep the peace, a four- or five-ship navy should keep your shores secure in the early going.

When you are at war, check each coastal square each turn to see if your enemies are preparing an amphibious landing. Race your ships into any threatened areas, and move your land army to garrison threatened provinces. With quick movement a very small force can keep a much larger opponent at bay.

Internal lines of communication are crucial to all defense maneuvers. Keep a single striking force in your capital province and zip it around your empire as provinces are threatened. Don't be too worried if a province falls, as there is no pillaging in IMPERIALISM. Instead, be ready to immediately counterattack.

If you are faced with a strong enemy, consider building a raiding force rather than an invasion force. On the ocean, the benefits of raiding are obvious—the computer AI tries it all the time, with considerable success. On land, build a few cavalry and light artillery and go hunting for weakly garrisoned provinces. (Both these units can usually escape in the event that you make a mistake or fall victim to faulty reconnaissance.)

Your raiders should bash whatever militia is on hand and move on as soon as possible. Don't bother to garrison conquered territory—if you could afford garrisons you could afford a bigger army. Often, the computer will be very sluggish in counterattacking, and you can impede your opponent's economic growth for some time. Also, you may end up signing a peace treaty while still holding useful territory.
focus your energy on your fledgling transportation network. Decide in advance where your first few depots will go, based on timber, coal, and wool squares, Begin mineral exploration in the squares near visible resources so that your early depots can be planned to take advantage of all resources. Later you can go back and systematically search your entire country.

Trade
Pay attention to the trade book and modify your diplomatic actions to ensure you have at least one overseas source of mineral resources. If your explorer gets lucky early on, the overseas source becomes less of a priority, but until you are sure your country is mineral rich you should act as though you'll have to buy everything. Also, you don't want your industry to lie dormant while you build your internal transportation network.

Infrastructure
Build just enough consumer goods to keep your country from going bankrupt. Everything else should go into infrastructure—peoples, merchant ships, transportation, and better industry. It's better to store materials than money, and all natural resources can be converted into valuable goods at no cost to you.

Last Words
Try to build one or two ships of the line early (within 20 turns), as this tends to deter your enemies. A sound economy that grows quickly should get your empire off to an impressive start. Don't worry if you seem to be falling behind; just make sure that all elements of your economy are working, and that your growth is steady. Eventually, you will be able to sort out those early bloomers through military action.

Without proper mop-up capabilities, your opponent’s defense will get stronger every time you make his empire smaller. Ultimately, you may face a capital city defended by so many guns that taking it is all but impossible.

When attacking a great power late in the game, take care to prepare your assault along a number of different fronts. You should be ready to blockade all of his major ports from the start, and should have units in place to attack at least two provinces at the start of the war. This will keep both human and computer opponents off balance and should allow you to make decent gains before suing for peace.

During peacetime, keep a few fleets near enemy capitals as a deterrent. If they declare war on you, you will be ready to blockade them from the beginning. The computer is quit paranoid about losing its capital cities, and as a consequence does not garrison key economic provinces well. When attacking, your first priority should be the resources you need, but your second should always be the resources your opponent can least afford to lose.

Winning on Nigh-On-Impossible requires patience. You must focus on economic growth until your industry is awesome, even if you are at war. Once you have the industrial power to field a large army, you should have little trouble defeating your enemies piecemeal.
Nothing puts you in the middle of the action like 3DZoneMaster.

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Aging cynics lament that youth is wasted on the young. Could it be that a few reflex-impaired wargamers out there say the same about air-combat simulations and the virtual fighter jocks who fly them? No one can deny that the opportunities to delve into the fascinating realm of air-to-air combat are few and far between for those gamers who prefer to ponder every move. However, if you fancy yourself an armchair flight leader more than a joystick jockey, Avalon Hill/Big Time Software's ACHTUNG SPITFIRE offers the perfect opportunity to strut your stuff.

Unlike most traditional wargames, however, ACHTUNG SPITFIRE pays strict attention to the laws of physics. The accurate modeling imposes complex restrictions on movement, which in turn raises the importance of proper maneuvering. Air-to-air fighting is also exceptionally fluid. At 20,000 feet there are neither battle lines nor terrain considerations. Positional advantages are purely relative, appearing and disappearing quickly in the heat of battle.

So, if ACHTUNG's formidable AI has your pilots diving for cover, the tactics explained here can help you turn the tide. Since the Battle of Britain is the heart of the game, we will focus mainly on the bomber interception and escort missions typical of this epic conflict.

The Best British Defense Is a Good Offense

Fighters are, by their very nature, offensive weapons. As an RAF squadron commander, you have to defend your homeland from its would-be invaders the only way you can: by knocking down their bombers. Unfortunately, the Germans are rather protective of them, so they are almost always accompanied by Bf109s or Bf110s. The trick is to penetrate this fighter screen and lay waste to the bombers without suffering significant casualties. The importance of keeping your pilots alive cannot be overstated: Too many costly victories will spell defeat in the long run.

Ironically, the computer-controlled escorts' intelligence is also their undoing. The AI's immediate response when attacked is to turn toward your fighters, presenting your pilots with the worst possible shot opportunities. To take advantage of this self-preservation instinct, strive to approach from behind and to the side of the enemy, such that the escorts must turn away from the bombers to turn toward your fighters. If done correctly, this will put them completely out of position, neutralizing their threat potential for some time. With the escorts safely sidestepped (yelling "Toso" at this point is appropriate), drive on through to the heavies. Don't waste ammunition on the

THE BETTER PART OF VALOR If you drive your Spitfires straight through these German Bf109s, you will take horrendous losses. The safer option is to turn away and work for a better angle before attempting to slice past the escorts to get at the bombers.
escorts unless presented with truly primo shots. Killing fighters may be glamorous, but it’s hardly why you are here.

If the German fighters are hot on your heels when you reach the bombers, do one quick pass and break off. Make it count by firing only at close range, then steer clear of the crossfire in the middle of the formation. If, on the other hand, the escorts take themselves far enough out of position, you can execute a more deliberate assault. In that case, throttle way back and try to camp your planes about 400 yards (four spaces) behind the rearmost bomber. From there, you can blow it to bits while remaining outside the firing range of its mates — the hastily defended German bombers are extremely vulnerable without supporting fire. Once the first goes down, move on the next. Keep your fighters close together to concentrate their firepower, but not too close or the movement system’s one-plane stacking limit will force your planes to make unwanted maneuvers to avoid overlapping.

Because of the uncommonly poor rearward visibility characteristic of early Spitfire and Hurricane models, lining all your fighters in back of the bomber group will cause you to lose track of the German escort scrambling to catch you from behind. Let this go on too long and you will be in for a deadly surprise. The easiest solution is to take one plane that is either damaged or low on ammo and assign it lookout duty. Have it turn 45–90 degrees away from the bombers and weave back and forth at high speed, staying nearby while maintaining visual contact on the approaching escorts.

Once the escorts are within 800 yards or so, it is time for you to fire and drive them off. Any planes low on ammo or heavily damaged should get the heck out of Dodge. Those that remain combat-ready can try to circle around at high speed and do the dance all over again.

Committing all your forces this way will likely allow the bombers to escape before you can reengage, however. Instead, use the lookout described earlier to keep tabs on the bomber group while the others lure the escorts away. The bombers will thus be prevented from fleeing, allowing your fighters to hide their time, waiting for just the right moment to slip by the enemy fighters once again.

Achieving Air Superiority

If you’re lucky, you’ll be able to embroil the interceptors in a free-for-all — or preferably

The Thin Blue Line

For the RAF player in the Battle of Britain scenario, optimizing response time to incoming raids is a crucial part of any winning strategy. The idea is to keep as many fighters as possible ready for action at the forward airfields in Hawkinge and Manston. The problem with using these fields is that the Luftwaffe, cognizant of the airfields’ strategic importance, will do their best to bomb them into oblivion. Such attacks will not damage any aircraft or personnel on the ground, thankfully, but it will increase the time it takes to repair, refuel, and rearm any of your planes that land there later. The solution to this problem is simple: Don’t send your fighters to bombed-out airfields!

If some of your planes take damage in a dogfight, split them off and send them to Hornchurch (assuming it hasn’t been hit); they can be repaired there faster than at any other airfield. Vector the rest to the least damaged base near the eastern shores. As planes become ready, ferry them back to Hawkinge and Manston. Since aircraft require no servicing after a ferry flight less than 30 minutes long, your fighters will be instantly ready for action after they land, no matter how damaged the destination may be. There is no need to worry about these extra flights tiring your pilots; either, they don’t affect fatigue levels.

The more interceptors you have available, the more raids you will be able to deflect and the more casualties you will inflict. Keep an agile and efficient defense and victory will eventually be yours.
GAMER'S EDGE

STRATEGY & TIPS: ACHTUNG SPITFIRE

LOSE SIGHT, LOSE THE FIGHT

The Spitfire that has turned away from the rest is acting as a spotter plane. This allows you to keep tabs on the approaching bandits that would otherwise be in the blind spot of your other three planes.

German Escort Service

Just as the RAF must attack bombers to defend Great Britain, so must the Luftwaffe defend the bombers to further its strategic offensive. When you command the German escort fighters, you must figure out how to get at the attackers before they decimate your bomber group. To accomplish this without your flight being victimized is easier said than done. One possible ploy is to show the enemy your six o'clock and attempt to lure them away. Dangerous in the extreme, this tactic is also ineffective because the AI's strong focus on attacking the bombers makes the British fighters difficult to distract. Don't think this means they'll pass up easy shots as they fly by, however; they won't.

If the British fighters start out right behind you, turn into them 90 degrees to give them a tough angle if they decide to shoot at you. But try not to turn much farther, or it will take forever to reverse back and pursue once they blow through on their way to your bombers.

Usually, you won't start out in such immediate danger. If time permits, establish a position behind and far to one side of the bombers, climbing a bit and weaving to reduce forward speed. As the enemy moves past, dive to convert your extra altitude into airspeed and roll in on their tails. Timing is everything here. Commit too soon and you will fly out in front of the enemy and get shot up. Commit too late and you won't be able to catch up before the British run wild among your bombers. Even if you do everything right, the best you can usually hope for is to get some good shots at the rearmost aircraft in the enemy formation. The ones in front will still get to the bombers, and will have to be dealt with later.

TIMING THE POUNCE

By staying close to the interceptors—but not so close as to invite attack—the German fighters at the bottom of the screen have positioned themselves perfectly to slide in behind the British planes when they make their move for the bombers (to the right).
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"Cozy little place you’ve got here."
The Space Bar

Hop Aboard Starship Scorpio for a Guided Interplanetary Tour of THE SPACE BAR

by Scorpio

The Space Bar is a tough game to write up as a Scorpio's title. Much of the time, the puzzles don't lend themselves to helpful little nudges in the right direction. While I prefer not to give outright answers, in some instances it will be necessary to do that, at least partially.

The first thing to keep in mind is that time is crucial in this game. You can't afford many wasted moves in and around the bar, each move is a tick on the clock, and those ticks add up fast. One way to save time is to save the game, explore the various rooms, making note of what's there, then restore. You may also want to do that when the computer terminal in the entryway is fixed, the info on the alien races is vital to completing some of the puzzle sequences.

As noted in my review last month, The Space Bar isn't all that nonlinear. Some flashbacks have to be done early, or you may become stuck in a nonwinning position. For best results, solve the Fleebix/Thud and Deven-7 flashbacks at the earliest opportunity. SeedRat and Click should be completed before you start finding any bodys. Soldier (the bartender) ought to be finished by around 8:00 or so, before the infrared jamming begins. Cilia and Bettaker can be left as the last ones.

Always save as soon as you enter a flashback, just in case. In some instances, if you miss an important item or action early on, you won't be able to go back to it later.

Soldier

Getting the egg to the shuttle is no easy task, especially as this flashback has two real-time segments with absolutely no margin for error. Move the egg into Food Prep, and explore the upper rooms for whatever you can grab.

Make your way down the lift shaft, then back up via the mine tracks. The control panel at the top opens the mine maze. Yes, there's a maze, but it's not really bad. You only have to open the green and black

Fleebix and Thud

Thud's flashback is simple, so get it out of the way first. Then go to Fleebix, who has perhaps the most complicated of all the game's flashbacks.

After taking the wrong bus and arriving at Glom Hole, check out the mailbox (don't forget the mailing label on the ground). Naturally, you search the crash site for whatever you can grab after the mystery plane smacks into the fuel truck.

A close examination of the fridge carton is also in order. Of course, out in the middle of nowhere, it's not likely to be picked up for delivery. Another location might be more suitable.

On the way to the delivery, don't just sit there, see what else is inside the truck. Also listen carefully to the conversation between the two drivers for some important information.

After delivery, do some more listening. You'll need to nip in and out twice, doing something both times. Then simply sit back and wait for your arrival at Quantelope Lodge, where the clock needs fixing before Fleebix can take his navigator's test.

Unfortunately, you'll be sending Thud up and down the ladder a number of times during this sequence; it can't be helped. After the first visit, you'll know what's up there; pressing the yellow button will generate a report. Note especially the location of the "X" on the diagram.

The next step is to get the crystals, which requires a little experimentation (hint: lever and one button), then put them back in properly. When that's all done, close the apparatus and start up the clock. Now Fleebix can take the test.

There are four tests, all of the same type: Making deliveries around the galaxy without running out of fuel. Typically, it's best to get rid of the heaviest loads first. Remember, as the ship becomes lighter, it uses less fuel during the hyperspace jumps. So keep an eye on the hyperspace multipliers as you travel around. All four problems can be solved.
Deven-7

This is a nasty sequence. Your offer has to be in by around 11, or you'll lose out to someone else. This is more than just adding up numbers; you have to send your negotiators out to meet with different groups. That means reading up on the bidders, buyers, negotiators, and "other interested parties," then figuring out whom to send where.

Here are a few tips to help you along (and to cut through some of the jungle): You need to negotiate with the environmentalists, politicians, Swanza-5, Gild-13, Dork-44, and Yeef-8. Deven has two of the bidders—Irk and Quosh—as guests in his home. You will have to talk to them personally to get them to put in their asking prices for Armpit III.

When all negotiations are complete, work up an offer. Keep in mind that you don't need to have a bid on all items on the spreadsheet. All that matters is producing an offer equal to, or greater than, the total asking price. I could never do better than even myself; it may not be possible to do better. So get your offer in as soon as you're even with the asking price.

doors, as well as the floor hatches. Save and take some time to do a little mapping. You need to find two items and the way onto the tracks (not where you came in). You must know the fastest way back onto the tracks (this will be important later).

On the outside bridge, you have to set up the cannon now (later is too late). It needs to be centered, and the spear replaced with something else.

After starting a flood, open the ventilation gate. This must be done before pushing the egg, as that starts the real-time segment and there is no allowance for even one wrong move. When you come out the other end of the shaft, act immediately.

Take a breather, then get ready for the next real-time segment on the mine tracks. If it reminds you of Indiana Jones, you're not mistaken. Again, there is no margin for error here. All your movements must be exact; if you make a mistake, stop, restore, and try again. You must get to the shuttle room before the egg and without being killed.

Click

Your friendly neighborhood drug runner. The first task is to make some cereobomb; the recipe is in your PDA (check messages). After finding the lab, save the game. Drop two of the insects into the analyzer to learn what they are (there doesn't seem to be any other way), then restore. While the names of the bugs don't change, which ones to use in the recipe does vary from game to game, so be careful there. Two other ingredients can be obtained from the windows in the lab.

Explore the great outdoors (remembering to deactivate the alarm before leaving, and again when entering) and a series of platforms with swinging vines. Look over the map on your PDA very carefully here. You will have to use the proper sequence of
EVER BURY THE ONE YOU LOVE IN A MATCH BOX! THAT'S ALL THEY LEFT OF HIS SISTER.

WHABOOM

FOR SLATER, EVENING THE SCORE WAST VENGEANCE, IT WAS SIMPLE JUSTICE.

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vines and platforms to elude the cop at the upper right. I suggest copying the arrangement on paper and working it out beforehand. When you're ready, exit the house without turning off the alarm to get the cop's attention, and continue from there.

Once at the spaceport, you have to do something about the Queep guards to get the e-bomb through customs. Perhaps if they weren't quite so alert you could manage it. Check out the notice on the wall; also check your PDA email. The correct phone call will get you safely into the kennels, where you can read the Queep Keeper's logbook. It's the next pair on rotation that you want here.

After you've taken care of them, you just have to pass the archway without triggering the alarm. An item you found recently will help with this (save before passing the arch in case you don't get it right the first time).

Cilia

In this flashback, you must safely get off-planet with important information. Most of the action takes place on and around the river, the main objective is to bypass the two inspection stations along the way.

SeedRot

The first stop is the canal lock control tower, just past the two warning buoys. Be sure to check out the police boat and help yourself before going up the tower. Read the notices before using the panel, and note the button on the wall, which is vital.

Play with the controls so the lock floods and washes the barge past the inspection point. The important items here are the lever, top and middle numbers, and top button. Listen carefully while fooling around with them for important clues to what's happening. Don't leave by the door.

The second stop is just past the next two warning buoys. This time you're at the control tower for the river currents, and working with them is much easier, since you can see what goes on when you work the various levers and switches. It's a simple system, and a few minutes of experimentation will be enough to work out the puzzle.

Be sure you arrive at the space dock with the barge only. The Cientheast crate is the one you want... empty, of course. Check your inventory for

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Kitchen
You can distract the cook with clever use of the megawave oven. Something you find in the room will help.

Infrared Jammer
You'll have to go down under in one of the rooms off the bar to locate it. You will also need a bribe of sorts.

Poison
You need the antidote before you're attacked. Right after finding the body with the dart in it, go see someone who would know about such things. A trade will be necessary.

Casino Office
You need money—big money—to get in. Read up on Blocklers beforehand, so you know what to do in there. The alien himself isn't important, but one of the devices is critical.

something appealing, and make the best use of what you find.

Bettaker
This flashback can be annoying, as there is no way to know ahead of time what to wear for the playing field. It is also a tedious segment; you spend a lot of time waiting for your turn.

Get yourself cleaned up and wait for the coach to haul you off to the stadium. Once there, you have to put on your uniform: the colored strips, boots, and knee pads (I'm giving it away, but this will save you needless restores). Also pick up and hold the club. Be sure to turn on your radio.

Wait for Detlacker (Bettaker before his downfall) to be announced, then make a brief appearance on the field. Wait again through all the events until "Arguing With The Referee." Pay close attention to what your opponent does, and in what order he does it. You have to do the same thing, but you must do it twice.

At the talk show afterward, check out the floor as soon as you can. During the interview, you can pretty much say what you like.

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Owasa Station
New York, NY 10028

Finale
After the flashback in the Shifter's mind, you'll know his weaknesses (you'll already know the form he's in). Give it to him, and the rest is automatic.

And that's about it for now. In the meantime, if you need help with an adventure game, you can reach me in all the usual ways. Until next time, happy adventuring!
Sports

Baseball Mogul

Sometime after the year 2010, women start showing up in the minor-league systems, eventually breaking into the majors. Their stats are similar to those of male players, so draw your own conclusions about how the grand old game might progress in the next 20 years.

After about 2050, aliens, animals, robots, and the like start to appear as player agents, GMs, and, eventually, players. This doesn't change any player stats; it's simply for amusement.

Adventure/RPG

Betrayal in Antara

1. Look carefully at the staff on the amulet in the close-up of the puzzle that opens the Shepherd's headquarters.

2. In the cave you find during Chapter Six, look for a lever chest to the east of the entrance.

3. Hang the lantern you find in the lever chest to the left of the mosaic to solve its puzzle.

4. Click the rope on the pits in Chapter Nine to cross them.

— Petra Schlunk

Twinsen's Odyssey

While success in Twinsen's Odyssey generally depends on keeping the story moving, you'll have a hard time doing that if you keep dying. Here are some tips to help you stay alive long enough to save Twinsen:

• Bad guys aren't the only things that restock when you leave a screen. Revisit flowerpots and the like again and again to load up on money and power-ups that you'll need. If you're really low on health after the aliens occupy Twinsun, run home, then pop in and out the door, searching the flowers outside each time until your health is restored.

• The short, gentle arc of the magic ball thrown in Discreet mode is frequently the best and most precise way to hit switches, especially if there's an obstacle in the way.

• While the Esmer races have a variety of rapid-firing, devastating weapons, you usually have an advantage in terms of range. Start firing from far away, and inch closer until you start hitting your target. Chances are, their best response to hordes of foes.

• If you don't see stars when you attack an enemy, you're not hurting him. Switch weapons until you find something that causes pain, then pound away.

• Can't use those health power-ups when you're at full strength? Equip the 'Triton of Healing' and it'll suck them up for use later when you might need them.

• Take the time to explore for extra lives. Make frequent use of the Save feature and hoard those bonus lives until the end of the game, when you'll need them to survive and win the final confrontation. — Robert Coffey
Strategy/ Wargames

PANZER GENERAL II

1. Ambush: The new recon rules make for much easier ambushes. If you know the other side hasn't recon units in the area, put a decent defensive unit in the path of attackers about 3-4 hexes from where the attacker will begin his move.

2. Antiaircraft ambushes: Don't place your defensive AA units right beside high-priority targets, such as artillery or weakened armor. Both the computer and any human opponents are vulnerable to AA units too far away to see in advance, but close enough to provide defensive AA coverage.

3. Wearing down tough guys: Any defending unit will lose two defense points and one level of entrenchment for the duration of a turn for every attack against it. This means that even the toughest unit can be cut down to size if enough firepower is brought to bear, a crucial factor when you go against T-34s and those tough Panthers and Tigers. Use antiaircraft and air power even if it will cause no damage — save your best attacking units for last, when the defender is weakest.

4. Taking out Allied air forces: If you don't want losses to your wimpy Messerschmitts, you'd better employ antiaircraft guns to soften up the Allied air first. If necessary, trap enemy planes between two fighters and move a mobile AA unit underneath the fighter. On the next turn you should get a shot with the AA and then be able to mop up with your weaker fighters.

5. Move and defend: Most units "unpack" when attacked, unlike in PANZER I. This means that you can move antitank weapons right up to enemy units without fear of a disastrous counterattack.

6. As the Germans in the Blitzkrieg campaign: Don't worry about buying infantry. OKW will give you plenty as the game progresses. Instead, use your prestige to get artillery and aircraft. Focus your early spending on artillery, as your best units are available for purchase from Poland on and won't require costly upgrades later.

7. Use the computer's aggressiveness against it: If you want to take out an especially strong enemy unit — particularly entrenched infantry — get your artillery in place and then move one of your units next to the target. Don't attack; just wait for him to come after you and let your defensive artillery and direct fire do the rest. — Tim Carter

MAN OF WAR

While each country is limited in general to the types of ships it built historically, there are no restrictions as to where you may build and use them. So, in any American Revolution scenario, feel free to give the US 74 — gun ships of the line — why wait for the War of 1812 (when these vessels were actually built)? Also, all scenarios are determined by point totals, and the smaller force always starts the game "ahead." So, if you want a cheap victory with Admiral Nelson, you can win Trafalgar by running away without firing a shot.

Likewise, the British can flee from Chesapeake Bay, leaving poor Cornwallis stranded in Yorktown. Such behavior can't be called a victory in a historical sense, but if you're in a cheating mood....
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*Release Date:* November 1989

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**COMPUTER GAMES: WAR**

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**ASL, Heroes of the Age**

**ASL, Leukemacher**

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**HEAVY GEAR** Plot of one of 16 Heavy Gear war machines, as well as Stealths and other armored vehicles. Gears are capable of agile, human-like movements. Construction of your own model, then pilot it with your exact customization choices. **Activation (Simulation)** Release Date: NOW PC CD $48

**FIGHTER SQUADRON/DEMONS OVER EUROPE** Combat simulation has featured fast-paced, first-person flight missions, dramatic, detailed or active game environments. Each of the nine planes flies just like its real-world counterpart, and contains 30 unique scenarios. Planes take damage on a per-system basis, which realistically and adversely affects handling. **Activation (Simulation)** Release Date: 12/91 PC CD $52

**FLYING NIGHTMARES II** Offers a unique combination of cut-edge flight simulation and real-time strategy, fully adjustable difficulty levels, controls options, and graphics preferences available nearly by any player to enjoy F2S's challenge. Virtual cockpits increase the realism and your situational awareness. **Eidos (Simulation)** Release Date: 1988 PC CD $42

**TOMBA Raider 2** Looks back, and better than ever, with new moves, a new underwater environment and a whole new music. Explore huge, exotic platforms-based 3D environments around the world, solve puzzles and kill baddies. **Eidos (Action)** Release Date: NOW PC CD $48

**QUANT II** Ours was just foreplay. Now comes Quaker II. It includes larger, mission-based levels, superior artificial intelligence, and improved graphics capabilities. Experience smoother 3D graphics and real-time lighting effects. **Activation (Simulation)** Release Date: NOW PC CD $43

**UNREAL** One of the greatest game worlds, huge areas of outdoor and indoor environments, and realistic cityscapes, mystical temples, the Unreal Engine is a true game engine that can design your own levels. **GT Interactive (Action)** Release Date: NOW PC CD $45

**BLADE RUNNER** Armed with your imagination and the tools of the Blade Runner tool, you'll be immersed in a world that breathes life and moves around you with breakneck lightning and visual effects. Interact with over 700 unique characters, all with AI and their own agendas. **Virgin (Adventure)** Release Date: NOW PC CD $53

**CH RACING SYSTEM** Become a race warrior with the system that was built for speed and durability. System comes complete with high-performance racing wheels with 160 degrees of motion, four push buttons and foot pedals for acceleration and braking. **CH Products (Hardware)** Release Date: NOW PC CD $85

**CH GAMESTICK** The comfortable, built-in game controller has 14 buttons, a slide stick, trigger controls, and four directional pads and analog stick. Designed for both left and right-handed control. **CH Products (Hardware)** Release Date: NOW PC CD $68

**STRIKE POCKET PROFESSIONAL VOL.2** Combines the action of 5 Card Decks with some very different table games. 400 opponents who are running & selling & hustling to let all of the players beat all the cards out of you! **Art Wors (Adult)** Release Date: NOW PC CD $33

**ROMSOCK P** Dolkc Down On Piong 2, Sensuous Girls in 3D, Massive Melons, Touch Me, Feel Me and Private Screens. Take a look at what you'll get in this easy 6 pack! **Romsock (Adult)** Release Date: NOW PC CD 6-CD $38

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- 104 Win95 Keyboard & Mouse
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Each month, 2,000 CGW subscribers are selected at random to rate 100 computer games. The results of that poll are combined with the results of previous months to yield a cumulative average for the best plays in gaming. If you receive a ballot, please return it with your ratings so that other gamers and game publishers can benefit from your feedback.

### Top Action Games

<table>
<thead>
<tr>
<th>Game</th>
<th>Company</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quake Pack II: Dissolution of Eternity</td>
<td>id Software/Rogue</td>
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<td>Quake Pack I: Scourge of Armagon</td>
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<td>Duke Nukem 3D</td>
<td>3D Realms</td>
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<td>Tomb Raider</td>
<td>Eidos</td>
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<tr>
<td>Crusader: No Remorse</td>
<td>EA/Origin</td>
<td>8.09</td>
</tr>
<tr>
<td>Quake</td>
<td>id Software</td>
<td>8.02</td>
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<tr>
<td>The Need for Speed SE</td>
<td>EA</td>
<td>7.99</td>
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<td>Crusader: No Regret</td>
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<td>MDK</td>
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### Top Adventure Games

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<td>Gabriel Knight 2</td>
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<td>Twisted's Odyssey</td>
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<td>The Neverhood</td>
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<td>Realms of the Haunting</td>
<td>Interplay</td>
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<td>Full Throttle</td>
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<td>Leisure Suit Larry 7</td>
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### Top Classic/Puzzle Games

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<td>Berkeley Systems</td>
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<td>Power Chess</td>
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<td>Incredible Teens</td>
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<td>Mind Grind</td>
<td>Microforum</td>
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<td>Monopoly</td>
<td>Virgin/Westwood</td>
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<td>Sierra Poker</td>
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<td>Baku Baku</td>
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### Top Simulation/Space Combat Games

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<td>Wing Commander IV</td>
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<tr>
<td>AH-64 Longbow</td>
<td>EA/Origin</td>
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<td>Wing Commander 2: Mercenaries</td>
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<td>Silent Hunter</td>
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<td>U.S. Marine Killers</td>
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<td>EBF II Hunter/Killer</td>
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<td>U.S. Navy Fighters</td>
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<td>Jack Nicklaus 4</td>
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<td>Triple Play 98</td>
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<td>NASCAR Racing</td>
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<td>NHL Hockey 96</td>
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### Top Strategy Games

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<td>Warcraft II Expansion Disk</td>
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<td>Red Alert: Counterstrike</td>
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<td>Command &amp; Conquer</td>
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<td>C&amp;C: Conquer Operations</td>
<td>Virgin/Westwood</td>
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<td>Civilization II: Scenarios</td>
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### Top Role-Playing Games

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<td>Daggerfall</td>
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<td>Betrayal in Antara</td>
<td>Sierra</td>
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<td>Anvil of Dawn</td>
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<td>Aliens</td>
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### Top Wargames

<table>
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<tr>
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<tr>
<td>Steel Panthers II Campaign Disk</td>
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<td>Battlefield: Shiloh</td>
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<td>Heroes II: Price of Loyalty</td>
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<td>Quake Pack 2: Dissolution of Eternity</td>
<td>id Software/Rogue</td>
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<td>Steel Panthers II Campaign Disk</td>
<td>SSI</td>
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<td>Warcraft II</td>
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<td>Heroes II</td>
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<td>Red Alert</td>
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<td>Steel Panthers Campaign Disk</td>
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<td>You Don't Know Jack II</td>
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<td>Red Alert: Counterstrike</td>
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<td>Wing Commander IV</td>
<td>EA/Origin</td>
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<td>Duke Nukem 3D</td>
<td>3D Realms</td>
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<td>Tomb Raider</td>
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<td>Command &amp; Conquer</td>
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<td>E&amp;C: Covert Operations</td>
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<td>The Lord of the Rings</td>
<td>ActiVision</td>
<td>ST</td>
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Games on unnumbered lines are tied with game on line above. ★ = Top game of type. Red = New Game, AD = Adventure, RP = Role-Playing, SI = Simulation/Space Combat, ST = Strategy, WG = Wargame, AC = Action, SP = Sports, CP = Classic/Puzzle. Games are retired after two years and become eligible for the Hall of Fame.
Welcome to the Cooperstown of Computer Games. Here you'll find, raised upon pedestals, the games that broke the records, established the benchmarks, and held gamers in delighted trances for hours untold.

**Alone in the Dark** (Moltron, 1992)
Lovercraftian horror goes 3D, with shifting camera angles adding to the creepy atmosphere.

**Battle Chess** (Interplay, 1988)
The Franklin Mint of computer chess games with violent and funny animation desigining a solid chess engine.

**Betrayal at Krondor** (Dynamicix, 1993)
As rich and imaginative as Raymond Feist's world itself, its 3D perspective was fresh.

**Chessmaster** (Software Toolworks, 1986)
The Casbaletto of crafting this chess masterpiece gets better with each version.

**Dungeon Master** (FTL Software, 1987)
Trend setting graphics, digitized score, and great hack-and-slash from a decade ago.

**Day of the Tentacle** (LucasArts, 1993)
A sequel to Maniac Mansion, the interactive equivalent of a classic Chuck Jones cartoon.

**DOOM** (id Software, 1993)
Revolutionized PC action games and network gaming, surpassed in technology but not gameplay.

**Earl Weaver Baseball** (EA, 1986)
Revolutionary physics-based baseball game that pleased both action and statistics fans.

**Empire** (Intertel, 1978)
Will in space, this mainframe transport brought elegant mechanics, depth, and enduring replayability to the PC.

**F-19 Stealth Fighter** (MicroProse, 1988)
A "thinking man's" game, with great missions, in which snaking around the level is as fun as dogfighting.

**Falcon 3.0** (Spectrum HolobYTE, 1991)
Tough, detailed jet sim with ambitious AI, graphics, and connectivity to match its realism.

**Front Page Sports Football Pro** (Dynamicix, 1993)
Physics-based system, good AI, and unmatched career play make this the ultimate in pigskin play.

**Gettysburg: The Turning Point** (SSI, 1996)
First variable order of battle changed the look of all American Civil War games on the PC.

**Gunsight** (MicroProse, 1990)
Great character continuity, R&R for fatigued pilots, and even sick leave; best flyer fare until Jane's Lorraine.

**Harpoon** (360 Pacific, 1995)
In-depth modern naval battles in real-time, based on Cold War fears.

**Kampfgruppe** (SSI, 1985)
Armored warfare on WWII's Eastern Front, offered engaging battles on multiple platforms.

**King's Quest V** (Sierra On-Line, 1990)
Redefined the graphic adventure with non-textual-based parser and VGA graphics.

**Lemmings** (LucasArts, 1991)
The lovable cartoon Lemmings were real-time hits on every platform.

**Links 366 Pro** (Access Software, 1992)
Topped the leader board in graphics and realism for its era.

**M-1 Tank Platoon** (MicroProse, 1989)
Realistic sim that properly focused on combat formations rather than single vehicles, good mission designs.

**Master of Magic** (MicroProse, 1994)
The atmosphere and variety of Magic: The Gathering with the sophistication of Civilization.

**Master of Orion** (MicroProse, 1993)
Remarkable diplomatic AI, deep and varied technology tree, aliens required radically different playing styles.

**Mech Brigade** (SSI, 1985)
Modern armored battles with improved Kampfgruppe system and more realism.

**Might & Magic** (New World Computing, 1989)
First-person, mouse-based RPG with huge environment and tough tactical combat.

**M.U.L.E.** (EA, 1983)
A landmark multiplayer strategy game that had no weapons of destruction, just cutthroat competition that made economics fun.

**Panzer General** (SSI, 1994)
A true fun wargame with an elegant interface, great campaigns, strong AI, good graphics, and impressive sound.

**Red Baron** (Digital Reality, 1990)
WWI air combat with great graphics, incredible realism, and a versatile replay feature.

**Sid Meier's Civilization** (MicroProse, 1991)
Cut-throat, addictive world conquest exploration game.

**Sid Meier's Pirates** (MicroProse, 1987)
Combines pirate adventure, action, RPG, and strategy to make the most successful hybrid of all time.

**Sid Meier's Railroad Tycoon** (MicroProse, 1990)
SimCity meets 1630 with rubber banders for emphasis.

**SimCity** (Maxis, 1987)
Urban planning with fascinating consequences and challenges, the first great simulation game.

**Starflight** (EA, 1985)
Depth, great characters and a good sci-fi storyline set early standards for RPGs.

**The Bard's Tale** (EA, 1985)
Pioneered three-point animation, 3D color mazes and automapping.

**The Secret of Monkey Island** (LucasArts, 1990)
Comedy adventure that set new standards in writing quality and social sensitivity.

**Tie Fighter** (LucasArts, 1994)
Most satisfying Star Wars space-combat game to date lets you live on the dark side.

**Ultima III** (Origin Systems, 1985)
Correcting the surly nobility of Ultima II: The Ultimate RPG.

**Ultima IV** (Origin Systems, 1985)
High concept RPG explores meaning of virtue and put the player in role-playing.

**Ultima VI** (Origin Systems, 1990)
This RPG as morally played paved the way for Ultima Online's realistic environments and objects.

**Ultima Underworld** (Origin Systems, 1992)
The first truly 3D RPG, and still the most convincing, its dungeon walls were nicely "painted" with texture-mapped graphics.

**War in Russia** (SSI, 1984)
More realistic than Battles of Europe, it captured the essence of the largest land campaign in history.

**Wasteland** (Interplay, 1988)
Derived from Mike Stackpole's MADMAX, SPIES, AND PRIVATE EYES, this is the definitive post-apocalyptic RPG.

**Wing Commander** (Origin Systems, 1990)
A hot spaceflight engine, unfolding story path, and great characters.

**Wing Commander II** (Origin Systems, 1991)
Bigger story, griller feel, sound card advances, and tougher AI made this a sequel of sequels.

**Wing Commander III** (Origin Systems, 1994)
Surprisingly satisfying FMV space opera didn't lose the essence of the space combat game.

**Wizardry** (Sir-Tech Software, 1981)
Defined the computer RPG with maze-based viewpoint and atmospheric spell names.

**Wolfenstein 3-D** (id Software, 1992)
Smooth scrolling action blasting cleanly updated the original, and put shareware back on the map.

**X-COM** (MicroProse, 1994)
Premier tactical squad-level engine combines with alien tech research and pop culture to make it still game nearly as addictive as C64.

**Zork** (Infocom, 1981)
The progenitor of adventure games on the PC, its humor and challenging puzzles seem timeless.
Coming Next Month in CGW

Diablo 2

It's the hot sequel to CGW's 1997 Game of the Year, and we've got it. We'll show you never-before-seen screenshots, all-new character classes, new monsters, spells, combat options, and environments.

We'll also unveil the new role-playing elements in Diablo 2: the story, quests, and discussion trees. You'll hear how the designers plan to increase the role of NPCs: some you can hire, and some will teach you new fighting techniques. So don't miss our exclusive cover story coming next month!

Build Your Own PC

In parts I and II of our series, we examined more than a dozen off-the-shelf systems designed to meet the needs of gamers/home users. In part III, Loyd Case presents three options for building your own system from scratch, or simply upgrading select components. Ready for a retrofit? In a quandary over Socket 7, AGP, and competing processors? Loyd knows what all's ya, and next month he'll sort it out.

PC Sports Supplement!

Check out our 30-page special section with comparative reviews of some of the hottest titles in PC sports. We'll review NBA Live 98, NBA Action, NHL 98, NHL Open Ice, and NHL Powerplay 98, and we'll offer strategies for Monday Night Football. Heck, we'll even predict who's going to win the Super Bowl!

Mega Reviews Issue!

Abe's Oddysee
MageSlayer
Postal
Chasm
Nuclear Strike
SandWarriors
Defiance
Shipwreckers
Ultima Online
Meridian 59: Revelation
Dark Earth
Forced Alliance
Sabre Ace
Armored Fist II
Close Combat II
Pax Imperia 2
Uprising
Entrepreneur
Tone Rebellion
East Front
Boggle
Galapagos

Strategies

Jedi Knight
Age of Empires
Total Annihilation
Fallout

On Sale

January 6

(January 1998 CGW)
What's the Deal With... Fortune Telling?

I see a growing danger in computer game mags today; we are slowly becoming soothsayers instead of reporters. There was a time when, except for the occasional preview, we were pretty much grounded in the present. Reviews were the bulk of any given magazine, and overview or comparison pieces were generally about games that were already published—verifiable commodities. Gamers could then use this information to make choices, with a reasonable guarantee that whatever they were reading was on the up and up. If it wasn’t, then there was little room for the guilty or mistaken to shock and jive.

But times are slowly changing.

Now the big games are reviewed not once, but two or three times. The fact is that magazines and Web sites are hungry to get the news out first and fast, and sooner or later, accuracy becomes an endangered species. Games of similar subject matter are rated against each other while most are still in the mid-beta stage. The Buzz has grown to such biblical proportions that the odds of having unbiased reviews of hot games are dwindling—across the industry.

A case in point: StarCraft.

Now at the time that I write this, no one has seen final copy on this blockbuster, and while I am pretty sure that it will be the biggest thing since sliced cheese, I have to wonder: What if, for whatever bizarre reason, it isn’t? What’s a reviewer to do when everybody in the business has reviewed this puppy at least twice, given it a half-dozen gush blurbs and covers apace, and proclaimed it, ipso facto, “strat game of the year”? What the hell do you do if this game ends up biting the big one, when the review is pretty much a fait accompli? Regardless of how great or awful StarCraft turns out to be, the reviews are, for all intents and purposes, already written. The pressure on any critic is simply to rubber stamp all that has been said.

Hands up out there—who thinks this trend is a good thing?

And it’s not just StarCraft; two or three games every quarter reach this critical mass of coverage, in which expectation can shoulder reality aside. For example, Quake 3 and Duke 64 have been the subject of so many previews that the word “dreadful” has become a euphemism. The odds of having unbiased reviews of hot games are, at present, pretty much a shot in the dark.

The odds of having unbiased reviews of hot games are dwindling—across the industry.

Gaming Monthly could smear the words “QUAKE 3 IN 4D!” across the cover, fill a page and a half inside with a few bad jogs lifted off the id Web site, and print a paragraph interview with some guy who might have seen a design spec for the game in a dumpster while he was taking out the trash...and sales for Duke 64 that month would skyrocket. No lies, ands, or buts. Satan himself could appear in every store across the land and claim a magazine is printed in the Kingdom of Lies, and if it has yet another preview of a big game on the cover, or a promise to help you decide which games (that aren’t even finished yet) to buy, half of you would buy it anyway.

It’s hard to argue with an economic truth like that, and the effects are beginning to show. And it’s even harder to say what should be done about it. Other than observe that maybe we should all relax and wait for Christmas morning to open our presents, or commit a publishing blasphemy and urge you to quickly scan the alluring article in question before you buy a mag to see if there is anything relevant being said, there isn’t much we in the business can do. In the end, you people have the dollars, and it’s you who call the tune most of the time.

If you, the readers, want fortune-tellers instead of reporters, then we have to dig out our swami gear or you’ll go elsewhere.

I will leave you with this one dark thought: This hunger for information before a game is finished is going to eventually give the industry the handle it has always wanted on review mags. Someday soon, the game companies are going to start dribbling out their little preview morsels only to the mags that make them happy, and you don’t need an economics degree to see what will be the result of that one. It’ll be a question of playing ball or getting trampled in sales by those who will.
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