Got Blood?
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And 9 More!
3D Graphics Buyers’ Guide Bonus Pull-Out Reference
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unreal.gtgames.com
"Game of the Year"
-GameSpot Editors

"Game of the Year"
-GameSpot Reader's Choice Awards

"Best Real-Time Strategy Game"
-PC Gamer On-Line, Reader's Choice Award

"Best Real-Time Strategy Game"
-Adrenaline Vault

"Best Real-Time Strategy Game"
-Ultra Game Player's magazine

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50 New Maps
25 New Missions
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I used to rap your knuckles twice a week for not doing your homework. Now I’m going to kick your tush in a fast-paced action-packed game of Moto Racer. And I can do it, too, because I’ve been playing with an Intense 3D Voodoo PC graphics card. Based on the 3Dfx® Voodoo Rush technology, Intense 3D Voodoo’s realistic 3D graphics gives me the edge to hone my playing skills. And its TV-out connector lets me plug my PC into the big-screen television in the rectory, so I really get into the action. Plus, because Intense 3D Voodoo runs regular Windows 95 applications, I still manage to track the school finances and bake sales and keep up my correspondence with Father Flanagan.”

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COVER STORY

70 Watch Your Back

The new wave in 3D action shooters is almost upon us. With plot-driven storylines becoming the norm, and complex puzzle-solving taking the place of “search for the key” gameplay, these new games promise to take the action genre to new levels of player immersion. We’ve got the low-down on all the hot new titles.

It’s time to shed some blood!

FEATURES

117 3D Buyer’s Guide
Here is all the information you’ll need to find the right 3D accelerator card for your system—at the right price.

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Trophy Rivers • Alley 19
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International Rugby League • Virtual Pool 2
Backyard Baseball • Ten Pin Alley
Virtual Snooker

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JUNE 1998
What is sin?

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Your arsenal boasts laser-sighting sniper rifles, remote-control detonation devices and weapons so powerful they can rip you apart.

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Walk, run, swim, even drive through six distinct environments enriched with succulent Quake II™-engine powered graphic detail.

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There are those who strongly oppose weapons and their highly destructive nature.
They Will Be the First

Weapons:
- Arc Sabre
- Napalm Cannon
- Freight Burst Cannon
- Rapid-Fire Pulse Gun
- High Explosive Mortar
- Molecular Distortion Mortar
- Proximity High Explosive Mine
- Proximity Molecular Distortion Mine
- Tether-Guided Explosive Missile
- Enhanced Rapid-Fire Pulse Gun
- Tether-Guided Practical Mine
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- Lock-On Explosive Missile
- Lock-On Practical Mine
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- Laser Designator
- Laser Sabre

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Command a rapid motion Battle Force Tank from a first- or third-person perspective. Morph it into four different vehicle types: land, hover, amphibious, and submersible. Tote 18 high-powered weapons of mass destruction. Battle your way through six treacherous, mission-based worlds. Manipulate high-tech indoor environments and striking outdoor textures. Or become one with the earth.

Weapon Sequences
Target Status: Destroied
Distance: 163,261,035

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Production Panacea?

How Completion Bonding May Reduce Product Slippage

Everyone complains about product slippage, but some smart people who started out in the film industry are actually attempting to do something about it. If the concept of "completion bonding" catches hold, as it has in the film industry, it could potentially be a "win-win" situation for developer and publisher alike. Better yet, it's potentially a "win-win" situation, where even those of us on the consumer side get included in the victory equation.

Completion bonding is a standard practice in the film industry. It began when the studios decided that certain directors weren't worth risking a full production budget on, because they were too difficult, eccentric, or perfectionist. First, insurance companies entered the picture by providing a surety for the completion of filming or editing by a certain date. In this way, studios could get all or most of their production budget back if the unreliable producer or director didn't get the film in the can on time. Next, some of the completion bond specialists realized that they could make even more attractive packages by packaging alternative funding for the production budget along with the insurance for delivery date. Today, many motion pictures would not be produced if it were not for completion bond funding.

You would also be hard-pressed to step onto the lot of many film shoots without finding the representative of the completion bond company close at hand. They have become part of the process.

If completion bonding becomes a major factor in the computer game industry, it will accomplish several things. For the publishers, it will reduce the risk of product slippage. Developers who are eligible for completion bonding will have proven track records of hitting the numbers for hitting the numbers and delivering the product on time.

For the developers, the new process will reduce the risk of feature creep. Since the publishers no longer hold the purse strings (except for the final delivery payment), they can no longer insist on what we call "The Incredibly Expanding Design Document." Under the completion bond structure, there can still be "change orders," but they have to be reviewed back to the developers, adding additional development time to the process. Completion bonding should help schedules stay more solid than under the current development structure.

For the publishers, this means that there will be new development funds available to them at interest rates as low as some credit cards. This means that there won't be as much of their capital directly tied to each product title and there is less risk due to delayed products. Further, delay of payment until the conclusion of a project means that the age-old question of how development expenses are handled in the corporate books (a problem Sierra had in the past and GT Interactive faced recently) is solved. The expenses occur in the quarter in which the game is released. In turn, completion bonding makes the developers more attractive to publishers because they are bringing money, as well as expertise, to the table.

 Naturally, such a description is merely a brief look at what completion bonding can do for our industry. There are deals where the publisher pays all and only wants the surety for completion. There are deals where the developer is willing to fund all, but wants guarantees for prompt response from the publisher. There are deals where the publisher and developer split the costs. Naturally, it's our hope that all of the deals will result in games which not only ship on time, but are complete, too.

In completion bonding, (A) the developer negotiates a deal with the publisher where (B) a surety company provides a guarantee of product completion to the publisher based on (C) the developer's guarantee to the surety company. (D) The Bank provides funding direct to the developer. Then, (E) when the developer delivers the title to the publisher, the publisher (F) pays the bank.

Program Structure

Publisher

Development Agreement (A)

Title (E)

Developer

Bond (B)

Surety

BANK

Guarantee (C)

Development Loan (D)

Loan Payoff (F)
POLICE QUEST
SWAT 2

"...the only game in town." – Adrenaline Vault

SWAT 2 is the only authentic police tactical simulation.

"Unpredictable...the suspects act differently each time you play."
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Scenarios are based on authentic SWAT cases

For more information, check out www.sierra.com and www.swat2.com

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TRUCKIN' YOUR WAY
THIS SUMMER
3-Demystified

The article in the April issue about 3D technology was very clear about where 3D is at the present time. In fact, as a piece of journalism it was great. It was to the point, clear, and easy to understand. Mr. Akkin is to be commended for a fine effort.

—Steve Burdette via the Internet

SIERRA IMITATES ART

I had to laugh reading the "BYTE/MC" section of your April issue. I wonder how many letters you will get from outraged gamers thinking they are about to get zapped again by some vapoware product.

However when I read your review of "RED BARON II" I realized the joke was on me. Sierra is releasing a BETA of a PATCH!!! What has this once fine company come to? Why hire quality assurance testers when there are millions of stupid suckers willing to pay to do the job? The other irony is that this is the first of several patches. I wish my company could ship its crap also. Then we could cow that we had a 100-percent yield. Sierra should take a tip from the gaming public. Clean up your games or you will be wondering how you could fall so far so fast.

—Thomas Hugh via the Internet

AND WHILE THEY'RE DOWN...

In your April issue, Johnny Wilson writes, "One thing for sure, we don't have the term 'Eurotrash' to kick around anymore." May I suggest "Sierratrash" as a suitable replacement?

—Nevis Lougander via the Internet

LORDS OF MAGIC

You listed the system requirements for LORDS OF MAGIC as a P100 (CGW #165). In another mag that my friend had it was a P75. In yet another mag it was a P93. Which one is right?

—Mark Maks via the Internet

We printed the system requirements straight from the LoM box. The copies we received have a sticker indicating that the minimum system is a Pentium 100. Underneath that sticker, the box indicates that the minimum system is (was) a P555 and the "preferred" system is a P133. That's probably where the other magazines got their requirements. You'll have to ask them why they used the wrong requirements.

MORE LORDS

Let me start by saying I love your magazine, and have just renewed my subscription. However, I have one major complaint. It is with regards to your review of the new Sierra game LORDS OF MAGIC.

I noticed an ad [for LoM] in three consecutive issues—one of those big fold-out jobs with three panels. It looked sharp. So, I waited for a review.

The game hit the store shelves, and still no review, yet that month's mag had that gorgeous ad again, the real expensive one, nice thick stock, etc. I figured I'd wait for the review to buy it, but when I picked up the next issue (now the game had been on the shelves for a good month and a half) there was still no review. Well, I bought it, and of course, it sucked...hard. Then, low and behold, at least two full months after the game shipped, there was the review! It said, basically, that the game sucked. Conspicuous by its absence though, was that pretty three-panel ad. In its place was a much cheesier one-page.

Now, I am not accusing you of anything here. But it certainly looks bad for a review of a much-anticipated product to be so delayed, and then for it to be so horrid. I am not so stupid as to think advertising plays no part whatsoever in your reviews (or the timing thereof), but this one slapped me in the face, and I am a little disappointed.

—Michael Backman via the Internet
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Letters

Your insinuation rankles us a bit, but it's a fair question. Print publishing requires about three months from the time we get a game to the time you read our review. We could do it faster if we were distributed like a weekly, but that would cost far more than CGW makes, so that's not possible. This may be the Information Age, but most magazines get onto a shelf or into a mailbox before a tracking.

Our editors weren't wise to Sierra's ad plan, because editorial and advertising are distinct operations at CGW. The sales department doesn't influence editorial coverage, and the editorial department doesn't rush or delay coverage to please an advertiser.

So why the coincidence? Advertisers have a budget, and they plan their expenditures carefully. Most games don't last on retail shelves longer than eight weeks, and consequently most marketing plans expire before that time.

RX FOR OS EDEMA

I have to thank Loyd Case for his article "A Tale of Tech Support" (CGW #165). My system had been plagued by numerous and unexplainable crashes. I thought my system had unsolvable hardware problems. I even asked my wife if I could throw gasoline on it and light it on fire. But then the April issue arrived. In desperation I kicked Windows and reinstalled. Now everything is running great. Wow! Thanks, Loyd.

—Keith (No last name given)

Via the Internet

Technical Editor Dave Salvator responds: You're absolutely right. Altec's USB-GUI software does have a control to enable/disable the pop-up menu. Once disabled, you're spared the dreaded pop-up during gameplay. We missed the disable switch because it was buried under several menu layers and cryptically named. Given that Altec has a provision to turn off this dubious feature (which should be disabled by default), we think it is appropriate to take the highly unusual step of revising the 305's rating to four stars. They do sound terrific and are attractively priced. Having the Dolby imaging modes (Pro-Logic, AC-3/Dolby Digital) may become more useful for gamers over time. Thanks for the heads-up, and we apologize for the oversight.

 Revised CGLabs rating for Altec-Lansing ADA305 speakers:

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DUNE
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New High Color Graphics
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to Multiplay.

Your Challenge Is To Seize Control Of Dune.
Lead one of three houses — the noble Atreides, the ruthless Harkonnen, or the insidious Ordos —
with gallant leadership, cunning tactics, and military prowess to win the Emperor’s challenge.
Only one house will prevail to claim the planet Dune and its precious resource, the Spice Melange.

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Behold, the day of the Lord comes, cruel, with wrath and fierce anger, to make the earth a desolation and to destroy its sinners from it.

Isaiah 13:9
SIMplicity Reigns

Maxis Rebuilds SimCity 3000 on the Series' Solid Foundation

If you're a SimCity fan, you're probably aware that a new version of the game—the first in four years—is under construction. The big news, however, is that Maxis has decided to keep the game's design closer to its original roots. When we saw SimCity 3000 at E3 last May, the design included 3D navigation. So, once you'd created your city, you would be able to walk around in it. When the design team began to implement gameplay, however, the 3D approach proved too restraining. To do the game in 3D, the designers would be forced to skimp on the level of detail that made previous SimCity games so magical. Maxis also worried that to truly appreciate the rich graphic detail in a 3D SimCity, you would need a really hot system—possibly one out of reach for the mainstream SimCity audience.

Instead, SimCity 3000 will be a highly detailed 2D environment—four times the size of SimCity 2000—that will feature 3D-rendered buildings with four levels of zoom and a rotating view that will allow you to see all four sides of the buildings. Maxis has increased the selection of exclusive building types from 80 to over 300 and will continue to expand the range after the game ships, with landmark buildings available for download from the Web. The new engine will also have the ability to add new gameplay components after the product ships, so expect to see new downloadable scenarios, too.

SimCity 3000 will feature three main levels of zoning: residential, commercial, and industrial; and within these, there will also be agricultural and historical zones. When you zoom in on a heavily industrialized area, you'll see animated cranes, smoke billowing from chimneys, and construction workers walking around. In suburban, residential areas, you'll see school buses, and nannies pushing baby strollers.

The game will offer different levels of complexity, and AI advisors will be there to provide hints. A news ticker will provide messages and inform you of meetings; and this time, you can have your advisors take care of the tedious duties.

At higher levels, you'll find yourself dealing with petitioners, who help you with the more advanced aspects of city management. You'll interact with neighboring towns via your petitioners—if you don't want a landfill in your own town, for example, you can pay to have the garbage sent to another city. Sometimes your decisions will have a positive impact on your town—building a university may boost the population, for example. If, on the other hand, the government offers you a wad of cash to place a toxic waste dump in your city, you can bet the long-term effects won't be good. Be prepared to be trounced by advisors and citizens if they don't like what you're doing.

There will be less micromanagement here than in SimCity 2000. Although when you begin building you'll have to get power and water out to remote zones, you won't have to lay pipes for water and electricity within these areas—you can assume that the builders will take care of that.

The game is scheduled for a fall release, and from what we've seen so far, this looks as if it could be the best SimCity yet. Look out for a full sneak preview in an upcoming issue.—Charlotte Panther
Hollywood Bound
Chris Roberts Makes His Big-screen Directorial Debut at the Helm of Wing Commander: The Movie

Although the usual route is from big-screen to game, sometimes the humble computer gaming industry reverses the flow, and a movie is made out of a game. Unfortunately, while Super Mario Bros, Streetfighter, and Mortal Kombat may have made a few bucks for the studios, they had little artistic integrity. However, Digital Arvil President Chris Roberts is hoping to change that record by directing a full-length, feature-film version of his gaming masterpiece, Wing Commander.

The movie is being shot in an armaments factory in Switzerland, on what was previously the set of An American Werewolf in Paris. In that film, it was transformed into a gothic church, but in Wing Commander, it's the hangar onboard the carrier CSS Tiger Claw—the scene of much of the on-screen action and the fictional target for half the Kilrathi fleet.

Those expecting Mark Hamill to reprise his Wing Commander IV game performance as Blair will be surprised to find him replaced by Freddie Prinze, Jr., fresh from the teen-slasher flick I Know What You Did Last Summer. Some of the usual suspects from the game series turn up in the movie version, including Maniac, played by Matthew Lillard (Scream) and Angel Devereaux, played by Salifron Burrows (Circle Of Friends).

Gamers may be surprised to find that Mark Hamill, who played Blair in the game, has been replaced by newcomer Freddie Prinze, Jr. (center), in the movie.

To help make Roberts' dream a reality, producer Todd Moyer (The Mask) is in charge of a $30 million budget, of which at least 25 percent is being spent on special effects.

The film's credentials are further enhanced by its director of photography, Thierry Argobast, who also shot The Fifth Element and La Femme Nikita. According to Roberts and Argobast, the atmosphere of the film is like that of a World War II-style submarine scenario—close, confined, and tense. The film is currently due for release in early 1999. For more information, check out our feature in next month's CGW. —Alan Dykes

Player Stats

<table>
<thead>
<tr>
<th>Core Gamers</th>
<th>Casual Gamers</th>
</tr>
</thead>
<tbody>
<tr>
<td>98% Visual Quality</td>
<td>86%</td>
</tr>
<tr>
<td>95% Ease of Installation</td>
<td>87%</td>
</tr>
<tr>
<td>95% Number of Skill Levels</td>
<td>85%</td>
</tr>
<tr>
<td>95% Frame rates</td>
<td>83%</td>
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<tr>
<td>88% Ease of Play</td>
<td>83%</td>
</tr>
<tr>
<td>89% Number of Scenarios Available</td>
<td>79%</td>
</tr>
<tr>
<td>94% Game's Realism</td>
<td>79%</td>
</tr>
<tr>
<td>94% Sound Quality</td>
<td>76%</td>
</tr>
<tr>
<td>81% Special Effects</td>
<td>71%</td>
</tr>
<tr>
<td>62% New Technology</td>
<td>64%</td>
</tr>
</tbody>
</table>

*Percentage of respondents who indicated each category as "very" or "somewhat" important to them.

Core gamers buy an average of 24 games a year; casual gamers buy an average of 3-4 games a year.
PLAYING LATELY

CGW Survey* Months on Last Month Chart
1. Age of Empires (Microsoft) 1 1
2. Quake II (id Software/Activision) 1 1
3. Jedi Knight (LucasArts) 2 3
4. Diablo (Blizzard/CUC) 1 13
5. Panzer General II (SSI) 7 2
6. Total Annihilation (GT Interactive ) 4 3
7. Civilization II (MicroProse) 5 24
8. Wing Commander Prophecy (Origin/EA) 1 1
9. Tomb Raider II (Eidos) 1 1
10. Riven (Red Orb) 1 1
11. Hellfire (Sierra) 1 1

* Check your mailbox! We mail a survey to 1,500 randomly-chosen subscribers each month. The results of Playing Lately indicate what games readers are blowing the most time on, as opposed to the reader's overall "quality ranking" in the Top 100.

PC Data Best-Sellers**

1. Deer Hunter (GT Interactive) Last Month
2. Myst (Red Orb) 1 2
3. Flight Simulator '98 (Microsoft) 3 3
4. Riven: The Sequel to Myst (Red Orb) 4 4
5. Quake II (id/Activision) 5 5
6. Age of Empires (Microsoft) 9 9
7. Titanic: Adventure out of Time (Cyberlink) 1 1
8. Frogs and Toads (تأسيس Interactive) 7 7
9. Tomb Raider II (Eidos) 6 6
10. Jedi Knight (LucasArts)

** This list indicates what the top-selling PC games were, as calculated by PC Data, during February, 1998.

In the Works

Mechaing Havoc
FASA and MicroProse Double-Team the Clans

It's no longer a matter of reflexes and firepower. In MechaCommander, it's your brains against the breeding of the vicious Smoke Jaguar clan. This time, you get no claustrophobic view from inside the cockpit. Instead, you have to liberate an entire planet—one key spot at a time.

Fans of the Mech-Warrior series (and the rich BattleTech universe that stands behind it) are likely to fire their short-range missiles in salute when MechaCommander finally hits the shelves at mid-year.

Instead of copying real-time strategy games like Command & Conquer, Total Annihilation, and Age of Empires, in which you must build new units in real-time, MechaCommander lets you manage your company at leisure, but demands quick tactical thinking in real-time.

While playing the Alpha version of MechaCommander, I noticed that some mechs were easily distinguishable from others in look, speed, weapons, and sensor range. I also noticed—for the first time in a science-fiction strategy game—units whose armor and facing made a real difference. The AI won't let you sneak up behind it, and you can sell, salvage, and strip various mechs to create the exact configuration you want. The combination of point-and-click and drag-and-drop interfaces works well, and the addition of realistic features such as collateral damage when mechs are in proximity of explosions and airstrike is a great feature.

For more information, check out our Web site at www.computergaming.com or next month's full-scale sneak preview. —Johnny Wilson

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

BLACK DAHLIA

If you blended Ripper, Myst, and Gabriel Knight into a single game, Black Dahlia would be the result. In the game, you navigate through pre-rendered screens of an atmospheric gameworld set in the 1940s, and have the ability to look freely around you. Although the puzzles are of the logic variety, each is well integrated into the plot. On the bad side, some of the puzzles are too difficult, the acting in some scenes is pretty bad, and the game has a few minor bugs, which should be patched by the time you read this. For those who yearn for an excellent mystery, i.e. Games: Kenji, B movie Dahlia is a must-have.—Thien Nguyen

Take2/Interplay [860] INTERPLAY
www.Interplay.com
Windows 95 CD-ROM

MI TANK PLATOON II

There's no question that M1 Tank Platoon II looks fantastic, especially with 32x graphics acceleration. Aside from updated graphics, better sound, multiplayer support, and the elimination of the driver's station, MicroProse hasn't significantly altered the formula that made the original game a hit. Taking members of your tank platoon on a campaign and honing them to a sharp edge remains the game's main focus. Thera are, however, a number of annoyances that detract from gameplay.
Rage With the Machine
TalonSoft Moves Into the Real-Time Arena

Among strategy gamers, TalonSoft is known for creating hard-core turn-based wargames. However, the company is branching out to create some games that the gaming world's non-grognards will want to play. One of the first of these titles is a real-time strategy game called TRIBAL RAGE. No doubt you've seen the ads, the ones with the bikini-clad biker babe saying, "Biker bongs my ass!" Well, TalonSoft is obviously trying to inject some sort of personality into their game, and at a certain level, they succeed. If you're expecting a C&C clone, you'll be surprised. This game has a style all its own.

TRIBAL RAGE's look is a cross between REDLINE RAPOUSER and MAD MAX. You can play as one of several tribes, among them biker babies, dinosaur-riding amazons, and muscle-car driving cyborgs. There isn't anything too far-fetched in this game as far as weaponry goes; most of the weapons are variations on machine-guns, flamethrowers, mines, and missiles. The vehicles are likewise mundane, with bikes, '50s style sedans, and pickup trucks. The exceptions, of course, are the amazon's dinosaurs.

If COMMAND & CONQUER's gameplay was considered tactical, TRIBAL RAGE's is almost squadlike, by virtue of more direct unit-controls and smaller numbers of troops. You can direct the fire of units with your cursor, just as in CONQUER EARTH. Unlike in other real-time strategy games, TRIBAL RAGE's units do not have unlimited ammo. In fact, some units sometimes have only three or four shots of a certain weapon, necessitating frequent reloading. Units also have multiple weapons, and you have to choose which weapons a unit will use (the AI currently won't cycle through its weapons—it uses only the last weapon you selected for it). This means that there is more unit micromanagement in TRIBAL RAGE than in other real-time strategy games. Another thing I noticed in the TRIBAL RAGE alpha was that maps have power-ups, including first-aid kits and weapon caches. And while the graphics aren't state of the art, there are plenty of other things to catch your attention, such as the ability to design your own vehicles, warriors, and maps. TalonSoft plans to debut this title sometime in early May; so it should be out by the time you read this. Watch for our review in the coming months.—Elliott Chin

such as the lack of a reverse gear, nonfunctioning keyboard commands, and an interface that adds needlessly difficulty. Nonetheless, this is the best tank simulation in nine years.—Patrick C. Miller
MicroPrase (800) 655-4253
www.microprase.com
Windows 95 CD-ROM

Norton AntiVirus 4.0

OK, we admit it: Anti-virus software is hardly as sexy as the latest Curve II DeathMatch level. But if you want to continue downloading your favorite gaming files, 3D driver updates, and demos—without compromising your computer's health or your peace of mind—you'll want to check out Norton AntiVirus 4.0.

The few games that we found to have some conflicts running with prior versions of Norton had no trouble with Norton 4.0. And our biggest concern with Norton 3, that it took up to six percent of system resources to run, is no longer true: Norton AV 4.0 uses under three percent (less than Windows 95, for example). When you consider that the number of new features, including auto-update and built-in Network support, equals the price of a single game, it seems a small price to pay for the best virus protection software we've seen yet.—Larry Cokmani
Symantec, (800) 441-7234
www.norton.com
Win 95 CD-ROM

NEWS FLASH

Despite the fact that Disney Interactive decided to drop its OT Sports division last year, the developers of Monday Night Football and Heroes of the Gremlins are still alive and kicking. Doug Whatley, executive producer of the MNF series recently announced the formation of BreakAway Games, a new company comprised of the core development teams from the former OT Sports group, including the key developers responsible for MNF, HOG, and Iron Racing League. BreakAway is currently in negotiation with several publishers and expects to announce more detailed plans shortly. Check out www.breakawaygames.com for more information.

LucasArts has announced its second real-time strategy game, Force Commander. This game is closer in scope to Total Annihilation and StarCraft, dealing more with ground combat on a tactical scale. Our guess is that you'll be able to command AT-ATs and squads of stormtroopers, along with other Star Wars mainstays.

Paramount Pictures recently announced that it has acquired the worldwide film rights to the Eidos' Tomb Raider, and plans to produce a live-action feature film, scheduled for a mid- to late '98 release, based on the game. The movie will be produced by Larry Gordon and Lloyd Levin. There's no word yet on who will play Lara....
IT'S TIME YOU

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Arkansas

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### Features

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[www.xatrix.com](http://www.xatrix.com)
Mightier, and More Magical
Five Years Later, New World Computing Roars Back With Might and Magic VI

T

The computer role-playing renaissance is kicking into high gear with the release of Might and Magic VI: The Mandate of Heaven, the latest, long-awaited installment of New World Computing's acclaimed fantasy RPG series. The game, due out by the time you read this, still wasn't finished as we went to press, but we've been playing a late beta to let you know what to expect.

New World Computing has completely overhauled the game's engine, gameplay, and interface. If you played any of the previous M&M games, prepare yourself for some huge changes.

The new game incorporates two new 3D graphic engines (for indoors and outdoors, respectively) that provide continuous, real-time first-person movement through the game world. It's a vast improvement over previous efforts, but unfortunately, the game does not support 3D accelerator cards, and the often pixelated graphics do not approach the smooth elegance of games like Quake II. Still, they're certainly the best first-person graphics in a role-playing game to date—much better than those in Daggerfall or Lands of Lore II.

In the game, you'll constantly need to use both turn-based and real-time action, and learning when to switch from one mode to the other will play a key part in combat strategy. For instance, there is no longer a "Run" button in turn-based mode, so the only way to flee is to hit the toggle and physically run away. But this is not a Diablo-like clickfest, either. You'll never make it past the game's first goblin camp without engaging in strategic turn-based combat.

A number of changes have been made to character advancement and party formation. The number of classes has been reduced from 10 to 6 (gone now are the Robber, Ninja, Barbarian, and Rangar), and human is the only race. Also, active party size has been cut from six to four. Don't mistake these cuts for a reduction in the game's complexity, though. A brand new skill system more than makes up for the losses by giving your party members countless ways to develop. Entry into the game has been made more accessible to novices, but the depth is still there, as individual characters will actually have more variables than before.

Also, New World Computing has completely overhauled and beefed up the game's magic system. Many of the series' classic spells are the same, but now there are even more of them, and they've been divided into nine schools: Fire, Water, Air, Earth, Mind, Body, Light, and Dark.

But, amazingly, despite all the changes, the game still looks, feels, and plays like classic Might and Magic. With the same mix of high fantasy questing, dungeon crawling, world exploration, and slightly dorky humor, Might and Magic VI is completely faithful to the spirit and feeling of the series. Look for a full review next month—assuming that the game actually ships. —Jeff Green

ULTIMATE RACEPRO
Arcade racing games usually get short shrift on the PC. The games that are ported over usually don't fare well, and the few original franchises just haven't been too exciting. Enter Kehlco and MicroProse's Ultimate RacePro, a game that tries to bring all the fun of Daytona USA to the PC, while offering a plethora of options to keep gamers interested beyond that first race. Ultimate RacePro has more than half a dozen different cars, more than a dozen different tracks, night and day races, and storm conditions. There are also many graphics options for tweaking detail and frame-rate, as well as multiplayer options that include races and a Destruction Derby-like deathmatch. There isn't a tournament mode, but there is still plenty of gameplay here. —Elliott Cohn

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333MHz INTEL PENTIUM II
The first iteration of Intel's 0.25-micron Pentium II line (a.k.a. "Daschutes") is now available both in shipping systems and to upgraders. For upgraders, you'll need a 440BX motherboard capable of supporting the 2.0 volt core voltage of this CPU. At the time of this writing, this was the fastest Intel-based CPU on the market, but as you read this, the 350- and 400MHz CPUs are probably shipping. If you want to upgrade, however, don't mess around with the 500s; the 333 runs better than previous Pentium IIs and is just a bit faster. —Lloyd Case

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Russian Roulette
1-Magic Takes a Chance With Retro Gaming

Interactive Magic's first foray into the action genre is a surreal adventure from an obscure group of developers in Russia. They've had little influence from the American world of gaming, and 1-Magic wants to keep it that way.

Vegasews, the group's debut title, is a top-down, vehicle-based action game. At first glance, the game may look like any other side-scrolling racing game, but it definitely a cut above the ones you're used to.

The first thing that strikes you is the game's organic look. All the vehicles, monsters, and weapons have strange alien names and look as if they were created from alien vegetation. The gameworld is also bizarre, filled with colorful environments and peculiar enemy cars. Yes, the vehicles may sound like weird animals in the setup screen, but in the game they look and drive like souped-up hot rods. 1-Magic points out that the world is interactive and completely flexible. You won't have missions as such; instead, you'll drive around until you see something that you want to pursue, then you'll hop into a portal and warp to a new world. Of course, with a variety of creatures and enemy vehicles in hot pursuit, reaching portals and uncovering new locales and items isn't as easy as it sounds.

With Vegasews' retro gameplay and look, Interactive Magic is trying to make sure this game stands out. You can see for yourself when it ships in June. —Elliott Chin

STAR WARS REBELLION
At long last, the Star Wars strategy game we've been waiting for has arrived. My first impression of this game was that it looks extremely complicated. The manual and poster, though, go a long way toward trying to explain the game. You are the leader of either the Empire or the Rebel Alliance, and you must control all manufacturing, diplomacy, and military aspects under your command. This means going to each sector you control and specifying what gets built, which ships go where, and whom and when your troops fight. You'll also assign characters for special missions. This game requires a lot of micromanagement, and strategy buffs should have a grand time trying to juggle all the tasks of galactic command. Look for out for a full review next month. —Elliott Chin

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CGW JUNE 1998
The only line between good and evil is the yellow one running down your back.
I Want to Believe

Call Agent Mulder! THE X-FILES Is One FMV Adventure We Just Might Like

by Jeff Green

You don't exactly have to be one of the Lone Gunmen to be skeptical about THE X-FILES computer game. Games based on popular TV or movie franchises are notoriously crappy, usually made by people who just want to cash in on the license and who have no real clue as to how to make a good game. And when the series is as brilliant and dynamic as The X-Files, there's even more reason to scoff. How could any game hope to capture the series' atmosphere, suspense, and complexity—without sullying the name and disappointing longtime fans?

But maybe, just maybe, somebody has gotten it right. THE X-FILES, due this summer from Fox Interactive and Hyperbole Studios, is an FMV adventure game that has so much going for it—including the direct involvement of many of the series' stars and creative team—that, for once, we're actually going to be surprised if it does suck. In addition, the game's creators talk a good game about making a good game, one with the kind of gameplay and plot that should appeal not just to fans of the TV show, but to hard-core adventure gamers as well.

LITTLE GREEN MIMEN

THE X-FILES game, sprawled over seven CDs (for both PC and Mac), is nothing less than a brand new, full-on "episode" of the series, featuring all-original footage of Agents Mulder, Scully, Skinner, and other characters from the TV show portrayed by the real actors. The new story is set in the time between seasons three and four. The time period when, in the series' uber-plot, the alien colonization plans were just beginning to unfold (as much as anything unfolds on this show), and Mulder's mysterious informant, X, was still alive (he's gunned down in the Season 4 opener). In the game's opening cutscene, we see Mulder and Scully in an old warehouse, where they are fired upon by a group of typically menacing-looking suit guys. The scene cuts abruptly to the familiar TV show credits and theme, and then the game begins.

You play Agent Craig Willmore, a Seattle-based FBI agent who is assigned by Assistant Director Skinner to track down Mulder and Scully, who, he informs you, have been missing for four days after checking in to a local motel. Finding Mulder and Scully is only the beginning of the story, however—a story that, we are told, will work into the series' mythology storyline. Fox Interactive is understandably keeping a lid on the specific plot details for now. Series writer Frank Spotnitz conceived the storyline, and though he may not be as well known as Chris Carter, David Duchovny, or Gillian Anderson, he happens to have written or cowritten a great many of the series' important "mythology" episodes. This means that anal-retentive X-Files watchdogs need not panic that the game will breach the series' continuity.
FOX HUNT: Join Agents Mulder and Scully in an adventure game that provides another piece of the show's "mythology" plot. The game's creators estimate the script at five to six times the length of a normal show script.

Once you find and team up with Mulder and Scully, you'll encounter other characters from the show, including The Lone Gunmen, X, and a few surprise guests. Although Fox Interactive didn't want to confirm or deny it, the name William B. Davis—the actor who portrays the Cigarette-Smoking Man—is listed prominently in the game's opening credits, so you can draw your own conclusions there. Unfortunately, Krycek (a.k.a. "Weasel Boy") is apparently not in the game, depriving fans the chance to shoot that one-armed bad boy dead once and for all.

HEY SCULLY, WANT TO INTERACT?

The gameplay seems most reminiscent of Activision's great, underrated SpyCraft of a couple years back, with inventory-based puzzles, branching interrogations, computer sleuthing, and even a couple of action sequences. As in SpyCraft, it looks as though you'll spend a lot of time at the computer within the game—searching files, analyzing photos, sending and receiving email, and so on. Along with the show's trademark cell phone and high-beam flashlights (which, we learned, are special underwater lights that run about $4,000 apiece), you'll also carry a personal digital assistant (an Apple Newton, of all things) with multiple functions, including a travel map for navigating the game's many locations.

Although the overall plot proceeds in a linear fashion, you are free to travel around at will, and the outcome of the game is not predetermined—there are multiple endings. Dialog trees branch throughout, and your choices will seriously affect how the game plays out. As in The Pandora Directive, what you say and how you say it (you can choose from a variety of moods) affects how characters respond to you. Follow the wrong course of action, piss off the wrong people, and you may find yourself dismissed from the case, or even dead. Knowing that newbie adventurers are likely to be attracted to this game, Hyperbole has added a logical hint system that will help guide players if they get stuck.

From what we've seen, the game looks like a solid enough adventure even without the TV show tie-in—but the payoff for fans, of course, is what puts this one over the top. Interacting with the real actors (who respond to your input) is, on a pure fanboy level, a great cheap thrill. (Try not to get worked up when Dana Scully starts talking to you—I dare you.) The cut-scenes, photographed by series photographer Jon Joffin, featuring music by Mark Snow, and played out in letterbox format, are as cool as anything on the show.

And finally, the game is loaded with X-Files trivia and in-jokes—such as a photo of Sophie the gorilla (from season two's "Fearful Symmetry" episode) in the Seattle motel lobby. These details will go unnoticed by many, but they are there for the rabid fan who seeks them out.

TRUST NO ONE

How The X-Files ultimately plays out as an adventure game is still shrouded in mystery, but as another chapter in the series mythology, it's going to be just about impossible to ignore. The credibility lent to the project by the involvement of all the series' key players means that, along with the upcoming X-Files movie, we at least get more of the show to watch. And any game that lets us talk with Dana Scully while she's wearing nothing but a flimsy hospital gown is a game that we simply have no choice but to play.
You will have a plan.
You will panic.
You will face your fear.
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Each decision you make, each parry and feint, bears consequence. You hesitate and the recruit you nurtured into an experienced MechWarrior is lost. His death is a stunning blow. The calls for backup, the missile impacts, the ammo bay explosion, and the scream as the pilot ejects. All play loud and clear.

At mission's end, you retrieve the survivors and their BattleMechs. Repair and refit what you can. Move your best MechWarriors into the best 'Mechs. Trade equipment in or add a new pilot. Let an injured pilot heal, if you can spare him. The next mission beckons.

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MGM Delivers a WOPR for Real-Time Strategy Fans

by Tahsin Shamma

When I first heard about WarGames, my first thought was that it was going to be some hokey adventure game based on the movie. I'm a big fan of the movie, and I was a little worried that this was just yet another attempt by a Hollywood company to milk a franchise for a mediocre game. Well, I'm happy to say that's not the case. WarGames is a real-time strategy game that delivers the 3D action of Myth, the technology of C&C, and an interesting twist on resource management. You might think that this would lead to a jack-of-all-trades, master-of-none situation, but WarGames manages to keep the best of those games without diminishing the overall appeal.

The game occurs 20 years after the movie. The WOPR (War Operations Plan Response) computer has deduced that humanity is the cause of all war and therefore must be destroyed. Despite the similarities to a certain James Cameron movie with a rampaging cyborg, WarGames stays close to the recognizable universe of modern-day weapons. While the human forces of NORAD are equipped with tanks and infantry, the WOPR forces are more technologically advanced, with combat walkers and droids.

PLAY TIME
Once the game starts with a familiar question—"Shall we play a game?"—you are given a choice between two campaigns: NORAD or WOPR. As NORAD, you utilize an array of human, air, and armored units to stop the genocidal machinations of the WOPR. Through a series of 15 missions (there are 15 for the WOPR side as well), you'll be presented with...
different global hot spots where WOPR forces are at work. The missions don’t just stay in the familiar terrain of North America. Operations will take you as far as Africa, Siberia, and the Pacific Islands, each with its own terrain set. C&C gamers will feel right at home with the point-and-click controls.

In a twist on resource gathering, money is gained by “hacking” into computer centers located around the maps. You send your hacker units (or agent droids if you’re playing as WOPR) into a computer center, and they’re offered a variety of abilities, such as researching technology, gaining information about your opponent, and acquiring funds to further your mission. The catch is that the computer centers can be destroyed if attacked, an objective the WOPR usually considers a priority.

One of the greatest strengths of WarGames is its diversity and balance of units. The NORAD side offers a plethora of soldiers, ranging from special ops to bazooka troopers to grenadiers. The armored vehicles, especially the slayer tank, are equally impressive when sent into battle. But if you’re the kind of gamer who likes things big and hulky, the WOPR forces will amaze you. Once you get a glimpse of the massive MK IV walker unit, you’re going to wish you hadn’t come across them yourself to take around the streets of New York (which occurs in one mission). Even the smaller droids, each with their own strengths and weaknesses, are fun to play with.

**TERRAIN MATTERS**

All these features don’t make a great game unless the terrain makes you feel like you’re actually on the battlefield. Here, WarGames will definitely disappoint you. The fully 3D terrain brings back all the excitement of Myth as you move units over a high and low ground, turning the map to see behind a tree or building. The terrain is integral to combat, with units hiding behind cliff walls and atop higher ground. The more missions you successfully complete, the more terrain disadvantages you start out with (for example, with your forces starting in a valley, while the enemy begins on high ground), and the more prevalent the terrain becomes. All this makes for a more intense strategy game with more considerations than just trying to overcome a superior force (although that happens, too, of course).

All in all, WarGames could do for sci-fi real-time strategy what Myth did for fantasy real-time strategy. If you followed through with its plans, this game could have enough innovation to make strategy gamers take notice, as well as enough of the movie’s flavor to please fans of the original film. As it looks now, with all its well-made, ingenious ideas, WarGames is definitely on my list of games to look out for this summer.}$
Space: 1998

This UK Space Opus Will Beam Down to North America With a Hot New Paint Job

by Denny Atkin

Released a few months back in Europe by Particle Systems, 1-War was regarded by many as the first hardcore space sim since the days of Elite. With unprecedented modeling of physics and ship's systems—and an AI that's none too shabby—this European gem is probably the closest thing yet to a convincing simulation of piloting a starship.

When 1-War lands on U.S. shores this summer, a number of changes from the original release. The most obvious is its new moniker, Independence War. ("1-War" was already trademarked in the U.S.) In addition, the game will feature Glide support for 3DFx Voodoo and Voodoo² graphics cards, as well as a new arcade mode for less serious players.

Colony Wars

The setting is a distant-future Earth whose colonies throughout near space have decided they want to control their own destiny. You'll fly as a Commonwealth pilot tasked with putting a stop to the indy raids on your shipping. The Commonwealth is your typical naval outfit, while the indies are for the most part undisciplined rebels.

Buddy System: You can send your wingmen a variety of commands, and you can even override the command codes of another ship and take control of it.

Moonrise: The dreadnought's navigation station, where you'll do much of your work.

They paint their ships with garish graffiti designed to taunt their Commonwealth foes.

All of this is set up in what has to be the magnum opus of all intro films—a full 14 minutes of fully 3D rendered, full-motion video. The space battles rival anything you've seen on Babylon 5, and the 3D-rendered actors don't look cheesy at all. This minicomic is entertaining, and about the only place it falls apart is in some of the "drama queen" voice acting.

The story continues to unfold as you complete missions. Multiple missions outcomes can affect how the storyline goes—there's even a hint that you may be forced to choose sides at one point. Missions are prescripted and must be completed in order. However, you can choose to replay any completed mission in an attempt to get a better score (most missions have bonuses available that you're bound to miss the first time through). In addition, a cheat code available at www.particle-systems.com will let you choose any mission at any time.

Although the story is fairly linear, the missions are varied enough to keep it interesting. On one mission, you may be tasked with stopping waves of lighters as they warp in at Lagrange Point. Further on, you may be tasked with destroying some asteroids before they collide with a moonbase, or escorting the Commonwealth's president on a foolhardy tour of the solar system. The backstory and video sequences here hold their own against the best Wing Commander titles.

Physics 101

When you take control of your dreadnought-class corvette for the first time, you'll immediately notice that this is not your father's spaceship. Say goodbye to magic physics. Independence War's designers have obviously heard of a guy named Newton. Your ship won't
magically change direction with a twitch of the joystick. The game models inertia, so while your thrusters can alter the direction the nose of your ship is pointing, it will take a while for your ship to come to the new course.

Along with making piloting and targeting more challenging, this feature adds amazing flexibility to combat. In normal flight, thrusters automatically fire to keep your nose pointed in the direction of travel. However, you can disengage thruster assistance and enter FreeMode, where turning the ship, in itself, doesn’t affect velocity. Bad guys on your tail? Simply enter FreeMode and you can instantly turn around and shoot them without altering your ship’s speed or direction of movement. You can also manually activate thrusters in this mode, so you could, for instance, engage full reverse thrusters without changing direction, causing your enemy to overshoot.

Of course, these physics affect not only your ship, but all the other ships as well. Because the direction a ship is facing isn’t necessarily related to the direction it’s traveling, the ship’s computer overlays a wireframe path behind other craft to indicate its flight path. This is extremely effective, although seeing a dozen or so of these virtual contrails in a heated melee can be intimidating.

The ship’s systems are modeled with a level of detail that’s not common in this type of game, but generally you’ll be using only a couple of the ship’s systems to perform any one task, so the workload is rarely overwhelming. In addition, there are autopilot modes for speed matching, formation flying, and docking.

In standard combat you’ll be in thruster mode. When you need to travel great distances within a system, you’ll activate the LDS (Linear Displacement Drive System), which can move you at great speeds. You can’t fire weapons in LDS mode, however. If an enemy ship is in LDS mode, you can use an LDSI missile to try to knock it into normal space, where you can then engage it. If the target ship is big enough, you can even fly into its LDS field and “catch the wave,” then shut off your own LDS system and start shooting.

If inertia and off-axis movement is more than you want to tackle when you sit down to play a game, fear not. The North American release of INDEPENDENCE WARM will also feature an arcade flight mode more along the lines of the Wing Commander series. The missions are rebalanced in arcade mode so they’ll still be challenging,

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But as you advance, you’ll want to hop from the pilot’s seat to the weapons workstation. Here you’re presented with a view all around your ship, with your ship itself rendered as a transparent wireframe. The advantage here is that you can target craft that aren’t directly in front of your ship. Even more fun to use, though, is the ripple fire mode. Activate this and you can target several enemy ships simultaneously.

Weapon variety isn’t as great as in some other games. Under normal combat, you’re armed with a particle-beam cannon and seeker missiles. At times, though, you’ll get the opportunity to fire the LDSI missiles, REM manually controlled missiles, and disruptor missiles (which disable an enemy ship’s systems).

For this preview I played through a good portion of the European version, and the software-only graphics were dazzling. Except for some blockiness in the planet textures, the UK I-War looked as good as many hardware-accelerated games. I got some stick time in on the 3D-accelerated version heading for the U.S. market and was blown away—no space game has looked better. Sound is superb as well, with 3D stereo effects and wonderful ambient background noises.

Already one of the most interesting space sims in years in its European version, INDEPENDENCE War looks ready to make a major splash when it’s released here this summer.

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**STATION IDENTIFICATION** While this space station gets some shading enhancements in 3DFx mode, the game looks nearly as good without 3D acceleration.

Shoot-'em-up fans will also appreciate the game’s instant action mode, which sends wave after wave of bad guys after the gamer.

**MISSILE COMMAND**

Combat has a few innovations of its own. When you first begin, you’ll probably stick to the typical forward-firing energy weapons and missiles.

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Turning on Its Axis

Potentially, It’s the Biggest Wargame Breakthrough Since PANZER GENERAL

by Terry Coleman

You can’t go home again. Or can you?

The folk at Hasbro seem to enjoy refuting this tired cliché about, oh, once every decade or so. In 1984, boardwargaming was floundering: The games had moved away from elegant classics such as Afrika Korps to become arcane dissertations on barely declassified military hardware. In a gaming world where 60-page tomes were the rule, and some games took longer to finish than the real-life campaigns they were simulating, increasingly alienated gamers moved away from the hobby.

Into this widening breach stepped Milton Bradley (a division of Hasbro), with a reworked version of Axis & Allies—a WWII game that, in its original release from Nova Games, had little impact—and to the surprise of the entire gaming industry, it was a huge success. Released Thanksgiving weekend of 1984, Axis & Allies sold 36,000 copies in the U.S. alone in a mere five weeks—a number that most computer game companies would have been happy with, even in today’s much larger computer gaming market.

The game is still popular today (more than a half-million unit sales later), because it is one of the most accessible you’ll find anywhere: A friend of mine once called Axis & Allies the “Reader’s Digest version of WWII with dice,” and that backhanded compliment isn’t far from the truth. Given how seriously some people take their gaming, it’s always a treat for me to introduce grown men to Axis & Allies and watch them drool over the miniatures style plastic pieces as they gleefully land their little fighters on the sleek, molded aircraft carriers.

I have to admit I was skeptical of a computer version of this classic. Hasbro Interactive’s post-Monopoly record might include Risk and Scrabble, but it also brings to mind horrors like Pictionary. I’m happy to report that, after hours and hours spent blowing up the world with an early version of the code, about the only thing I missed in PC Axis & Allies was moving my little plastic armies by hand.

GLOBAL WAR

For those unfamiliar with Axis & Allies, it is a grand strategic game of all of WWII, beginning in 1942, when the Axis powers (Germany and Japan) achieved their conquests’ high-water mark. Simple as the game is to play, it requires that you balance the economics of war production; pursue a grand strategy (either the Axis powers conquer enough of the world to win the game, or the Allies force their unconditional surrender); and master tactics of air, land, and sea units.

True to its boardgame origins, Axis & Allies is strictly turn-based (with each turn representing approximately three months of the war). It should, however, support every kind of multiplayer available on the computer: Internet (both over Microsoft’s Internet Gaming Zone and TCP/IP), direct modem-to-modem hookup, local network, hotseat, and even email. Unlike most turn-based games, there are a few decisions you can make during your opponent’s turn, such as which losses you’ll take in combat. The designers are also experimenting with timed turns to keep things moving.
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EIDOS INTERACTIVE
What the designers aren't taking chances with, though, is the AI. There are five levels of computer opponents for each of the five great powers: Russia, Germany, Britain, Japan, and the U.S. (listed in the order that each moves in the game). The top-level opponents are already better than those in most of the recent strategy games we've seen, probably because Hasbro has some of the best Axis & Allies players in the country putting the AI through its paces. To keep the game accessible to those who couldn't play the boardgame, the design includes both a tutorial mode and scads of Windows help files.

**IT'S THE SPOTTING IMAGE**

For most computer games, saying that they "look as good as a boardgame" is scant praise. Here, it's a compliment. The vibrant colors are inviting to side-eyed newbie and jaded veteran alike, and the smooth scrolling map evokes memories of the effortlessly navigable interface of the first Panzer General. The map also allows the designers to clear up some navigational questions from the boardgame. For instance, it now clearly takes two moves to get through the Panama Canal, and you can't get from Western Canada to the Atlantic Ocean in one move—all of which makes sense, given the game's global scale.

There are several other small changes from the boardgame—most suggested by either the original designer, Larry Harris, or by veteran Axis & Allies players—that comprise this "third edition" of the classic Axis & Allies rules. Anyone who has played the second edition rules (the ones currently in use), however, can simply log off if they desire.

In fact, the best thing about Axis & Allies is that it combines the best aspects of the boardgame with all of the things a computer does so well. Not only can you play the PC game exactly like its cardboard counterpart, you can also edit nearly everything, à la Civilization II. Tired of having your German submarine trashed in the Baltic Sea at the beginning of every game? Just set it up off the coast of Brazil instead, and watch the British and U.S. players sweat. Games of Axis & Allies finish more quickly on the computer, of course, and you can save games in progress—as opposed to leaving your battleship as bait for your favorite feline admiral. Finally, Hasbro plans a full chat menu, since players actually have more time to chat in turn-based games.

About the only problem I can see with Axis & Allies is that the player setting up the game is the server. Before you have Diablo style nightmares, however, Hasbro assures us that it's a bit easier to discourage cheating in a non-dynamic strategy world than on, say, battle.net (and Microsoft's Internet Gaming Zone has built-in protection as well). Basically, all players will agree to the rules set used before play begins, at which time the options are locked down, and not editable through the remainder of the game.

All in all, Hasbro is well on its way to lighting a fire in the computer strategy/wargaming world, much as it did over a decade ago with boardgames. If the designers take the time to finish Axis & Allies, for Hasbro—and for those who buy the company's games—those recent computer-game nightmares will seem a long time ago. &
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WATCH YOUR BACK

Get Ready for the Bloodiest Match of the Year as We Preview All the Hot New 3D Action Shooters Coming at You

Last year at this time, we wrote of the revolution of 3D shooters. As we predicted, the crop of post-Quake games moved from run-and-gun gameplay to more story-driven, action/adventure gaming. Of course, in the end, we all want to kill things, so the emphasis was, and still is, on awesome action. But realistic puzzles and interactive environments, as well as characters and enemies with personality, have arrived to revitalize this genre.

However, the kind of creative boost this genre needed has apparently been harder to implement than we first thought, as less than half of the games we previewed last year have shipped—Quake II, Hexen II, Jedi Knight, and Turok are the only ones to make an appearance as of yet. In a sense, these games were the heralds of the 3D revolution. The rest of last year’s pack, and some new entrants, are finally threatening to release, and with real-time 3D engines now standard, each game has to distinguish itself with story and innovative game design. To survive, these games are boasting deeper stories, intelligently crafted missions, and well-designed levels, as well as interactive environments and realistic puzzles. Jedi Knight showed that character growth is a plus, and Quake II reminded us that deathmatch and multiplayer must never be neglected. And the lesson we learned from Hexen II was that no matter how much depth you add, you have to give players focus.

Round two of the 3D shooting wars passed quietly, with Quake II and Jedi emerging as the victors in a small field. This year, round three is finally set to arrive, behind schedule, but with an even bigger lineup of some spectacular 3D action games. We said it last year, but this time we mean it: Here come the killers!
HALF-LIFE

Realism and Story Could Combine for a Blockbuster

by Elliott Chin

Among the new generation of 3D first-person shooters, there is a trend toward more realism, more interactivity, more story, and a more cinematic quality. Many of the games in this roundup sport features that advance these goals, such as skeletal animation for more realistic movement and damage detection, seamless level integration for more believable environments, and greater character interaction to tell in-depth stories. HALF-LIFE is a game that is loaded with such features, and it's a game that is among the most promising of this latest crop of 3D action titles.

In HALF-LIFE, you play a scientist for the military who is thrust into the middle of a clandestine war between the government and a race of aliens. Despite the government's attempts at a cover-up, the aliens make their presence known by teleporting into your laboratory and turning the entire military base into a battleground. As you see the aliens tear your world apart, you have to stop them by whatever means necessary, even if that means going through their portal and taking the fight to their homeworld.

ON WITH THE SHOW

HALF-LIFE's list of features is extensive, but Valve says that the core of this game is the gameplay, and that is achieved through a greater attention to detail and realism. What struck me most about HALF-LIFE was its cinematic feel. You don't just progress from level to level because "level complete" screen tells you to wait for the next world to load. In HALF-LIFE, you feel like you are part of a living world, where events and little details conspire to tell a story.

It isn't any one feature that conveys HALF-LIFE's cinematic feel or realism. It's everything about the game. For one, you'll notice that objects from one level can pass to the next. Two floors of a building could be two different levels, but you would never know it because when you move from one to the other, you won't see a loading screen. If you fire a grenade from one floor (level) up to the next, it will pass through and explode in the next floor (level). Monsters will also be able to pass between levels and follow you. What gamers will see is a welcome absence of artificial boundaries between environments.

The level of detail in the levels and monsters will also enhance the realism. Bullets will leave marks on the walls and dead bodies will permanently color their resting spots with blood. Valve calls these permanent markers to their levels "decals," but whatever their name, they enhance the feeling that you can leave your mark on the world.

The way characters move in the game also begs comparison to the real world. Because of Valve's skeletal animation system, all the monsters can move more fluidly and realistically than in games like Quake II, which uses vertex animation. This system allows the game to store more animation for the monsters, and allows more precise collision detection, so bullets can actually fly through a monster's legs. The skeletal animation system also allows for monsters to react to specific body damage. Valve isn't sure yet whether there will be progressive pain skins for different body parts (as Swm is proposing), but the engine can identify where a specific shot hits. This means that assigning corresponding results, such as instant death for head shots, would be very simple.

WILL YOU NEED POPCORN WITH THAT GUN?

Adding to the cinematic feel of HALF-LIFE are the number of scripted events that appear to tell a story and create atmosphere. In Act I, rather than tell you that aliens are overrunning your base, Valve will set up events to show you what is happening. You'll walk into a room and see a scientist battle, and then succumb, to two scavenger aliens. You'll be walking through a corridor, passing other scientists, and suddenly infested humans will break through the walls on all sides of you.

ALIEN INVASION: In HALF-LIFE, an experiment has gone awry and led to an invasion by a horde of monstrous aliens.
killing those very people you just greeted. These scripted events are only a few examples of the many “mini-movies” that will be spread throughout the game to enhance the story. However, though these events will be more like in that they are scripted sequences, they will be interruptible. You’ll be able to save the scientists in those two previous examples.

The way you meet end-bosses will also give you the feeling that you are in a movie rather than in a game. When you meet Big Momma, for instance, you’ll first hear her four crablike feet tapping against the metal floor, and then you’ll catch glimpses of her bulbous egg sac through windows. You won’t know exactly what she is, but the ominous music, coupled with the sounds and cursory glimpses of an alien figure, will foreshadow your impending doom. This is a far cry from the Quake days, when you would warp into a small arena and see a big bad guy breathing in your face.

Sound will also enhance the mood. Your footsteps will echo differently depending on the surface you traverse, and each new event or boss monster will have its own accompanying music. The placement of guns and health will also solidify the game’s realism; health will be available only from first-aid kits on the walls, and weapons and ammo will come from fallen bodies or gun racks.

**GUNS AND GLORY**

Valve has been pretty shy about giving away the scoop on all the weapons, but we did manage to score some new information. Two weapons that will appear later in the game will be a particle accelerator that can punch through walls, and a rocket launcher that fires laser-guided rockets. A scientist will actually assemble the accelerator for you after you retrieve several items for him. Its firepower is dependent on how long you hold down the fire button. The rocket launcher is particularly cool because once you fire it, it will follow your laser sight. If you move it to the left, your rocket will veer left; move the sight up and the rocket will shoot up. The deathmatch possibilities (running around corners won’t save you anymore) are spine-tingling.

While we’ve all heard about Half-Life’s AI, actually seeing it in action is amazing. In one room, a team of three commandos actually surrounded me as I hid behind a wall. While I started shooting at the first commando, another one snuck up behind and gunned me down. In another instance, when I refused to come out, one of the commandos threw a grenade into my hiding place while the other two waited to pick me off.

There is still a lot that Valve isn’t talking about, namely the later portion of the game and the deeper levels of the plot. According to Gabe Newell, the game’s project manager, Valve wants to keep some things a surprise. We’ve told you what we can; now we’ll just have to wait and see if Valve delivers on its promise. We think it will.

---

**MAKING YOUR MARK II** The blood spattered on the wall is from the dead bodies of two commandos.

**WATCH YOUR BACK** This is your character, a scientist who has donned a suit of intelligent armor to combat the alien menace.

---

**Developer:** Valve  **Publisher:** Sierra  
**Target Release Date:** 02 '96  **Engine:** Quake/Proprietary  
**Synopsis:** Aliens have invaded Earth, and you must wade through this extraterrestrial menace, beat back hordes of strange aliens, and take the fight to their homeworld.
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Thou Shalt Kill in Ritual's 3D Shooter

by Robert Coffey

It's 2097 and you're tough-guy Colonel John R. Blade, leader of the HARD-CORPS security force. Ten years ago you restored order to the crime-ridden city of Freeport, but the hard-won order you fought for is being threatened by a new menace—an addictive, genetic mutating drug called U4 that's being sold as perfume by the beautiful and totally evil Alexis Sinclair. Ain't life a bitch?

Sin, Ritual Entertainment's entry into the 3D-shooter arena, reflects the growing trend in this genre to embrace story and eschew the simplistic "level clearing" gameplay of yore.

AWESOME ARSENAL

In keeping with Sin's emphasis on realism, weaponry and ammo will be obtained only from gun racks, slain enemies, and the like. There will be different types of armor, including kevlar, riot armor, and a cloak shield. And while all armor will offer some protection, each will have its own strengths and weaknesses—for instance, kevlar will be more effective against bullets than against energy weapons.

Weapons will primarily be different types of real-world, bullet-firing guns. But there could be some BFG-type surprises. As you'd expect, there are magnum, shotguns, machine guns, grenades, and rocket launchers. What you wouldn't expect is that most of these come in silenced-equipped versions as well, all the better for the stealth portions of the game. Not all guns will be silenced; some, such as the Predator-style super machine-gun, just can't be used with subtlety.

Lurkers and snipers will love the sniper rifle. Its precision firepower will highlight Sin's region-based damage system. Use a scope to zero in on your enemy and target specific body parts. A good head-shot will kill some bad guys. If you're looking for eye candy, damage will be regionally depicted, with successive pain skins reflecting the series of shots you just pumped into some monster's arm.

There will be energy weapons as well, including a laser gun that fires a constant beam as opposed to short bursts and, for underwater action, a spear gun, which may, or may not, tether and hold enemies.

Finally, there's the quantum destabilizer. The design team was still debating its inclusion, but we hope it makes it in—who wouldn't like a gun that reduces enemies to glittering dust motes? There's an even better second attack—It'll suck your enemy into the barrel, charge it up with energy, then fire it away where the energy buildup will cause it to explode. This weapon is perfect for deathmatch, which Ritual promises will not be ignored.

Sin looks like it could be one of the winners of the upcoming 3DM feeding frenzy. We'll know for sure when it ships in mid-summer.

Developer: Ritual Entertainment  Publisher: Activision, Inc.
Target Release Date: 02' 98  Engine: "Duke II"
Synopsis: The emphasis is on realistic environments and weapons, but you'll face your fair share of mutants as you battle an evil villain's plans to mutate the human race.

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Looking for depth?
*Cyberstorm 2* is the ultimate game of mass destruction and total control—for gamers who love deeply-layered strategic warfare.

It's the year 3569. In the Typhoeus system, a newly-discovered jumpgate will allow massive expansion and wealth to the corporation that controls the gate. Eight corporations will fight for this right... only one will succeed.

*CYBERSTORM 2*
CORPORATE WARS
While the world waits for Trinity (it isn't coming out for some time, so Id says, "Stop asking"), Id is busy working on several Quake II-related projects. The first is the Quake II Mission Pack 1: The Reckoning, being developed by Xatrix, the creators of Redneck Rampage.

The Reckoning
In The Reckoning, you play the marine whose pod collided with the Quake II marine's pod. Having been knocked off course, you've landed just outside another Strogg base. Your mission is to neutralize this site, but now you have to brave the Strogg planet's alien wilderness before entering the base. While you'll face various modified Quake II cyborgs (including hyperblaster-wielding guards and iron maidens with homing rockets), you'll also encounter a wild beast indigenous to the planet: the Gekk. The Gekk are vicious fiendlike creatures that attack in packs. The Gekk can spit acid, rake with their claws, and heal themselves. As if that weren't enough, their gliblets ooze harmful acid, à la Aliens. The plan is to include three new weapons: the ion ripper, which fires a laser disc that ricochets off walls; the phalanx, which fires twin rockets; and the trap, a mine that sucks in enemies and spits out health-giving food cubes.

The levels in this pack promise to be full of interactive environments and realistic puzzles. Some levels will also let you team up with NPC marines to duke it out, squad-style, against the Strogg baddies. Xatrix also says that the end level, and the end boss, will be refreshingly unconventional.

The Rogue Pack
Id's second mission pack doesn't have an official name, but it's being developed by Rogue, the creators of Quake Mission Pack 2: Dissolution of Eternity. There will be a single-player game (wherein you play a new marine on a mission to disable a Strogg gravity well), but the primary focus is on multiplayer. The Rogue pack should include the multiplayer game Capture the Flag, and perhaps Rocket Arena and Tag, in addition to 20 new DeathMatch levels.

The pack will also be chock-full of power-ups and weapons. The Quake II disintegrator (which didn't quite make it into Quake II) is finally making its appearance in the Rogue Pack. Multiple shots of this weapon cause the target to fade into nothingness. There will also be a tesla bomb, which fixes to the ground and fires lightning bolts at any player who ventures near it (great for preventing campers from getting near weapons). There will also be a laser weapon that drills a constant beam of searing energy at a target, much like Quake's lightning gun. There will also be hand-thrown proximity mines. Other weapons are still pending Id's approval.

The Vengeance Sphere from Dissolution returns, and two new variations of the sphere will make their debut: a defense sphere that fires a vindictive rocket when the owner falls to 25 hit points, and a "buddy" orb that hovers near the player and lends secondary fire. There will also be a Double Damage artifact (half the power of a Quad Damage icon).

Lastly, Id has tentatively decided to start work on a Quake III that would blend the graphics portion of Carmack's new Trinity engine with Quake II's networking code. Id has barely begun work on it, so don't expect any details for a few months. See our news flash in ReadMe for more information.

The Reckoning
Developer: Id Software/Xatrix • Publisher: Activision
Target Release Date: Q2 '99 • Engine: Quake II
Synopsis: This Quake II expansion introduces new levels and enemies both in the Strogg wilderness and within new Strogg bases.

The Rogue Pack
Developer: Id Software/Rogue • Publisher: Activision
Target Release Date: Q2 '99 • Engine: Quake II
Synopsis: Rogue's mission pack has a multiplayer focus, with many new weapons, DeathMatch options, and levels.
Catch the Buzz

Posted by Jax on February 25, 1998 at 15:33:37: The Mona Lisa of dungeon-bashers... I must say, this was an AWESOME game!!! Your miraculous VSIM technology is one of the most break through things I have ever seen in computer game technology!!! NO motion capture! NO key frames!! WWWOOOOOOOOOOOOOOOOO!!! Posted by Mino ISIL on February 25, 1998 at 14:54:07: I was plugin DBTS and I gotta say - bravof it kick some serious ass. I especially love matulating corpses. Posted by Fragals& on February 25, 1998 at 11:30:00: This game is outstanding. I will be waiting in line to buy it. Wish the demo was longer ::sniff:: Posted by Imajedi on February 25, 1998 at 09:53:31: Die By the Sword kicks ass. I have managed to play the demo and damn its fun...who wouldn't like to play a game in which u can chop off multiple body parts and after you kill the enemy you can mutilate his/her body??? Oh well us soon as i get the $$$ I'm getting this game. Posted by The Lord Humongous on February 25, 1998 at 01:32:44: THE GAME TO END ALL GAMES! Finally, after months of waiting, I get a taste of the adventure mode. I NEED MORE! This has got to be the best, most addicting game I have played in years. I remember first hearing about the concept and how the developer had wanted to make a game that had "Dilettante" game for the apple one of my friends got me dying to play this game. ASS. I WANT IT NOW NOW NOW!!! 1998 at 10:57:35: DBTS - what I have have been waiting for since I was equipment and breaking out broom bat of the best of the back guests. March 01, 1998 at 02:56:16: Swinging demos none stop, its a brilliant March 01, 1998 at 16:25:57: Die By The surpassing this masterpiece : i e-mail: inferno@voyageur.ca Posted by definitly psycotic hamu.. so getting fer to jump and crouch a whole lot, hurt, cuz I rule some sweet muffins) by ripping the kobold to pieces, limb 0800, in comp.sys.ibm.pc.games.rpg VSIM engine in Die By The Sword is ing code I've ever had the pleasure to swords in your spare time? Well, for those Jordan Thomas http://wwwult.com On Wed, comp.sys.ibm.pc.games.action have to admit, I was wondering about this demo until I installed it and found the following four things: 1. The movement ability of your character is great! 2. Running over the bridge and getting snared in the rope and hanging upside down and STILL FIGHTING (at least until I got my head lopped off!). 3. The only thing that was better was when I beat two enemies while still hanging upside down! 4. Getting my leg taken off at the knee and still hopping around on one foot! All I could think of was the Holy Grail! I think this just entered the wish list category!! Rock From blabla97@bool.com Sun Dec 07 14:01:09 1997, comp.sys.ibm.pc.games.action, Subject: Die By the Sword Demo I really liked the sound effects. When my knight would land or as he would say things like "you fight like a kobold!" The sound of the music, music, and more music! All I could think of was that good, I will LOVE the game. I have a P133 w/ 48 MB RAM and no 3d acceleration, and the game ran reasonably well with pretty good graphics. I would definitly keep an eye out for this one. Fromrzkobra@bellsouth.net Sun Dec 07 14:11:45 1997, comp.sys.ibm.pc.games.action, Subject: Re: Die By the Sword Demo... The control is great, the only way to go IMHO is to use the mouse VSIM option. The graphics and character animation are both excellent. The frame rate was butter smooth. If the quest mode (not in demo) is as good as the arena combat, I think this will be one of the best games of 1998. Check out this demo if you get a chance. Taken from Usenet and DBTS message board.
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Windows © '95 CD-ROM
by now, everyone on the planet has heard of Unreal, that original
Quake killer which was predicted to blow Quake out of the water
with MMX-enhanced graphics. That was a year and a half ago,
but as we approach the summer of 1998, Unreal is finally near-
ing completion.
Unreal's story is a simple one: Your ship has been pulled into the
"Bermuda triangle" of space. As a result, you've crash-landed on a
strange planet's surface. The first level actually begins inside the
damaged inwards of your vessel. Once you manage to escape from
the burning hulk, you find yourself on an alien world where a war is

**HIT THE LIGHTS** This shot shows a Skaari, a vicious combatant who will dodge bullets and
chase you through levels. This shot also shows Unreal's lighting effects.

raging between the warlike Skaari and the peaceful Nali. You
become embroiled in this war, battle the Skaari, and save the Nali.
While exploring this world, you'll encounter Nali who will guide
you through levels and to secret areas. Of course, you'll battle plenty
of hostile aliens on this world. We've seen several monsters in earlier pre-
views, namely the hulking brutes with dual weapons and the quick-
footed Skaari with blades on each arm. There will also be less
humanoid creatures, including flocks of little aerial carnivores,
innocent alien cattle, and flies buzzing about dead bodies.

You'll use plenty of weapons to dispose of all these beasts. Epic
Megagames is being coy about which weapons will actually be in
the game. What it will confirm is that nearly all the weapons have
secondary-fire modes. The secondary attack of one of the early laser
weapons, the disruptor, is a more powerful charged shot, while the
pistol's secondary attack is a rapid-fire burst.

**NO MORE ENGINE CHANGES!**
Many of Unreal's delays have been due to changes
to the engine as new technology was continually added
to improve and update the engine. However, Epic now
says the engine is feature complete. The engine uses
both BSPs and portals for drawing the world. The por-
tals are used for Unreal's skies, mirrors, reflective sur-
faces, and transporters. Among the other goodies in
the engine are volumetric lighting, lens flare, and some
great shimmering textures for water, fire, and lighting.
There will also be a liberal sprinkling of scripted events,
such as hearing a fight beyond a door, that will
tell stories and set mood.

Epic also promises that the engine responsible for
the character animation will store some pleasant sur-
prises, such as regional damage. As in Half-Life and
Sonic, the monsters in Unreal will react based on where
you shoot them; a head shot, for example, will be
especially lethal. You'll also be able to see a player's
actual weapon in deathmatch, rather than a generic
weapon-skin.

At this point, GT Interactive and Epic are adamant that the game
is really in its final stages. Unreal has a lot to live up to, and we'll see if
it succeeds this summer. 

**CHOOSE YOUR WEAPON** Epic supplied us with a few shots of weapons, but wouldn't elaborate on the arsenal your
character will have at her disposal.

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**Developer:** Digital Extreme/Epic Megagames

**Publisher:** GT Interactive

**Target Release Date:** Q2 '98

**Engine:** Proprietary

**Synopsis:** This much-anticipated Quake killer has been cooking for a
very long time, and showcases a female lead character and some
spectacular special effects.
DEMONS
FROM THE PAST
CAN TORMENT
YOU
OR SET YOU FREE .
The Awakening
The beginning of a long journey into madness.

The Innocent Abandoned
Seek the truth or the children are damned.

Pathways to Forgivness
A loved one's death is the key to past and future.

Revelations of Darkness
Uncover the atrocities of one man's corruption.

Sanitarium

The first adventure game where your emotions play with your intelligence

“A deeply disturbing and surreal mystery”

- Computer Gaming World
Klingon Honor Guard

When the Going Gets Tough, the Klingons Call the Honor Guard

by Denny Atkin and Elliott Chin

Star Trek games haven't all been good. The half-baked "action" game GENERATIONS was one example of a license gone bad. But MicroProse's upcoming KLINGON HONOR GUARD, slated to ship late this year, could restore honor to the Star Trek franchise.

Honor Guard is the other action game for which MicroProse has licensed the Unreal engine (the first is First Contact), but it could be the more popular of the two, because you get to play a bloodthirsty Klingon. As a member of the Klingon Honor Guard, you have to hunt down some traitors who have made an attempt on the Emperor's life. As you progress through the game, you'll uncover a conspiracy to take over the throne by some familiar Star Trek villains. Along the way, you'll encounter NPCs with whom you can fight or talk, including Kurn, Worf's brother (voiced by actor Tony Todd).

The game will feature between 15 and 19 levels in a variety of environments. In addition to the Klingon High Council building on Q'onoS, the Klingon homeworld, you'll also travel to the snowy penal colony on Rura Penthe. You'll also find yourself on a variety of Klingon ships and a space station.

There will be plenty of vicious Klingon melee weapons and destructive firepower to use, as well as many Klingons, aliens, and monsters to fight. The graphics, likewise, are very impressive, since the game uses the very latest Unreal engine. While the game is still months away from shipping (First Contact will release first), you can read more about this promising game at GameSpot (www.gamespot.com/features/klingson). §

Developer: MicroProse • Publisher: MicroProse
Target Release Date: Q4 '98 • Engine: Unreal
Synopsis: You play an elite Klingon warrior who must cut and shoot his way through a murderous ring of traitors out to destabilize the Empire.

First Contact

by Elliott Chin

Adventure gamers have been able to play in the Star Trek world for some time now, and it looks as if action gamers will finally be able to get in on some of that fun as well. This fall, MicroProse plans to finish Star Trek: First Contact, a first-person action game set aboard the Enterprise. This game is a digital sequence to the movie, rather than a recreation of the film, and so in this game, it's assumed that the Borg Queen escaped her destruction at Picard's hands and has exacted revenge by taking over the Enterprise.

You must take back the ship by controlling the crew of the Enterprise. The game is split into missions, which span various locations aboard the ship (like the bridge, holodeck, and transporter room). In each mission, you assume the role of one crewmember, while at your side you command two other crewmates. So in the first levels, you might control Picard and have Crusher and Data alongside you.

The game uses a combination of the Unreal engine and voxel technology. The levels will be constructed in true 3D via the Unreal engine, while the detailed characters will be rendered with voxels, which are sprites with depth, height, and width.

The gameplay has plenty of action, as you take phasers, rifles, and grenades to Borg cyber-flesh. But there is also a lot of thinking, courtesy of many logic puzzles.

There will be deathmatch play, so those who have always wanted to trash the Enterprise with the blood of whiny little redshirts will finally get their wish. Too bad you can't deathmatch with any of the actual crew members (it's a legal issue), otherwise we'd see lots of Deanna Troi skulls lying in Ten Forward.

For even more information on this game, you can turn to CGW's May cover story, in which we devoted a full preview to First Contact. §

Developer: Visionary Media • Publisher: MicroProse
Target Release Date: Q3 '98 • Engine: Unreal
Synopsis: The Borg have captured the Enterprise in this digital sequel to the movie, and you must guide the crew to reclaim the ship.
It's your duty to protect mining operations in the new Frontier. But who are these guys? Looks like the same heinous Sectoids from Earth. Only this time the battle is on their turf.

Good thing you're piloting a fighter you designed and armed with everything from a Plasma Pulse Cannon to an Eletrum Torpedo Launcher. Good for you... bad for them.

You nabbed a Sectoid fighter with a secret weapon on board. But where's the trigger? The Research Screen will help you return the aliens' thunder in an intense and epic battle.

A brutal dogfight... you take some losses. But by intercepting an alien supply ship, you find the secret location of their key outpost and replenish your resources.

Now that you've researched the Doppleganger Missile Launcher from the alien ship, you can equip your fighters with powerful alien technology and improve your odds.

With this new arsenal, the tide is turning. The aliens are retreating to their cozy little black hole. But what will they plan next? Better find out... before they come back for you.

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DAIKATANA
Slice and Dice Through Time in Ion Storm’s Upcoming Shooter
by Robert Coffey

Is it still a shooter if the main weapon is a sword? Well, when it’s a great big, two-handed, power-sucking, mystical, time-traveling badass of a blade, you betcha. Do not despair, action fans, DAIKATANA is no frilly-shirt fencing sim.

EON FLUX
The game’s story is one of time-travel through four different time periods. You journey with two gun-toting NPCs to thwart a history-altering madman. Of the game’s four periods, the two shown the most during our Ion Storm visit were the Greek and the medieval. The Greek levels will have (at least) a Medusa level, an Acropolis level, a Minotaur’s maze, and a King Midas level. The name of each level refers to the boss characters you will face (while the Acropolis level will be the actual building), according to the Greek period’s level designer John "Dr. Sleep" Anderson.

Levels will play out more as missions with specific goals, and gamers will do more than just waste bad guys while searching for keys. And while DAIKATANA isn’t embracing the branching structure of a Wing Commander-type game, you will have a few choices in missions—do you reach the castle by climbing up the mountain or by working your way up through the dungeons beneath it?

SIGHT-SEEING THROUGH TIME
Like many other games, DAIKATANA will use the Quake II engine. Judging from the levels we saw on our visit to Ion Storm, graphically, the game will be sharp and beautifully detailed, with sweeping skies and lighting effects that create an appropriately gloomy gothic feel for the medieval levels. Much of the game will take place in expansive outdoor levels. Unfortunately, the game was running a bit sluggishly at the time of our visit, but that should be corrected before its release.

Cinematics will play between episodes and between some levels to advance the story.

CUTTING EDGE
One of the more intriguing things about DAIKATANA is its inclusion of some limited role-playing elements. As you slash your way through time, you will accrue experience points to enhance both your skills (such as speed and jumping ability) as well as your sword’s special properties. It’s similar to the use of force powers in Jedi Knight, but there is a difference. Jedi Knight’s force powers had to be triggered to be used, almost as if they were inventory items. In DAIKATANA, the powers will always be in effect; you’ll move more quickly through the levels, your jumps will always be bigger...you get the picture. How you allocate these powers lets you customize your character to your style of play and ensures that DAIKATANA will play differently for different gamers.

Developer: Ion Storm • Publisher: Eidos Interactive
Target Release Date: Q3 ’98 • Engine: Quake II
Synopsis: Wielding a powerful magic sword called the Daikatana, you must embark on a quest with two teammates through four time periods to stop a history-altering villain.

John Romero, Ion Storm president, has plenty of plans for deathmatch, including bringing the experience system of the single-player game over to deathmatch.

In order to prevent some players from dominating multiplayer contests with maxed-out characters, Romero wants to reward higher-level characters with little or no experience for offering weaker opponents. On the other hand, weaker characters who kill higher-level ones will find themselves blessed with a bucketload of experience.

Additionally, you might be able to set an experience point limit for deathmatches.

Also, if players pick up power-ups, their appearance will change. For instance, superhealth might make a player bigger.

DAIKATANA will support cooperative, Capture the Flag, and deathmatch play. While you can play only as Hiro in single-player mode, other characters will be available in multiplayer games, and Ion Storm is toying with the idea of allowing you to play as some of the monsters as well.

We saw DAIKATANA at a critical juncture, when much of the game was in a disparate state due to the conversion to the Quake II engine. In September we’ll see just how well the game’s ambitious pieces come together.

WINTER WONDER-LAND In DAIKATANA, each time period, like this medieval one, will have its own set of architecture, weapons, and monsters.

TERRIFIC TRIO Meet Mikkaka, Hiro, and Superfly Johnson, the heroes of DAIKATANA.
TRESPASSER

Dinosaurs Come Alive in the Most Realistic World Ever Crafted for the Action Genre

by Elliott Chin

Of all the games in this round-up, the one least deserving of the "action" title is Dreamworks' TRESPASSER... and that is an entirely good thing. TRESPASSER is a game with a totally physics-based world populated by living, thinking dinosaurs. You're an interloper, voiced by actress Minnie Driver, who must escape the island home of these creatures.

The reason why this isn't entirely an action game is because you'll often interact with the world in ways besides killing. There are many dinosaurs that look at you as food, but you won't be able to fight them head to head (in the interest of realism, your character will die from just a single raptor bite). Instead, you'll explore the island, getting past dozens of puzzles by manipulating the environment around you, all with the express goal of getting through a gauntlet of traps and killer dinos and off the island.

THE WORLD COMES ALIVE

The physics of the world are unbelievable. Every object in the world is a 3D object that can be manipulated. Barrels can be pushed down hills, rocks can be thrown into ponds. Those rocks will sink to the bottom of the pond, while the barrels will float; and both will create different sized ripples in the lake. Basically, if you can see it, you can interact with it. And all objects will react based on the laws of physics. Doors will swing on hinges, and objects will tumble down mountains based on how hard you push them and from what direction.

Because the world is so physics-based, having scripted animation wouldn't work for the dinosaurs, so Dreamworks moved beyond the traditional method of animating characters to something Seamus Blackley, lead designer, calls a "musculature-skeletal movement system." Basically, as in skeletal animation, all characters are composed of bones. However, TRESPASSER's engine goes one step further and attaches muscles to move those bones, as well as skins on top of those bones that stretch according to muscle movement. This creates completely realistic, and mesmerizing, movement. The bodies of running dinosaurs will bounce according to how fast and on what terrain they are running, and skin around mouths and tails will stretch as they move. The bones will also respond to the physics of the world, so that if you hit a raptor's head, the head will snap back. Hit it harder, and the head will recoil farther. Smash it hard enough and you'll actually see the rest of the dinosaur's body moving counter to the blow to maintain balance. While skeletal animation systems of games like Unreal and Sin will be able to duplicate many of the effects of TRESPASSER's movement system, such as regional damage, none look like they'll be able to achieve such dynamic results.

The AI of the dinosaurs is likewise realistic. All dinosaurs will be motivated by a combination of physical and emotional states, including hunger, anger, fear, curiosity, fatigue, and pain. Different dinosaurs will start out with different default settings (raptors will have more anger and less fear than a docile hadrosaurus), but these states can and will be affected by the game world and you. For instance, if a hungry raptor comes chasing you, you could actually toss it a piece of meat, which would satisfy its hunger and cause it to ignore you. By giving these dinosaurs a range of feelings to act upon, Dreamworks is in essence populating their world with living creatures with their own needs, creatures who don't exist solely to kill or be killed by you.

THE NEXT STEP

After seeing TRESPASSER, I decided that what Dreamworks is creating isn't just a game, it's a world. A world that breathes and exists without you, one that you're privileged to be a part of. However, though realism is TRESPASSER's greatest strength, it is also its greatest weakness. The best technology in the world doesn't automatically create a wonderful game, and Blackley and Dreamworks know that. That's why they are devoting the time between now and the September ship-date to actually designing and testing the gameplay. The trick is to piece all the puzzles together, giving enough focus to the gameplay so that gamers don't get lost in the possibilities (that's where Minnie Driver's voiceover hints come in), and to balance the game so that the fun, and not the technology, is the order of the day. I'm very eager to see whether the game lives up to the engine.

Developer/Publisher: Dreamworks
Target Release Date: Q3 '98
Engine: Proprietary
Synopsis: You are a woman stranded in Jurassic Park who must interact with a realistic, physics-based world and save yourself from hungry dinosaurs.
IF YOU CAN'T BEAT 'EM, CRUSH 'EM.

Monster Truck Madness™ 2 is here, with more ground-pounding, trash-talking fun than the original. Featuring 20 trucks that show the damage you dish out, including four new WCW™ and nWo™ WrestleTrucks like "Hollywood" Hogan. Risky night racing and nasty weather options. Thumping force-feedback support. The Summit Rumble, an outrageous multiplayer game of "king of the hill."

And 11 wild new tracks. Get your free demo and start crushing the competition at www.microsoft.com/games/monster/
Requiem: Wrath of the Fallen

The Apocalypse Is Coming Two Years Ahead of Schedule

by Elliott Chin

Cybome Studios is best known for its debut title, Uprising, but after this summer, the company will be remembered for bringing Heaven and Hell to Earth. Requiem: Wrath of the Fallen, its first-person action game, is set in the far future, and features a very metaphysical storyline and heavy adventure game elements.

Heaven and Hell

Ages ago, a second war commenced in Heaven that divided the angels into the Chosen and the Fallen.

The Fallen's latest evil plot is to exterminate all mankind by delivering souls to a massive space ship called Leviathan. Once it is powered by these souls, Leviathan will unleash a devastation that will eradicate all of humanity. You play one of the Chosen, who must journey to the world of Creation to stop the Fallen.

Cybome is very determined to make its action game an intelligent and cinematic one. The game unfolds in three acts. Each act is composed of many levels' worth of environments, all seamlessly strung together. Act I takes place on Creation's surface, where you bear witness to the horrors that the Fallen have visited upon the populace. The Fallen, after inhabiting the bodies of Creation's leaders, are now herding people into pens to await transportation to the Leviathan. The Fallen are also spreading general chaos and evil among the population.

Act II of the game takes place in the underground of Creation. Here, you'll face many of the hideous demons and deformed monsters that the Fallen have unleashed from the mythical realm of Chaos (the land in between Heaven and Hell, where the angels do serious battle—you'll battle Fallen boss monsters here).

Act III takes you to the ship Leviathan, where you'll finally do battle with the Fallen and try to make sense of this gigantic doomsday vessel.

Divine Right

As a divine agent, you will, of course, be bristling with God-given powers. However, being far removed from Heaven, your Angelic Essence (as Cybome calls it) will be diminished. That means there will be a vast repertoire of angelic powers to call upon, but you'll have to quest through the game before you gain access to all of them. Some powers might be acquired after completing quests or defeating boss. There will be more than 20 powers, broken into several categories—such as attack, defense, and movement. A few examples of your divine powers include: turning enemies into salt, walking on water, sending a plague of locusts at enemies, healing, resurrecting dead enemies to fight for you, and inhabiting the bodies of others. Multiplayer fans will be glad to know all these powers will be available in deathmatch.

We have even more information on Requiem, but it just won't fit into this cramped page, so we'll be bringing you a full preview in the coming months. Meanwhile, you can visit our online partner, GameSpot, at www.gamespot.com/features/requiem for more information on the game's engine, story, character animation system, and monster and non-player-character AI.

Developer: Cybome Studios • Publisher: 3DO
Target Release Date: Q3 '98 • Engine: EMOTIVE (proprietary engine)
Synopsis: In the far future, you play an angel who must prevent an evil force of fallen angels from destroying humanity.

Buy You a Drink? Not everyone in Creation is an enemy. You'll talk to various NPCs, some of whom will help you battle the Fallen angels.
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It’s Spy Versus Spy in SegaSoft’s Modern-Day 3D Shooter

by Elliott Chin

SegaSoft’s VIGILANCE stands out among this distinguished crowd of games by virtue of its modern day setting and its ability to let you play any and all of eight player characters, each with his or her own attributes.

You are part of an antiterrorist group, progressing linearly through six zones of conflict. Each zone has its own missions and objectives, and the zones are like hubs, in that they are composed of several interlocking levels. Each zone will have its own mission and story, but as you play the game, you’ll discover a conspiracy that links all the missions and ministries together.

MISSION BRIEFINGS

The mix of missions is quite diverse. You’ll have to retrieve secret documents, conduct jail breaks, infiltrate and destroy military bases, and rescue and escort dignitaries. The environments you’ll encounter in the six zones include monasteries, caves, subways, libraries, office buildings, army depots, and oil derricks.

As the game is set in modern times, the enemies you face will be human. There are 12 types of enemy soldiers you could face, but by adding variants with different AI and different levels of weapons power, the number is actually larger than that.

EIGHT IS ENOUGH

Although you can play only one character at a time per zone, you can choose from any of the characters. Each has his or her own special abilities; Amy, for instance, is a sharpshooter who is better for long-range assassinations, while Bishop is best for sneaking in shadows and infiltrating bases. Once you choose a character, you are stuck with them for the rest of that zone. If you die, you’ll have to restart with a new character, because these agents don’t come back to life for the rest of the single-player game.

To further distinguish the eight characters, they will each have a different starting weapon, although all other weapons (28 in total, including bombs, 6-rocket launchers, sniper rifles, and chainguns) can be used by any character. SegaSoft also says that each character will have notable special abilities that will affect gameplay, but that these abilities won’t be so pronounced that they adversely affect multiplayer game balance.

The multiplayer games in VIGILANCE sound very promising. You can play deathmatch or capture the flag, but you’ll also be able to play cooperatively throughout the entire single-player campaign. So, if you ever think you need help in a particular solo mission, you can enlist the help of a friend and both tackle the level. However, the game will increase the difficulty of coop missions by adding more monsters and puzzles for every additional player in the level.

The graphics in VIGILANCE look good, especially when they are 3D-accelerated. All characters use skeletal animation for smoother movement as well as regional damage. Now, where you hit your targets will make a huge difference.

Despite the technology behind VIGILANCE, it’s not any more revolutionary than what many other developers are doing, the game’s setting, different characters, and Mission Impossible-like gameplay could make it stand out among this busy sci-fi crowd.

Developer: Postlinear • Publisher: SegaSoft
Target Release Date: 03 '96 • Engine: Anyworld
Synopsis: Control eight elite agents as they battle terrorist activity around the modern day world and uncover a global conspiracy.

VIGILANT VIXENS These three female characters are among the eight special agents you’ll play when battling terrorists in SegaSoft’s VIGILANCE.

QUIET IN THE LIBRARY This sparsely populated level is preliminary, but it shows a library—one of many different environments in the game.

BACK IN ACTION VIGILANCE also has a third-person view, which helps to navigate certain puzzles. You’ll use it as you used third-person view in JCD.
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DUKE NUKEM FOREVER

Duke's Back to Smash Bugs on the Strip
by Ken Brown

In the two years since Duke Nukem 3D's release, the game has been
eclipsed by at least a dozen action games with true 3D
engines. But none of those games have surpassed Duke 3D's com-
bination of personality and interactivity. Duke not only walked the
walk, he could talk the talk, and he could perform plenty of
daring actions, like relieving himself, bursting urinals with his
boot, collapsing entire buildings, tipping strippers, and shrinking
alien monsters to squish them underfoot.

Now the 3D Realms team is trying to wring the same level of
interactivity out of the
Quake II engine for
Duke Nukem Forever.
3D Realms president
George Broussard was
the project leader for
Duke Nukem 3D and
he's also heading up
DNF. We caught up
with Broussard long
enough to ask him the
following questions.

CGW: Duke Nukem has a reputation as a
tough S.O.B. with a
sense of humor and a
fondness for women.
All we want to know
is, will Duke finally be
able to kick ass, ride
a Harley, and get
laid?

Broussard: [Laughs.] I couldn't
have said it better
myself. Without giving away all the surprises, let's just say that it's
Duke and we're 3D Realms. You can expect Duke's character to be
improved upon. We have a firm vision of who Duke is and what the
fans like and expect from him. We will give you no less.

CGW: You've told me Duke's heading to Vegas to handle some
pest control. What kinds of buildings and environments are you
planning to have? Will there be a lot of action outdoors, as in
Duke 3D?

Broussard: DNF takes place in and around Las Vegas. The game is
fairly well planned out, but we don't want to give away all the sur-
prises this early. I'm sure you can imagine interesting places Duke
might visit. Only one small part of the game will be set in the city of
Las Vegas.

CGW: You've built a reputation with Duke Nukem for greater inter-
activity with the environment than other 3D shooters. How much
interactivity do you think you'll have in DNF?

Broussard: I think we'll have more than any other 3D shooter to
date. Chris Hargrove and Nick Shaffer [programmers] have spent
the last month totally rewriting the Quake entity system. It was too
restrictive for us, and we could do things like move a crane, or rotate
it, but not both. We want insane interactivity for DNF. So they de-
veloped a text-based scripting system similar to Quake-C but more
powerful and advanced. We also still support DLLs [Dynamic Link
Libraries], but a lot of the game will be script-based, so people don't
have to have a $300 compiler to make add-ons for the game. We feel
it is very important for the average user to be able to experiment and
play with the code of the game with just a brain and a text editor. So
the bottom line is that you will see a very dynamic environment in
DNF with lots of things to "do."

CGW: If Duke Nukem Forever were a movie, what do you think it
would be rated?

Broussard: Probably PG-13ish. Even Duke 3D was PG-13. The
strongest word he said was "Shit," and the nudity was right
on the edge of PG-
13. The sad thing is
everyone wants us
to make it R-rated,
but we still have to
sell games here. We
will try to make the
game sellable to
10-year-old kids,
while offering con-
tent to interest us
30-year-old types.
It's a tough balanc-
ing act, but I think
we can pull it off
again. I hope the
day soon comes
when chains like
WalMart and
CompUSA stop cen-
soring which games
they will sell.

CGW: Will Duke be able to drive vehicles?

Broussard: We're not committing to vehicles yet, but again it's an
obvious and very popular request. Everyone seems to want to see
Duke on a Harley, JetSki, Hummer, or other vehicle. We will do what
we can and have some definite plans in the area. We experimented
with vehicles in Snow Warrior and even though we were limited by
the engine, we think things turned out pretty well. We're looking to
go to the next level now.

CGW: What kinds of monsters do you expect to have?

Broussard: There will be a broad mix of Dr. Proton's bad guys,
mostly organic, and maybe a few robotic types. We're still designing
enemies at this point.

CGW: Last November a computer game magazine had a cover
story on Duke Forever. How much of the game has changed since
that time? Are those screenshots representative of gameplay?

Broussard: Frankly, those shots are turds. Those are all 8-bit
source art running on a 3Dfx. DNF has been full 16 bit since about
late November and we're really, really happy with the art style and
quality in the game now.

CGW: How about weapons? Here's our wishlist: flame thrower,
grenade launcher, minigun (à la Terminator 2), and laser weapons.

Broussard: Most of those are listed as front runners, but we do
weapons one at a time, as we make the game. Weapons aren't
VEHICULAR HOMICIDE 3D Realms is experimenting with interactive vehicles like this jet. They’d like Duke to be able to drop into the cockpit and open fire, as James Bond did in Tomorrow Never Dies.

something you can screw around with, especially when it comes to play—balance in multiplayer. Duke will have a pistol, shotgun, and a rocket launcher. Beyond that we either aren’t talking about them yet, or they are still up in the air. There is a big push for us to bring back the shrink ray, which we really liked. People also love the sneaky weapons like the pipe bombs and trip bombs, so you can expect something similar.

CGW: What do you expect the system requirements will be?
Broussard: System requirements are hard to nail down this early, but the game will lean heavily on hardware acceleration. It’ll probably run on a 2MB 3Dfx card, but as a poor man’s base. You will likely want a 6MB Voodoo card, or a Voodoo² card with 8–12MB for the best performance. We’d ideally like to drop software and focus on a kickass hardware-only game, but we wonder if the market will be large enough. I think it is for most games, but with Duke, you have the potential to sell over a million copies. We’re not sure we want to mess with that.

CGW: When are you expecting to finish the game?
Broussard: When it’s done. It’s Duke and we’re not going to rush it out to make a deadline—even Christmas. It will be done when we all agree it’s the best 3D game to play and it advances the Duke Nukem franchise the way we all want it to.

LET’S ROCK No guard post will stop Duke from rushing into action. Many of the locations are complete, all using 16-bit artwork.

Developer: 3D Realms • Publisher: GT Interactive • Target Release Date: Q4 ’98
Engine: Quake II
Synopsis: Dr Proton’s back, and he’s invited an alien horde to party down on the Las Vegas strip. Time to call Duke Nukem, exterminator extraordinaire. Profanity, partial nudity, extreme violence—you know the drill.
3D Realms' First Hardware-only Game Looks Very Impressive

by Ken Brown

In 1996, CGW's contributing editor on game design, Paul Schuytema, and I marveled at a game called Prey, which was running at 3D Realms' offices just outside Dallas. We were there to see the nearly-finished Duke Nukem 3D, but Prey, even in its infancy, caught our eye. It promised many innovative features, such as a true 3D environment, dynamic lighting and shadows, and robust multiplayer options, including the ability for players to chat and exchange resources online. The game failed to materialize in time to "blow Quake away," as 3D Realms' president George Broussard predicted, but Broussard had no way of knowing that part of his team would defect to create a startup. And I had no way of knowing that Paul Schuytema would leave CGW and become the Prey project leader.

Obviously, the game has gone through revolutionary changes since then, but perhaps the most exciting change is that Prey will be a 3D-only game, requiring a 3D graphics card to play. The company is betting that when Prey ships early next year, most serious action gamers will have a 3D card.

The Prey team is working feverishly in preparation for this year's E3. But by relentlessly playing the "CGW alumni" card with Schuytema, he finally agreed to send some never-before-seen screenshots of the game and answer the following questions.

CGW: What will the Prey engine be able to do that you can't do with the Quake II engine?

Schuytema: Our Portal Technology yields capabilities that just aren't present in the QII engine. We deal with all of our geometry real-time, meaning that everything has the potential to be interactive—every wall, every floor, every polyhedron. Our portals can be dynamic, meaning that these "rips in space" can do just about anything you can imagine. Because we use portals to break our world into manageable chunks, our GSEs (game space engineers) can burn far more polygons on detail areas if they choose.

There's also Preditor, our content-modeling tool—it allows our GSEs to create insane interactivity. The cool thing is, we're giving it away with the game.

CGW: What will the system requirements be? What 3D APIs do you plan to support?

Schuytema: We're not committing to specs yet, but Prey will be a very scalable game, able to run on a wide range of systems. If you've got a robust Pentium with a quality 3D accelerator, you'll run the game just fine.

As for 3D APIs, we will do a native 3Dfx version, as well as an OpenGL version. We may directly support a few other cards, depending on what shakes out in the card market over the next few months.

Developer: 3D Realms • Publisher: GT Interactive
Target Release Date: Q4 '99 • Engine: Prey
Synopsis: You play Talon Brave, a modern-era Apache from Arizona, who is abducted by aliens and has to fight his way back to Earth.
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When we set out to create Descent: FreeSpace - The Great War, our goal was the same as with Descent: We're going to create the kind of game we want to play.

"We've been working on Descent: FreeSpace - The Great War for two years, longer than the original Descent. And it shows. The things Descent players will expect are all here: the best technology, the best A.I., the best physics, great gameplay and the continuous sense of wonder and surprise. It's the kind of experience you can only create when you pour yourselves into your game for a very long time.

We learned a lot when we wrote the Descent A.I. and we applied all that to Descent: FreeSpace - The Great War. It's in a whole new class. The A.I. system is three times as large, much deeper and much more flexible. Every ship has its own set of goals it pursues through an environment that is the richest ever. We observed how human players handle complex situations and coded the A.I. to do the same intelligent things.

In Descent: FreeSpace - The Great War, everything you do has an important consequence. Not only is the mission branching non-linear, but the choices you make in a mission, such as whether to protect a ship, can have profound consequences. This offers almost limitless replayability.

Descent: FreeSpace - The Great War will be the greatest multiplayer space sim ever. In fact, multiplayer code was planned from day one. Plus, we're launching a free matching and tracking service through our website. You'll always be able to find a game on the Internet. And we're going to track games so everyone will know who are the best players in the world.

When Descent: FreeSpace - The Great War ships this April, it will do to the space combat market what Descent did to first person shooters. We will have set the new standard everyone else will have to measure up to."

WWW.INTERPLAY.COM
REBEL MOON: REVOLUTION
Quake Meets Squad Leader
by Terry Coleman

Reconman is an apt name for Fennis Wolf's small, but adventurous, Recon Moon project. The game's potential is mind-boggling; it's as close to a marriage of wargaming and 3D action as we've seen. Imagine a combination of Quake and Squad Leader, with a little Aliens and Starship Troopers, as you continue the Recon Moon struggle of rebels vs. the UN on the Moon in the near future.

Certainly, earlier games such as Hexen tried to be more than just shooters, and games such as Max or Maxx tried to bring first-person 3D to wargaming. Yet none of these attempts combine technology and gameplay, as does Reconman, which, even at this early stage, captures a lot of the feel of squad-level combat. For example, in one mission, we saw an AI firefight move in to rescue hostages using stealthy maneuver. After the hostage were freed—with almost no casualties—members of the firefight escorted them off-map to safety, then returned to lay covering fire so that their AI comrades could get away as well! It's rare you see AI this sophisticated in a 3D first-person shooter.

Reconman could very well be classified as a strategy-wargame with action elements, since it is not a pure action game. The emphasis is on realism, so you won't have power-ups or unlimited lives. Revolution should support all major 3D cards, and, like Recon Moon Reaver, will use IBM Volatile memory technology, so you can issue orders to other firefight members through voice commands. A full-blown preview, %

Descent III
Are You Ready for More Rollercoaster, Upside Down Action?
by Tahsin Shamma

Descent has always been known for claustrophobic spaces, but that should change with Descent III. The action that made Descent a hit will return, but there will also be some very nice changes, courtesy of developer Outrage (one-half of the company formerly known as Parallax).

As the Material Defender, you pilot your craft over planets and asteroids seeking to destroy virus-infected mines. After learning that David (the corporate executive who hired you in Descent I) sabotaged your warp drive, leaving you stranded in space, you start off on your quest for revenge.

Descent III's most awesome feature is its combination of outdoor environments with the claustrophobic tunnels that made the first game so popular. As you're flying above a planet, you'll be able to dive down into buildings that stretch deep below the surface.

Interaction with objects will also be improved. Environmental objects such as ventilation fans and volcanic fissures will provide new obstacles to avoid or to use as traps. Enemy AI is also slated for improvement. Enemies will use terrain to their advantage, such as the vicious stalkers who will leap down from above and drain victims of energy. Outrage is determined to make each enemy as memorable as Descent I's thirst bot.

What's also adding to our anticipation are the new physics. Different worlds will now have different gravity and atmospheric effects. Weather will even affect certain weapons. Combine this with three ship types and 10 new weapons, and the tactical nature of play looks even more promising.

All this information is very preliminary. It's still very early in Descent III's development, but when we hear more, we'll bring you a bigger preview. %

Developer: Fennis Wolf • Publisher: GT Interactive
Target Release Date: Q3 '99 • Engine: Proprietary
Synopsis: This hybrid of first-person action and squad-level wargaming casts you as a freedom fighter on the Moon's surface, battling the intrusive hand of the UN.

Developer: Outrage • Publisher: Interplay
Target Release Date: Q4 '99 • Engine: Proprietary
Synopsis: As in Descent II, you'll pilot a vehicle in full 360-degree movement through familiar Descent-style tunnels, but you'll also fight new robots and visit new areas.

FASTER YOUR SEAT BELTS! This is an early look at the engine-in-progress. It should feature much more interactivity and seamless level transitions.

CGW JUNE 1999
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Like the U.S. Army Rangers, SpecOps: Rangers Lead the Way isn’t for lightweights. It’s intensely real, with motion-capture technology, photorealistic textures, stunning outdoor 3D environments and actual ambient and weapons sounds. Your missions range from blowing up SCUD bases in North Korea to rescuing hostages in Afghanistan. You might even receive a medal. But that’s not why you signed up. You joined to uphold the honor of the Rangers and your country. So let’s go, soldier. Your country needs you.
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expertly trained, The
U.S. Army Rangers
are the most revered
— and feared —
fighting unit in the world.
Now you can put it
all on the line and be
one of them.

SPEC OPS:
Rangers Lead the Way

Your COUNTRY.
Your HONOR:
Your TURN.
Most of the advice we level designers have given to date has been at the high-school level. Now it’s time for college. I don’t want to come off as too intellectual, especially toward the fun-loving Q-munity, but much of what goes into a killer level is actually very sophisticated. When designing levels, I often find myself referring to concepts I learned in engineering school and graduate-level art school. I’ll try to introduce those principles in the following pages, but I can’t spend enough time on such topics as Minimalism and optical illusions in this short article. Please get a book or two on those subjects, or do some surfing on the Net for these terms.

Natural landscape is one of my favorite level settings. These settings have tons of irregular shapes and tend to be bigger and more open than the typical inside level. Unfortunately, both of these characteristics, irregularity and openness, are stymied by current 3D game engine technology.

Current technology enforces great restrictions on the number of polygonal surfaces in any given view within a level, usually to the order of 500 to 700 in count. Current 3D game engines also have great favor toward things square and orthogonal (relating to or composed of right angles). Anyone who has spent more than a few hours trying to create a level knows that the current state-of-the-art limits the ability to create big, natural environments. I’ve found ways, however, of circumventing these constraints. Some finesse borrowed from the art world, as well as a handful of tricks from the world of weird science, make levels look bigger than they really are. A limited palette does not necessarily a limited artist make!

**MINIMALISM: LESS IS MORE!**

Minimalism is one of the major movements in modern art. It is characterized by the utmost restriction in the use of color and form. Typically, a minimalist uses simple, repetitive geometrical shapes (sound familiar?) to represent the purest essence of the artwork. A cylinder may represent a tree, or a square may be a house. Although unintended, this is precisely the type of medium in which the level designer is immersed. The point for the art movement is to eliminate all nonessential and superfluous distractions from the study. The point for the level designer is to create the most impressive and coolest level with the fewest number of polygons. The underlying strategies, although different in motives, are exactly the same. Levels must be as simple as possible due to the constraints of technology, yet they must authentically convey an entire environment and impress the player. Only the absolute necessities can be used and even then, these absolutes must be managed with dexterity and prudent economy.

**IKEBANA (SHOKA)**

A prime example of a minimalistic approach can be found in the Japanese art of flower arranging called *Ikebana*. It is a very simplistic and natural form of flower arranging, in contrast to the almost overly decorative form in Western societies. Level designers, for the most part, tend to think like Westerners. *Ikebana* seeks to create a harmony of linear construction and rhythm instead of emphasizing the quantity of the flowers. Devoting their attention to the blossoms, students of *Ikebana* emphasize the linear aspects of the arrangement. That’s the important concept: the arrangement, not the flowers themselves, is the main focus. Particularly relevant is *Shoka Ikebana*, in which only three flowers are displayed in a precise triangular shape. This same approach to brush placement, emphasizing the linear aspects of the display while effectively using the fewest surfaces, can turn crimpingly few polygons into a stunning and fulfilling landscape. An entire mountainside can be cast with only three correctly placed brushes.

**HUMAN VISUAL SYSTEM**

Your eyes, the human visual system (HVS), are an enhanced two-dimensional system. Although you think you see things in three
dimensions, your eyes are actually only a 2D side-scroller. That seems simple to understand, but I want you to pause for a moment and fully realize that you know nothing of the third dimension from what you see! The third dimension is added later by the occipital cortex in the back of your brain. Everything you know about the third dimension is induced by some very sophisticated software in the occipital cortex. This software makes many assumptions and takes numerous shortcuts while recreating the third dimension. You can use some of these assumptions and shortcuts to enhance your level, especially its depth and expanse.

**OPTICAL ILLUSIONS**

As I'm sure we've all seen, there are many optical illusions and their effects can be quite astounding. Most optical illusions are twists on the HVS process of rebuilding the third dimension. In particular, we want to focus on the optical illusions responsible for visual depth cues. It is most important that the player feels there's something beyond the immediately visible level. In the real world, the following depth cues influence our perception of space and reality: occlusion, perspective, atmospheric effects, shading, binocular disparity, motion parallax, interposition, convergence, and accommodation.

Visual depth cues, such as perspective, shading, and even atmospheric effects, are already handled by current 3D engines. Other depth cues are binocular and require input differentials to two separate eyes. Binocular displacement, disparity, and accommodation therefore require some equipment (stereo-optic goggles, split screen, and the like) to reproduce their effect on a display. There are still a few monocular depth cues, though, that will work on the eyes as a single unit yet are very easy to employ in a level. We want to fool the player's brain into "feeling" that the level is larger and more expansive than it actually is. We want to cheat the system and stimulate the player to say things like "behind," "beyond," and "in back of" when viewing a level.

**OCCLUSION**

When one part of an image is obstructed by something in the foreground, the obscured portion is occluded. One of the assumptions made by the HVS is that the "something" doing the occluding must be in front of the portion that is not seen. Forcing the player's brain to perform this process is an indirect but effective way to enhance the level's feel of dimension. We can use this assumption to add depth to our levels, and it costs very little in terms of polygons. Often place objects and structures in your levels for no other reason than to stimulate this effect. Usually I do this in front of border areas so that the level appears to go off much farther than it really does.

**MOTION PARALLAX**

Motion parallax is another very powerful effect that will add great depth to your levels. This effect is the apparent displacement of an object in a view relative to its proximity to the viewer. It is similar to occlusion, but it is based on objects within moving views rather than static scenes. The brain uses this difference in displacement to help determine relative distances, and you can use it as well to make your levels appear deeper. Objects in foreground will subtly stimulate the player's motion parallax, and moving around will provide a steady stream of parallax differentials to reinforce the sense of depth. An example of this would be when you're riding in a car, looking out the side window, and noticing that the houses immediately in front of you are panning across your view at a much faster rate than the buildings off in the distance. Even slower, still are the clouds in the farthest background.

**ELEGANT EFFICIENCY**

Level designing is definitely a cross between art and science. The limitations in level design are many, and they can be quite frustrating. It is only through finessing and trickery that these conditions can be overcome. Most people, I believe, don't realize how much science is actually involved and tend to think of level design as purely creative art. In fact, level designing is juxtaposed between these two seemingly disparate disciplines, and understanding both can greatly help your levels. Remember that art describes "why" things are seen, and science describes "how" things are seen; knowledge of both will help you create very effective levels with the very limiting tools of the trade. A great level designer must think in the most simplistic of terms. Studying other forms of simplicity, such as Minimalism and ikebana, can greatly help the designer to see with new eyes. When now eyes don't help any more, it's time to pull out the Black Bag of Science and use the tricks of the human visual system. 6
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Piecing Together the 3D Puzzle

Making Sense of the Third Dimension

by Loyd Case
and Dave Salvator
Understanding 3D

What 3D Does for You

In some ways, 3D in PC games isn't anything new. 3D game engines have been around for years, and some have even looked pretty good; all their rendering work was done on the CPU. But as 3D accelerators and game engines have matured, having a 3D accelerator has become more of a staple and much less of a luxury. Without 3D card support, many games run smoothly only on rigs with very fast processors, because displaying a three-dimensional world in the confines of your 2D monitor requires a tremendous number of mathematical calculations. Of the calculations needed to display 3D graphics, the most intensive is the final rendering—that is, turning those mathematical calculations of space and time into a picture on your screen that changes 15 or more times per second. When you add those calculations to the math required for basic gameplay—artificial intelligence, tracking enemies, playing music, reading a joystick, etc.—you end up with a daunting set of tasks for even a fast CPU to handle.

A good 3D accelerator card can take much of the burden of rendering the 3D game world off your processor. Its specialized hardware handles the tasks of placing objects on the screen, usually leaving your processor more time for its other tasks and resulting in smoother gameplay. Games that support 3D cards (adding a 3D accelerator won't do a thing for your old games that predate 3D hardware) will generally run much faster if you have such a card in your system.

How much faster? Let's take Quake II as an example. On a 200MHz MMX Pentium system with a decent 2D graphics card, you can get Quake II to run, at best, around 10-15 frames per second (fps) at 640x480 resolution. Now, if you add a graphics accelerator, that number can kick up to 25-30 fps or better at the same resolution. Running Quake II in software, most of the graphics are handled on the CPU, and the 2D card is just a "dumb frame buffer," meaning all it does is display the final image.

3D APIs

Okay, now you're sold on the idea of buying a 3D accelerator. Which one to buy?

Here's where it gets difficult, because various games support a number of different, incompatible 3D standards, and you'll want to make sure to get a card that supports the standards used by games you like to play.

The various 3D standards are based on different 3D APIs (Application Programming Interfaces), the software layer that programmers use to tell the 3D accelerator hardware what to do. There are three prevalent APIs and a couple of other, somewhat common, ones. Many cards support more than one of these. The three most common APIs are Microsoft's Direct3D, OpenGL (originally developed by Silicon Graphics), and Glide, the proprietary API that exclusively supports hardware using 3DFx graphics chips.

Direct3D games were slow in coming early on, but we've seen a good number of top-shelf titles that were written entirely using DirectX. Early versions were poorly documented and poor performers to boot. Direct3D became usable only with DirectX 3.0. DirectX 5.0 supplied still better documentation and performance.

In the interim, 3DFx stole some of Microsoft's thunder by proselytizing its own 3D API, Glide. The performance of the 3DFx Voodoo Graphics chipset was well ahead of any other 3D chips at the time, so quite a number of 3D game developers were attracted to the chips because they could use their power to show off their games.

Meanwhile, the boys at id Software turned a cold shoulder to Microsoft, picking OpenGL to add hardware acceleration support to the Quake engine. At first, it seemed somewhat quixotic, since OpenGL was the purview of very professional level 3D cards, but 3DFx stepped up to the plate with a "mini-GL" driver which included only the OpenGL functions needed by Quake. All the mini-GL driver does is take the OpenGL calls...
used in Quake and translate them to the appropriate Glide calls.

Meanwhile, the NEC and Rendition were out beating the drum for their respective proprietary APIs. All of this has resulted in an enormous amount of confusion among the buying public.

What does this mean to you? Until the market settles on one or two 3D APIs, you'll need to look at the games you want to play, consider which APIs they use for 3D, and then buy a 3D card based on this information. For a jump-start, check out the charts that detail which APIs are supported by popular games.

LOOKING GOOD Without 3D acceleration, you don't get Quake-II's colored lighting, which adds greatly to the overall mood of the scenes. But with a 3D accelerator, you not only get the colored lighting, but larger resolutions with smooth frame rates, and filtered textures that don't get blocky. In software, Quake-II runs best at a resolution of 320x240, but with hardware acceleration, you can run at 640x480, 800x600, and in some cases even 1024x768, and still be in the 20–30 frames-per-second range.

C ONLINE To get an up-to-the-minute idea of what the hottest graphics cards are when you read this article, check our Ultimate Game Machine page at www.gamespot.com.
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So to see what we mean by performance that’s measured in G-forces, see us at www.nvidia.com. And hang on tight.
System Performance Issues: The CPU Matters

Designing and producing a graphics chip takes time. The record time to market for a new chip is probably nVidia's RIVA 128—the chip went from inception to production in around nine months. The chip designers have to use crystal balls and decide what kinds of systems the people using their cards will have. Bear in mind that most graphics cards and chips sold go into new systems sold by big PC manufacturers, not into boxes on store shelves. Naturally, a chip designed last year would want to target the AGP bus and the Intel Pentium II. Of course, the operating system would be either Windows 95 or Windows NT.

There's an interesting side effect to this necessity. Owners of mid-range Pentium systems may find that the latest hot chips don't do so well on their rig. The RIVA 128 and ATI's new Rage Pro are good examples. Both do well on Pentium II AGP systems. Pop a PCI version into a Pentium 100, and you'll wonder what all the fuss is about. Using 3D WinBench as our measure, the newer chips will run faster than a 3dx accelerator like the Monster 3D on a 266MHz Pentium II. On the other hand, the RIVA will actually run 3D WinBench 98 slower than a 3dx card on a Pentium 120. The one exception to the rule seems to be the Rendition V2200 chip, which has a very even performance curve. Here's where it gets a little confusing: Creative's new 3dx Voodoo2 part outguns all the competition running 3D WinBench 98 on both a Pentium MMX and a Pentium-II 333, but in Direct3D games we tested, it was faster, but not dramatically so. For Quake II and Quake-based games, Voodoo2 looks to be the choice, but be prepared to pony up.

So, the graphics card you might choose for a new system would be different than the one you'd get to upgrade an existing PCI-based Pentium system. While the ATI All-in-Wonder Pro might beat out a Monster 3D in your new 300MHz AGP Pentium II system, it will be a distant second in a Pentium 166 box.

Not All AGP Cards Are Created Equal

The PCI slots in your PC have caused few headaches for graphics card purchasers. For the most part, you buy a PCI graphics card, you plug it in, and it works. AGP is different, and more complicated. The AGP bus runs at 66MHz. It allows for storing 3D texture maps in main memory, called AGP textures (also referred to occasionally as execute maps). Here, only the amount of texture needed is downloaded over the bus, not the entire texture. Then there's full AGP support, which includes 2x sideband addressing and address demultiplexing, which can double the amount of data that can be passed to the card, from 268MB per second (66MHz) to 528MB per second (133MHz).

Part of the blame for AGP confusion lies with Intel, for not taking a stand on AGP features. Basically, any chip that can run on an AGP bus—whether it takes advantage of AGP features or not—can be called "AGP compliant." So if you're in the market for an AGP card, choose carefully. Here are some guidelines. Also, check our handy chart at the end of this supplement for AGP feature support.

There are several graphics chips that use the AGP bus as a sort of glorified PCI bus. They don't allow textures to be stored in main memory (AGP textureing) or take advantage of address demultiplexing or sideband support. We've labeled these AGP 1X only cards, but another term you might see is "AGP lite." These aren't necessarily bad cards, but if you get one, make sure you get 64MB of RAM. Chips that are AGP 1X only include the Number Nine Ticket-to-Ride. Rendition V2100/V2200 and Voodoo2.

Then there are cards that add AGP textureing to AGP 1X apparel. These still transfer data at 66MHz, but allow for off-card texture storage. These include the RIVA 128 and Pimema 2. Finally, there are cards that fully implement the AGP spec. The chips used in these cards include the Intel/740 and ATI Rage Pro. —Lloyd Case

CPU Speed Matters

Some new graphics cards are hot performers, in speedy Pentium II rigs, but can't match last year's 3DX in your trusty Pentium 166. We took three graphics cards and tested them in the PCI slots of a P166MMX and a PII/266 to gauge their performance in each system.

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Performance Difference Between Cards, P166

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Making the Right Choice

Upgrading Your Current PC

So what do you buy? Like that old classic boardgame, Clue, there's more than one solution to this mystery. Let's break it down a bit.

If you're unable to upgrade your entire computer, you can still get a lot of bang for your buck by adding a current-generation 3D accelerator. There are a lot of choices, but if you have anything slower than a Pentium 200 the choice becomes a little clearer, though it still depends on how much you're looking to spend.

Now that Voodoo² has arrived, it's the performance choice that you can carry over to your next system or motherboard/CPU swap-in. But prices on Voodoo² boards start at around $229 and head north from there, so if you're more budget-constrained, consider an add-on card based on the first-generation 3Dfx Voodoo Graphics chipset. Prices on Voodoo-based boards should begin to drop as boardmakers roll out their Voodoo² offerings, but Voodoo is still a respectable performer. And as Voodoo board prices dip toward the $99-$129 range, they'll become even more attractive. Both work in conjunction with the 2D card already in your system. Unless your primary graphics card is truly awful, this is your best bet—and could even delay that much dreaded system upgrade for a few more months. Later, you can add a low-cost, 2D/3D accelerator. If you do want to get a 2D/3D card, then take a good look at the Rendition V2100 and V2200-based accelerators. They offer balanced performance on a wide variety of systems, and are the only good bet if you're on a very tight budget and need to find a card that sells for $100 or less.

If you have a fast system—a 233MHz Pentium MMX, say, or a 200MHz Pentium Pro—a 3Dfx Voodoo² or Voodoo-based add-on card is probably still the first option to consider. But other interesting options open up as well, particularly if you want to do 3D in a window (e.g., VRML on the Web or Microsoft Flight Simulator 98). RIVA 128 and ATI Rage Pro chips begin to shine at CPU speeds of 200MHz or faster. RIVA is somewhat faster than Rage Pro cards, while the 3D image quality of the Rage Pro is slightly better. However, RIVA cards are dropping in price, and their performance is remarkable in Direct3D.

The bottom line is this: For the best performance on a Pentium system and the widest range of software support, you should probably consider first purchasing a card based on the 3Dfx chipset. Then look into getting as fast a 2D/3D card as your budget allows. Note, however, that if you are planning a system upgrade in the next 3-6 months, then hold off on that 2D/3D card. You'll want AGP in your new system, so that PCI combo card won't be a good investment. But the PCI-based 3Dfx card will carry over fine to the AGP system, since it's an add-on card rather than your primary video card.

Choosing the 3D on Your New System

Okay, so you're in the market for a new computer—or at least you're considering a serious brain transplant by adding a new motherboard/CPU combination to your system. First, if you're just moving up to a Pentium MMX system to take advantage of plummeting CPU prices, follow our advice for an existing system. Get a 3Dfx-based add-on card. If you're also buying the primary 2D/3D card, consider a Rendition V2200 card if it's a 200MHz or slower system.

What we'd really recommend, though, is that you get a Pentium II system with an AGP graphics card. Be aware, however, that not all AGP cards are created equal (see AGP sidebar on page 3D-8). Some graphics cards can take full advantage of AGP's advanced features, whereas others simply use it as a faster PCI bus. This doesn't mean that an AGP card that can't store textures in AGP memory is a bad card—but it does mean you might want to get one with more memory on board. Our picks include the ATI Rage Pro cards, RIVA 128 cards, cards using the Intel740, and the

IN THE PAINT The 3Dfx version of NBA Live 99 (right) delivers better shadowing and reflections than the software-only version (top).
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Piecing Together the 3D Puzzle

Rendition V2200 cards (but only if they're equipped with 8MB of RAM). If you do have to mix professional graphics work with your gaming, the Permedia 2 cards are worth considering. Note, however, that most of these cards will work with Direct3D and OpenGL, but only 3Dfx cards will work with Glide games.

The 3Dfx Factor

If it seems like the 3Dfx Voodoo chipset is getting the lion's share of recommendations here, there's a logical explanation. The company's Glide API has proven very popular in certain segments of the market, such as simulations and sports games. Because of 3Dfx's early technology lead and Microsoft's initial stumbles with Direct3D, many current 3D titles support only 3Dfx. Game developers didn't have to rethink how they did their titles much; they could just plug 3Dfx's Glide programming interface into their rendering engine. It gave them the ability to quickly port existing games.

On top of that, the original Voodoo Graphics chipset had a commanding technology lead over their competitors. The technology playing field is showing signs of leveling a bit now, but with the Voodoo2 chipset, 3Dfx regains that performance edge. The bottom line is that if you want full support across the gamut of 3D games—Direct3D, OpenGL, and Glide—you need to get a 3Dfx card. The good news is that even if Glide eventually fades away as game programmers pick one of the standard APIs, then you still have a fast card.

Wargamers should sit up and take notice, too, because it's very likely that 3D wargame titles will want to do their 3D in a window—but that's just a guess on my part.

It's even more confusing. Some games that have the 3Dfx logo on the box—such as DID's F-22 ADF—in fact support both Glide and Direct3D. Other games with the 3Dfx logo use only Direct3D—but have been tested only with 3Dfx. So the safe bet for a hard-core gamer continues to be: Get a 3Dfx card to put alongside whatever other graphics card you have. And, yes, a 3Dfx card will coexist very nicely with an AGP graphics card.

If you're picking up a hot new AGP rig with a 333MHz Pentium II, you might want to budget for one of the cards based on the 3Dfx Voodoo2 chipset.

IN THE GRASS Thanks to filtering, both FIFA '98 and Eurosoccer 2 have much better looking terrain. Notice the roughness of the Eurosoccer 2 terrain running in software.
At just over 1,500 miles per hour, the loudest sound in the cockpit is your heartbeat.
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Simulation Game of the Year
- Computer Gaming World, March '98

Simulation of the Year
- PC Gamer, March '98

Special Achievement in Graphics
- PC Gamer, March '98

Gamecenter’s Sim of the Year
- CNET Gamecenter, February '98

Simulation of the Year
- GameSpot, February '98

Reader’s Choice: Sim of the Year
- GameSpot, February '98

Simulation of the Year
- Online Gaming Review, January '98

Kick Ass Product
- Boot, February '98

Best Simulation
- Computer Games Strategy Plus, February '98

Reader’s Choice: Best Sim
- OGR, January '98

And the list goes on...
Top 10 Misconceptions about 3D Accelerators

1. A 3D accelerator will speed up all of my 3D games.
   Not necessarily. First, the game has to be written to take advantage of a 3D accelerator. Second, some of the first-generation 3D ”accelerators” actually run slower than if the game had been run using the software renderer.

2. The box says ”3Dfx,” but the game won’t run in accelerated mode on my card!
   ”3Dfx” refers to a company that makes the 3Dfx Voodoo Graphics and Voodoo Rush chipsets. While some games that have the 3Dfx label use Direct3D, many can run only on accelerators using one of the 3Dfx chipsets.

3. An AGP graphics card will run faster than a PCI graphics card.
   Again, not necessarily. Some AGP cards are really just glorified PCI cards. Unless the card supports some of the advanced AGP features (such as AGP textures), you’ll see little benefit over a PCI card.

4. An AGP Voodoo² will blow everything away.
   Maybe, maybe not. It probably won’t run any faster than a PCI Voodoo². 3Dfx has stated that the PCI bus is not a performance bottleneck. On top of that, the Voodoo² is an ”AGP lite” chip, meaning it doesn’t support any advanced AGP features, just the 66MHz bus. Finally, you’ll lose the ability to add a pair of Voodoo²’s in S1I mode—both have to be PCI cards. It’s far better to get an advanced AGP 2D/3D card and a Voodoo²—or maybe a pair of Voodoo²’s.

5. I’d like to upgrade to AGP, but buying another graphics card will stretch my budget, since I’d have to throw away my PCI graphics card.
   No, you won’t. Assuming your AGP motherboard has enough slots, your PCI graphics card will work just fine in it. Then you can sit back, wait for the dust to settle a bit, and pick the AGP card that’s right for you.

6. 3D is useless. I bought one of the highly rated 3D cards, and my 3D games don’t run any faster and look just the same.
   You probably didn’t enable 3D acceleration in the game. Most games still default to software rendering, and you have to actually tell the game’s setup or preferences boxes to turn on 3D acceleration.

7. It seems if I want a Windows 3D card, then I have to get a combination 2D/3D card, and if I want to run DOS-based 3D, then an add-on card would be sufficient. Is there an answer for me that will not compromise the power of my existing card?
   Most games don’t run 3D in a Window—they run full screen. So you don’t have to give up your hotrod 2D card, especially if you use it for high-end graphics. Just get an add-on accelerator, like a 3Dfx Voodoo Graphics card.

8. I play only strategy and adventure games, so I don’t need a 3D card.
   Guess again. Some point-of-view adventure games have started adding 3D accelerator support. There are already two strategy games—MYTH and INCUBATION—that support 3D acceleration. We’ve bumped into several wargame designers at 3D graphics seminars, too.

9. According to all the computer magazines, AGP is totally useless, and is no better than PCI.
   Most computer magazines focus on ”productivity” applications, which are generally 2D-based. AGP won’t help much with 2D work. AGP begins to come into its own only with games that have huge textures and understand AGP. Check out the AGP version of G-POLICE and contrast it with the normal version.

10. I can buy only a 3Dfx card because I want to play Quake and Quake II.
    I’m sure the boys at id would take exception to calling Quake II a 3Dfx game. Quake II uses OpenGL for its 3D acceleration; 3Dfx happened to be the first one out with a ”mini-GL” driver for GL Quake. There are indeed games that support only 3Dfx (and some pretty damned good ones at that), but there are also some very good Direct3D games. Also, OpenGL is a viable option now that Microsoft and SGI have kissed and made up.
Best Hardware. Best Software.
PC Gaming Comes of Age.

41. Casmageddon
Interplay Productions
Sales Curve Interactive

42. Deathtrap Dungeon
Eidos Interactive
Eidos Interactive

43. Escalibur 2555 AD
Telestar Productions
FISH UK Ltd.

44. Requiem
Studio 3DO
Cybros Studios

45. Resident Evil
Virgin Interactive Entertainment
Capcom

46. S/I/N
Activision
Rival Entertainment

47. StarCon
Acrotope
Acrotope

48. Tentrope 4
Acrotope
Pitbull Syndicate

49. Uprising
Studio 3DO
Cyclone Studios

50. Wing Commander Prophecy
Origin Systems
Origin Systems

51. King's Quest VIII: Mask of Eternity
Sierra Studios
Sierra Studios

52. Adventures of Lego Island
Mindscapes
Mindscapes

53. MDK
Playmates Interactive Entertainment
Shiny Entertainment

54. Precision Car Racing
Microsoft Games
Termed Reality, Inc.

55. Power Slide
Emergent Software
Emergent Software

56. Incoming
Rage Software
Rage Software

57. MANX TT
Sega Entertainment
Sega

58. Mars Maniacs
Church of Electronic Entertainment
Church of Electronic Entertainment

59. Overboard
Playnomics
Playnomics

60. Pandemonium II
Crystal Dynamics
Crystal Dynamics

61. Outlaws
LucasArts
LucasArts

62. Mad Max
Rayland Entertainment
Rayland Entertainment

63. Omikron
Eidos Interactive
Quantic Dream

64. Shadows of the Empire
LucasArts
LucasArts

65. Interstate '76
Activision
Activision

66. Shot
Housemarque Games
Housemarque Games

67. Skies
SergioSoft
Paragon Entertainment

68. Vigilance
SergioSoft
Any Channel

69. Urban Assault
Microsoft Games
Anarchy

70. Outlaws
Microsoft Games
Microsoft Games

71. Flight Simulator 90
Microsoft Games
Microsoft Games

72. F-15
Electronic Arts
Jane's Combat Simulations

73. Grand Theft Auto
ASC Games
DMA Design

74. Motormouth
Gremlin
Illusions

75. Prey
GT Interactive
3D Realms

76. Ultimate Race Pro
Microcasino
Kairo

77. Microsoft Baseball 96
Microsoft Games
WildBang!

78. Independence War
Ocean
Paradise Systems

79. EarthSiege: StarSiege
Sierra Studios
Dynax

80. Thief
Eidos Interactive
Looking Glass Technologies
New 3D Cards Reviewed

Creative Labs’ 3D Blaster Voodoo²

Without a doubt, the most hotly anticipated chipset for 1998 has been 3Dfx’s Voodoo², 3Dfx’s first new chipset in almost two years. It’s a testimony to the first Voodoo’s staying power in this rapidly evolving market. Voodoo² adds several rendering features, including trilinear per-pixel mip-mapping, a more advanced—and computationally intensive—technique to achieve better filtering. Also new for Voodoo² is a full triangle setup engine, further off-loading rendering duties from the CPU.

The version of Creative’s 3D Blaster Voodoo² we tested packs 12MB of memory onto a single board (4MB frame buffer, and 4MB for each of the texel processors) and comes in at a rather steep $299. A good price for a 12MB board, but it’s still 3D-only, and it’s still $300 simulators. For those truly intent on having the best 3D on the block, you can strap two of these guys together using 3Dfx’s SLI technology—and another $300—and have yourself one hell of a party.

Looking at the 3D WinBench 98 numbers, this 3D Blaster is the hands-down best of the lot on both boxes, and at both resolutions. But 3D Blaster’s numbers running Direct3D games don’t make it the clear winner, and in several cases it was bested by original Voodoo parts. In some cases, the 3D Blaster was simply waiting for the CPU to give it more triangles, but in others, it became apparent that the Direct3D drivers are still in need of some tuning. For Quake II on the baseline system, 3D Blaster turned in numbers similar to the Quantum3D Obsidian, but on high-end rigs, nothing else even comes close.

Voodoo² has re-established 3Dfx’s position as the “on the bleeding edge” of 3D performance, and Creative’s 3D Blaster will let you burn through Quake II with a vengeance. But in order to beat rival board-maker Diamond Multimedia to market, Creative opted to use 3Dfx’s reference hardware, whose Direct3D performance is not all that great, so while this performance will almost certainly head north, it’s not quite what we expected. Still, it is Voodoo², and Direct3D performance is by no means shabby. So if you’ve just got to do Voodoo², then check this guy out. —DS

PROS: King of the Quake II-accelerator hill (for now), great API support.
CONS: Direct3D drivers still need some tweaking; expensive, 3D-only.

Guillemot International MaxiGraphics Gamer3D

Guillemot International is the parent company of game-maker UbiSoft, which last year brought out the futuristic racing sim, Pod. Gamer3D is Guillemot’s second hardware offering, following Guillemot’s MaxiSound sound card, which also shipped last year. Gamer3D is yet another 3Dfx-based add-on 3D card that finds itself in something of a squeeze play. To one side, there’s the Pure3D, which has another 2MB of texture memory and a TV-out, and to the other, there’s the Magic3D, which is priced to move. So to find a niche for the Gamer3D...

Looking at Gamer3D’s numbers, they were pretty much what we’ve come to expect from Voodoo-based boards, but were otherwise unremarkable. On 3D WinBench 98, Gamer3D’s performance is even with the Magic3D on the baseline system, but falls behind on the high-end box, and trails the Pure3D on both test systems. Gamer3D fares better on the high-end’s PII 333 MHz system than on the P-166 MMX. On the baseline test system, Gamer3D’s Direct3D game frame rates are mixed, with it faring well on Turok, MSFS 98, and Quake II. On the high-end system, Gamer3D’s frame rates are, again, mixed. Turok and Jedi ran well, but all other frame rates trailed.

About three months ago, the Gamer3D might have been a pretty good bet. But with the arrival of Voodoo², coupled with the arrival of lower-cost Voodoo-based boards, Gamer3D winds up something of a man without a country in this new market. If you’re looking for killer performance, Voodoo² is a superior performer, and Magic3D squarely beats it on price. —DS

PROS: Solid 3D performer.
CONS: Not the fastest, or the cheapest.
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- Boot Magazine, Issue 20, April 1998

"StarFighter: True AGP Superstar."
- PC World, April 1998

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- Activision

"Real 3D's StarFighter is ahead of the game in 3D image quality."
- Jon Peddie, Graphics Industry Expert

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Evaluate the benchmark numbers. But don't forget to look at the images. StarFighter goes beyond the numbers to deliver high realism, high fidelity images with an extraordinary level of detail.

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1-800-393-7730 • www.real3d.com/cgw
Hercules Thriller 3D

Thriller 3D is one of two boards we looked at that uses Rendition's V2200, and though we've reviewed it before, we thought a revisit was in order. Thriller does have several things going for it: solid 3D, good 2D, and Rendition's Redline Windows 95 3D API. But since we last reviewed the Thriller, Jazz Multimedia has brought their aggressively-priced Outlaw 3D to market, undercutting Thriller by about $40 for a 4MB card, and $70 on the 8MB version.

As for 3D WinBench 98 performance, Thriller has the edge on Outlaw, especially on the high-end system, at both 640x480 and 800x600. Looking at Direct3D frame rates, we saw a similar pattern, where the boards were comparable when running on our baseline test rig but the Thriller pulled ahead running on the high-end box. One exception was Jedi Knight, where the two cards were evenly matched. Running Rendition's OpenGL driver, Thriller again enjoyed a slight edge running Quake II. As for 2D performance, the two cards were comparable running WinBench 98 on both test systems. Both cards, however, trail the RIVA 128-based STB Velocity 128 on Turok and Jedi Knight, though were comparable running the other Direct3D titles.

The Thriller 3D, though a bit pricier than the Outlaw 3D, is probably worth the extra shekels for its better performance. As a 2D/3D card, it delivers solid (though not the fastest) 3D, and solid (and just about the fastest) 2D. If your system more resembles our baseline system, the Thriller is a good choice, but if you've got a high-end box, you may want to consider STB's Velocity 128, depending on what kind of games you'll be running on it. —DS

Hercules Thriller 3D

PROS: Solid 2D and 3D performance; great image quality
CONS: Not the fastest; more expensive than the Outlaw 3D

$179 for 4MB, $249 for 8MB
Contact: Hercules Computer Technology, (600) 532-0600
www.hercules.com

Here's an example of browns running on PowerVR NG.
Jazz Multimedia Outlaw 3D

"The Outlaw just might be a great alternative for someone on a budget looking for a full-featured accelerator."

The Outlaw 3D uses Rendition's flagship V2200 3D processor. Using a RISC engine at its core, the V2200 delivers solid 3D performance, good 2D performance, and decent image quality. And the Outlaw delivers Rendition quality at a very aggressive price. We looked at both the PCI and AGP versions. The Outlaw is very basic—no TV out, no bundled games—but you can find the 4MB card on the street for as low as $137.

The Outlaw's performance trailed the more expensive Thriller 3D, which also uses the V2200 chip. Some of this may be attributed to the memory difference—the Outlaw had 4MB of RAM, whereas both the Thriller cards had 8MB. In fact, the difference in 3D Winbench numbers at 800×600 is probably the difference in memory. You can get the Outlaw with 8MB as well. The Outlaw, however, does use somewhat slower SGRAM.

The Outlaw's image quality was quite good, as we've come to expect with Rendition cards. Surprisingly, the 2D Winbench numbers were also quite good—a testament to how far Rendition's chips have come since the V1000. All the games we ran looked pretty good. Note that the V2200 is not a true AGP-aware card, hence the lack of extreme texture support in G-Policie.

With decent performance and a low price, the Outlaw just might be a great alternative for someone on a budget looking for a full-featured accelerator.

---

Quantum3D Obsidian 100SB

"Obsidian's target market for this card is arcade systems and 3D modelers."

There's been a lot of buzz about the possibility of adding two linked Voodoo² boards for better performance and resolution. The technique is called SLI, or scan line interleave. Guess what? It's been done. Quantum3D has been shipping SLI-capable Voodoo boards for a number of months now.

The reason for the Obsidian 100SB's existence may be waning now that Voodoo² is finally out, but it's an interesting exercise and may be a hint at what Quantum3D may be doing with Voodoo². The Obsidian 100SB is two Voodoo boards that are linked by a PCI bridge chip on a single card, in SLI mode with a whopping 20MB of RAM (4MB of frame buffer and 4MB for each of the four texture units). At $795, it's not cheap, but it is fast. Until the dual Voodoo² setups were available, it was the only card to support multitextures in Quake II.

The performance in Glide and Quake II was pretty impressive. Direct3D performance was less impressive, due to the lack of SLI support in DirectX 5; this will change with DirectX 6.0.

Obsidian's target market for this card is arcade systems and 3D modelers. However, it was, for a time, the hottest card for Quake and the Quake-engine games, so Quantum3D made their boards available to the hardcore Quake set. It's over the top, but then the best usually is. Now we're waiting for the Obsidian "200" SB.

---

Quantum3D Obsidian 100SB

PROS: 3D Studio plug-in for those who want it. For Quake II, it's fast.
CONS: ...but not as fast as Voodoo². Very expensive.

Quantum3D Obsidian 100SB

$795 (direct from Quantum3D)
Contact: Quantum3D, (408) 919-9999
www.quantum3d.com
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-Spring 1998

StarCon

The Star Control Saga continues. Battle your way through space with the most immersive space game ever designed. Third person perspective coupled with massively animated fighters and carriers make Star Con the must have action-adventure.

-Winter 1998

Download the demos at: www.accolade.com
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Beauty vs. Beast - modern supercars battle the power of the past! Race your favorite of 10 vehicles on 6 tracks through the rain, snow or bustling city streets.
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-Summer 1998

ACCOLADE™ POWERED BY 3Dfx Corporation
Real3D Starfighter AGP

Because the Intel 740 is made by Intel, there’s been a lot of controversy generated over this chip. Some decry it for not being hugely better. Others say it will kill all the other chip companies. In fact, it’s a fairly speedy chip that will define the baseline. And it’s a good baseline. No maker of 3D chips in the future can afford to ship something less capable than the 740—and this is a good thing for all of us.

The Starfighter AGP is an odd mix—in some ways very capable, but with odd limitations. Unlike most accelerator boards, it supports per-pixel MIP mapping. Most cards use per-polygon MIP mapping, which can result in odd texture sparkles as the level of detail changes. Interestingly, although Real3D holds fundamental patents on trilinear MIP mapping, it nevertheless “simulates” trilinear filtering by dithering the near MIP maps rather than filtering them. It works, but the dithering artifacts are noticeable in 3D Winbench 98.

The performance is pretty good. The 3D Winbench score is somewhat better than the RIVA 128, but this is mostly due to the support of additional quality features. In game testing, the Starfighter and the STB card were pretty close. The image quality in games seemed a bit better, though it was hard to judge. There seemed to be somewhat less texture sparkling in Flight Simulator 98. Turok looked very good. The Quake II numbers were less than impressive, but all we had was a GL wrapper for Direct3D; Real3D will be shipping a full ICD for OpenGL that may be out by the time you read this.

One aside: The Intel 740 doesn’t seem to support true color at better than 1024x768, limiting the card’s usefulness for heavy Windows graphics users. Overall, the Starfighter is a balanced card with good 3D performance and excellent image quality, but with a few limitations. If you’re moving to AGP, it’s definitely worth considering, but if you have one already, don’t throw away your current card just yet. —LC

Starfighter AGP
$189 (4MB), $249 (6MB)
Contact: Real3D, (800) 393-7730
www.real3D.com

There’s a wealth of information, free utilities, and other niceties on the net. Here’s a list of the best ones.

3Dfx resources
www.voodoextreme.com
This is a good source of news on 3Dfx tiles, drivers, utilities, and other miscellaneous 3D information.

www.planetquake.com/gldioj/ Though Zanshin focuses heavily on GL Quake, there’s lots of useful information on 3Dfx cards and some pointers to recent drivers and patches.

www.o3dfx.allgames.com/
More of a news-oriented site; less useful than Voodoo Extreme.

www.3dfxmania.com/
Lots of pointers to game patches and other useful information.

RIVA 128
nvidia.dimension3D.com A great source of utilities and news on RIVA 128.

www.rivazone.com
Another good font of software and information on the RIVA.

pages.prodigy.net/babblins/Main.html More good stuff on RIVA 128.

Rendition
members.occasionline.com/mattpetk/rendition_resource/ News and information on Rendition-based accelerators.

www.bjom3d.com A must-see web site for Rendition owners.

ATI Rage Pro
www.geocities.com/SiliconValley/Horizon/8276/ Good source of information on ATI’s newest chip.

S3 (No, Really)
www.tbrown.eet.com/s3virge/ There are a lot of VIRGE cards out there, and this is a good source of information on the various members of the VIRGE family.

Miscellaneous
www.real3d.com/primer/contents.html Although Real3D is a vendor, this part of its site defines 3D accelerator terms and technology.

www.fastgraphics.com/FASTVID and a host of other interesting utilities. Lots of information on general graphics performance issues.
DESTROY MORE.
DISEMBowel MORE.

Screenshots of Shadow Warrior courtesy of 3D Realms Entertainment.

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Monster 3D II features:
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• Advanced MEGAMonster™ dual card feature for over 100 fps at 1024 x 768 gaming
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• Superior resolution support at 800 x 600 with Z-buffer
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"The best looking Direct 3D game I've ever seen."
COMPUTER GAMING WORLD

"We were left with our jaws on the ground."
COMPUTER & NET PLAYER

"The most lavish graphics ever to hit your Direct 3D card."
BOOY

Download the demo at www.forsaken.com

Final version of Forsaken does not require 3D hardware acceleration

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GO TO #104 @ www.computergaming.com/info/
Skywell Technology Magic3D

The Magic3D is pretty representative of many of the generic 3Dfx boards that are starting to appear. It's a pretty cheap board, but the performance isn't quite up to par. However, it does have 40ns EDO DRAM, for those of you hell-bent on overclocking.

The Magic3D comes with a decent little manual, a driver CD, a pass-through cable, and not much else. The overall 3D performance trails the Gamer3D and Pure3D, making it one of the slower 3Dfx cards we've seen. This is a little odd, considering that the Gamer3D actually ships with older drivers.

The Magic3D is generally available only mail order or bundled into PCs from some local clone builders. It's somewhat difficult to find in the U.S., but Skywell Technology has a support page along with worldwide distribution information. Support may be problematic, but because of its generic nature, there's a wide body of 3Dfx knowledge out there already. Just be sure to get one from someone with a good return policy. —LC

Magic3D
PROS: Cheap.
CONS: Hard to find in the U.S.; slow.

STB Systems Velocity 128

We reviewed this RIVA 128 card when it first came out, but we wanted to include a RIVA card as a checkpoint. Since STB Systems had just released their 1.32 drivers, they were elected. We also tested nVidia's beta OpenGL drivers on the card to get a feel for how well the RIVA would fare in the OpenGL world.

As is becoming well known now, the RIVA 128 scales up with clock speed very well. On the 166MHz Pentium MMX, it was pretty much even with the 3Dfx boards; on the 333 MHz Pentium II, it was one of the clear leaders in pure frame rate. The RIVA has developed a reputation for having less than optimal image quality. However, to some extent, this is subjective. Quake II, for example, looked very good on the Velocity 128—in some respects, better than on 3Dfx. However, it also exhibited some polygon cracking along texture seams. Image quality can be very subjective, so when buying a 3D card, you need to check out any card with your own eyeballs. Also, the auto-MIP mapping capability of the RIVA causes problems in some games; it's notable that the beta OpenGL drivers come with RIVA-Tweak, which allows users to turn off auto MIP-mapping.

Image quality can be very subjective, so when buying a 3D card, you need to check out any card with your own eyeballs. The RIVA generally stayed even with the other AGP board in this roundup, including the Real3D Starfighter. However, the Starfighter's drivers were probably less mature at the time of the testing, and the image quality was just a bit better. Overall, the Velocity 128 still holds up pretty well. We're very much looking forward to STB's shipping OpenGL drivers. —LC

Velocity 128
Price: $109 (street)
Contact: STB Systems,
(872) 234-8750
www.stb.com
About the Authors

Dave Salvador
Dave Salvador is CGW's technical editor, lab director, and resident propeller-head. He oversees CGW's Hardware section, and reviews hardware and emerging technology. He also evaluates new support technologies, such as Applications Programming Interfaces (APIs) and new chips that make PC games more compelling. In addition to his incurable Quake jones, Dave is CGW's lead saxophonist, and he has also been conducting extensive research into new projectile applications for rubber chickens.

Lloyd Case
Lloyd Case is CGW's contributing editor for hardware/technology, and has been a CGW columnist for the past several years, writing about the agony and the ecstasy of PC gaming as it has migrated to Windows 95. Lloyd is a regular reviewer of gaming hardware in CGW, and writes CGW's Ultimate Gaming Machine (UGM), a continually updated resource on the Web which details the hottest gaming hardware out there (www.gamespot.com/ugm/).
YOUR FRIENDS AND RELATIVES WILL THINK YOU DIED

the Quake II Mission Pack: The Reckoning, 15 never-before-seen levels to scour, added weapons to wield, and fresh foes to defeat.

you won’t want to be disturbed by anything else.

experience bioluminescent life forms, stalagmites and stalactites and other breathtaking environments.

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the trap sucks nearby enemies inside and turns them into food cubes for player consumption.

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AN OFFICIAL, id AUTHORIZED QUAKE II MISSION PACK.
How We Tested

The focus of this supplement is 3D acceleration, so we spent most of our time immersed in 3D games, although we also put 2D’s own 3D WinBench 98 through its paces. There are a lot of misconceptions about 3D WinBench 98. Early on, people assumed that a higher 3D WinBench score meant faster gameplay—but it ain’t necessarily so. A card may get a higher score simply by supporting all the expected quality features in hardware, which doesn’t always translate into faster games, because most current games don’t use all the features used by the 3D WinBench. In that sense, 3D WinBench is a forward-looking benchmark. Though not reviewed here, we included performance numbers for Canopus’ Pure3D for the sake of comparison. This board garnered our 1997 CGW Premier Award for Hardware.

### Pentium II 333

<table>
<thead>
<tr>
<th>Graphics Card</th>
<th>Baseline</th>
<th>WinBench 98 BGVM @ 1024x768x16</th>
<th>3D WinBench 98 @ 6x4</th>
<th>3D WinBench 98 @ 8x6</th>
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### Pentium 166

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In addition to 3D WinBench, we did use quite a few games, because in the end, that’s what you get a 3D accelerator for. This round of testing found us using JEDI KNIGHT, G-POLICE, FLIGHT SIMULATOR 98, Turok, and Quake II (where there was a working GL driver for the hardware).

Because a 3D card’s performance can depend on how fast the system’s CPU is, we tested on two systems: one, a 166MHz Pentium MMX with 64MB of EDO DRAM and the other, a 333MHz Pentium II (Deschutes) with 96MB of SDRAM. AGP needs a lot of RAM, hence the 96MB in the Pentium II system.

We ran 3D WinBench 98 at both 640x480 and 800x600, in 16-bit color. Because 3D accelerators’ speeds are ever-increasing, we ran at the higher resolution to see if the cards had sufficient fill rate to maintain a level performance comparable to their 640x480 performance.

We gathered frame rate data in four Direct3D games: JEDI KNIGHT, Turok, FLIGHT SIMULATOR ’98, and G-POLICE. Of these four, G-POLICE is AGP-aware, and will scale both polygon counts and amount of textures, depending on which hardware it’s running. And in Quake II, we ran both TimeDemos at 640x480 with default rendering settings, using the 3Dfx OpenGL driver for the 3Dfx-based boards, and the Default OpenGL driver for all others. — Loyd Case and Dave Salvador

<table>
<thead>
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<th>Jedi Knight Frame Rates</th>
<th>Turok Frame Rates</th>
<th>G-Police Frame Rates</th>
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1. Look at the "API Support in Popular 3D Games" index and find the games you like to play the most. Then, look to see which API(s) they support.

2. Look at the "3D Card Showdown" table, and see our ratings for most 3D cards, as well as which cards support the API(s) used by most of your favorite games (or kinds of games).

3. Now go to our Price/Performance charts, and check the ratings for the cards that support the games you play most. More than likely, you'll be looking at more than one choice, so your decision should be based on whether you need a 2D/3D card or a 3D-only card, and from there, on who delivers the most bang for the buck.

All editorial content was produced independently of supplement sponsorship. No products or companies received any preferential treatment in the testing process, and no advertisers were given advance notice of results. Testers and panel members were unaware of the actual supplement advertisers. Performance ratings determined by aggregate benchmark performance, API support, and polling of an expert panel.
3D Support for Popular PC Games

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# 3D Card Showdown:
Standards, Ratings, and Prices

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MOST GAMES ASSUME YOU DON'T HAVE A BRAIN.

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CGW 3D GameGauge
Finally, a Reliable Way to Judge 3D Performance—You Heard It Here First!

Which 3D card do I buy? This is a deceptively simple question. There are two approaches to benchmarking that look at 3D performance: synthetic- and application-based benchmarks. For example, Ziff-Davis has WinBench 98, a series of synthetic benchmarks that measures the performance of individual subsystems, and WinStone, which measures system performance by running actual applications in a measurable way. For 3D graphics, Ziff-Davis has 3D WinBench 98, a synthetic benchmark that creates a score based both on the card's performance and its feature set. It's also the best tool available for inspecting how a card implements different Direct3D features.

However, there is no 3D equivalent to WinStone, in the sense that there is no application-level benchmark. Creating the game's equivalent of WinStone was far too difficult a task. 3D games don't behave like business applications, and the use of 3D features from one game to the next may vary greatly. A graphics card may run well and generate great-looking images in one game, but look terrible and run poorly on another.

IT'S GAMEPLAY THAT MATTERS
At this year's Computer Game Developer's Conference (CGDC), CGW will be unveiling the CGW 3D GameGauge, which will take performance numbers from six different games: five Direct3D games and one OpenGL game. The current line-up consists of Rage Software's INCOMING, Acclaim's Turok, id Software's Quake II, and Acclaim's FORSAKEN. At press time, we were still finalizing which flight simulator we'll use, and we're also still looking for another AGP-aware game with a large texture set. The games are either demo versions or playback-only scenes, and the CGW 3D GameGauge score is generated by adding up the average frame-rate from all the game tests. Because 3D card performance can vary depending on the system it's in, we'll test on both a baseline system and a high-end system. In addition to publishing a single CGW 3D GameGauge score for Direct3D and OpenGL titles, we'll also publish native API results for those cards that have native API support. For the latest results, check out www.computergaming.com.

HOW THE CGW 3D GAMEGAUGE WORKS
At press time, we didn't have all the test-games ready, but let's assume that the CGW 3D GameGauge just uses the four test-games we have so far: Turok, IncominG, Forsaken, and Quake II. We actually ran the Canopus Pure 3D and a Voodoo2 reference board through this "mini-index" (see the results table).

CAVEAT GAMETUR
CGW 3D GameGauge is not a rigorous benchmark in the way that WinStone is. But it is the best game-oriented way of evaluating the performance of your 3D hardware. We partnered with 3Dfx to convince a number of game companies to export a more comprehensive set of performance numbers, and, with the exception of Quake II, these game playbacks will generate a test file containing the average frame-rate of the test.

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<tr>
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<td>Quake II (avg. of 2)</td>
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<td>CGW 3D GameGauge Score</td>
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Though the Voodoo2's CGW 3D GameGauge score is more than double that of the Canopus Pure3D, you still need to consider individual game scores to get the whole story.
Over the coming months, we'll be publishing the CGW 3D GameGauge scores for a host of graphics cards and several system configurations.

Because 3D performance is a moving target, we'll be working closely with all 3D graphics card vendors and game developers to help the CGW 3D GameGauge evolve into a flexible tool for showing how graphics cards are faring with the latest games. We will keep the game set fixed for a reasonable period of time to ensure that it will be a useful tool for comparison.

CGW's 3D GameGauge will be our primary game-based metric for evaluating both 3D cards and complete systems, but we'll also test with additional games when that makes sense. Together with 3D WinBench 98, you'll have an unbeatable one-two punch for checking out how your system's 3D performance measures up.

**Quantum3D to Ship First AGP Voodoo2**

Quantum3D, the maker of high-end 3Dfx-based cards for 3D modeling and game authoring, is moving into the market for high-performance gaming hardware. In a bid to differentiate themselves from all the other Voodoo2 boards on store shelves, they'll be shipping the first AGP Voodoo2 board. Dubbed the Obsidian2 S-12 AGP, it will be a 12MB board with an optional TV-out daughter card. The board will be low profile, and should fit into even NLX-style cases. Suggested retail prices are $399 with TV-out and $349 without it. And for those you who crave even more, Quantum3D is also planning on unleashing the Obsidian2 X-16, a 16MB PCI single-board with two Voodoo2s running in SLL mode, which will list for $599.

—Loyd Case

**Who's Going to Have the Best Gaming CPU?**

Space Cadet, by science-fiction pioneer Robert Heinlein, is one of my favorite books. In the story, the powers-that-be inflict a series of tests on the would-be astronaut. One test involves operating a complex machine. But after reading and re-reading the instructions several times, it dawned on our hero that successful operation of this particular machine is impossible. When he confronts the instructor, he's just told to move on.

Confounding CPU choices this year, I feel like that astronaut wannabe. Every time I think I have finally made the right choice, another wrinkle pops up. So I thought I'd cover what will happen on the CPU front in the next few months and solicit opinions. That's right, it's audience participation time once again.

First, let me say that this is about Intel-compatible CPUs. The vast majority of shipping games these days run on Windows 95, so I want to stay focused in that area.

Keep in mind as we explore this road that some of these are future products, and company plans may change. Such is the nature of crystal-ball gazing.

**LITTLE BIG MAN**

AMD wants to be a big player. Really, they do. Certainly the company's microprocessor designs are ambitious. It's too bad its manufacturing isn't quite up to the challenge.

Okay, I'll admit, I'm being hard on them. But there have been a number of reports about AMD's inability to get good yields on its chip manufacturing. If you want to play David against the Goliath of the industry, all of your cylinders have to be firing effectively.

The K6 proved to be a less than optimal solution for serious 3D gaming or simulations. The floating-point unit proved to be somewhat slower than a Pentium classic, even though the integer performance approached Pentium II speeds. Recently, AMD has made a splash with the K6/3D. It's an interesting chip; AMD has added 32-bit extensions to the MMX instruction set. These instructions specifically speed up 32-bit transforms (the mathematical functions that are required for 3D geometry and rendering). Since few programmers will want to take the effort to code to a particular CPU (and one with a relatively small market share, at that), AMD is cleverly writing a 3D HAL for Direct3D, similar to the MMX library that already

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Continued on pg 166
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exists as part of Direct3D. But game
developers will have to use Direct3D's
geometry engine to take advantage of
these new instructions, something many
game developers have been loath to do.
Performance in 3D games hasn't yet
been determined, but I saw some impressive
demos at Comdex. AMD has also
made positive noises about OpenGL, but
nothing firm has been forthcoming. The
latest rumor, though, is that although the
K6 3D extensions have been added, the
core floating-point unit hasn't been
improved. That means if you're not run-
nning Direct3D, then the performance will
be slower than the equivalent Pentium II.
Later on, the K6 3D will bring the
level 2 cache into the chip itself, which
will make for a big chip — over 21 million
transistors. This chip could be a serious
contender if AMD can get their 0.25-
micron manufacturing line into shape.

THE WILD CARD
Cirrus has been relatively quiet since it
was acquired by National Semiconductor.
I've heard rumors that the company is
increasing the integration of PC function-
ality that began with the interesting, but
performance-impaired, MediaCX chip.
The other announcement Cirrus
made recently is a product code-named
Cayenne. Cayenne is supposed to have a
highly enhanced floating-point unit,
something the 6x86MX sorely lacked,
and will most likely incorporate AMD's
3D floating-point extensions, though
none of this information is firm.

THE MOUSE THAT (MAY) ROAR
A lot of attention has been focused on
AMD's attempts to take on Intel.
Meanwhile, IDT has launched a stealth
campaign with its Centaur division, fly-
ing under the radar (not to mention the
price lists) of the fight between Intel
and AMD. The current Centaur
processor is the C6; it won't win any
similarly-clockered Pentium MMX in inte-
ger performance and about the same as
the Pentium MMX in floating-point per-
fomance. It has dual MMX units and
will be available in clock speeds up to
300MHz. The price will probably
remain lower than that of Intel's new
Celeron line, but the C6+ will likely per-
form better than the Celeron. The C6+
also supports motherboards with
100MHz system bus speeds. It's likely
that IDT will adopt the AMD 3D
enhancements as well. If so, then there

CPU Speeds for 1998

![Graph showing CPU speeds for 1998]

Go Speed Racer
Though Intel will probably hold the clock-speed advantage through
1998, the other CPU makers will all be using AMD's 3D extensions, which may give
them a leg up on Intel.

 awards for floating point performance,
but it is cheap. In fact, it's probably the
lowest cost, Pentium-equivalent CPU
out there. It's not a good fit for 3D gam-
ing or sims, but is interesting because of
its inherently low-cost design.

What's more interesting are the prod-
ucts on IDT's road map. The C6+ may
be shipping as you read this. It has an
enhanced floating-point unit. According
to IDT, the C6+ is a little faster than a
may be more support for these instruc-
tions in the future.

Later this year, the C6+ will move
the level 2 cache onto the chip itself.
This will likely bring the price of com-
plete systems down to a very low point.
Imagine getting a 300MHz system
with decent performance down to, oh,
$600. It would have good perfor-
mance, some (but limited) expandabili-
ty and be a great second system for

Control Your Startup Programs
Picking one of the 3D WinBench 98 CDs is a good
idea even if you never run a benchmark. There's a nifty pro-
gram that's installed with the benchmark called Startup
Manager. Startup Manager allows you to enable or disable
programs that run every time you boot up your system—
even those pesky ones that are set to run automatically in
the registry. It's amazing what stuff can be running on your
system under Windows 95 without your knowledge.
Benchmark CDs are only $5; you can order yours from

Bulletproof Your Downloads
One near-essential program to have if you do a lot of
downloads is Bulletproof Software's Bulletproof FTP (BPFTP).
Using FTP is a little trickier than clicking on a download link
in your browser, but BPFTP is worth the short learning curve.
BPFTP can handle partial downloads and will resume where
it left off if interrupted. If you've ever been interrupted during
a 30MB download you can see how useful this is. Couple it
with Vector Development's DUNCE (Dial-up Networking
Connection Enhancement), which reconnects automatically
and launches up to four programs, and you'll never have to
be frustrated by big downloads again. Note that these are
shareware programs, so if you use them, make sure you pay
the developers. Bulletproof is located at www.bpftp.com,
and DUNCE can be found at www.vecdav.com/dunce.html.
Can a modem hurl you into the center of a mosh pit? In a word, no. But with near CD-quality audio and smoother-streaming video, the new V.90 U.S. Robotics® 56K* standard modem, comes closer than ever before. It connects up to 80% faster than other 28.8 modem brands. And it’s compatible with nine of the top ten Internet providers and over 1,400 more around the globe. No wonder U.S. Robotics is the world’s bestselling modem.

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multiplayer gaming. This may be the perfect add-on.

THE BIG KAHUNA

It's likely that most of us will still choose Intel this year. (The alternatives are more compelling later in the year, though, so stay with me.) About the time you read this, Intel will have shipped the 440BX core-logic chipset. This chipset finally moves Slot 1 motherboards into the 100MHz bus system bus arena. That means we have Pentium II at 350- and 400MHz, with 450- and 500MHz chips on the horizon.

Then there's Slot 2. Slot 2 is targeted towards servers and high-end workstations (read: high-priced, high-margin systems). The cache will run at the same speed as the CPU, as it was in the original Pentium Pro. Slot 2 CPUs will have more cache (up to 2MB), but will be more expensive. In fact, there have been some published reports that indicate a 450MHz Slot 2 Pentium II with 2MB of cache could cost over $4,000 — for the CPU alone! Slot 2 will also require a new chipset, the 458GCX. These processors may have a different name, as does the Celeron on the low end.

There's also been some discussion of future 32-bit enhancements to MMX, called the "Katinui instruction set," after the code name for a future Pentium II descendent. Not much is known at this time, except that delivery will probably trail K6 3D enhancements, but be somewhat more general purpose.

Intel has announced Celeron as the company's low-end product. It's a low-cost CPU in a SEC cartridge like the standard Pentium II, but without the Level 2 cache. The Celeron is targeted for systems under $1,200. The real question is one of performance. With no Level 2 cache, the performance may even be poorer than a P55C with Level 2 cache.

LOOKS GOOD ON PAPER

If all these plans reach fruition, Intel could finally have some serious competition. However, plans on paper don't always make it to reality. Both the K6 and 666MX looked great initially, but proved to be inferior to even classic Pentiums in game performance. The K6's floating point is still good enough as a "marginally" alternative to the Intel spread, but unless AMD delivers the volume, it's difficult to see it really chowing into Intel's market share.

IDT's C6+ looks very interesting, particularly in very low-end systems. Its minimalist approach makes size reductions easier, and getting the equivalent of a 300MHz Pentium for less than $1,000 would make for much more pervasive personal computing. Only time — and shipping products — will tell.

---

**REVIEW • 3COM SPORTSTER V.90 FAXMODEM**

by Loyd Case

The whole issue of 56K modems — which standard would "win" in the marketplace — has finally been settled. The ITU (International Telecommunications Union) has finalized a standard known as V.90. 3Com's US Robotics division is first out of the block with a V.90 modem, but only by a couple of weeks. Now that there is a single 56K standard, you should contact your ISP about supporting 56K — especially if they've been sitting on the fence waiting for a standard.

We looked at the external version of the Sportster V90, which looks pretty much like all the Sportsters — a short, squat, retro-looking box with a rocker switch and indicator lights. Setup is very straightforward. Connect a serial cable (not supplied) and your phone line, then boot up the computer. Windows 95 will detect the modem and ask for the driver. Hop in the CD, and it will be found automatically.

Since we only received one review unit, we couldn't put V90 itself to the test. However, we did connect to CompuServe using one of their X2 connections and to a local ISP using V34. The good news is that X2 compatibility is still built into the Sportster. Downloading a 1MB file, we saw an average throughput of around 9.9KB/sec — about what you'd expect. The V34 connection didn't seem quite so robust; we couldn't manage better than 26.4Kbps, possibly due to line noise. A brief run with Kali and GameSpy netted ping times between 70 and 110, a bit above average for 56K modems.

Other than that, what you have is a pretty typical US Robotics modem. The connections seem pretty solid, which is a relief — early V34 Sportsters frequently dropped connections and US Robotics had to introduce an expensive fix. The backward compatibility with X2 is a nice bonus. Current users of US Robotics X2 modems can upgrade to the V90 standard directly from the 3Com Web site (www.3com.com).

As the first of numerous V90 modem to hit your store shelves, the Sportster is a solid unit that should be a welcome addition to any Internet user who still needs to connect via standard phone lines.

---

**APPEAL:** Users sitting on the fence waiting for the standard.

**PROS:** V.90 modem that can connect at 56K to existing X2 users; easy setup.

**CONS:** Not much of a software bundle; unattractive case.
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**Split Decision**

by Denny Atkin

The Suncom Strike Fighter Throttle is a much-needed companion for the company's Talon, Raptor, and Hawk F-15 joysticks, and it's even worth a look if you have a competitor's joystick.

The throttle is a full-sized, heavy-gauge plastic device that looks almost as if it were pulled from the cockpit of an F/A-18. In addition to the buttons used for programming and mode-switching, it includes two four-position hats, a two-position wheel, a pinky button, and four two-position switches. Each of these can be programmed with up to six characters. A lever lets you adjust the throttle's tension, and you'll find both minimum-power and afterburner dets.

Programming is simple: Select one of four available program slots and activate program mode, then press the switch you want to program and type the characters you want to map to it. You can even program a switch from inside a game. While it's nice to not to have to deal with a software utility to program the device, the inability to store settings on your computer means gamers who use the throttle for more than four games will be doing lots of manual reprogramming.

If you release a lock on the front center of the throttle quadrant, you access the device's most unique feature: split-throttle support for controlling two engines independently. Unfortunately, due to the four-axis limitation of the PC joystick port, activating the second throttle means you won't be able to use rudder pedals. How many sim fans who want a throttle this serious aren't going to have rudder pedals?

As you'd expect, the throttle works very well with Suncom's joysticks. Surprisingly, it also works perfectly with a ThrustMaster F-22 Pro Stick or a CH Products F-16 Combat Stick.

**So Close...**

by Dave Salvator

3D positional audio hasn't yet become the gaming norm—mostly because only a handful of titles are using this technology (it also doesn't help that Microsoft's DirectSound3D API is having some growing pains). But 3D positional audio is rising. In its second generation of PCI sound card offerings, Diamond Multimedia has something to get things riled up, and the price is right. Their new MonsterSound M80 is a $99 PCI-based sound card that supports both DirectSound 3D as well as Aureal Semiconductor's A3D API (used by a larger number of games). But the news isn't all good.

Setup is straightforward enough: plug the M80 into a free PCI slot, fire up your machine, and feed it a driver CD. One reboot later, M80 is up and running. Overall sound quality for wave audio is clean, and in close listening tests using headphones, M80's line-out had almost no audible hash (hissing sound when idle). M80's wavetable synthesizer is adequate, though not stellar. The good news here is that their interface is WaveBlaster-compatible, so if you have a Roland SC-410, you can attach it, and it should work.

M80 supports up to eight 3D audio streams via A3D or DirectSound3D, and the effect is very impressive in two garden-variety multimedia speakers.

Things were going quite smoothly until I tried attaching several different game controllers to M80's joystick port. ThrustMaster's Rage3D gamepad wasn't recognized, nor was Microsoft's Side-Winder Force Feedback Pro. Diamond is aware of both problems, and should have a driver up to allow Rage3D to work with M80. As for the Force Feedback Pro, Diamond has cited its use of the M1D1 pin of the joystick port for force feedback as the problem, but the company doesn't have an ETA for a workaround as of yet.

The Strike Fighter Throttle is definitely worth a look if you want a well-built, easily programmable controller and you only play a few sims regularly. But if you want to take advantage of the second throttle axis, you'll either have to forged rudder control or wait for USB controllers to become available.

---

**Appeal:** Owners of Suncom SF-series joysticks; sim players looking for an easy-to-program throttle.

**Pros:** Innovative split-throttle design; simple to program; very well built.

**Cons:** No game support for second throttle axis yet; split-throttle mode won't work with rudders; can save only four game configurations.

---

**Appeal:** Gamers with a dedicated game-controller card banking for 3D audio.

**Pros:** Clean wave audio; adequate wavetable MIDI; solid game performance and SoundBlaster Pro compatibility.

**Cons:** Joystick port has serious problems with digital controllers.
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—FamilyPC

* * *
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- FAMILY PC

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Panther XL is a Lean, Mean, Strafing Machine

by Loyd Case

The first thing you notice about Madcatz's new Panther XL is how bloody big this thing is—it has almost the same desk footprint as a small keyboard. The Panther XL is the direct descendent of FP Gaming's Assassin controller, which we reviewed last year, and FP Gaming has now licensed its Assassin technology to Madcatz. Since the Assassin needed a joystick for full operation, Madcatz has naturally mated a beefy ergonomic joystick with the trackball device from the Assassin into a single controller.

Despite its size, the Panther works well either on a desktop or on your lap. The joystick is just a tad big for small hands, but feels very comfortable. In terms of ergonomics, the Sidewinder and Logitech sticks can only aspire to feeling this good. The overall precision of the joystick is right, too—just a little stiff, but not mushy. So as a joystick, it's pretty decent.

But this is no mere joystick. On the left side of the base is a red trackball. The trackball adds 3D view functionality—something really handy in 3D shooters like Quake II. Your right hand operates the joystick, which handles forward movement and strafing; the trackball handles directionality. You can adjust the sensitivity of the ball so that a slight twitch will spin you 180 degrees—or you can set it so you have to madly spin the ball to turn around. Spinning the ball left and right turns your view while rotating it forward and backward looks up and down. This two-handed operation takes some time to learn, but once you get the hang of it, it gets pretty intuitive.

Circle-strafing—one of the moves I always have problems with when using a mouse/keyboard combo—is a piece of cake with the Panther XL. Another plus is that the programmable buttons on the Panther's base are strategically placed for easy reach.

As a flight stick, it works pretty well; you can even use the ball as a rudder pedal, though its natural use is to manage virtual cockpit views. There's even a separate throttle control.

As a controller for 3D Action games, the Panther XL's only real peer may be the classic mouse/keyboard combo, but if you take a little time to learn how to use the Panther, it may prove even more versatile than that classic setup.
"Sadly, when you play DEADLOCK II, only by overcoming the limitations of the design can you hope to have any fun."

—Tim Carter, reviewing DEADLOCK II

---

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*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.
turn, run, turn, turn run, turn, run, turn run, turn, run, run run, turn, run, turn run, run, turn run, run, run run, run, turn, run, run run, run, run, slam door breathe, breathe

feeling safe?
Think again. You can run. You can hide, but they’d like to get a taste. Change course, run up to flush you out. Slam a door, they’re coming in. So ask yourself: Is your will to live strong enough to fight for it?
hide. But these guys can smell you. And so, they’ll follow. Take cover, they’ll team up to get it open. They’re hunting you down. Longer than theirs?

SHOOT TO KILL. THINK TO LIVE.
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WE ARE FAMILY
Not everyone that joins you looks like you. Super-mutants, robo-dogs and ghouls may join your adventure, or why not do-it-yourself by implanting the brain of someone near and dear into that shiny new robot body.

KILL SMARTER, NOT HARDER
Improved combat AI for friends and foes alike. Most of the people in your own group won't take that burst shot with the Flechetta-gun, but a couple are probably just asking for the opportunity.

SHARE THE WEALTH
If you want to, you can upgrade any traveling companions with more dangerous weapons, tougher armor, or even teach them new skills and abilities. Of course, you'd better make sure they're on your side.

BIGGER & BADDER THAN EVER
Bigger, smarter, nastier enemies than you've ever fought before. We've given you a few pals that are just as ugly. You didn't think you were the only Bad-ass in town did you?

SEX & ROMANCE AFTER THE BOMB
Fall in love, get married, and then pimp your spouse for a little extra chump-change. Hey, it's a dark and dangerous world.

LEARNING IS FUN-DA-MENTAL
Over 100 new skills, called perks, available to learn during the course of your travels. Better to learn the Flaming Dragon Punch from the crazed tribal shaman or how to squeeze the trigger on your spiffy new Gauss-rifle faster than the next guy? Decisions, decisions...
Sequel to the RPG of the Year

Arriving Fall '98

Fallout 2
A Post Nuclear Role Playing Game
In the Zone
An Arcade Classic Makes a Triumphant Return in Activision's Stellar Update
by Robert Coffey

Eighteen years ago, it just didn't get any better than BATTLEZONE. While its simple, green vector graphics were unbelievably primitive by today's standards, in 1980 they were beyond cool and had one thing all the other games in the arcade didn't—depth. BATTLEZONE invented 3D gaming, and now, close to two decades later, it's back to lay its claim on the genre in a fantastic new version from Activision. It may not be the revelation it was in 1980, but it comes close.

COLD WAR GETS HOT
Set in the '60s and early 70s, BATTLEZONE takes place in a world where the space race is an elaborate cover-up for an interplanetary military conflict between the U.S. and the Soviet Union. After a mysterious bio-metal is discovered following a meteor shower, the U.S. forms the National Space Defense Force (NSDF) and dispatches it to harvest the element from the planets and moons in our solar system. Of course, the Russians are after it as well, sending the Cosmo Colonist Army (CCA) to claim the bio-metal for themselves. It doesn't take long before a shooting war breaks out on our moon—and Mars, Venus, Io, Titan, and Europa.

While BATTLEZONE features the same hover-tank driving action of the original, it has become something much more, introducing a real, honest-to-goodness strategy element to the gameplay. Other games have attempted this mix of action and strategy, most notably UPRISING, but none have gotten it as dead-on right as BATTLEZONE.

The action is simply great. Battles run from small, furious skirmishes against a few opponents to thunderously brutal base assaults against loads of adversaries, frequently all in a single mission. Just piloting your tank is a blast—skimming across planetscapes, spinning around a rapidly dying enemy, and firing your jump-jets both to hurdle cliffs and cushion plunges. While piloting a tank that moves kind of like an air hockey puck might sound difficult, it's actually a breeze, easily handled either with a combination of keyboard and mouse or with a joystick. If you get bored in your default tank, you can always jump out and commandeer one of nine other vehicles.

GIVING ORDERS
But it's the strategy that sets BATTLEZONE apart. Most every mission requires you to build and defend a base. The only real limitations in base-building are the same as those in most straight strategy games—energy and raw materials. Your production facilities have to be parked on top of power-producing gyser and you have to scavenge bio-metal scrap to build units (fortunately, you can scavenge the debris of destroyed units). Other than that, you're free to custom-tailor your base and troop mix-up to your liking.

Once your production facilities are on line, you can create portable defensive turrets, gun towers, a variety of different tanks, and even large meechlike walking units. Unlike those in UPRISING, these units can move around the whole map and be given real orders, such as to guard a specific area or to attack the front of an enemy base while you bring in another contingent from the rear.

You'll have to learn to pilot your tank while attacking enemies, controlling production, and issuing orders, often all at the same time. It would be daunting in any

---

Price: $49.95
System Requirements:
Pentium 120, Windows 95, 16MB RAM, 160MB hard-drive space plus 50MB for Windows system file (additional 25MB for HEAT), 16-bit high color video card with 1MB RAM, 2x CD-ROM drive, Sound Blaster-compatible sound card, mouse, 26.8 or faster modem for Internet and modemplay, Windows 95-compatible joysticks supported.
Multiplayer Support:
Modern, serial cable (2 players); LAN, Internet, HEAT (up to 16 players); 1 CD per player.
3D Support: Direct3D
Designer: Activision, Inc.
Publisher: Activision, Inc.
Los Angeles, CA
(310) 255-2050
www.activision.com
Each campaign has a unique flavor as well. Mission parameters in the NSDF series often change focus, depending on the developments in the string mission-linking plot. The CCA campaign suffers from a weaker story, but increases the challenge considerably with missions more focused on fighting than on building.

While not as groundbreaking graphically as the original, BATTLEZONE is still something special, with cool explosions, rocket vapor-trails, detailed texture maps on every unit, and the lightning-torn, acidic haze on Venus. Just make sure you have a 3D accelerator. Also, as visually rich as BATTLEZONE is, the rather wimpy sound comes as a disappointment.

BATTLEZONE isn’t perfect, but most of its shortcomings are little things, like occasional polygon tearing on some landscapes and infrequent audio cracking and popping. The game would benefit from some sort of spawning option for its terrific multiplayer options; as it is, every player on a LAN needs a CD. The biggest knocks against BATTLEZONE are its lack of a random mission generator, a pathfanding AI that makes units following you go around terrain that you are able to travel over, and the inability to order tanks to protect anything but transports.

But none of these things really get in the way of the gameplay, which is fantastic overall. By proving that action and real strategy can coexist, this BATTLEZONE may become every bit the classic its predecessor was.

**Battlezone Tips**

When assaulting fortified bases, try to draw out a few tanks before entering the base. This way, you’ll thin out enemy defenses. When you start your assault, have support units draw fire from gun towers while you target power generators. Once the easily destroyed generators are down, the gun towers can’t fire. After that, take out any constructors before they can rebuild the power sources.

Lure enemies to your protected scrap fields. Your defensive turrets will help in the battle, and killing your enemies near your scrap source will keep your vulnerable scavengers from venturing away from your protection.

Don’t be afraid to pack up and move your base. Since all facilities are portable, go ahead and move them closer to scrap fields and conflict zones. You’ll get faster production and you’ll be closer to repair and reload facilities.

You can still take the high ground even if an enemy is perched on a ledge above you. Charge up the hill and hit your jump jets at the top, launching yourself in the air. Spin around and fire on the opponent beneath you, who probably won’t be able to fire back.

Have your armory launch some repair and ammo power-ups near an enemy base before you begin your assault. This way, you won’t have to travel far to get fixed up when you start getting damaged.

**APPEAL:** Action fans, strategy fans, and gamers who can appreciate a unique and compelling game.

**PROS:** True strategic depth in a great action game; inspired mission design; elegant interface; beautiful 3D-enhanced graphics; strong multiplayer game.

**CONS:** Sound falls short; no random quickstart missions; pathfinding AI could be smarter and more responsive; can’t have tanks protect more vulnerable vehicles.
ARMY MEN

Take any one of six classic army men figures into combat in this squad level action-strategy game.

Melt attacking infantry with your flamethrower or shatter enemy vehicles with your bazooka and tank.
“I love the smell of burnt plastic in the morning.”

Break your troops out of a heavily guarded POW camp in one of over 30 action-packed missions.

Make your way through alpine, desert and bayou terrains or play against your friends on special multiplayer maps.

www.armymen.com
To Boldly Blow...

by Jeff Green

STAR TREK PINBALL—just the thought of it gets your Vulcan blood boiling, doesn’t it? Yeah, me neither. But Interplay, apparently on a mission (I hope it’s not a five-year one) to boldly milk a franchise as it has never been milked before, has wedged a pinball game to the Star Trek label. Maybe they’re figuring that all five people who thought their WATERWORLD game was a good idea will buy this one, too.

In any event, what you get are three tables—To Boldly Go, Qapla’, and Nemesis—that provide acceptable, but completely uninspired, pinball action. Despite an overcomplicated manual that blathers on for pages about the game’s features, most of the time it feels like there’s nothing to do except watch your ball slip down the middle while a Klingon laughs at you. This game can’t hold a candle to Empire’s Pro PINBALL: TIME SHOCK, the current king of pinball simulations.

But, honestly, who’s going to buy this game for the pinball? Your $50 worth of entertainment is really supposed to come through the integration of Star Trek themes, sights, and sounds. I hit the warp lock! Pick the right Tribble! Listen to the Star Trek theme music over and over until you want to kill someone!

The game gets docked another notch for the Nemesis table, a multiplayer-only table that, according to the box and manual, allows hotseat and network play—except that Interplay removed the network play before shipping the game, with no warning to gamers of the omission.

Next time anyone decides to develop such an unapologetic concept, they should at least go for the gusto and try something cool. I could improve this game 100 percent with three words: Vulcan car flippers.

Price: $29.95
System Requirements: PSX, Windows 95 or DOS, 16MB RAM
3D Support: None
Multiplayer Support: Hotseat (2 players)
Publisher: Interplay
Irvine, CA
(714) 553-6655
www.interplay.com

Kirk’s Silver Balls: “Experience the world of James T. Kirk.” Uh huh. Somebody stop the fun.

Appeal: People who speak fluent Klingon.
Pros: One of the bumpers says “Aye Captain!” in Scotty’s voice when you hit it.
Cons: Uninspired tables, unimplemented multiplayer support, shameless milking of a franchise.

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.

Trees Make a World of Difference. Thanks to trees we enjoy shadier streets, greener city parks, and friendlier neighborhoods. Trees also produce oxygen, absorb carbon dioxide, and help keep the atmosphere in balance.

This year, plant Trees for America. For your free brochure, write: Trees for America, The National Arbor Day Foundation, Nebraska City, NE 68410.
All Funked Up

I-'76 ARSENAL Revs Up a Great Action Game and Delivers Some New Thrills

by Jeff Green

I-76 was one of the best action games of 1997. It was a stylish auto-combat simulation that won a CGW Artistic Achievement award for perfectly recreating the cheesy atmosphere of '70s TV cop shows. While a true sequel is now in development, Activision, in the meantime, has taken the original back to the garage, tinkered around, and come up with something called I-76 ARSENAL. What is this? Well, it's two games in one: a souped-up version of the original game along with a standalone expansion game with new single- and multiplayer action. The result is a must-have for those who've never experienced the game, and a probably-have for long-time fans looking for more.

GOOD AS GOLD

The first part of the ARSENAL is I-76 GOLD, a new version of the original game that fixes many problems and adds a few new features. Or, more to the point, it's the game that I-76 should have been in the first place.

The biggest difference is native support for 3DFx and Rendition-based 3D accelerator cards, which strongly enhance the game's already stellar graphic appeal with much richer textures and backgrounds — provided you have the system to deal with them. Take seriously Activision's recommended system of a P133, and figure on at least a 166 to enable all graphic options.

While Activision didn't fix our biggest gripe with the original — the inability to save in the middle of some of the longer missions — they did come up with a compromise solution: difficulty levels to dumb down (or increase) the mayhem. It's an acceptable fix, but be forewarned that even on the "Wimp" setting, less-skilled gamers are still going to repeat the harder missions over and over.

ALL NEW EPISODES!

For those who bought the original game, the bigger news is the long-awaited Nitro Pack, which adds all new single- and multiplayer missions, along with new weapons, vehicles, and multiplayer options. If you're wondering whether the ARSENAL is worth it for the new stuff, it is — but if you don't want to deal with the hassle of sending back your old discs for a $15 rebate, you might just want to order the standalone Nitro Pack directly from Activision's Web site (www.activision.com).

The Nitro Pack's single-player action consists of about 20 new scenarios set in the months before I-76, when Groove Champion's sister, Jade, was still alive. In this version of the game, you take the wheel alternately as Jade, Taurus, and Skeeter. As in the original game, the new missions offer a variety of tasks — including search-and-destroy raids, races, and escort and rescue missions — and they vary in difficulty from simple to nearly impossible.

The scenarios are not linked campaign-style, so you can freely move around if you get stuck. None of the scenarios, however, should take veteran I-76 players very long to complete, which, along with the lack of a campaign-length storyline, makes the Nitro Pack feel a little light.

The new weapons are uniformly good, especially the Cauldron, which drops a load of nails onto the road — a great immobilizer that works particularly well in multiplayer games. Many of the new vehicles (like the clown car) seem to be there more for novelty value, but the ability to pick any car for any scenario is a welcome change.

The multiplayer game is now much better, with a bunch of new death-match options, including time limits, frag limits, and weapon restrictions, not to mention new capture-the-flag and racing modes. Even in our limited multiplayer testing, however, we experienced way more dropouts, configuration problems, and crashes than we would have expected from a game now in its second year.

ROAD KILL

If you've resisted I-76 until now, this new package is the perfect entry point, and you won't be disappointed. If you are a long-time fan looking for more, you may be satisfied, but it won't blow you away, and you should take this as a holding pattern while waiting for the real sequel later this year.

Price: $39.99
System Requirements:
Pentium 90, Windows 95, VESA local bus or PCI video with 1MB RAM, 256-color SVGA (640x480), 16MB RAM, 4x CD-ROM drive, Sound Blaster-compatible sound card, mouse. Supports Windows 95-compatible joystick, gamepads, and wheels.
3D Support: 3DFx and Rendition chipsets.
Multiplayer Support: LAN and Internet (2-8 players), modem; 1 CD per player.
Developer/Publisher: Activision
Santa Monica, CA
(310) 255-2000
www.activision.com
The most anticipated RPG of the year.

In the FORGOTTEN REALMS®, we've lived through foul pestilence, vicious battles, exorbitant taxes, and even the occasional dragon. But when HE showed up, things really started getting ugly.

Prepare to be immersed into a world of intrigue and mystery on a perilous quest to rescue a storied land from impending war. Even your own soul is at stake as you and a party of adventurers become entangled in a dangerous riddle of betrayed alliances, dark prophecies and murder.

Will you become the unlikely hero of the story, or merely another of its unfortunate casualties? Before you answer, the big guy here might have something to say about it.

Explore an immense, intricate game world - from cloud-covered mountains & rain drenched plains to dark catacombs & abandoned temples - all meticulously rendered in lush, 16-bit SVGA graphics.

Invoke more than 100 spells - Freeze enemies with an icy blast from a Cone of Cold, or incinerate them with a scaring stream of magical flame.

Push your leadership skills to the limit as you guide a party of up to six characters, each with a personality that affects gameplay. Don't let your stubborn fighter pummel the arrogant thief - you may need their teamwork in your next battle.

Create your character from six AD&D® races and 26 different classes and subclasses. You control every attribute, down to skin and hair color, weapons, and armor - all accurately depicted on-screen.

Coming Soon

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Jugger-Not

This Quake II Add-on Pack Is Less Than Earth-shaking

by Mark Clarkson

It's take a look at the future. Mankind has eked out a tenu-
ous existence on Jupiter's moon, Europa. Others, who once
dwelt on the moon Callisto, destroyed themselves long ago
through genetic experimentation gone wrong... or so
it was thought.

Now the Callistans—
mutated, twisted, and mad—
have appeared again, stealing
the memory core that drives
Europa's atmospheric proces-
sors. That core must be
retrieved; it's time for a hero.

ROCK ON

JUGGERNAUT is a new
Quake II mission pack from
Head Games. It promises a
storyline, and there is a minor
continuing narrative, as well as a sen-
tence or two of instructions in each
level, but this isn't an RPG— it's a killfest.

JUGGERNAUT supports multiplayer
deadmatchs on five levels but, disap-
pointingly, you can't play through the
missions in cooperative mode. That's a

to finding those ubiquitous key cards,
you'll flip switches to disable fans or turn
power on or off before proceeding to
the next area.

The blade gun is in place of the hyper-
blaster. It looks something like one of
Saturn's gardening tools and fires hyper-
blaster rounds. Since it has teeth inexpli-
cably sticking out of it, I guess
it's the blade gun. There is a
new, souped-up machine gun,
too, which I suppose is the
EMP; I have to guess because
the game always calls the new
weapons "hyperblaster" and
"machine gun."

JUGGERNAUT adds five new
monsters to the QH mix. My
favorites are the huge, ugly,
mutant gorillas that backhand
you clear across the room, and
flying guys who look like rel-
tives of Godzilla's pantomodu-
necisus, Riordan.

And, good lord, there was a
lot of monsters! The big levels
near the end— packed shoul-
der-to-shoulder with mon-
sters— reduced my killer machine (PII/
266, 128MB RAM, 6MB Voodoo Rush) to
running molasses-like frame-rates.

Level design is pretty average, and I
don't think JUGGERNAUT's look is quite
up to the QH standard. The textures tend
to be a bit... busy. Some levels look quite
striking; others are positively cartoonish.

The models are usually better looking
than the textures thrown over them.

So what's the verdict? While
JUGGERNAUT doesn't do anything really
wrong, it doesn't do enough extra to
excite me, either.

IT'S COZY IN HERE

JUGGERNAUT's levels are
packed with monsters. This screen's worth of
enemies is standard fare in this expansion.

Sometimes, you must jump into
freezing waters to retrieve various good-
ies or discover escape routes, but there
were several places where I jumped in
only to discover that there was no way
back out; my only choice was to drown
and load my last saved game.

I'm not sure if that's a bug or a fea-
ture, but there were lots of little
glitches and oversights: buttons that
ran through solid objects, rooms that
you can get into but not out of again,
and internal error messages that
appeared onscreen periodically.

Most annoying to me was the fact
that the first time you run over a
new weapon, you switch to that
weapon whether you want to or not.
You can be dancing around the
room, blasting away with the chains-
gun, when suddenly (whoops) you're
holding a hand grenade.

WHAT'S NEW?

JUGGERNAUT boasts two new
weapons— the EMP and the blade gun.
MYTH
THE FALLEN LORDS

GAME OF THE YEAR!
- COMPUTER GAMES STRATEGY PLUS

STRATEGY GAME
OF THE YEAR!
- COMPUTER GAMING WORLD

REAL-TIME STRATEGY
GAME OF THE YEAR!
- PC GAMER

Top 50 Games
of All Time!
- ONLINE GAMING REVIEW

For more information visit www.bungie.com or call 800 295-0060.
Tour's Over
by Tahsin Shamma

You might think, from the title of this game, that you'll be racing sexy sports cars against speed-lowing tourists through exotic locales. Unfortunately, TOURING CAR CHAMPIONSHIP goes so fast, the boys at Sega forgot to stop and look at the map. When you buy a racing game for the PC, even an arcade port, you want it to have lots of tracks. TOURING CAR CHAMPIONSHIP gives you only three tracks. And seeing as how the average lap time for each track runs about 35 seconds, you can see the whole "world" of the game in about 105 seconds.

There is a lot I don't like about this game: the arcade physics, the superfluous arcade mode (which merely repeats an option already available in PC mode), the annoying techno dance music, the lack of 3D-ard support, and the nearly 10 seconds to type your name after a high score. When will Sega learn that it needs to add lots more gameplay to its arcade-to-PC ports?

There are extended features like car damage and extra tracks and cars, but it's ridiculous that you have to beat the game perfectly before you can access them.

The only good, and immediate, feature of the game— the chance to race against a ghost car that represents any of your previous runs of the track— doesn't always work. Sometimes the ghost car just stops by the side of the track and doesn't move at all.

Even if you liked the original game, you should keep your quarters for the arcade, and spend your money on some better native-PC racing games.

△APPEAL: Gamers desperate for any Sega racing game.
△PROS: Sega arcade racing; eight-player multiplayer support; some PC-only features.
△CONS: Sega arcade racing; features don't work or are hard to access; no 3D support; too few tracks.

NOT SO FAST TRACK There just isn't enough gameplay here to keep even arcade racing fans happy; there are too few tracks and no 3D support.

Price: $32.99
System Requirements: Pentium 90, Windows 95, 16MB RAM.
Multiplayer Support: Hotseat, modem (2 players), IPX and TCP/IP LAN (2-8 players); 1 CD per player.
Publisher: Sega
Redwood City, CA (888) SEGASALES
www.sega.com

Actual screen captures from Tex Murphy: Overseer
Enter a Virtual Reality world where an unspeakable evil is destroying the elite team of scientists who created it—with only you to stand in its way:

- You solve over 20 mini-mysteries on your way to the final confrontation
- You search for clues in over 31 virtual reality locations
- You interrogate up to 40 unique witnesses and suspects
- Both DVD and CD versions inside the box
- Featuring Dolby Digital™ (AC-3) 5.1-channel surround sound
Death to the Maker

Id Should Have Thought Twice Before Endorsing This Lame Editor

by Joe Vallina

Many Quake-heads (myself included) dream of designing their own levels, based on their offices, homes, or neighborhoods. Others want to indulge their most diabolical fantasies and create levels such as an all-BFG deathmatch arena.

DEATHMATCH MAKER 2 claims to put this power into your greedy little hands, but, in reality, a frustrating interface and horrible documentation cripple the program.

THE BASICS

DMM2 uses two windows for level creation and editing. The first, the design window, is a grid-based, 2D map outline of your level. But, since you are actually creating your level in 3D, you can view your level from three angles: the top, the right side, and the front. The second editing window is the walk window, which lets you walk inside your level as you build it, so you can see how things will look without exporting the level to Quake II — a time-consuming process.

This is all in theory, of course. In reality, what you see is almost never what you actually end up with after the compiling process. In DMM2, level design is reduced to a frustrating process of trial and error.

THINGS GET UGLY

The biggest drawback in DMM2 is that, to accommodate the simplistic approach needed to make the program work, you must re-in your designs.

For example, while DMM2 lets you select from many textures, it has no handy comprehensive visual list. This forces you to scroll through the entire list of textures, previewing them one at a time, until you find the one you’re looking for. Fortunately, there is a comprehensive visual list of textures at http://deathmatch.stomped.com. When you do find your texture, getting it to fit on the surface you’re trying to decorate (by “fit,” I mean slaving the texture to the correct angle, or keeping it from tilting on the object’s surface) is nearly impossible.

One extremely annoying feature in DMM2 is the “unlock all” command. Individual items within your level can be grouped and locked into position, but it is impossible to unlock specific areas within your level. Instead, you must unlock the entire level (or layer, whichever the case may be). The inability to unlock individual items is a major drawback, especially on large, complicated levels. Other interface problems include the inability to move around the design window without using the scroll-bar: the way the toolbar and layer menu disappear behind other windows (you can tile the windows, but this leaves little room in which to work); and the annoying way that the epicenter of the design window changes when you switch between the top and side (or front) views.

If you do finally finish your level, get ready for some surprises when you export it to Quake II — for example, walls that stretch farther than they are supposed to; distorted textures and objects; semi-transparent walls that leak (an item not fully contained inside your level is said to “leak”); and items that are positioned incorrectly in the design window, but which don’t show up when the level is exported.

IS PAPER THAT EXPENSIVE?

There may be quick and easy ways to get around all of these problems, but you won’t find them described in the ashy manual. The only thing included in the box was a scrawny booklet outlining the bare-bones basics, such as saving and exporting to Quake II. Thank heaven I had the original DEATHMATCH MAKER’s User’s Guide and Tutorial to help me along. The online help is barely adequate, and the DMM Website is useless.

It is possible to create simplistic, unrealistic-looking levels with DEATHMATCH MAKER 2, but for a program with such lofty aspirations, these half-baked levels are a real letdown. This could have been a cool program. Unfortunately, the glitches, the lack of documentation, and the clumsy interface keep it from rising even to mediocrity.

Price: $39.95
System Requirements: Pentium 90, Windows 95, 16MB RAM, 40MB free hard-drive space, SVGA 256-color monitor; registered copy of Quake II.
3D Support: None.
Multiplayer Support: None.
Designer: Virtus
Distributor: Virtus
Cary, NC
(919) 467-9700
www.deathmatchmaker.com

> APPEAL: Future level lords with lots of patience.
> PROS: It is possible to create simplistic levels.
> CONS: Lack of documentation, clumsy interface, program glitches.

CGW JUNE '96
Tex Murphy: Underachiever

OVERSEE Is One Giant Leap Backward for the Tex Murphy Series

by Scorpio

After playing the surprisingly good Pandora Directive, I really looked forward to the next Tex Murphy game. In particular, I wondered how Access would build on the Pandora foundation. As it turns out, they didn’t. Overseer is actually an updated reprise of the first Murphy game, Mean Streets. So rather than a follow-up to Pandora, we have an old adventure in a slightly new guise.

The game starts with Tex having nightmares, and to get them out of his system he describes his very first case to Chelsea (his current girlfriend) over the trail of a very high tech, and very sinister, conspiracy. To say more would ruin the story; as with most mysteries, a lot of the interest is in watching the plot unfold.

Naturally, there are puzzles to solve, people to interview, and bodies to find along the way to the grand finale. In between, there is the budding romance between Tex and Sylvia, which adds a little extra incentive to Tex’s efforts. All in all, it’s a quite a package for a novice private eye to handle his first time out.

The actual interrogations have been made easier by the inclusion of the notepad. This lists all possible subjects, including items, that Tex can ask about. Once you choose a topic, it’s checked off, so you always know what’s been discussed previously with someone, and what hasn’t.

Going to different locations is a process similar to that in the previous games. As you learn about new areas, they appear on a travel map that slides out from the left side of the screen. Simply click on a destination, then on “go,” and you’re off. If the destination isn’t a person to interview, it’s a place where Tex can snoop around to pick up items and information.

This is where the 3D interface comes into play. The view is from Tex’s perspective, with full 360-degree motion. That includes the ability to stand on tippy-toe, crouch, look up, and look down. Combinations of those actions are usually necessary to thoroughly search an area.

THAT’S ENTERTAINMENT?

Overseer features two types of puzzles: the traditional, object-oriented sort

Price: $44.95
System Requirements:
- Pentium 133, Windows 95
- 16MB RAM, 2MB video RAM, 16-bit sound card
- 4X CD-ROM drive, 35MB hard-drive space. For DVD version: P133 with hardware MPEG-2 or P233 with software MPEG-2 DVD drive.
- 3D Support: None
- Multiplayer Support: None
- Developer/Publisher: Access Software
- Salt Lake City, Utah
- (801) 359-2900
- www.accesssoftware.com
OH, BOY—A PUZZLE! Just what every detective is faced with as he works his case: a jigsaw puzzle!

for getting around obstacles, and the "pure" variety, which range from assembling jigsaw puzzles to decoding secret messages.

Not everyone likes, or is good at, all types of puzzles. Access recognized this in PANDORA, by providing Game mode and Entertainment mode. Both return in OVERSEEER. Entertainment mode allows you to bring up a menu of in-game hints and solutions for all the puzzle situations in the game. It also tells you how to bypass (solve by default) any puzzle you find too difficult or don't want to bother solving.

The downside is that you lose some game points every time you use the menu for hints or bypass a puzzle. However, unless you're a perfectionist, that is a fairly minor penalty; the outcome of the game is in no way affected by recourse to the hints or cheats.

Game mode, as you might expect, is a bit more difficult. The in-game hints and bypasses are turned off. Further, the puzzles all have time limits; if you solve a puzzle before time runs out, you get extra points. In most cases, these "deadlines" are artificial in nature; it makes no difference in game terms how long it takes you to reach the solution.

The downside to Game mode is that OVERSEEER is a linear adventure. There are many points where you can't progress until one or more puzzles have been solved. If you're stumped, you're stuck at that point with nowhere else to go until you've come up with the solution. For that reason—and since this time around, there is virtually no in-game difference between Game and Entertainment modes—I recommend playing the Entertainment version. Points in a game of this type are superfluous, anyway; getting on with the adventure is the important thing. You may be glad Entertainment mode is available, for instance, when playing hide-and-seek with a pair of very nasty security droids.

RED HERRINGS

While OVERSEEER is done in the same stylish manner as PANDORA, it is still something of a disappointment. Anyone familiar with the original MEAN STREETS will find few surprises here; these players will know what's going on even before the game starts.

Of course, for the majority of gamers, this is a new adventure. Regardless, while the story may be fresh for them, the outcome is not in doubt. Tex must prevail, or he wouldn't be sitting there talking to Chelsea. Further, there are no multiple difficult tone-based puzzle. The one clue is completely absurd; there are no written hints of any kind. Anyone with hearing difficulties is thus forced either to get another person's help, or look at the in-game hint system for the bypass.

On the technical side, OVERSEEER is prone to crashing back to the Windows desktop now and then, for no discernable reason. On one occasion only, it locked up totally, forcing me to reboot the system. These crashes happened at different times and locations in the game; there was no way to tell when a crash might occur. Fortunately, the game does keep track of where you were, and on restarting, you can pick up at just about the place where the game crashed. For all that, saving often is still advisable. The FMVs—some of them fairly lengthy—run well for the most part. They are smooth, with no stuttering or jerkiness.

CASE CLOSED

Overall, OVERSEEER is a definite step down from PANDORA DIRECTIVE. With its foregone conclusion, it lacks the replayability of the previous game in the series. While there is a lot to do, there is so much FMV; I often had the feeling that I was watching a movie, with some adventure game parts dropped in as interruptions. Many of the puzzles seem ludicrous in the given situations. We can only hope the next game in the series will pick up and expand on what PANDORA established. In the meantime, OVERSEEER is more for the TEX MURPHY fan than for anyone else.

Star ratings for Scopio-reviewed games are by CGW staff. Scopio disavows numerical ratings for games.

APPEAL: Tex Murphy fans.

PROS: Good interface; nice scaleable gameplay for novices and experienced gamers.

CONS: Too much FMV at the expense of gameplay, no multiple paths; rehashed storyline; lame puzzles; very high system requirements.

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Apocalypse Tao

Interplay's Eschatological Marathon Is Both Frustrating and Inspired

by Johnny L. Wilson

OF LIGHT & DARKNESS is an eclectic conglomeration of myth, rumor, history, travesty, and theology. Its plot is a rich tapestry in which the seductive power of Evil is rendered with a capital "E" and incredibly sophisticated art and acting are used to pull gamers into the unsettling morass of the story. And this story is an incredibly vivid and disturbing tale set against the backdrop of global catastrophe. It is an adventure game in the finest tradition, but it offers a race against the clock to add adrenaline to the familiar mix, an eschatological marathon, if you will, where humanity's destiny is the ultimate prize. Indeed, OL&D is such fresh ambrosia for the palate of starved adventure gamers, that any review must be framed in divine analogy. Thus, let there be criticism!

IN THE BEGINNING

In the beginning, there was artwork and artwork formed on the face of the 3D. And the screen gave forth a surreal presentation of the seven deadly sins from traditional theology, and the game's geography was built from their consequences. And the Chosen One said that it was good.

When I first became aware that Interplay was planning to build an adventure game around the artwork of Gil Bruvel, one of the world's foremost surrealists, I was skeptical. I wondered how such odd depictions of strangely colored landscapes could possibly work in an adventure game. I was afraid that OL&D was going to become just another MISTI clone, for good or evil. Frankly, Bruvel art perfectly sets the stage for this game. It is an unsettling and disturbing as the subject matter itself and often gives you a sense of vertigo not unlike your dance on this cosmic tightrope, a venue where only the ultimate personification of evil, Gar Hob, seems to know the rules.

Yet, the graphics go deeper than Bruvel's artwork. There are notorious villains from all ages in the game, and they are represented by traditional masks from primitive traditions. The use of the masks to depict these apparitions is a master stroke, a sound touch that communicates the eternal nature of the gamer's quest. Further, the most important character in the plot (besides the gamer, of course) is the Angel Gemini. Played to divine perfection by Lolita Davidovich (most famous for her portrayal of stripper Blaze Starr against Paul Newman's Governor Earl Long in 1989's Blaze), she is the prize — the symbol of light which Gar Hob attempts to seduce and you seek to win. Yet, the game doesn't use lame film footage to convey the action. It uses great 3D modeling and face technology to tell the tale, a terrific touch which blends in well with the Bruvel graphics. Also, if you lose the game, the 3D sequences are bizarre and horrifying, with just enough black humor to lighten the mood.

Then, the Chosen One called for actors, and lo, the portrayals were very deep. Could there be a more perfect villain's voice than that of James Woods, the Klun murderer in Ghosts of Mississippi? Is there a more angelic portrayal than that provided by Lolita Davidovich? Even the bit players in the program are not content to toss off a lightweight performance. Some of us might know William Utay's voice only from bit parts in Cobb and Species, but his baliff character in OL&D unloads his lines as brilliantly as a master thespian playing Lucky in Waiting for Godot. And the Chosen One beheld the acting, and lo, it was very good.

LET THERE BE LIGHT

And the Chosen One looked upon the face of the game and desired structure. So, Interplay called upon veteran game designer Cliff Johnson (The Fool's Errand, 3 Into Three) and

Price: $60.00
System Requirements:
P133, 32MB RAM, 4x CD-ROM drive, Windows 95-compliant sound card, Win 95-compliant 1MB video card, mouse.
3D Support: None
Multiplayer Support: None
Developer: Tribal Dreams
Publisher: Interplay Productions
Irvine, CA
(800) 468-3775
www.interplay.com
interactive director David Rorotion (It Came From the Desert, Voyeur) to create a story and game. The game seems deceptively simple to explain. The game takes on the role of the Chosen One. As such, he must navigate the game's malevolent Candaland of sin and disaster, picking up orbs of light as tools to use in liberating the apparitions of ancient and modern villains who appear at various ticks of the cosmic clock. He can also use teleporter devices when time is running short or when his way is blocked by a persistent apparition.

Each tick of the cosmic clock is represented by a particular color, and that color is one of the keys to liberating an apparition. The other keys to liberating the apparitions are finding the correct artifact associated with the phantom and firing the right color of light in the sin room associated with that person's sin. (Warning: hint follows.) For example, there is a cross in the radiation room which is associated with the famous occultist Aleister Crowley. In my game, Crowley was associated with the time zone of the blue star. Listening to the voiceover associated with the cross, and reading the biography of Crowley in the manual, I realized that Crowley's sin was lust. I took the cross into the sin room, selected the cross, and fired off a blue orb. Crowley was sent to the Hall of Mirrors to await future developments. Liberate all of the phantoms on a given level before the clock strikes its final toll, and you move on. Fail, and you are humiliated by the bailiff and Gar Hob.

When the Chosen One reaches the second and third rounds of the struggle, the ante is upped. Not only are there more apparitions to redeem, but there are locks on some of the doorways leading to the sin rooms where the phantoms can be redeemed. These locks are unlocked by finding the right artifacts and using them as keys. At times, this adds to the challenge of the game. At others, it seems unnecessarily tedious.

Finally, at the end of the second and third rounds, the Chosen One must place orbs in the right places in the right order so that Gar Hob will be thwarted and the overall redemption of humanity can progress.

The biographies in the manual add depth and intrigue to chasing down the proper artifacts. They are well written and the combination of historical, mythical, legendary, and fictional characters is just right. Sometimes, as in the case of Cain, the designers composite events like Samson killing a thousand Philistines with the jawbone of an ass with Cain killing his brother, Abel. It may not be the right weapon, but it "feels" right.

Plus, the 3D-modeled dream sequences unravel an intriguing mystery, one step at a time. They aren't too long. They just offer a tantalizing morsel of the mystery and let you move on in your apocalyptic game of "Beat the Clock."

**BUT OF THE TREE...**

"If there can be no good without evil," goes the tagline, "can there be evil without good?" Interplay seems to have proven the tagline in OL&D. With all of its freshness, and all of its rich bounty, OF LIGHT & DARKNESS still has prob-

lems. The documentation is poorly organized. There is no index and some of the instructions are incomplete (perhaps the old design flaw of forcing the gamer to solve the interface?). The interface is inexcessably clumsy. The manual instructs you to right click to open the inventory, but you actually have to right click and hold. While holding the right mouse key down, you have to left mouse-click in order to select. This is silly and sometimes causes you to waste precious time.

Further, whoever designed the interface for the inventory went against all conventions of Windows 95. When you pick up a teleporter device and want to use them to get from place to place, the places look "grayed out" on your inventory screen. So, I played the game twice before I realized that I did have the teleporters in inventory and available for use.

Finally, the game contains far too much running back and forth in order to solve the puzzles. If you didn't like using the shuttle method for solving puzzles in Myst, you won't like it here. The teleporters help some, but not enough. You can feel like an apocalyptic Fed-Ex guy at times.

**JUDGMENT DAY**

OF LIGHT & DARKNESS is a fresh, fascinating, rich, mesmerizing experience. It requires patience, diligence, and frequent restarts to win. It requires forgiveness with regard to its interface. Still, upon completion, the Chosen One looked on all that he had won. And lo, it was very good—but not quite worthy of a C.G. Choice.

**APPEAL:** Fans of puzzle-driven games who don't mind tracking and backtracking; those who crave atmosphere and story in their adventures.

**PROS:** Magnificent graphics; sterling acting performances; rich, bizarre plot elements.

**CONS:** Infuriating interface and too many Fed-Ex-type excursions reduce the enjoyment factor.

**RATED:** 4
Sim Lite

A Fresh Approach That's, Alas, More Game Than Sim

by Denny Atkin

Intense Entertainment has taken a unique approach to flight simulation—they've given us a game in which the goal is to save lives, rather than to take them. SEARCH AND RESCUE puts flyers in the cockpits of a variety of helicopters and sends them on missions to rescue crash survivors, transport accident victims, and locate lost ships.

To pull off rescues, you'll need to make liberal use of the sim's external views. Although there's a simple virtual cockpit, you generally can't see the target of your mission once you're actually in position to drop the rescue hoist.

Some of the missions are fairly challenging, such as one where you must chase a rhino back into the boundaries of a national park. The actual "search" missions generally involve just flying around in a search pattern until you encounter the target and then dropping the rescue winch—not very exciting.

When you do complete a mission, a radio call announces "mission accomplished, over and out" or "mission failed, over and out." That's it. No stats, no briefing showing the amount of time you spent, nothing.

HERC DOWN You'll need to switch to an external view to rescue crash survivors. The game would have benefited from a view from the winch station.

Hard-core sim fans take note, though. SEARCH AND RESCUE is very much a game, not a serious simulation. It reminds me very much of the types of sims I played on my Amiga in the early '90s—scripted missions, small game-worlds with distinct edges, and a wide variety of vehicles that pretty much all fly the same. But, if you don't mind the game's retro feel, there is some interesting stuff here.

CHOPPER BLOCK

There are a variety of helicopters here, and they differ in maximum speed and carrying capacity, but the handling is very similar between choppers. Three difficulty levels are available, ranging from simple arcade-flight to a complex model where you must use rudder pedals and a throttle (collective) to fly. The advanced model is challenging, but it can't compare to the realism of LONGHORN 2 or FLIGHT SIM 98 helicopters.

MAYDAY!

SEARCH AND RESCUE's missions revolve around rescuing people using a winch, dropping objects on a target (such as fire retardant on a forest fire), following an objective while a camcorder shoots footage, or stunt-flying missions.

There's a bit of humor here, as well as the occasional Easter egg—such as UFOs you encounter during a mission to rescue crash survivors in the Bermuda Triangle—but, for the most part, the missions are fairly similar.

IS MONICA ONBOARD? One mission lets you fly the president's chopper away from a terrorist threat. Old-time sim fans may find the instrument panel reminiscent of SUPER HUEY.

Price: $39.95
System Requirements:
Pentium 80, 16MB RAM, Windows 95 or NT 4.0, SVGA, 2X CD-ROM, sound card.
3D Support: None.
Multiplayer Support: None.
Developer: Interactivevision A/S
Publisher: Intense Entertainment
Torrance, MD
(888) 240-6172
www.intense-games.com

SEARCH AND RESCUE's publishers seem to realize that the game is a bit simplistic for today's market. They include a coupon worth $20 toward SEARCH AND RESCUE 2, slated for release around the end of this year. Coast Guard Lt. Commander John Padukiewicz, an HH-65A Dolphin instructor pilot, is at the helm of the sequel. He says the new game will feature only a couple of helicopters, but it will be modeled in great detail, with realistic flight models. Also on tap are 3D-card support and more realistic missions.

Graphics are fairly simple, with repeating textures. While the game supports just about any VESA resolution (800x600 was about as high as I could get while maintaining a playable frame rate), overall, the graphics have a very simple, retro-gaming appearance. Sounds are very basic.

There's definitely some entertainment value here, but SEARCH AND RESCUE's overall feel is just too dated in a world full of dazzling 3D-accelerated games. Too simple for experienced sim flyers, it's primarily of interest to beginners or casual gamers just looking for a fresh approach to sims.

APPEAL: SimCopter fans, beginning gamers.

PROS: Unique, nonviolent take on simulations; wide variety of missions.

CONS: Simplicitic helicopter modeling; dated graphics and sound; missions have limited scope.
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Big-Time Score

Beautiful Graphics and Great Gameplay Combine to Make a Winner

by Dave “Kick Me” Salvator

A lot of Americans look at soccer and ask, “What’s the big deal?” They complain about the lack of scoring, action, and all-out collisions. But for most of the rest of the world, soccer is a way of life. For them, it’s basketball, football, and baseball all rolled up into one.

EA Sports has produced an impressive array of PC sports titles over the last several years, and FIFA ROAD TO WORLD CUP ’98 is yet another proud member of that lineup. The combination of stellar graphics and fast, furious gameplay make FIFA 98 a blast for both single- and multiplayer games.

When you start the game, you can jump into a quick “friendly” game, play an individual country’s league, or plot out an entire FIFA season as you and your favorite national team battle your way toward the World Cup. As with its sibling title, NBA Live ’98, FIFA 98’s controls are more detailed, and require more time to master than last year’s version. In fact, EA recommends a gamepad controller with 10 (yes, 10) buttons to really drive FIFA. The variety of controls becomes much more important as you crank up the difficulty level.

Visually, FIFA 98 is nothing short of stunning, even without 3D acceleration. Adding 3D acceleration cleans up all of the textures and makes the stadium crowd look more convincing. For both day and night games, you’ll see shadows from the players: one by day and four by night (to simulate overhead lights). Adding to the overall effect, EA has implemented Dolby Surround for crowd noise.

GETTIN’ YOUR KICKS

FIFA 98 comes at you with three difficulty levels: amateur, professional, and world-class. On the two higher levels, computer AI defense becomes much more intense with many more slide tackles and reach-ins, and keepers become very tough, making saves against all but the best off-angle shots or crossed headers. Because of the more aggressive defense, you’ll need to be able to execute what are called skill moves: jukes, head-fakes, fancy ball-handling, and jumping (to avoid going down at the feet of a slide-tackler).
LONG CROSS The ball is airborne, and should be ripe for a header when it reaches the receiver.

You’ll also need the more complex controls to handle defensive chores, including reach-ins, slide-tackles, and player switching. And if you’re into brawl-ball, there’s even a key to slide-tackle more aggressively, or throw a punch at some uppity opponent who’s earned it. Whether you get the yellow card (two before ejection) or red card (immediate ejection), depends on how you tweak the referees’ strictness, or you can leave it at its default random setting. One thing is curiously missing. You can come in hard to slide-tackle an opposing player and take him down (or vice-versa), but there’s none of the theatrics so often seen in FIFA matches in which the downed player claps a shrill or knee in hopes of drawing a more severe penalty for his attacker.

FIFA’s AI, when cranky, is pretty sophisticated in setting up offensive plays, such as when it has a wing-man sprint down the sideline and kick a long cross to a second wing-man, who then centers to a third player for the shot-on-goal.

On the amateur setting, AI defense keeps its distance, leaving gaps large enough to drive a truck through. Keepers also can be pulled out of position much more easily, though they’re less aggressive about snatching the ball from a would-be scorer, both on breakaways and corner kicks. As you dial up the AI, the teams do seem to flatten somewhat—defenses become much more aggressive and keepers become much tougher.

But when you do finally punch one in, FIFA 98 not only has immediate instant replay, but also has a stop-time, frame-by-frame instant replay. Using the Free-Cam, you can pan around the scene to

Tips for Americans (And Other Rookies)

Playing so badly that you fear your countrymen have a contract out on you? Try these tips before skipping town:

- If the opposing team is threatening at your end of the field, use the shot-on-goal button (the C button) to clear the ball out of danger.
- Drive a wing-man down a sideline, and lob a cross-pass to center. After you send the pass, hold down the shot-on-goal button (the C button) to have the pass-receiver head the ball into the goal.
- When the ball is in the air after a goal-kick, switch to the nearest man and hold down the A button to have him head the ball to a teammate.

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CHASE! On the amateur setting, the keeper is less likely to charge an oncoming defender, whereas on higher skill settings, the keeper becomes more aggressive.

View the action from all angles. And because FIFA 98 uses a 3D polygonal engine, the effect is a little like being in a scene where time stands still for everyone except you. Admittedly, FIFA 98 isn't the first game to do this (International Soccer '94 on the N64 had it first), but FIFA 98 gets points for a good implementation.

PLAYING THE CHESS BOARD

If you also enjoy playing general manager, you can make adjustments to your favorite team or design a custom squad stacked with your favorite ringer. But you can also edit individual players' aggressiveness (ranging from "calm" to "rutter") and offensive bias. What's more, FIFA has not only included national teams of the world, but also has internal league teams for a number of countries, replete with rosters.

You can pick whom your starters are going to be, as well as decide team formation, wherein you can tweak your three lines, and the individual players in them. A pleasant extra is a single button to reset team settings to default values if you feel you've over-edited and want to start again. Unfortunately, you can't edit the keeper's characteristics under the Team Management screen, which, given the key role that position plays on any team, is a pretty big omission. Under the Player Edit section, you can edit all individual players, including the all-important keeper, dialing their skills up or down to taste.

Nearly all EA games let every sports zealot live out his dreams: to be the line-up of his favorite team at the superstar. But FIFA doesn't let you create a new player per se. Instead, you have to take an existing player (a benchwarmer), and rename him in your own image.

AT THE END OF 90

Despite a few minor lapses, FIFA 98 is the most compelling PC soccer title to date, with great graphics, addictive gameplay, and cool ambient crowd noise. If you're already a devoted "footballer," then pick up a copy and strap on your shin guards. Or if you're just looking to see what the big deal is, then grab a copy and find out.

APPEAL: Soccer nuts and newbies looking to satisfy their World Cup jones.

PROS: Great graphics; fun gameplay; actual rosters; individual country leagues.

CONS: No way to adjust keeper settings in Team Management screen; teams seem to even out somewhat at higher difficulty levels; some clumsy menu navigation.

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Batter Up

It's a Whole New Ballgame With the Arriving 3D Baseball Revolution

by Terry Coleman

Long before EA Sports aspired to Babe Ruth-like dominance, Trip Hawkins and EA shared a vision: to create the best baseball game possible given the existing technology. *Earl Weaver Baseball* was a revelation in 1985. It used a physics-based model, yet still managed to rival statistical-based simulations in its accuracy. *Earl Weaver was equally fun to play in action or coach mode, and the Amiga version in particular was so far ahead of its time that it was years before the game's sound and graphics were surpassed on IBM or 16-bit consoles. The sad thing is, despite more than a decade of technical innovations, no one has come close to capturing the magic of *Earl Weaver*.

This year might finally be different, as PC baseball has discovered 3D in a big way. That means more up close and personal action, more realistically depicted grounders to the shortstop, and some truly visceral slides into third base. Despite the processor overhead associated with 3D, everything should work better than in other sports games, at least in theory: In baseball, you move a lot fewer simulated players around the field at one time than you do in a game like *NBA Live*.

What's bringing this revolution about, finally, is that various 3D accelerator cards are in the hands of a critical mass of gamers. The philosophy among most of the major publishers seems to be that baseball games are mainstream enough to require 3D hardware. At the same time, marketers are always worried about leaving out any potential buyers, so some producers are hedging their bets by offering software solutions for those without 3D acceleration—always a tricky proposition.

An equally tricky exercise, of course, is trying to separate the championship contenders from the pretenders. The following are our scouting reports, based on how each team looked during the PC baseball season's version of spring training. Keep in mind that while these games were in beta as of press time (and therefore, any given feature is subject to change), we've scoured the virtual locker rooms and peeked around the offices of prominent GMs to give you the latest additions and free-agent signings.

**How 3D Are They?**

<table>
<thead>
<tr>
<th>Game</th>
<th>Baseline PC</th>
<th>3Dfx</th>
<th>Power VR</th>
<th>Render</th>
<th>D3D</th>
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<td>yes</td>
<td>no</td>
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</tbody>
</table>

Note: Baseline PC = Minimum PC for a full-featured gaming experience; all others refer to specific hardware support in each game's code.
Hardball 6

As recently as two years ago, HARDBALL was the PC baseball titleholder (HARDBALL 5 reportedly sold over a quarter-million titles on the PC). Despite the recent success of the STAR CONTROL and JACK NICKLAUS lines, it's fair to say that HARDBALL 6 will once again be Accolade's flagship for 1998. The design team took the extra year between HARDBALLS 5 and 6 to develop a new 3D engine, which has some of the best Direct 3D support we've seen. If you have a 3Dfx card, the graphics are simply stunning; you can see the wrinkles as Albert Belle's shirt ripples.

For real baseball lovers, however, HARDBALL 6 offers much more than just pretty pictures. Every aspect of baseball is simulated without compromising the action. General Manager functions rival those of pure stat-based games, as you conduct trades, deal with the expansion draft, and move players to and from the minor leagues.

Unlike HARDBALL 5, you can play through seasons in which the final players' stats actually approach those of their real-life counterparts, and you can manage those players' careers through multiple seasons. Everything from the endurance and durability of players to the tendencies of individual managers is modeled, and you can even hand out MVP awards at the end of the season.

Even hard-core fanatics will note that the fielding model is much improved—possibly the best yet for an action-oriented baseball game. And any fan will thrill to the chance to pit the likes of Willie Mays and Babe Ruth against the best of today's players in a game that is worlds better than last year's AARON vs. RUTH. If Accolade takes the time to finish this one, HARDBALL 6 has the legs to go the distance.

Target Release Date: Q3 '98
Style: Action/Simulation
Developer: Accolade
Publisher: Accolade/EA
Prediction: The one to beat.

High Heat Baseball

Trip Hawkins knows a lot about baseball. He also knows a lot about properly pacing gameplay, which is why a typical game of HIGH HEAT BASEBALL takes less than an hour to complete. In many respects, this is the game that the last TONY LA RUSSA badly wanted to be: a game with a strong emphasis on baseball simulation, but still strongly grounded in a 3D physics-based environment. The heart of High Heat is the classic batter vs. pitcher matchup, where the simple interface allows you to select pitches based on your hurler's real-life abilities. Batters may guess at pitches, but risk swinging wildly if they guess incorrectly.

There are a lot of things to like in High Heat, especially the fast pace of play. Even at this early stage, High Heat handles curve balls better than most baseball games. Fielding seems pretty accurately modeled as well. It can't shake the impression that Trip might have been on the console side too long. For a game that prides itself on simulation to place so much emphasis on a home-run derby makes you wonder if either aspect will be fully developed. The lack of mouse support in a Windows 95 product is sort of strange, too.

The graphics, while 3D, don't have the eye-candy quality of HARDBALL 6 or TRIPLE PLAY 99. The GM functions, at least for now, don't quite match up to those of HARDBALL 6 (though they are better than everything else). At press time, 3DO still hasn't committed to LAN or Internet play. And you can't put Ted Williams in to pinch hit....

Target Release Date: Q2 '98
Style: Action/Simulation
Developer: Team...355
Publisher: 3DO
Prediction: Could finish first, with Tony La Russa fans.

Microsoft 3D Baseball

Just so there's no misunderstanding: 3D BASEBALL is the exact opposite of Microsoft's hardly lamented strategy basketball game of a year ago. If arcade action is what you want, you can do athletic moves with the right button combination one minute, and blast the ball out of the park the next. Despite all the claims of how difficult the real physics would make this, I had little trouble connecting with the ball on a regular basis—and I doubt any gamer used to arcade sports games would, either.

3D BASEBALL's main claim to fame is its splendid 3D graphical look, which is
We believe in soaking up the optimism of opening day.
We believe in savoring the rare beauty of a no-hitter.
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We believe in dancing to chin music.
We believe in High Heat Baseball™, a game that captures the intensity, excitement and spirit of the game we love.

We're the Team .366™ studio, a squad of passionate game craftsmen and diehard baseball fanatics who've dedicated the last two years to creating a baseball experience that will, quite simply, redefine the genre.


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Become a believer.
Unparalleled Baseball AI: A new industry standard has been set with our TruPlay™ basebal AI. You'll notice the difference in true-to-life base running, fielding and managing.

Fastest Gameplay Ever: Streamlined design lets you blaze through a complete game in 30 minutes. Fast frame rates, low load times and ship-thru shortcuts mean no more waiting around.

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Pro-style Interface: Practice the real art of pitching and hitting. No need for gimmicks, you have all the tools to think and react like a baseball pro using the real tactics of Major League Players.
so detailed that you can actually recognize your favorite players. Though the game offers force-feedback support and 3D sound, it’s probably going to take more than that for Microsoft to make much of a dent in an arcade market dominated by Triple Play and Hardball.

**Target Release Date:** Q2 ’98

**Style:** Arcade

**Developer:** WizBengt Software

**Publisher:** Acclaim/EA

**Prediction:** It will be hard for this expansion team to win in its first year.

**Triple Play 99**

When EA Sports goes for an in-the-park homer, they don’t usually expect to be thrown out at the plate. But for all its dominance on consoles, the only year Triple Play has held the PC crown was during Hardball’s sabbatical last year, and you have to think the designers are looking over their collective shoulder.

Why? Because they’ve added some minimal GM functions to the game, including career play with a strange kind of “point system” salary cap. Plus, the only way to play over the Internet is in manager mode—for an arcade game? And, as always, baseball purists beware: Joe Schmoe can hit .500, with 60 home runs—provided your trigger finger stays fresh.

If it’s arcade action you came for, Triple Play 99 looks better in every respect than in previous years. EA’s Inverse Kinematics technology lets a batter’s head move independently of his body when tracking a pitch over the plate, a nice touch. The fatigue and momentum models have been overhauled, and it’s now your decision as to whether to leave your tiring star pitcher in for a complete game, or pull him for your ace closer.

I still don’t know why a game that tracks 1,300 stats per player can’t be more realistic, but at least you can now toggle the arcade functions (such as adjusting the pitch after it’s thrown). And if you can put your thoughts of baseball purity aside, the Home Run Derby is a lot of fun—EA certainly knows its audience.

**Target Release Date:** Q2 ’98

**Style:** Arcade

**Developer:** EA Sports

**Publisher:** EA

**Prediction:** Better than last year, but can it catch Hardball 6?

---

**In the Bullpen**

Interplay has been aggressive with its VR Baseball line since its inception. The first version, released late last year, was one of the first sports products to support 3D acceleration. With 3D graphics finding their way into all the competitor’s bullpens this season, however, team owner Brian Fargo knew he needed some new blood to build a championship contender. So, he signed Diamond Mind Baseball to be the underlying statistical engine for VR Baseball 99. If you missed our review of Diamond Mind last year, suffice it to say that anyone who really understands baseball will be surprised at how accurately the game engine simulates the nuances of America’s pastime.

Then there’s the Sierra saga. FRONT PAGE SPORTS: BASEBALL has been a perennial underachiever, never coming within a whiff of the PC sports crown so long dominated by its FOODBALL PRO cousins. Now, to coincide with their new “Sierra Sports” branding, the company is completely ditching the FPS name and arcade engine and starting from scratch in BASEBALL Pro 99. Arcade play will now feature full-3D polygonal players and 3D models of every Major League ballpark. The underlying AI is based on the FPS games, but is being enhanced to consider situational fielding and base-running logic. Sierra is also promising to beef up the game’s multiplayer support, with head-to-head, modem, LAN, and Internet play—as well as the ability to download Major League stats into your game to keep the numbers up-to-date. It’s definitely a rebuilding year for Sierra, but BASEBALL Pro 99 is definitely worth keeping an eye on—they just might surprise everyone come playoff time. —Terry Coleman and Jeff Green.

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**Gameplay Features and Support**

<table>
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<tr>
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<th>LAN</th>
<th>Internet</th>
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<tr>
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</tr>
</tbody>
</table>

**Note:** Gamepad and force feedback entries refer to specific support for that peripheral in each game's code.

* = Only through Internet Gaming Zone  ** = Stat play only, not action
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Superb graphics with accurate dual sight down to the lay of the rough.

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BASEBALL MOGUL STRATEGY

I, Steinbrenner

How to Craft Your Own Dream Team in BASEBALL MOGUL

by Dennis McCauley

While most baseball sims stress arcade action or dugout decisions, Infinite Monkey's BASEBALL MOGUL elevates sports gamers to the owner's suite. Here, would-be George Steinbrenners make the high-level choices that will either build a dynasty or lead their club into mediocrity—perhaps even bankruptcy.

However, decoding the intricate relationships between ticket sales, roster moves, city population, and even the price that the beer man charges for a cold one can be as difficult as hitting a Curt Schilling fastball. Don't fret too much: there's no need to hold a fire sale for your ball club just yet. CGW, the gaming magazine that first recognized BASEBALL Mogul as a brilliant diamond-in-the-rough, is back with strategies to help you transform your personal Bad News Bears into a digital redux of the '27 Yankees.

Don't Price Yourself Out of the Market

Having bought your way into baseball's ownership circle, it's time to make the hard business decisions that will determine the financial future of your team. While setting ticket and hot dog prices may seem less than glamorous, their effect on attendance will have a serious impact on your ability to sign important free agents or keep your own key players when their contracts expire. But how do you determine the optimal ticket price? The simple rule-of-thumb is to charge roughly .55 percent of per capita income. In the Big Apple, for example, with its per capita income of $27,000, this translates to charging $13.50 for admission. Charge more, and you'll lose fans to other sports entertainment options. Charge less, and you'll suffer unrealized ticket income.

Computing Your Formula for Success:

(Per Capita Income) X .0055 = Your Optimal Ticket Price

Now that you've maximized the number of fannies in the seats, you'll want to ensure that your loyal followers make like Coneheads and consume mass quantities of beer, hot dogs, and ice cream during the games. In most cities with an average income ($22,750) and average ticket price ($11.00), beer should sell for $2.40 (22 percent of ticket price), wiener for $1.80 (16 percent), and cremas for $1.30 (12 percent), respectively. (What a gastronomic combination?) In higher-priced towns like New York, you can get away with a proportionate increase in concession prices, so jack those beer prices up to $3.00, and don't apologize for it. If you stay too much above the suggested prices, however, your fan loyalty will suffer a small hit, which, in turn, adversely affects both attendance and local TV revenue.

Speaking of the boob tube, TV revenue represents another of those critical dollars-and-sense decisions that will put your managerial instincts to the test in Mogul. With a complete TV blackout being counterproductive in terms of fan loyalty, you have to ultimately choose between pay-per-view vs. free local coverage. Pay TV is the best long-term solution, particularly in larger markets, as it generates substantial income that can then be used to sign big-ticket free agents and upgrade your club's infrastructure. Whatever you do, pick one television strategy and stick with it, since there is a foot loyalty penalty every time you switch from free coverage to pay-per-view.

Defense Wins Championships

BASEBALL MOGUL's underlying engine places a premium on defensive play, so arrange to have a back-up at each position in the event of an injury to a starter. In addition to a backup catcher, be sure to have a handy an IF, an OF, a player with a high slugging percentage for pinch hitting, and a player with speed for pinch running.

On defense, it's important to follow that old diamond cliché, and be strong up the middle. When you're wheeling and dealing, keep in mind that championship caliber teams have players with good range at 2B, SS, and CF. When evaluating scouting reports, look beyond the offensive ratings for things like range and throwing ability.
Show Me the Money

Player personnel decisions, however, are the heart and soul of Mogul. As in real baseball, you must base your roster moves on a combination of past performance (stats) and future expectations (scouting reports), and manage to keep everything within budget. The game simulation aspect of Mogul is based on recent years' stats, career averages, maturation, injuries, and stadium effects.

For players with little statistical history, however, evaluations can be difficult, especially if you've been stingy with your scouting staff. The accuracy of your scouts' reports is in direct relation to the money you've invested in them. Very poor scouts will routinely rate stiffs as future Hall-of-Famers, all the while urging you to release quality players. The best advice here is to pump money into your scouting operation until it is in the top five in the majors. Elite scouts such as these should never be off by more than a grade step in player evaluation categories. The overall best staff will issue perfect evaluations, but a club needs to maintain the top position for at least one season before 100 percent accuracy is attained.

The bottom line is that a first-rate group of scouts allow you to trust the letter grades more than past statistical records when you evaluate talent. Don't forget to check your scouts' ranking every season, as your opponents will be upgrading their operations from time to time. Remember that the accuracy of your scouting department is based on the entire year's expenditures, so don't expect to see results of your increased investment immediately.

Play Me or Delete Me

Ironically, the challenges of the finances and personnel decisions tend to make the season itself something of an anti-climax. However, even if you've made the right administrative moves in the off-season, there are still a few key decisions that can make or break your pennant race.

Understand that in Mogul, baseball is strictly a nine-man game. Bench players tend to get very little use, so don't have a lot of operating capital sitting on the pine. Focus your attention—and your money—on your starting lineup, your five-man pitching rotation, and your closer. The only exception is backup catcher, a position that tends to get a fair amount of playing time. Otherwise, stock your bench with younger, cheaper players, and unload your veteran second-stringers for cash or prospects.

There's only a minimal penalty for rushing players to the big leagues—an anomaly that will almost certainly be addressed in future editions. A young player will continue to develop whether he plays a full season in the minors, or warms the big club's bench. This means that you can stock your bench with low-paid rookies without significantly impacting their development.

Good pitchers with high endurance ratings should be ticketed for the starting rotation. In the bullpen, your best arm without an endurance grade should be in the first position as closer. Look for power pitchers with high strikeout-numbers. The second and third slots in the bullpen should go to the next best low-endurance pitchers. The fourth and sixth spots will be little used, so bury your weakest hurlers there. The fifth spot is reserved for your spot starter, so plug in a decent pitcher with a C+ or better endurance factor.

Liar, Liar, Pants on Fire

Along with free agents and the farm system, trading is one of the three pillars of team building in Mogul. Be sure to use the game's powerful "Find Players" utility to track down the specific talent you need to complete your team. Other GMs will propose trades to you several times during the course of a season. Evaluate these carefully, as they are generally one-sided in your opponent's favor. Your trading decisions will vary with both your seasonal and long-term strategies. If
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Let's Make a Deal

Before you propose a deal, make sure it's one you really want. Clicking the "Just Kidding" button reduces your credibility with the other GMs. A few too many such offenses, and your colleagues won't deal with you unless you sweeten the pot with a million dollars or more.

There's one trick that your fellow GMs won't catch onto, however: It's possible to exploit a loophole in the game's AI that lets you sign a big-name free agent, and then immediately turn around and trade him for several good players.

you're in the thick of a pennant race, you may be willing to overpay for that one vital cog that completes your roster. On the other hand, if you're rebuilding, it's often worthwhile to unload an older, high-salaried veteran for as many young up-and-comers as you can coax out of your opposite number.

Beware, though. The trade AI in Mogul is fairly impressive. Don't expect opposing GMs to acquiesce to lame proposals. Players at very high-salary levels can be especially difficult to move. If you're intent on unloading a mega-bucks player, but are having a hard time striking a deal, try including another quality player of moderate salary in the package. This will often overcome the resistance.

Players suffer injuries in Mogul, and these can have a lasting impact on performance. The rule of thumb is, the longer the injury, the more likely it is to have a permanent effect. Check out the newspaper report on your player when he is injured. This will give you a clue as to the nature of the injury. Different injuries affect different parts of a player's game. Arm and hand injuries detract from batting, throwing, and pitching, while leg and foot injuries lessen base-path speed and fielding range. Head and back injuries tend to speed their ill effects across a player's entire skills package. Your scouts can help you gauge the effects of a player injury, thus clarifying your future roster moves. For example, if your career .330 hitter has his contact rating suddenly drop from A to C following a wrist injury, you can count on his production tailing off when he returns to the lineup. In all likelihood, he will never be as good a hitter again.

A Plan for All Seasons

Okay, you've made your trades, signed your free agents, and decided which rookies to promote from AAA. Your starting lineup is set, your pitching rotation looks steady, and your bullpen crew stands ready to put out the fires. In other words, you're ready for league play. Mogul allows you to simulate the season in increments from one day to the entire 162-game schedule. Your choice here depends upon your style of play. Monthly play is optimal, since it allows you a reasonable chance to periodically evaluate roster moves, and affords you an opportunity to deal with the occasional long-term injury. Anything longer (half or full season) serves no real purpose, while shorter increments can result in micromanaging, and offer very little benefit at a cost of greatly increased playing time. Whatever your choice, remember that Mogul is a multi-year sim. Your decisions can affect both today's pennant race and the future of your team.
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STRATEGY AND TIPS

NASCAR Grand Nationals

How to Negotiate Those Treacherous Ovals

by Gordon Goble

The dozen new Grand National Series (GNS) tracks from Papyrus for NASCAR Racing 2 nearly doubled the number of tracks included with the original title. And while it's true that not less than 10 of the 12 GNS tracks are ovals or derivatives thereof, anyone who's serious about racing will tell you that each is a completely unique driving experience. Just try taking a California setup to Hickory, and watch as Mr. Tire heads you straight for Mr. Wall in one big hurry.

The purpose of this article is to help you run smooth, clean races on those challenging GNS ovals. Everything that follows presumes that: the opposition strength is pegged at 100 percent (substantially more challenging than the default 97 percent); realistic damage is on; the field is full; and race distances are set through at least one pit stop.

You won't come away with a magical solution to all that hinders your quest for a championship—even Papyrus' GNS Primary Test Driver Tony Johns readily admits that there is no magic cheat key—but we will explore what it takes to get competitive with the lead pack. The rest is up to you.

Racing School

Most of the top GNS drivers spend as much time behind the wheel testing as racing. So it's in testing that you want to get the car going as fast as possible, at the same time piecing together a setup that's not too wild. After all, when you're racing for real, there's nothing worse than sliding all over the place in traffic. You also don't want to see those tires burning up halfway to a fuel stop, so getting the right setup is a tricky procedure, to say the least.

In the cockpit, there's no shortage of data to monitor. Hit the “S” key to watch your speed at four critical junctures: the end of each straightaway and the apex of each turn. Remember that the speed you carry through the slowest point in the turns has a big effect on your speed all the way down (and at the end of) the following straightaway. And learn how over-steering is depicted vs. under-steering; if you aren't careful, you'll end up making adjustments the wrong way.

Hit the “F4” key to keep an eye on your tire temperatures, and prepare to make adjustments should they not be equal across the inside, middle, and outside of each tire. I've never encountered a durable setup that didn't have perfectly balanced temps all the way around the course. And finally, check the oil pressure light at the end of each straightaway. If it regularly starts flashing three-quarters of the way down the straightaway, it's time to bump that top gear up until that lamp illuminates just before you turn in.
Obviously, you’ll want to wait a few laps for the tires to warm up (at least two laps on a large oval and a couple more than that on a short one) before getting in the groove. What’s the right groove for you? Well, though the skid marks are a good indication of the correct line, generally, I’d recommend hitting a slightly later and lengthier apex—one that carries you a bit lower on the track, perhaps to the point that one wheel hangs into the apron. Be smooth and consistent and keep your entry speed slow, mid-section speed slower, and exit speed full-throttle.

When racing, don’t undervalue the spotter. He can be a bit late, but the spotter is always correct, and he can stop you from cutting up or down into that car that sits just off your door. Keep a good eye on your rear view mirror as well. The car beside you must disappear completely from the right or left “side” views to be considered out of the way, and this often happens before the spotter has a chance to tell you about it.

Try racing without qualifying; nothing will teach you about traffic like winding your way through a full field. And don’t fret if you just can’t seem to catch the front of the pack. Papyrus cars simply don’t have the smarts to deal with back markers like you do, so be confident that you’ll close that gap when slow moving traffic comes back into play.

**Texas Race**

**Best Tire & Shocks Setup**

<table>
<thead>
<tr>
<th>Tire Pressure</th>
<th>Left Front</th>
<th>Left Rear</th>
<th>Right Front</th>
<th>Right Rear</th>
</tr>
</thead>
<tbody>
<tr>
<td>40psi</td>
<td>52psi</td>
<td>52psi</td>
<td>52psi</td>
<td>50psi</td>
</tr>
<tr>
<td>Tire Camber</td>
<td>+0.60</td>
<td>N/A</td>
<td>N/A</td>
<td>-2.70</td>
</tr>
<tr>
<td>Shocks</td>
<td>100%</td>
<td>85%</td>
<td>70%</td>
<td>59%</td>
</tr>
</tbody>
</table>

**Jack Settings**

<table>
<thead>
<tr>
<th>Position</th>
<th>Weight</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear</td>
<td>1710 lbs</td>
<td>48.7%</td>
</tr>
<tr>
<td>Left</td>
<td>1900 lbs</td>
<td>51.2%</td>
</tr>
<tr>
<td>Cross</td>
<td>5 lbs</td>
<td>49.7%</td>
</tr>
</tbody>
</table>

When you’re new to a track, hit the Chase View key (F10) to fully understand how much room you do have out there, and always grip the wheel lightly—it’s surprising what a soft, subtle touch can do for such a snarling beast. In a long race, take it easy through the turns to keep that right front tire cool, and draft as much as humanly possible, because there’s no way these cars could zip around here as fast as they do without a little wind-resistance assistance. And remember, though the paint schemes may be different, the mechanics and physics modeling of a GNS car is exactly the same as that of a NASCAR Cup car (at least in this game).

Last, but not least, a fast, smooth frame-rate is essential for good results. Rather than dropping the resolution, I’d suggest switching off Clouds, Trees, People, Infield, and Grandstand, in that order. If that doesn’t do the trick, knock off Grass and Asphalt for a huge performance boost. Do not turn Billboards off, as they are essential reference points. The same goes for Skid Marks, because they often point the way to the best line.

**Burnin’ Rubber in Texas**

To win at Texas, you need a solid setup that’s no more difficult to control than the prepackaged Texas Ace, but with an extra punch that should have you screaming toward the end of each straightaway. My suggestions (see the sidebar also save rubber if you drive compassionately, thereby allowing you
The science of drafting: The NAPA car has been getting closer all the way down the front straighthaway, and is just about to become the victim of a perfectly executed slingshot.

Like most ovals, Texas is a rhythmical thing that rewards a smooth approach. With the tires nicely warmed and fuel load just dropping from the full mark, you should find the speedometer approaching 190mph nearing the end of the front straighthaway. I recommend letting off the accelerator and turning in right exactly at the skid marks, then using a slow easy motion to bring it down to a late apex. If you’ve hit the apex about a half-second before the first billboard passes by on your right hand side, things are going well.

Then hold it down there, with just enough throttle to keep the speed in the 169–170mph range (this figure and all figures here will of course change with the condition of your car). Ideally, you’ve set it up so that the wheel should not have to be moved at all after the billboards have passed by. Try to keep your left-side tires up against the edge of the apron all the way through the turn’s latter half before sweeping onto the back straighthaway.

Coming into Turn 3, prepare to turn in just before the skid marks, not quite as deep as you did for Turn 1. Whatever you do, don’t go past those marks or your exit speed will suffer mightily.

Otherwise, deal with this section in the same manner as Turns 1 and 2 before exiting onto the front straighthaway. By the way, those two mid-straight doglegs are surprisingly effective passing zones with surprisingly unslippery grass when you get two wheels up on it. When racing at Texas, seek out and use the draft. There’s really only one line and you’d better be there.

Take to the inside for the doglegs along the Texas front straighthaway. Here, even with two wheels on the grass, your car should stay surprisingly tight and ready for a pass.

to keep fast over the long haul.

At Texas, everyone wants to go real low, and the pack can keep things pretty clogged up. So you need machinery that’ll let you catch a draft and build enough momentum to slip aggressively under your peers going into the turns—they’ll back off if you’ve got their door covered. At Texas, if you take the high line, you will be hung out to dry.

Texas Race
Optimal Gear Ratio

<table>
<thead>
<tr>
<th>Gear</th>
<th>Ratio</th>
<th>Gear</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>9.80</td>
<td>3rd</td>
<td>4.50</td>
</tr>
<tr>
<td>2nd</td>
<td>6.90</td>
<td>4th</td>
<td>3.60</td>
</tr>
</tbody>
</table>

Other Adjustments

| Steering Lock | 13 degrees |
| Rear Spoiler  | 52 degrees  |

186 mph

183 mph
Sunny, Sizzling California

Long and wide, California Speedway is just the tonic for anyone who prefers a loose, wild ride. It won’t quite get you airborne, but it will get you close.

My suggested setup (see sidebar) is designed not only for those high straightaway speeds, but also to keep you glued to the pavement as you slash through those enormous turns. You can experiment with a lower spoiler, but the key here is definitely speed through the corners.

California has three very visible and distinct lanes, and they can be used as guidelines around the course. As is typical of all ovals, you’ll want to keep high through the straightaway, then swing in for the turns. Of course everyone else is doing the same thing, so it’s nice that this track has a surprisingly accommodating high-line through the turns, too.

Fortunately, this car will let you sweep up and past one (and sometimes two) car on the outside before slotting back in to the train. This is one of the few tracks in all of NASCAR Racing where I’d even recommend such a move, but here it can be surprisingly successful.

Additionally, Papyrus NASCAR cars are just plain easier to bully past when approached from the outside. It would have to be considered a minor program fault, but many is the time my driver’s side has seemingly “merged” through the right side of an opponent’s car, with no damage or momentum degradation. Lower is faster though, with most California passes made as you’re exiting the turns, so go high only when necessary.

At California, more than anywhere else, don’t accelerate too early on the exits because backing off regularly for an upcoming wall will not only kill your tires but will keep you forever mired back in the pack. On this track, with tires warmed and fuel slightly depleted, look for a low of 167mph through the turns, a high of 195mph down the back straightaway and 198mph on the front. Brake only when presented with a sudden obstacle, and don’t forget to take it easy in the turns to save those tires.

---

California Race

Best Tire and Shocks Setup

<table>
<thead>
<tr>
<th></th>
<th>Left Front</th>
<th>Left Rear</th>
<th>Right Rear</th>
<th>Right Front</th>
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</thead>
<tbody>
<tr>
<td>Tire Pressure</td>
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<td>51psi</td>
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<td>49psi</td>
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<tr>
<td>Tire Cambre</td>
<td>-0.20</td>
<td>N/A</td>
<td>N/A</td>
<td>-2.50</td>
</tr>
<tr>
<td>Shocks</td>
<td>100%</td>
<td>100%</td>
<td>95%</td>
<td>70%</td>
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</table>

Optimal Gear Ratio

<table>
<thead>
<tr>
<th>Gear</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>9.80</td>
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<tr>
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<td>7.00</td>
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<table>
<thead>
<tr>
<th>Gear</th>
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<tbody>
<tr>
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<td>4th</td>
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Jack Settings

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<tr>
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<tbody>
<tr>
<td>Rear</td>
<td>1855 lbs</td>
<td>53</td>
</tr>
<tr>
<td>Left</td>
<td>1800 lbs</td>
<td>54.2</td>
</tr>
<tr>
<td>Cross</td>
<td>-10 lbs</td>
<td>49.7</td>
</tr>
</tbody>
</table>

Other Adjustments

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Steering Lock</td>
<td>14 degrees</td>
</tr>
<tr>
<td>Rear Spoiler</td>
<td>64 degrees</td>
</tr>
</tbody>
</table>
Wild World of Sports

Sports Games off the Beaten Base Path

by Robert Coffey

Somewhere in the world of sports, there is a place without big TV-money and multimillionaire athletes, a place where there is nary a strategically placed Nike swoosh. It's a place where the seemingly ubiquitous baseball, basketball, football, and hockey are non-entities. And guess what? They make computer versions of these sports — although in some cases, they'd have been better off leaving well enough alone. Here are our picks of the best, the worst, and the simply unfathomable in the wild, wild world of acquired-taste computer sports games.

Trophy Rivers

Sierra's TROPHY RIVERS ends up providing a great deal of fun. Yeah, I know, you're not going to see a trout on When Animals Attack, but at least fish fight back. In TROPHY RIVERS, the fish fight back a lot.

I was happily surprised at how engrossing the struggles were between angler and fish, at times taking on satisfyingly epic proportions. The mouse-driven interface is easy to learn, yet doesn't shortchange challenge, with fly-casting becoming a delicate art at higher skill levels. In order to make sure that really big fish don't become 'the one that got away,' you will have to make the right selections from a slew of rods, spinners, flies, and more.

Owners of force-feedback joysticks are in for a special treat — with all that jerking and pulling you'll wonder if there's something other than a gameport at the end of your joystick. Gamers with reservations about killing even virtual fish, take heart — the game is strictly catch and release. To top it off, TROPHY RIVERS supports modem, network, and Internet play, letting you compete against friends in custom-designed tournaments.

APPEAL: Fishing enthusiasts and newcomers alike.
PROS: Plenty of challenge; great force-feedback support; lots of options.
CONS: Must download a patch to get force-feedback.

Price: $49.95 Contact: Sierra Online, (800) 757-7707 www.sierra.com

Bowling, the Rodney Dangerfield of sports, gets no respect. With its inherent image problem, making a bowling game that's both engaging and true to the sport would seem difficult, at best. So it should come as no surprise that ALLEY 19 and TEN PIN ALLEY (see review next page) both live down to expectations, albeit in different ways.

With its kitschy look and '50s-style music, ALLEY 19 is like one of those theme restaurants that specialize in neon novelty drinks, costumed waitresses, and 100 different ways to embarrass you on your birthday. But no matter how many unemployed actors sing the menu to you, the food still stinks; and ALLEY 19 is the same way. In spite of its relentless attitude, the gameplay just isn't there. You don't bowl as much as steer the ball, tracking out a path on the lane with your mouse. Sure, it's easy — too easy. You'll be rolling turkeys (three strikes in a row) by your second game. Unfortunately, you'll be treated to a chorus line of turkeys cum Rockettes for your efforts. What little charm it has, this game quickly loses.

APPEAL: Gamers looking for a quick, unrealistic bowling fix.
PROS: Easy interface; decent music; network play; dancing bowlers.
CONS: Too easy; relentless attitude reminiscent of Richard Simmons on a caffeine binge.

Price: $39.95 Contact: Starplay Productions, (800) 203-2503 www.starplay.com
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Backyard Baseball

Remember those pick-up baseball games of your youth? Humongous Entertainment does, and its BACKYARD BASEBALL aims to move those games from vacant lots and blacktop playgrounds to your PC. BACKYARD BASEBALL is targeted for kids aged 5-10, and serves up gameplay that’s more arcade than simulation. Considering that this game features a blazing fastball that actually catches fire, it isn’t the game to introduce your child to the nuances of baseball. Teams are formed by selecting from a pool of about 30 multicultural Little League players, each with individual strengths and weaknesses. Teams must be chosen carefully, as some siblings only shine when playing together or on opposing teams.

There are a few pitfalls, chiefly a tendency for the kids to drop and throw away the ball even with the error option turned off: Three frustrating, uncharged errors on one play isn’t uncommon. There’s no paper manual, and older children may find the game’s pace unpleasantly slow. Still, BACKYARD BASEBALL is fun enough for a younger kids’ game, which to be fair, is what it’s designed to be.

APPEAL: Younger kids with an interest in baseball.
PROS: Light-hearted approach; easy to learn; lots of personality.
CONS: Lots of fielding errors; too slow for older kids; doesn’t really teach baseball.

Price: $39.95 • Contact: Humongous Entertainment, (800) 499-8386 • www.humongous.com

Ten Pin Alley

TEN PIN ALLEY takes a different tack than ALLEY 19. Trying hard to be a simulation, TEN PIN lets you customize such details as your ball’s weight, surface material, and appearance. The multiplier options include leagues and tournaments—a must for serious bowling competition.

Instead of aiming your mouse, TEN PIN ALLEY uses a bowling meter similar to the swing meters found in golf games. Three clicks set ball spin, power, and your release point. It’s hard to bowl accurately, and the meter’s insistence on imparting some degree of hook means you can’t roll the ball straight. So any right-hander trying to pick up a spare by knocking down pins on the far right of the lane will be frustrated as he watches the ball curve away for a total miss. And, to make things worse, the character graphics are really jagged. For the only real fun in this game, instead of clicking for a release point, try watching your character fling his ball backwards over his head.

APPEAL: Gamers looking for a slightly more serious bowling experience.
PROS: Multiplayer options; you can hurt the ball over your head.
CONS: Can’t bowl in a straight line; jagged character graphics, like being locked into an endless screening of The Postman.

Price: $29.95 • Contact: ASC Games, (203) 655-0032 • www.ascgames.com

Virtual Snooker

While it’s not exactly a bad game, VIRTUAL SNOOKER suffers from limitations that are made all the more obvious when Snooker is compared to the stellar Virtual Pool 2 (see review next page). First off, there’s just the one game—snooker—and while it’s a fine game, it doesn’t offer any variety in play.

VIRTUAL SNOOKER’s engine is a couple years old now, and its DOS-clunkiness really shows. Only a handful of aged graphics—cards are supported, forcing owners of more recent cards to go through a tedious trial-and-error hunt to find something compatible on the game’s limited list. Failure forces you to use the 320x240 VGA default, resulting in the ultimate in blocky graphics—finesse shots are effectively eliminated by balls that look more like Lego stacks than spheres. The game’s sound is barely adequate, and the Instructionals videos aren’t particularly interesting, either. Unless you’re a rabid snooker fan, pass this one by.

APPEAL: Die-hard snooker fanatics.
PROS: Only PC snooker game in town.
CONS: Too little variety; aging engine; dull instructional videos.

Price: $19.95 • Contact: Interplay Productions, (714) 955-9592 • www.interplay.com
Cricket 97: Ashes Tour Edition

There's no more genteel a sport than cricket, and Cricket 97: Ashes Tour Edition does a solid job of recreating that experience. The focus is on the timeless duel between bowler (pitcher) and batsman (hitter). There's no strike zone in cricket, so you'll swing away at everything, using a simple interface to choose from 18 types of swings. Bowlers aren't shortchanged in options either, with about as many pitches to choose from, including the dreaded leg cutter. Fielding is mostly automatic, with your only responsibility in throwing to the proper wicket. The unique ambiance of this very civilized game is perfectly captured by the droll commentary of legendary player Richie Benaud and the hearty huzzahs that greet stellar plays.

Cricket isn't too complicated. However, the game noticeably lacks any explanation of the rules, so you'll be left in the dark on terms like "overs." Graphics are another drawback, with players jaggedly rendered—even in hi-res mode—and it would have been nice to have more than just eight teams included with the game. Still, if you're interested in Cricket, this is a great introduction to the sport.

**Appeal:** Cricket fans and those intrigued by the sport.

**Pros:** Good recreation of bowler/batsman confrontation; entertaining commentary; elegant controls; real cricket ambiance.

**Cons:** Dated graphics; lack of rules and tips may confuse newcomers; only eight teams.

**Price:** $34.95 • **Contact:** Electronic Arts, (800) 245-4525 • www.ea.com

Virtual Pool 2

For less physically demanding sports competition, check out Virtual Pool 2. The very definition of sneaky-addictive, Virtual Pool 2 will have you chalk- ing cues late into the night. Virtual Pool 2 improves upon the original version with over 50 features, including five new games, adjustable table characteristics, and the ability to jump balls. Instructional videos demonstrate all aspects of play (including trick shots) then set up the table for immediate practice, all the better for preparing to face the 128 computer opponents. Of course, you can also trounce a friend via hotseat, modem, Internet, or network play.

The interface is simple, and cue action faithfully follows even the most delicate back and forth movement of your mouse. Hotkeys let you set ball English and cue angle, and a handy tracking feature can be toggled to show color-coded ball paths for every potential shot. For once, the box copy bragadocio isn't hollow: Pool players of all abilities can learn from this game. The game looks fantastic, with smooth, true-to-life game physics, rich colors, and beautiful light sourcing. Virtual Pool players will be glad to know that there's 3D support this time around (with a Pentium II, it looks great even without it). While the 3D support and Pentium II optimization can be finicky, those are the only drawbacks in an otherwise fine game.

**Appeal:** Pool players of all levels.

**Pros:** Beautiful to look at, a pleasure to play; instructional videos for basic play and trick shots are actually helpful; variety of games and play options.

**Cons:** Finicky 3D-support and Pentium II optimization may cause crashes during setup.

**Price:** $39.95 • **Contact:** Interplay Productions, (800) 999-GAME • www.interplay.com

International Rugby League

If cricket is the European equivalent of baseball, then rugby is Euro-football. Fast, tough, and hard-hitting, rugby isn't a game for wimps. Unfortunately, trying to play International Rugby League (IRL) can be equally brutal.

Supposedly a Windows 95 product, IRL wouldn't run on the three different Win-95 systems I tried. Giving up, I ran it in DOS. While it was fairly smooth and looked okay—with small bitmapped players charging up and down the field, knocking the hell out of each other—the controls were mushy and very unresponsive. While IRL offers lots of different play modes, you can't adjust the difficulty. Throw in the bad controls, and you get a steep learning curve, a terribly lopsided score, and a wholly unsatisfying gaming experience. Americans will appreciate the manual's solid job in explaining rugby, but the game is unpleasant enough to chase even the most die-hard rugby fans away.

**Appeal:** Only for obsessed rugby fans.

**Pros:** The manual helps to explain rugby.

**Cons:** Won't run in Windows 95; lousy controls; frustrating gameplay.

**Price:** $34.95 • **Contact:** Electronic Arts, (800) 245-4525 • www.ea.com
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Creator: DAIKATANA

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Babbage’s

By any means necessary
www.madcatz.com
<table>
<thead>
<tr>
<th>GAME</th>
<th>PUBLISHER</th>
<th>RATING</th>
<th>SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseball Mogul</td>
<td>Infinite Monkey</td>
<td>★★★★★</td>
<td>This co-winner of CGW's Best Sports Game of 1997 lets you run every aspect of the team, from trades to hot-dog prices.</td>
</tr>
<tr>
<td>Diamond Mind Baseball</td>
<td>Diamond Mind</td>
<td>★★★★</td>
<td>It doesn't get any more statistically realistic than this, if you can handle the lack of graphics.</td>
</tr>
<tr>
<td>Front Page Sports Baseball '98</td>
<td>Sierra</td>
<td>★★★★</td>
<td>While better than the previous year's catastrophe, it has a long way to go as both action and simulation.</td>
</tr>
<tr>
<td>Grand Slam Baseball</td>
<td>Virgin</td>
<td>★★★★</td>
<td>Looks and feels like a bad console game, complete with weak stats, bad interface, and poor trade AI.</td>
</tr>
<tr>
<td>Triple Play 98</td>
<td>EA Sports</td>
<td>★★★★</td>
<td>Entertaining 3D action not quite as fresh or fun as last year's version, and you can forget any claims of stat accuracy.</td>
</tr>
<tr>
<td>Tony LaRusso 4</td>
<td>Maxis</td>
<td>★★★★</td>
<td>An embarrassment for the once-proud franchise: dust off your old copy of Tony LaRusso 3 instead.</td>
</tr>
<tr>
<td>ABC Monday Night Football 98</td>
<td>OT Sports</td>
<td>★★★★</td>
<td>A winner in its second season, with great graphics, solid action, and the best play-calling interface yet.</td>
</tr>
<tr>
<td>Front Page Sports Football '98</td>
<td>Sierra</td>
<td>★★★★</td>
<td>Still the best football sim, but the weak multiplayer and lack of 3D hardware support make for a rebuilding year.</td>
</tr>
<tr>
<td>Heroes of the Gridiron</td>
<td>OT Sports</td>
<td>★★★★</td>
<td>Blends multimedia and questionable stats are overcome by good AI, fast action, and fine selection of all-time college gridiron greats.</td>
</tr>
<tr>
<td>Legends Football 98</td>
<td>Accolade</td>
<td>★★★★</td>
<td>This lackluster attempt at cross-genre pigeon action was the biggest disappointment of the 1997 PC sports year.</td>
</tr>
<tr>
<td>Madden 98</td>
<td>EA Sports</td>
<td>★★★★</td>
<td>Better than last year's team, but weak AI and poor GM functions keep this out of the playoffs again.</td>
</tr>
<tr>
<td>NBA Action 98</td>
<td>Sega</td>
<td>★★★★</td>
<td>Realistic enough, but its dull play-by-play and game-speed problems make it a pretender to NBA Live's crown.</td>
</tr>
<tr>
<td>NBA Live 98</td>
<td>EA Sports</td>
<td>★★★★</td>
<td>Still some annoyances, but the depth of strategy and player-control options once again have EA cutting the nets.</td>
</tr>
<tr>
<td>NCAA Basketball Final Four 97</td>
<td>Mindscape</td>
<td>★★★★</td>
<td>Medicare college hoops with dated graphics, limited options, and confused layout.</td>
</tr>
<tr>
<td>British Open Championship Golf</td>
<td>Looking Glass</td>
<td>★★★★</td>
<td>Realistic, intelligent golf-action is sometimes lost in the difficult mechanics, and there's no multiplayer.</td>
</tr>
<tr>
<td>Front Page Sports Golf</td>
<td>Sierra</td>
<td>★★★★</td>
<td>True Swing is a nice alternative to the traditional swing meter, and it works well with the nice graphics and multiplayer options.</td>
</tr>
<tr>
<td>Jack Nicklaus 5</td>
<td>Accolade</td>
<td>★★★★</td>
<td>It's tough to beat the Golden Bear's combination of fast play, great graphics, and superb course editor.</td>
</tr>
<tr>
<td>Links LS 1998</td>
<td>Access</td>
<td>★★★★</td>
<td>Quicker screen redraws and Internet play made the world's best golf sim even better.</td>
</tr>
<tr>
<td>PGA Tour Pro</td>
<td>EA Sports</td>
<td>★★★★</td>
<td>Solid update of a good series, with multiple courses, modeling of famous golfers, and more multiplayer options.</td>
</tr>
<tr>
<td>Microsoft CART Racing</td>
<td>Microsoft</td>
<td>★★★★</td>
<td>All of the numerous options, from the high frame-rates to the aggressive computer opponents, help this one past the checkered flag.</td>
</tr>
<tr>
<td>NASCAR Grand National Series</td>
<td>Papyrus</td>
<td>★★★★</td>
<td>Despite shaky frame-rates, most new tracks of this expansion disk are a welcome addition to NASCAR 2.</td>
</tr>
<tr>
<td>SODA Off-Road Racing</td>
<td>Sierra</td>
<td>★★★★</td>
<td>Excellent physics model, track designer, and car dynamics make this the best PC off-road experience ever.</td>
</tr>
<tr>
<td>X-Cars: Experimental Racing</td>
<td>Bethesda</td>
<td>★★★★</td>
<td>This deep and intense driving simulation is marred only in that it's just too difficult at times.</td>
</tr>
<tr>
<td>NHL 98</td>
<td>EA Sports</td>
<td>★★★★</td>
<td>Improved AI, better team line-changes, and the usual invigorating, immersive action we expect from this veteran.</td>
</tr>
<tr>
<td>NHL Open Ice</td>
<td>GT Interactive</td>
<td>★★★★</td>
<td>Anyone who likes real hockey is advised to stay well away from this power-up saturated version.</td>
</tr>
<tr>
<td>NHL Powerplay 98</td>
<td>Virgin</td>
<td>★★★★</td>
<td>More meaty, but less flashy, than NHL Hockey; nice team management and pretty good 3D action make this game better than average.</td>
</tr>
<tr>
<td>Kickoff 97</td>
<td>Maxis</td>
<td>★★★★</td>
<td>The first U.S. version of ANCO's soccer simulation, it's the best of the class, with great gameplay and challenging AI.</td>
</tr>
<tr>
<td>Tennis Elbow</td>
<td>GOTO</td>
<td>★★★★</td>
<td>Decent tennis simulation with lots of spins, lobs, and smashes, it's mainly for die-hards.</td>
</tr>
</tbody>
</table>
Once again, congrats to Thresh and DeepBlue for their championship performances in the PGL’s inaugural season! Thresh shrugged off his first-ever public Quake® defeat at the hands of Reptile, beating the scaled one twice in succession in the final round. Meanwhile, DeepBlue required three matches to overcome dark horse SoLjA in the Command & Conquer®: Red Alert™ finals.

As we go to press, these gaming stars are bracing themselves for the next big test: defending their titles in Season 2. Who will challenge them for PGL dominance? Some of the prime suspects can undoubtedly be found among the profiles of other Season 1 finalists on pages 2 and 3...

For its second season, the PGL has revamped its web site (www.pgl.com) in order to deliver more league action to pro gaming fans around the globe. In addition to the league news, player profiles, season calendar and other great stuff that’s been offered from the beginning, new features of the site include:

News reports of “regular season” matches, including screen shots, game summaries, and (in the case of Quake and Quake II) downloadable demos of every confrontation!

A searchable player database, making it easy to find out the status, statistics, won-loss record, and contact info for all of the hundreds of players who “make the cut” and compete for the crown.

Live match reporting — real-time updates of all matches as they occur. Now anyone can follow the PGL action as it unfolds, with “ticker-tape” style play-by-play coverage of each and every battle!

Packaged highlights, updated on a regular basis and showcasing the most incredible performances from each week of league action!

In the tradition of sites focused on professional sports, the new PGL site makes all of the vital player and league data easily accessible to fans and participants alike. Come to the PGL web site to follow your favorite players and teams on their quest to make the finals!
Finalists at the 3M Volition Championships of the AMD PGL, held at Gameworks in Seattle. Pictured: (Standing, left to right) MOBBIN, Str8ballin, DeepBlue, SoLjA, Reptile, Push, Sephiroth, Hoggleford, Lord Jim, soulnet, Unabombers, cabalistic, Thresh; (kneeling, left to right) Unholy, B2, play-by-play announcer “Rasta,” and frick

SoLjA
Real Name: Cuong Tran
PGL Season 1 finish: 2nd Place, Strategy Category
Arch-nemesis: anybody who is playing against me :)
Preferred Weapons: medium or heavy tanks
Controller: mouse
Gaming Experience: about 1 1/2 years of Red Alert
Birthplace: New Orleans, LA
Residence: Avondale, LA
Age: 21
Connection: 33.6
CPU speed: 200 Mhz AMD K6
Favorite Level/Map: Path Beyond
Hobbies: Basketball, Football, and Fishes
Favorite saying: Time To PuT ur SoLjA RaG oNN!! and Only Make Ur Move WhEn Ur HeArt’s In It... :)

“Many thanks to the PGL for putting on such a great event! The league officials did a tremendous job accommodating all the players’ needs... once again, it’s a privilege to be a part of the PGL!”
— SoLjA

Sephiroth
Real Name: Brad Rajani
PGL Season 1 finish: 3rd Place, Strategy Category
Arch-nemesis: none
Preferred Weapons: Soviet Heavy Tank
Controller: Mouse + Keyboard
Gaming Experience: 1 year of Red Alert
Birthplace: Madison, WI
Residence: Milwaukee WI
Age: 15
Connection: 28.8 Modem
CPU speed: 233mhz
Favorite Level/Map: Path Beyond
Hobbies: sports, TV, and homework
Favorite saying: “It’s coming right for us !!!”

“If someone had told me I’d be flying cross-country to compete in a computer gaming championship, I would have said they were crazy. The PGL is a great idea that really rewards gamers for their efforts.”
— Sephiroth
soulnet
Real Name: Tony Burt
PGL Season 1 Finish: 7th Place, Action Category
Preferred Weapons: Rocket Launcher, Grenade Launcher
Controller: Logitech 3-button mouse, keyboard
Gaming Experience: Just over a year of Quake
Birthplace: Atlanta, GA
Residence: Newnan, GA
Age: 18
Connection: 33.6
CPU speed: 200mhz
Favorite Level/Map: em2 and Cheat Complex for CTF
Hobbies: Computers, Movies, any games :)
Favorite saying: WHEELED! (c) badm00n

"The trip to Seattle, the Gameworks site, and meeting all
the other finalists was great fun. The PGL is definitely
worth joining, even if you don't win the whole thing — I
never thought my Quake skillz would take me so far!"
— soulnet

B2
Real Name: Patrick Li
PGL Season 1 Finish: 4th Place, Action Category
Preferred Weapons: Rocket Launcher
Controller: Mouse and Keyboard
Gaming Experience: Overall, 3 years; Quake, 1 year
Birthplace: Hong Kong
Residence: San Jose, CA
Age: 19
Connection: T1
CPU speed: 200mhz
Favorite Levels/Maps: E1M2, E4M3, DM2, DM3, DM4, DM6
Hobbies: IRC, Web page development, Movies, Basketball
Favorite saying: Death Row sends hugs!

"It was a really special feeling to be among the finalists
at the PGL's first championships! The whole idea of a
pro sports league for computer gaming fans is like a
dream come true, and I'm looking forward to competing
for a long time to come!"
— B2

---

PGL BY THE NUMBERS

5,134 .......... Total frags logged by “frick” in Season 1

$275,000 ....... Total estimated value of cash and prizes being awarded in PGL Year 1

4,131,206 .......... Total frags recorded during Quake matches in Season 1

6 ............ Number of in-game disqualifications issued by PGL referees in Season 1

7,870 ............ Number of hours of Command & Conquer: Red Alert play logged in Season 1

31,412 ....... Number of RealVideo “hits” to All Games Network’s Webcast of the PGL Season finals

62,899,600 .......... Number of media impressions generated by the PGL in its first 5 months

www.pgl.com
PGL — Making Headlines

The PGL has enjoyed coverage in just about every major media you can think of, from Disney Adventures to Playboy! Here are a few highlights from some of the heavy hitters in the news biz:

"Two modern-day gladiators enter an arena bathed in the glow of kleig lights, and a violent duel begins. Spectators roar as they follow the action. "Did you think this was a game?" blares an announcer. "This ain't no game." The death match is the first championship of [The Professional Gamers' League]."

- The Wall Street Journal

"Move over, NFL, NHL, and NBA, there's a new league in town. The first professional organization of computer game players begins its first season today — the Professional Gamers' League has its own referees, playoffs, even commercial endorsements!"

- CNN Headline News

"Hey, if golf counts as a legitimate sport, then fragging certainly should...the PGL aims to standardize the fragmented realm of competitive gaming, turn top players into stars, and earn gaming a mass audience. Thanks to more than US$2 million in big-name sponsorships, the elite gamers can start paying their rent by annihilating pixel opponents."

- WIRED

"As a gamerplayer, what would your world ranking be? You might soon find out in the Professional Gamers' League. It sounds more than slightly ambitious and it won't catch on overnight, but I'll be among the first in line to see if I'm good enough. I'm quite certain I won't be alone."

- Next Generation

...And as always, the PGL is featured regularly on America's most popular television show dedicated to computers and the Internet, TV.com, airing weekly all over the country. Check http://www.cnet.com/Content/Tv/TVcom/Where/ for the station and air times in your area!

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www.pgl.com
Change of Perspective
A New Look for Real-time Strategy
Can’t Disguise This Game’s Ordinary Gameplay

by Martin E. Cirulis

One good thing about the night-endless flood of real-time strategy games is the fact that in an effort to distinguish themselves, many designers are pushing the limits of the sub-genre until it collides with others. In the case of Armor Command, the developers at Ronin Entertainment have tried to mesh the standard resource-gathering real-time game with a fully 3D action environment. The result is a thinking-man’s game that looks great. Unfortunately for those looking for a true genre hybrid, the simplistic sights of this game seem purely for show, and don’t have half as much to do with the game as one might hope.

SAME DATE, MUCH BETTER DRESSED
At its heart, Armor Command is your basic real-time strategy game with few surprises. The plot is essentially Brave Humans bump into Creepy Aliens and wackiness ensues. Translating this into game mechanics, you get two mirror-image campaigns consisting of 20 odd scenarios in which you can take the side of either the Humans or the technographic Viess. Each side has its own set of analogous equipment in the tried-and-true C&C tradition (light tanks, heavy tanks, mining units, a couple of air units, and a few units distinct to either side), and your job is usually to go down and mine enough resources to build the units to crush the other guy.

So far it’s pretty much the same old thing, but Armor Command comes partially into its own by providing a new way of seeing the action. Where Total Annihilation provided 3D terrain to watch from your eagle’s perch, Armor Command goes one better and brings the camera down to ground level. While you can play the game completely from the ho-hum top-down view, this game looks great at eye level (a mouse-rotateable chase camera is slaved to whichever unit you want) as shots blast right by you in all their 3D-accelerated glory.

All the perks of the new graphic technologies are here: transparent explosions, fast vehicle modeling, and atmospheric effects, such as fog, rain, and snow. Ronin did some very nice work to give the alien forces a distinct but coherent look. Some of the pure special effects, such as the way new units ride down a tractor beam into your spaceport, enhance the feel of the game instead of distracting you. And the best part of this high-tech graphic extravaganza is that the designers have actually bothered to make sure that the majority of gamers can see the game at its best. This game has some of the best 3D-card support I have seen, with just about every card or chipset directly supported. All you have to do at set-up is choose your hardware from the extensive list and go. This is a lesson I wish other game developers would learn, instead of making us wait months for patches specific to each kind of graphic chipset.

Price: $49.95
System Requirements: Pentium 90 with 3D accelerator or P166, 16MB RAM, 30MB hardrive space, 4x CD-ROM drive, DirectX compatible VGA card, mouse, Sound Blaster-compatible sound card.
Multiplayer Support: Modem, serial cable (2 players); LAN, Internet (2-4 players); 1 CD per 4 players.
3D Support: All major 3D cards.
Designer: Ronin Entertainment
Publisher: Ripcord Games
Santa Clara, CA (888) 797-5667
www.ripcordgames.com

BACK TO THIS: Although the graphics are good, they don’t enhance gameplay, and much of your time will actually be spent in this more traditional view.

AND THE POINT WOULD BE...?
Of course, with all the effort that went into Armor Command’s unique look, I really have to wonder why nobody
That's not a toll bridge is it?

Detonating this summer

COMMANDOS
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GO TO #278, @ www.computer gaming.com/info link
The New Tank Wars

The cross-genre wars are heating up, with action gamers looking for a little brains and real-time strategy types seeking a greater adrenaline rush. While Armor Command tried to straddle this line, another title, Uprising, a Christmas season sleeper from Cyclone Studios, got its version of the same concept onto shelves first.

Due probably to its longer baking time, Armor Command is a better-looking game that makes better use of cutting-edge 3D technology, specifically light-sourcing, to immerse gamers in the game world. Uprising isn't exactly old news in the graphics department, but does suffer somewhat in comparison. On the other hand, the graphics in Uprising are more interactive, so players can climb hills and use the terrain to their advantage. In Armor Command, the terrain is little more than a pretty background.

Once you get past the visuals, though, the two games diverge sharply. Armor Command delivers relatively deep, traditional real-time strategy with a new viewing angle—but Uprising is a true hybrid that delivers on its promise, allowing players to drive a vehicle on the battlefield as well as to make the odd strategic decision. The emphasis is on the battlefield in Uprising, so there is a corresponding weakness in the strategic game that wargamers, especially the reflex-challenged, may not find very welcoming. Uprising still expects you to gather resources in real time and use them to build new units, but you had better be a skilled tank driver as well.

Of course, this little competition between strategy tank games may be all but over with the arrival of the new heavyweight on the block, Battlezone from Activision (see our review this issue). While leaning heavily on the action side of things, initial intelligence reports indicate Battlezone may easily have what it takes to utterly dominate in this new cross-genre, and reduce both Armor Command and Uprising to also-rans.

was concerned with extending that look toward enhanced gameplay. Despite all this visual bounty, graphics really have little to do with the actual gameplay. I was surprised when I discovered all this 3D hoopla was mainly cosmetic. The majority of the time in this game is spent in the traditional overhead map, maneuvering units in the same tried and true Command & Conquer fashion.

Even if you overlook the strange concept of having simulator views without simulator control over any of the vehicles, the whole 3D aspect of this game has little impact on gameplay in any way. For one thing, while the terrain is very nicely rendered, it's strictly from the bad old days of ground-sims, where vehicles could travel only across perfectly flat surfaces; the slightest hill stops your tanks dead. This defeats most of the need for a 3D view, since you can't cleverly maneuver up hills and along the sides of valleys to set up complex ambushes or tight firing angles.

Another annoyance is the fact that your chase camera rotates only horizontally; you can't shift the angle up or down in order to gather battlefield information—aircraft reconnaissance is actually more informative when using the top-down view.

On top of this disappointment, Armor Command saddles you with a pointlessly goofy interface driven more by the keyboard than by the mouse. Since this is your basic real-time wargame, it is beyond me why the traditional set of click-'n'-drag controls weren't good enough for this game.

And after all this, Armor Command managed to ship with a major bug that made the game unplayable. By the time you read this, all shelf copies should be at least the bug-free 1.02 version, but if not, be prepared for a trip to patch land.

After all is said and done, Armor Command is a competent Command & Conquer clone with a good gimmick and quite a bit of gameplay for your dollar. It's just unfortunate that it looks like so much more on the box.

> APPEAL: Traditional real-time players who want a new look without too much distracting innovation.
> PROS: Excellent 3D graphics; some good real-time strategy gameplay with a competent computer player.
> CONS: 3D graphics turn out to be just a gimmick with no real impact on actual gameplay; interface is needlessly complex; initial release has a critical bug.
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Scrappy but Skimpy

Stanley Associates' SEMPER FI Gets Less Than Front-line Treatment From I-Magic

by Loyd Case

Semper Fi is short for Semper Fidelis — always faithful — and it's the motto of the U.S. Marine Corps. The game of SEMPER Fi appropriately places you in the role of a Marine Corps company or battalion commander. In this turn-based game by Stanley Associates (the same team that made PC WOODEN SHIPS AND IRON MEN for Avalon Hill), your battalion is often outnumbered and outgunned.

Both reviewers and gamers have debated the struggle of gameplay versus graphics for years, and SEMPER Fi will certainly fire that controversy yet again. SEMPER Fi presents an innovative, highly playable game that is buried under less-than-stellar production values. The interface is surprisingly awkward for a design from the company that brought us WS&IM and FIFTH FLEET, and the retro graphics are utilitarian to a fault. Your view of the battlefield looks like a topographic map, complete with contour lines. The units are pictorial rather than represented by NATO symbols, and while the units are easy enough to recognize, why couldn't we have both icons and symbols?

FOLLOW THE LEADER

You have to remember two things when playing SEMPER Fi. First, the game is based on initiative phases. Even within a given turn, enemy units (the OPPOR willy-nilly, without thought to the chain of command, chaos and lack of control will result. This is the heart of SEMPER Fi. In a real battle, platoons and companies don't take off on their own, ignoring orders. This is The Corps, buddy—Rambos need not apply.

In a similarly realistic vein, the leadership system nicely simulates the chain of command. In a nutshell, it works like this. Clicking on the company commander activates the entire company by clicking on the Activate Company button in the game's command tab. Company commanders have a command radius. If a unit gets outside of the command radius, that unit is on its own, and you can move it only by using an entire initiative phase. If you activate a single unit within the commander's command radius, and fail to click the Activate Company button, the phase will end after that unit's actions.

Even ending a phase, though, doesn't mean that you can't activate another unit. The initiative calculation in a phase is a virtual die roll that's modified by the quality of the unit, the unit's status (morale), and the presence of the company commander. I played entire turns where the OPPOR units didn't activate until I was finished with all of my units.

To keep yourself from going crazy in SEMPER Fi, just remember the chain of command. You, as the battalion commander, give orders to the company commander, who then passes on your orders to the individual platoons.

Price: $39.95
System Requirements: 590, Windows 95, 16 MB RAM, 20MB hard drive space, SVGA graphics, 4x CD-ROM.
3D Support: None.
Multiplayer Support: LAN, Serial, TCP/IP, IPX (2 players); 1 CD per player.
Developer: Stanley Associates
Publisher: Interactive Magic
Research Triangle Park, NC
(800) 789-1534
www.imagigames.com

FINAL ASSAULT ON PANTELLERIA Fire into a city to reveal hidden units, then close the assault with infantry. The Activate Company button is the flag to the left of the Marine's picture; that picture shows you your morale at any given time.

UNKNOWN SOLDIER? If you do well, you'll be rewarded.
MAKE YOUR OWN HISTORY

One minor disappointment is that the game is entirely hypothetical. There are no historical scenarios in the game, and all the weapons, vehicles, and off-board support are modern. Don't be fooled by scenario titles like Task Force Smith; all the scenarios and campaigns are modern hypothetical battles.

After playing huge games like EAST FRONT, the relatively brief (but well-designed) scenarios and campaigns are a refreshing departure. None of the battles I played were more than eight turns long. Despite the relatively few turns, the initiative phase rules not only make the combat very fluid, they also make the scenarios seem longer. Still, no single battle took more than a couple of hours.

Two of the campaigns cover relatively familiar territory. There's a modern-day Korean War invasion, and a second Iraqi war. The third campaign, Panzerkampf, is set on a small island in the Mediterranean, not far from Libya, and it's probably the easiest to play.

You'd think that the Iraqi campaign would be fairly easy, given what happened in the Gulf War, but these Iraqis are made of stern stuff.

All of the campaigns revolve around battles involving second- or third-rate military forces. A couple of the scenarios pit the Corps against tough foes, such as Russian paratroopers. Although none of the campaigns or individual battles is historical, they are all nicely balanced and designed.

Unlike in a game such as STEEL PANTHERS, there's no role-playing element here. Units can't be renamed and units carried over in campaign battles are regenerated.

For those of you inclined to create your own battles, there is a flexible and easy-to-use scenario editor. You can even alter initiative levels to simulate the effect of running up against elite forces.

TACTICAL DEFEATS

The game is mostly bug-free, although I ran into a couple of minor glitches. Several times, pressing the Quit button did nothing (which can be cured simply by pressing the reset button). Still, this occurred only three times in many hours of gameplay (and even then, the save-game function keeps you from losing the game you've been playing). On other occasions, clicking on a unit's weapons didn't activate them, and the wrong weapons fired.

The most frustrating problem was the user interface. This is partly due to the leaden-oriented nature of the game, but selecting and deselecting were awkward operations that required constant double-clicking. Casual clicking can lead to real disaster here, so take some care when selecting units. The right mouse button is usually the safe one.

TACTICAL VICTORY

All in all, SEMPER FI is an above-average little game that could only have benefited from higher production values. The campaigns and scenarios are relatively short, but they're good enough to leave you wanting more. The AI editor and scenario editor, however, combine to make a flexible "Marine construction kit" that greatly increases replay value. Unlike most turn-based games, SEMPER FI's initiative system makes for a good multiplayer game over LAN or modem.

Despite the flaws, it's great to see a game come out on a different subject, with battles that can be easily played over a long lunch break.

> APPEAL: Wargamers looking for something different to play in short increments.

> PROS: Nicely simulates chain of command; initiative-based phases keep play fluid; cool AI editor.

> CONS: Very dated with awkward interface; needs historical scenarios and a longer campaign; Iraqis too tough.
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KIDS TO ADULTS
CONTENT RATED BY ESRB

Metropolis Digital
Trapped in Space

Accolade Calls This a Sequel to DEADLOCK, but We Can’t

by Tim Carter

In most instances, becoming emotionally and mentally absorbed in a game’s fictional world constitutes a mark of success. If you felt fear while creeping around corners in DOOM, or frustration and anxiety as the weather bogged down your advance in PANZER GENERAL, you might be inclined to feel that the designers of those games had done their job well.

DEADLOCK II may be the exception that proves the rule. In DEADLOCK II, you land on a desolate planet with limited space and resources, a paucity of time, and very few options. You must overcome these deficits to build a viable, secure colony. Sadly, when you play DEADLOCK II, only by overcoming the limitations of the design can you hope to have any fun.

As in DEADLOCK, you command a fledgling colony on an unsettled planet, where you compete with a variety of other races for domination. You must develop your economy and allocate your population to a variety of tasks, all while managing classic trade-offs.

**LAND HO** The enhancements include some sea units, new graphics, and a new interface, but there really isn’t enough here to be classified a sequel.

A TOO LITTLE, TOO LATE DEADLOCK II still isn’t exciting in single play, and with the recent advances in multiplayer games, it isn’t even a premier multiplayer game.

between the development of military, economic, and technological resources. Success comes from expanding to other provinces and developing each to create an economically viable empire. Since your space and resources are limited, you inevitably bump into other races, and conflict ensues.

**BREAKING OLD GROUND**

Although the interface has changed somewhat, and new technologies, units, and rules have been added, DEADLOCK II’s gameplay remains relatively unchanged from DEADLOCKS. So much so that I wonder why Accolade thought that the assorted tweaks and additions justified an entirely new game. Sure, the ocean platforms are kind of cool, and the new stacking and population control rules make the game more interesting, but it’s difficult to see how anyone could consider this a fundamentally new game, or could justify charging customers the full price for what seems to be a facelift.

The real attraction of DEADLOCK, of course, is the ability to play it online against human opponents easily and quickly, and many of the design limitations can be justified by the constraints of multiplayer games. For instance, larger maps and more extensive technology trees don’t lend themselves to the online environment, where time and the ability to move simultaneously are important.

When playing only against the computer, however, these constraints seem unnecessary and aggravating. Moreover, although the game box boasts an improved artificial intelligence, I found the game’s AI to be even more woeful than the industry standard. The AI is so passive that initial expansion goes unmolested and at later stages of the game the computer is strangely reticent to attack, even when it enjoys a tremendous military advantage.

When DEADLOCK II was released, the number of fun games that could be played over the Internet was small. With games like MYTH and PANZER GENERAL II on the market, however, I have to wonder how many people are going to enjoy switching back to DEADLOCK II’s outdated graphics and stifled and confining gameplay just so they can play some human opposition.

**APPEAL:** Fans of the original DEADLOCK.

**PROS:** Design tailored to multiplayer play; new units; better handling of morale.

**CONS:** Lousy AI; boring as a solitaire game; not as fun as many other internet-capable games.

Price: $49.95
System Requirements: Pentium 90, Windows 95, 16MB RAM, 60MB hard-drive space. 2x CD-ROM drive, 1MB SVGA card, Sound Blaster-compatible 16-bit sound card.

Multiplayer Support: Modem, serial cable (2 players), LAN, Internet (up to 6 players); 1 CD per 7 players.

3D Support: None.

Designer: Cybarion

Publisher: Accolade
San Jose, CA
(408) 985-1700
www.accolade.com

JUNE 1998
CGW
257
Eye of the Storm
Schwerpunkt Takes On Ike’s War
by Jim Cobb

Our current age of glitter has endangered the traditional board wargame paradigm on the PC. Schwerpunkt, however, keeps the embers glowing with one WWII release after another. The company’s latest entry, Storm in the West, showcases France, the Low Countries, and western Germany at the division level.

Storm emphasizes supply, fog of war, and weather, all of which integrate well into the week-per-turn game system. The Germans attack more often in bad weather, while the Allies increase attacks by capturing ports (and increasing supply). Adding to the fun are paratroops in 1944–45 and Allied evacuations in 1940 (such as Dunkirk). To determine victory, you compare your own losses, any casualties inflicted on your enemy, and cities you’ve taken versus both your opponent’s achievements and the historical results of the campaign.

The heart of Storm, as it were, is in the optional rules. Advanced combat allows for breakthrough attacks, in which you can pursue a foe and attack again with mechanized units, at the risk of more casualties. Holding attacks, true to their name, merely pin enemy units. Tactical air units may support ground attacks, intercept enemy supply, supply friendly units, or reconnoiter. Early German jets limit Allied air operations.

Other global options make the game more difficult, more realistic, and more fun. Toggling on realistic Allied politics, for example, can cause French and British units not to attack, and reduce American attack supply. If you choose to redeploy Allied strategic bombing for increased benefits tactically, German units can move more freely. Increased command-control allows headquarters units to increase subordinate combat factors, but compels the headquarters to be near attacking units.

Bouncing the Rhine

The six scenarios included with Storm are well designed and well researched, in particular May, 1940, on the fall of France, Bouncing the Rhine, and Bulge/Northwind, which covers the entire front (including Monty’s northern stand). Other scenarios cover Patton’s drive from Paris to the Rhine, the liberation of the Low Countries, and the entire 1944 campaign from August onward. A scenario editor used to create new orders of battle and starting dispositions enhances replayability.

Although it’s a generally interesting look at the west in WWII, Storm has enough flaws to keep it from rising above the pack. An overaggressive AI mars solitaire play, but Storm is well suited for play-by-email. Air reconnaissance wastes air units, and the AI often doesn’t recognize when HQ has organic air recon assets. Some phases require too many clicks, the stack of windows for selecting units during movement really needs a “Select All” button. If you’re playing Storm under Windows 95, you’ll likely have to retoast on eating — a real nuisance. WWII enthusiasts will find plenty going on here, but they’ll have to work for it.

Price: $39.95
System Requirements: 386 PC, DOS 3.1/Win 3.1/Win 95, less than 1MB RAM, 20MB hard-drive space, SVGA graphics.
3D Support: None.
Multiplayer Support: Email (2 players).
Developer: Ron Dockal
Publisher: Schwerpunkt
Pearsland, TX 77584
(281) 997-1209
www.ghcorp.com/schwerpt

APPEAL: For WWII students and turn-based advocates.
PROS: The clean system captures the essence of the subject matter and offers plenty of replayability.
CONS: Scarcity eye- and ear-candy; click-heavy interface; shaky defensive AI.
Top-notch 3D graphics showcase cities, scorched terrain, real-time lighting effects, and the AH-64A Apache combat helicopter.

Test your combat skills in two full campaigns and 18 stand alone missions; mission editor provided for extended gameplay.

Interactive flight environment registers turbulence from explosions, blasts, and other aircraft - support for force feedback joysticks included!

Manage your team of ace pilots! Options include skill ratings, fatigue and morale management, recruitment, and courts martial.

Training mode with instructor feedback, adjustable difficulty settings, and easy/advanced flight models will get you in the air fast.

Supports both head-to-head and cooperative multiplayer for dogfights over the internet, on a local network, or modern to modern against your buddy.

Armed to the teeth and dressed to kill!
Life Goes On

by Dawn Jepsen

Tortured by Grendels? Annoyed by naughty Norns? Perhaps life on Albia isn't what it once was? Well, before all of your creatures register a big, fat BORED on the health indicator, grab a copy of CREATURES LIFE Kit #1 and inject a little life back into their routine.

Cyberlife's first LIFE Kit is a compilation of add-ons designed to create some variety in the paradise of Albia. Objects such as the observation kit, the cages, and the Grendel scarers provide the player with more control over Albia's virtual world. The new crystal ball teleporters come in very handy when trying to quickly move your Norns around Albia. A great selection of Creatures Object Files (COBs), which often serve to heighten the player's challenge, are included in the kit.

Since many of the new features in LIFE Kit #1 have been available for free download from the Web for a while, wired CREATURES fanatics may find that there's little new to see here. But for those who don't fancy tying up their machines with lengthy downloads, this one-stop CREATURES tune-up shop offers a good alternative at an excellent price.

NEW TOYS Crystal balls, Grendel scarers, and other new gadgets abound in this add-on. Should you choose to install the pesky "cave fly," for example, be prepared for your less healthy Norns to contract diseases. If you've grown weary of traditional Norns and their offspring, the kit offers several new Norn varieties. In addition to a particularly evil-looking "Santa," you'll find three other types that should offer a bit of genetic variety to potential offspring.

Price: $14.99
System Requirements: Pentium 60, Windows 95, 2x CD-ROM, sound card, SVGA graphics, 16MB RAM, 80MB hard drive space
3D Support: None. Multiplayer Support: None.
Developer: Cyberlife
Publisher: Mindscape
Sunnyvale, CA 94086
(408) 737-6890
www.mindscape.com

Tomb Runner

by Tahsin Shamma

While PHARAOH'S ASCENT is a good, wholesome, nonviolent puzzle, gamers should be warned that the Pyramids are not the only thing in the game showing their age. Your logic and problem-solving abilities may fare you well as you plow through the game's many levels, but you'll need more logic than this reviewer has to figure out just why the game's developer, Ambertec, is bothered with such dated gameplay.

Throwing realistic burial rites aside, PHARAOH'S ASCENT casts you as a deceased pharaoh who must escape his pyramid-tomb in order to send his soul to rest in the land of Osiris. You must navigate your way through a series of rooms, interacting with obstacles, shifting blocks, and jumping over hazards to complete each level.

The biggest problem with PHARAOH'S ASCENT is its save game feature. You can save your game once you've completed a room, but not from within a room. If, for example, you've figured out part of a room's pattern, there's no way to save your steps leading up to that point, and repeating steps over and over again makes the gameplay more tedious than exciting.

All in all, PHARAOH'S ASCENT is just another 2D action/puzzle game that fails to bring anything new to the genre. Yes, there's more puzzle than action here, but the level of gameplay will be redundant to all but the complete novice. This one should be reserved for novices looking for a game to ease themselves into the genre or for LODERUNNER fanatics in desperate need of a fix.

Price: $29.95
System Requirements: 486/68, Windows 95, 8MB RAM, 256 color graphics, 2x CD-ROM, Windows-compatible sound card.
3D Support: None. Multiplayer Support: None.
Developer: Ambertec
Clara, CA
(800) 551-6979
www.ambertec.com

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From Here to Eternity on Mere Shekels a Day!

by Charles Ardai

Tired of the same old destinations? Even seasoned travelers—time travelers, that is—need to go somewhere really special once in a while. Those in the know come here, to the Presto Studios Travel Agency. If you don’t believe me, check out this brochure for our new LEGACY OF TIME package: four days, three nights in three of the greatest cities that ever existed—Atlantis, El Dorado, and Shangri La! See each just days before and just days after its fiery destruction. No mere rainforest tour can compare!

Like all Presto tours, this package is all-inclusive: you get round-trip transportation and you don’t have to worry about food or lodging. Plus, exclusive to this tour, you also get unlimited use of a Chameleon Jumpseat, perfect for interacting with the natives. (Using the Jumpseat, you can take on the appearance of anyone you see—perfect camouflage, and a blast at parties!)

Travelers who have been mindwiped are advised to bring a functioning AI guide with them. If you don’t have one, we advise you to pick one up from an abandoned jumpseat before traveling too far. Some other tips might help you get the most from your tour; we’ve taken the liberty to outline a few. Bon voyage!

Day One: Atlantis

The crystal blue waters of Atlantis are beautiful, but remember that swimming is not allowed. To get around, you’ll want to keep some pocket change on hand and ride the city’s gondolas. If you forget to get some local currency before your trip, don’t worry. You can usually count on a fellow foreigner who appreciates dire straits to help you out.

Among the sights to see are Atlantis’ majestic windmill, its memorable temple, and its salt-air dockyard. And don’t miss the bazaar, where you can pick up a souvenir for the folks back home! Get some olive oil at the oil merchant and a pot in which to keep it at the potter. Should you be lucky enough to visit when the potter isn’t around, you can even take a little of his clay and fire it yourself, for a one-of-a-kind memento. If you have a little gold leaf, you can even make a darling medallion just like the temple guards!

While in Atlantis, don’t limit yourself to well-worn paths. Athletic travelers should feel free to do a little climbing and enjoy the view of the city from the heights of a deserted ship’s mast. And if you see anything you like, help yourself. Whether it’s a sailor’s hooked spear or a beggar’s bowl, it’s a mark of an Atlantean’s hospitality not to mind if you take something that belongs to him.

The highlight of your trip will be your visit to the sacred temple ceremony at Atlantis’ holiest spot. You’ll have to enter from an underground tunnel, so be sure to let the water drain first, the central well at the temple is the place to take care of this. And once you’re inside, enjoy a close-up look at some fascinating alien technology. Normally we’d say “Don’t touch!” but this time, go right ahead.

One reminder: The courteous time traveler always leaves things as they were before he came. When you return to the surface, turn the

EXOTIC MODES OF TRAVEL: Your timesuit is pretty nifty, but it won’t let you fly, swim, or ski. So, make sure to take advantage of local transportation on your journey. We guarantee you’ll never forget those thrilling balloon rides or the treacherous bridges in the Himalayas!
Day Two: El Dorado

From oceans to jungles: On day two you're in steamy South America. Giant hot air balloons can take you from peak to peak, but before you go flying off, take a few minutes to look around and chat with the locals. A sleeping boy by the well can give you your first chameleon disguise.

Another fabulous religious ceremony is in preparation just a balloon ride away at the main temple. Read the story of the ancient battles being celebrated (and pick up a little gold leaf while you're at it — they call the place El Dorado for a reason). Don't miss the opportunity to talk to El Dorado's shaman; a guard is posted to keep tourists away, but a simple garden knife should be enough to distract him — if you use it to sever his balloon's mooring lines.

El Dorado is a city famed for its architecture — he sure to enjoy the view above the temple in the shaman's own balloon. You may want to sketch the patterns you see. This is a once-in-a-lifetime sight, and you never know when you'll want to remember it.

Back on the ground, wake the boy and get a talisman from him — no, he won't give it to a time traveler, but he will give it to someone who looks like his shaman — and use this talisman at the arrowhead pool to drain out all the water. For a chance to look around inside the temple, just unlock the doors (your balloon sketch should tell you which four carvings to press) and cool down the temple fires by retrieving the talisman and letting the pool's water back in.

And while you are on this part of your fabulous journey, if you see something you like, take it. A day after you leave, the whole city will be destroyed, and they won't miss one little artifact...

Day Three: Shangri La

On day three, the air gets thin, so bundle up! I light up in the Himalayas is Buddhism's most private retreat. All the rich and famous end up here, so don't be surprised to see the mighty Genghis Khan lay down his sword for a bit of serene meditation. If you'd like, you can take his sword, but do it quickly when he's not looking — Genghis is no Allatantus!

The best way to get around is through the city's well-heated steam tunnels; use your spear to enter outside the green shrine and then consult the map from the greenhouse if you get lost. The temple is the central building you can visit, but save yourself some time and visit all the city's shrines first. In the tunnels below the greenhouse, use some of the water from Atlantis to heal the dry roots; up above, you can use the fruit of your labors to collect a holy bead from the garden shrine. (You can also collect the gardener's knife — who knows where it might come in handy?)

Outside Genghis' tent, use his sword to collect a bead from the warrior shrine. Use the book of knowledge the Lama gives you (if you pose as Khan and show that you know your Noble Truths) to get a bead at the green shrine; and while you're talking to the Lama, you can get another bead from the prayer hall shrine if you present it with an alms bowl. The black shrine in the tunnels is not as solid as the rest; shut the steam doors to direct some extra heat toward it and you'll get another bead as your reward. Finally, in the entryway to the main temple, play your mantra on the prayer wheels to get your last bead. (You may need a bit of oil to fix the squeaky wheel.)

Once in the heart of the temple, place each bead in a Buddha's hand to ascend to the heavens — a beautiful climax to an exhilarating trip! On your way out, be nice to the staff...and for some local color, chat with the pilgrims praying in the snow...
STRATEGY & TIPS

F-22 Air Dominance Fighter

Our Flight Sim Expert Shows How to Fill 'er Up

by Tom "KC" Basham

In this installment of Rules of Engagement (our ongoing series of tutorials on becoming an ace fighter pilot), KC tackles one of the most difficult tasks sim pilots have been faced with yet. You may find topping off your tanks more challenging than many air combat missions, but these expert tips should help you master the task.

Very few flight simulations even offer aerial refueling, and no previous simulation has made the procedure as realistic as DIG's F-22 Air Dominance Fighter. F-22 ADF features in-flight refueling not just as eye candy, but as an integral part of the virtual battlefield. With Jane's F-15 also offering aerial tankers and FALCON 4.0 on the horizon with similar promises of realistic refueling, learning to hook up with the tanker is a skill worth developing.

Early Connections

Like smart bombs, intelligent munitions, and stealth technology, aerial refueling has become a force multiplier. The first refueling (between a biplane DH-4B-1 tanker and a DH-4 recipient) on June 27, 1923, established an in-flight endurance record of 37.25 hours. The availability of tankers lets aircraft positioned well out of the combat theater still participate in the battle. Fighters can launch with less fuel and more weapons knowing they can top off the gas tanks from nearby tankers on ingress and egress. Tankers positioned along the route home let pilots burn more fuel in the target area.

The Bingo fuel level—the minimum amount of fuel needed to get home—doesn't have to take the fighter all the way to a friendly base, only back to the nearest tanker. In fact, if a fighter finds himself in particular trouble, the tanker can even move forward—even into enemy territory—to greet the thirsty jet. Of course, moving a tanker into enemy airspace is not without risk, but doing so at least once during the Gulf War brought an F/A-18 home that otherwise wouldn't have made it.

Our study begins with a dissection of formation flying. Aerial refueling is, after all, merely a specialized method of formation flying. Most flight simulations offer little opportunity to practice
formation flying, placing you in the combat area as quickly as possible to maintain the excitement level. While you may very well work with a wingman (or two) in the combat area, combat formation flying generally occurs at greater distances with more variation among the aircraft than airshow formation flying.

**Rock-Solid Formations**

Several simulations besides F-22 ADF offer opportunities to practice formation flying (SSS's SU-27 FLANKER is a good example). Any simulation with a good flight model, a decent representation of momentum, and a mission builder can be used to practice formation flying. Developing formation flying skills takes some practice. If you retain only one thing from this lesson, always remember this: *Make small control adjustments, and give them time to take effect before making more corrections*. The more you move the controls, the more your airplane will move, and the harder it is to keep position. It's much easier to try to resolve one variable at a time.

Begin the exercise by flying within a mile of the lead aircraft. Assume a position at the leader's five or seven o'clock position. Note the leader's position on your canopy. The key to formation flying is keeping the lead on that same spot at all times. In simulations, it helps to radar lock your flight lead, although in real life he probably wouldn't appreciate you dousing him with a heavy dose of radiation. In the simulation world, though, a radar lock provides you with precise information about his airspeed, altitude, and heading. Match all three of these attributes exactly while keeping your distance.

Next, close the range to the leader. Add a little

---

**Boom vs. Basket**

If there's one military truth, it's that the Navy and the Air Force can't do anything the same way. Although both rely on aerial refueling, the two services use two separate systems. After WWII (during which aircraft range limitations presented serious strategic difficulties), the United States developed two systems. In the first system, the probe-and-drogue, the tanker spoons out a hose with a basket-like receptacle, or drogue. The receiving aircraft flies to the tanker and inserts a probe into the receptacle. The U.S. Navy, the UK Royal Air Force, and many NATO countries prefer this method.

The U.S. Air Force, however, believed the difficult task of hooking up should be performed by a trained professional. They adopted the "boom" system. The operator steers the boom into a locking receptacle on the recipient aircraft while its pilot flies tight formation in the tanker's wake.

---

**DUAL PERSONALITY** Because Naval planes like this NASA F/A-18 use probe-and-drogue refueling, Air Force tankers like the KC-135 can refuel them only using an adapter on the boom.

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throttle to increase your airspeed just slightly above the leader's. Watch your closure speed — keep it under 25kts for now (after some practice you'll probably be able to close faster). It will take a while to get close, but if you rush things you'll find yourself overshooting the leader and starting over from scratch. Make small heading and pitch adjustments as necessary so that the lead appears stationary on your canopy. Ideally, he'll stay in one spot like a squashed bug on your car windshield; however, as you get closer he'll get larger.

It's Not You, It's Me

When you start getting close, you'll probably notice that squashed bug start to move around a little. At some point he'll drift away above you. When you start a gentle climb toward him, he'll dive like a madman for the deck. Just as you think you've aligned your heading with his, you'll see him sideslip rapidly across your nose. "What the heck is this idiot doing?" you'll wonder.

Odds are he's flying straight and level. In 99.99 percent of the time, it's not him veering wildly about the sky, it's you. It's not just a "simulation" thing, either. That's how it happens to real world pilots learning formation flying. This takes us back to that important rule of thumb: make very small corrections. It may seem like you're not moving the joystick much, but you'll still be making massive overcorrections. If you find yourself above the lead, don't try to correct the altitude difference all at once. Lower the nose an almost imperceptible amount, and then throttle back slightly to keep from gaining speed. Level out and smoothly reapply power. Lather, rinse, and repeat until you reach the appropriate altitude. After each correction, the aircraft takes a few seconds to settle along the new flight path. Give the aircraft time to stabilize before making further adjustments. Be slow, methodical, and patient. Slowly move in close and hold a 10-foot separation.

**Big Gulp**

Let's assume you've practiced and mastered formation flying, so now you're ready to pull up to a tanker. Enter F-22's "simulator" mode and select the refueling training mission. The manual adequately describes the process of finding and approaching the tanker. Here, we'll look at the end game, from the last mile out until successfully hooking up. Begin by establishing a 75 knot closure rate and drive right up behind the tanker. Maintain the closure rate until you're about 0.5m from KC-135 (as indicated on the HUD). Quickly pop the speed brake and slow to 50 knots closure. Retract the speed brake immediately.
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Close Quarters

In-flight refueling is certainly a risky endeavor. Having two aircraft—one of which is filled with highly volatile fuel—operate in such proximity is inherently risky. Further, there's always a risk of problems connecting or disconnecting to the receptacle. It's not unheard of for the booms used by the U.S. Air Force (and featured in F-22 ADF) to do serious damage to the recipient fighter, even to the point of penetrating the cockpit. During connection, the flight dynamics of both refueler and recipient are altered. Tanker pilots report being able to tell when a receiving fighter has connected. The speed differential between the two aircraft is also critical. In some cases, the tanker is flying at max speed, yet the fighter is operating just barely above stall speed. Operating two aircraft at opposite ends of their flight envelopes at such close range is tricky business.

Overall, the major advantages of refueling outweigh the risks, especially since practice, skill, and professionalism can substantially reduce the danger.

UP CLOSE AND PERSONAL An F-117 takes on fuel from a KC-135. Flying in such close proximity is tricky.

lights beneath the KC-135 become visible. It may be a little surprising how far forward you have to fly. Now, with a few gentle corrections the boom operator should masterfully guide the boom into your aircraft.

More than likely, though, you won't connect and will fall out of position, forcing a new start. Don't be discouraged: Mastering aerial refueling takes a considerable amount of practice. Don't force your way in. Practice holding position 0.1 nm behind the tanker until you can stick to it like glue. If you can't hold formation at this position, you'll never steer it into a connection position.

It may sound like boring, dull, repetitive work. In fact, it is dull, boring, repetitive work! Mastering the process, though, provides considerable flexibility in your combat operations as well as a more realistic flight experience. Further, it makes you part of an elite group; the relatively small number of simulation pilots who can successfully refuel.
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FALLOUT

FALLOUT, in addition to being one of the best role-playing games in years, certainly has its share of sticky situations. Here are some helpful hints to get you through the toughest parts of the game. If you want more detailed help, check out our walkthrough at cgw.gamepowned.com/gamersedge/2b2e.html.

CRASH HOUSE

If you stay overnight at the Crash House in Junktown, you can earn lots of experience by talking down someone in a hostage situation.

RADSCORPIONS

First, snag one radscorpion tail for the doctor in Shady Sands. Next, find the weak spot near the cave's entrance and use some dynamite to seal off the entrance. You can find dynamite in Vault 15.

EXTRACTING DEATHCLAWS

If you're having trouble getting rid of the deathclaws in the Boneyard, it's because you haven't killed their mommy. Find the stairs in the northeast corner of the warehouse, take a deep breath (save your game now!), and head down to kill her.

THE MALTESE FALCON

If you have special pharmaceutical needs, visit Vance in the Hub. The best way to get info about Vance is from Jacob, the arms dealer. If you've missed that opportunity, talk to the shady looking guy, Lenny, outside The Maltese Falcon. Then again, if you're looking for drugs because you're an addict, you can always try going cold turkey...

PULSE IN THE GLOW

Take out the comatose sentry robots in the Glow on your way down, so you don't have to deal with them on your way out when they're alert. You'll still have to fight several wide-awake robots, but pick up the Pulse Grenades on Level 4 and use them to demolish such remaining annoyances.

FARMING BY HYDROPONICS

Where's the part that Miles wants for his hydroponic farm? Try looking in the deathclaw area just to the east of the main building. It may or may not be on a body, depending on how long you've been looking. — Petra Schlink

Sports

VIRTUAL POOL 2

Use the tracking option during practice play to improve your shot angles, but don't play the game with it on. Instead, line up your shots first, then turn on the tracking option to see if you'll be accomplishing what you want. If you're close, keep it on to get an idea of how little you need to move to refine your aim. Eventually, you should try tweaking your aim without the tracking option and using it only to double-check your refinements. This way, the tracking feature becomes a tool, not a crutch. Getting just the right touch with the cue is vital to success in Virtual Pool 2. If you're consistently hitting your shots too hard or too soft, adjust the mouse tracking-speed accordingly under preferences. If you can generally get the right touch but suffer from occasional miscues because your hand slips, try using an ergonomic mouse with wrist support to steady your hand and your shots. — Robert Coffey
**Storm in the West**

Annoyed by the attacks-per-turn limit? The best way to get around this is to improve your skill at breakdows. After a successful initial attack, move any mechanized units next to an unattacked enemy during pursuit. Mechanized and air units that didn't attack in the first combat adjacent to the new target can be included in the second combat. Hence, you get two attacks for the price of one.

Air reconnaissance seems reasonable, but it leaves combat aircraft away from the fighting for a week. Instead, use your ground units for recon. Assign the “No Zone of Control” movement mode to a mechanized unit, thereby tripling its movement factors. Move the mech unit around until the message “Enemy Zone of Control” appears, then click “Back” and continue moving. After all vectors have been explored, click “Done” without clicking “Drop,” with the result that as far as the game engine is concerned, the unit hasn't really moved yet. You can use “Moves No Attack” for similar benefits: a shorter range, but with the ability to move through zones of control. — Jim Cobb

**Close Combat: A Bridge Too Far**

Moving infantry across an open field under enemy machine-gun fire is no picnic, but it's often a necessity to win a scenario. The key is to cover your sneaking grunts with a smoke screen you lay down with mortar fire. Eventually, your troops should be able to close to within grenade range of their objective.

— Patrick Miller

**Action**

**Quake II**

If you thought the secret chamber hidden beneath the final boss was Id's only in-joke, you probably missed this hidden Easter egg.

When you reach the Upper Palace, you'll soon find yourself in a room with a series of shafts: take the downward shaft. When you reach the lower level, there will be a series of entryways blocked off by forcefields, and you'll spend a good deal of your time on this level opening these passages. However, once all the passages are open, enter a room with a small pool of acid nearby. Take the plunge and swim quickly through the corridor underneath. The adjoining room has a Doom logo on the wall and a picture of Carmack and his famous Testscreen on the other wall. If the photo looks somehow familiar to you, it should: it was taken by former CGW editor Chris Lombardi for our cover story on Doom II, way back in 1994.

By the way, if you don't feel like shutting down all those forcefields manually, you can bring up the console interface view via the following method:

Hit the ~ key. Then type noclip to turn off clipping, which will allow you to walk through walls. — Jack Rodrigues and Thierry Nguyen

**Classics & Puzzles**

**Shanghai: Dynasty**

Here's a cheat for gamers who want to beat their highest speed in a round of Shanghai Tournament, or for those who simply want to check out each tile-set's cool multimedia animation without solving every layout. This cheat will work only in the Shanghai or Tournament modes of Shanghai Dynasty, so don't try it during a game of Pandemonium or Dynasty.

First, create a file in the game's directory named CHEATER (the contents of the file don't matter). Begin a new game of Shanghai or Tournament and hit CTRL-Y, then remove pairs by hitting the spacebar. Once you've activated this cheat, don't try to use your mouse to remove tiles manually, as this will throw everything off and may result in an odd number of tiles left at the end. — Charlotte Panther
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**FALCON 4.0** is a multiple air combat simulation set in the Korean Peninsula with a real-time war-in-progress in which you take the role of a pilot in an F-4 Phantom II. Features include photorealistic terrain, high-fidelity graphics, and detailed models of F-4 jets, weapons, and missiles.

**Microprose (Simulation)** Release Date: 8/86 PC CD $54
THE OPERATIONAL ART OF WAR** is a strategy game that covers all modern warfare from 1935 to 1969, including all major conflicts, using a unique map of the world, and detailed combat tables.

Release Date: 5/86 PC CD $38

**FINAL FANTASY VII** An innovative role-playing game featuring seamless 3D graphics and animation. Hundreds of pre-rendered, computer-generated backgrounds and real-time combat maps, as well as complex graphics and challenging AI.

Eidos (Roleplaying) Release Date: 9/86 PC $38
**DAIKAMAN** Crash your way through time with the aid of your trusty sword! Play as the dragon and face off against the evil dragon lord.

Eidos (Action) Release Date: 9/86 PC $38
**DUKE NUKEM FOREVER** Duke is back and badder than before in this expanded sequel. Making use of the Quake engine, the game offers more realistic graphics and a fast-paced action-packed adventure.

Eidos (Action) Release Date: 9/86 PC $38
UNREAL is a first-person shooter game in a seamless 3D environment with realistic graphics and physics. It offers advanced graphics, items, and objects that interact with each other.

Release Date: 5/86 PC CD $46

**SANTARIUM** Your wake-up call brings you to a world of tomorrow. You are the last of your kind, trapped in a hospital for the mentally ill. You must solve puzzles and overcome obstacles to escape.

Eidos (Action) Release Date: 9/86 PC $38

**GRAND THEFT AUTO** Your goal is to rise through the ranks of criminal underworld. You start as a small-time crook, but eventually become a powerful figure in the city's power structure.

American Softworks (Action) Release Date: 4/86 PC $38

**DIVA X KANIKO** The latest in the DIVA X series. You must find your way through the maze of the minds to save the world.

**FluX (Puzzle)** Release Date: NOW PC CD $38

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### BOARD GAMES

<table>
<thead>
<tr>
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### ROYAL PLAYING GAMES

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### FREE GAME OFFER!

Spend the specified amount on any in-stock software and receive a FREE IBM game from the accompanying list. Request must be made at time of order. Offer good on in-stock software only, while supplies last. Limit 2 per customer. Valid until [insert date].

<table>
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**NOTE:** Prices and availability subject to change. Check our website for the latest information.
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.

New Inductee!

WarCraft II

Whether WarCraft II is better than Command & Conquer (a recent Hall of Fame inductee) is a matter of personal taste. Both games are largely responsible for the current real-time craze. While each owes its origins to Duke II, WarCraft II carved out its own destiny, eschewing the military theme of C&C for a fantasy motif.

Moreover, WarCraft II added new depth to the real-time model with a more sophisticated economic model. WarCraft II created a second school of real-time gaming, one that still included the quick-thinking tactical aspect of C&C, but also added far-reaching strategy in the form of upgrades, spells, and technology research. It's a more cerebral, resource-management-heavy model that only Age of Empires has managed to match. WarCraft II was noteworthy for its incredibly intuitive interface (remember the novelty of that right-click command?), amazingly polished SVGA graphics, and its simple, yet robust, scenario editor.

More than anything, however, WarCraft II will always be remembered for its engaging personality. The designers added many delightful little details to make the world of Azeroth come alive. Each unit had its own quirky voice (or grunt), and the goblins alchemist's shop in the snow levels even sported Christmas lights. We could go on, but suffice to say that this game had it all: incredible gameplay; great graphics; fantastic multiplayer support; and unmatched personality. There can be no question that WarCraft II belongs with the very best in the CGW Hall of Fame.

Then Finest Hour (LucasArts, 1989)

WILL sim with great campaigns and crew member options some current sims lack.

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)

Convincing and surprisingly subtle emphasized role-playing, and set the tone for later Ultimas.

Ultima IV (Origin Systems, 1985)

High-concept RPGs explored meaning of virtue and evil in role-playing.

Ultima VI (Origin Systems, 1990)

RPGs move away from rigid character sheets and more interactive play.

Ultima Underworld (Origin Systems, 1992)

The first truly 3D RPG, and the most convincing, its dungeon areas were nicely "painted" with texture-mapped graphics.

War in Russia (SSI, 1994)

More realistic than Eastern Front, it captured the essence of the largest land campaign in history.

Wasteland (Interplay, 1988)

Derived from Mike Stackpole's Mercenaries, Spies and Private Eyes, this is the definitive postapocalyptic RPG.

Wing Commander (Origin Systems, 1990)

A hot space-fight game, unfolding story path, and great characters.

Wing Commander II (Origin Systems, 1991)

Deeper story, greater feel, sound card advances, and tougher AI made this a sequel of sequels.

Wing Commander III (Origin Systems, 1994)

Surprisingly satisfying F4W space opera didn't lose the essence of the space combat game.

Wizardry (Sir-Tech Software, 1981)

 Defined the computer RPG with 80 by 60 point-and-click interface.

Wolfeinstein 3D (id Software, 1992)

Smooth-scrolling action blasting classic updated the original, and put shareware back on the map.

X-COM (MicroProse, 1994)

Premier tactical squad lead engine combined with alien tech research and pop culture for a 40k game nearly as addictive as C64.
"The Ultimate Gaming Machine"

"BOTTOM LINE: If you've got the money to spend this is the gaming system to own"
-PC Gamer, January, 1998

The "GREY"
Intel Pentium II 300MHz MMX
440LX AGP Motherboard w/512K
AAVIO Cooling System
64MB SDRAM 10ns
3.5" Floppy Drive
Hercules Thriller 30 w/8MB AGP
Rendition V2200 Chipset
30FX Voodoo II Card
4.368 Ultra-OMA Hard Drive
SoundBlaster AWE 64 PnP
Aitec Lansing ASC545
Subwoofer & Speaker System
32X EIDE CD-ROM
ATX Full-Tower Case w/300 Watt
Power Supply w/Dual-Fans
KoolMaxx Video Cooling System
104-Enhanced Keyboard
Microsoft 2-Button Mouse
Diamond Supra 56K V.90 Fax/Modem
Windows "95 OSR/2
Latest Drivers for Motherboard, Video, Sound, Direct X
Free Installation & configuration of Favorite Games
Game Bundle

Price: $2,099.00

"Attention to detail, personalized treatment, optimized quality components ready to take on any game or simulation...A system truly built and serviced by hard-core gamers. That's what makes a system like the Area51 a worthwhile investment, not a high price gamble."
-PC Multimedia & Entertainment, February, 1998

The "HIVE"
Intel Pentium II 333MHz MMX
440LX AGP Motherboard w/512K
AAVIO Cooling System
64MB SDRAM 10ns
3.5" Floppy Drive
Hercules Thriller 30 w/8MB AGP
Rendition V2200 Chipset
30FX Voodoo II Card
4.368 Ultra-OMA Hard Drive
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Microsoft 2-Button Mouse
Diamond Supra 56K V.90 Fax/Modem
Windows "95 OSR/2
Latest Drivers for Motherboard, Video, Sound, Direct X
Free Installation & configuration of Favorite Games
Game Bundle

Price: $2,499.00

"The Area51 is an out-of-this world, polygon-pumping, pixel pushing gamers' dream machine on speed that kicked every benchmark I fired it's way!"
-V000000 Extreme, January, 1998

The "HIVE-MIND"
Intel Pentium II 350MHz MMX
440LX AGP Motherboard w/512K
AAVIO Cooling System
64MB SDRAM 10ns
3.5" Floppy Drive
Hercules Thriller 30 w/8MB AGP
Rendition V2200 Chipset
30FX Voodoo II Card
8.468 Ultra-OMA Hard Drive
SoundBlaster AWE 64 PnP
Aitec Lansing ASC545
Subwoofer & Speaker System
32X EIDE CD-ROM
ATX Full-Tower Case w/300 Watt
Power Supply w/Dual-Fans
KoolMaxx Video Cooling System
104-Enhanced Keyboard
Microsoft 2-Button Mouse
Diamond Supra 56K V.90 Fax/Modem
Windows "95 OSR/2
Latest Drivers for Motherboard, Video, Sound, Direct X
Free Installation & configuration of Favorite Games
Game Bundle

Price: $2,799.00

The "AREA51"
Intel Pentium II 400MHz MMX
440BX AGP Motherboard w/512K
AAVIO Cooling System
128MB SDRAM 10ns
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Hercules Thriller 30 w/8MB AGP
Rendition V2200 Chipset
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Iomega Internal Zip Drive 100MB
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Diamond Monitors Sound PCI
Aitec Lansing ASC500
Subwoofer & Speaker System
Hitachi DVD Player 20X
MPEG-2 Decoder Card
ATX Full-Tower Case w/300 Watt
Power Supply w/Dual-Fans
KoolMaxx Video Cooling System
104-Enhanced Keyboard
Logitech Mouseless Fx/Modem
Saltel X36/X36 Controllers
Windows "95 OSR/2
Latest Drivers for Motherboard, Video, Sound, Direct X
Free Installation & configuration of Favorite Games
Game Bundle

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17" Viewsonic V773 .26dp add: $400.00
15" Viewsonic V55 .26dp add: $250.00
21" Viewsonic PB1D .26dp add: $1,050.00

"ABDUCT THIS COMPUTER"
-Bất Ti Magazine, September, 1997

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Voodoo Extreme

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The Computer Gaming Poll

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

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<thead>
<tr>
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<th>Company</th>
<th>Score</th>
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<td>Quake II</td>
<td>Id Software/Activision</td>
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<td>Quake Pack 2: Dissolution of Eternity</td>
<td>Id Software/Frogg</td>
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<td>Id Software/Ritual</td>
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<td>Jedi Knight: Dark Forces II</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>The Need for Speed SE</td>
<td>EA</td>
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### Top Adventure Games

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<td>Gabriel Knight 2</td>
<td>Sierra</td>
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<td>The Curse of Monkey Island</td>
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<td>Twins' Odyssey</td>
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<td>Realms of the Haunting</td>
<td>Interplay</td>
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<td>The Neverhood</td>
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<td>Riven</td>
<td>Red Orb</td>
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<td>RAMA</td>
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<td>Circle of Blood</td>
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<td>Lose Your Marbles</td>
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### Top Sports Games

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### Top Strategy Games

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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.
Sizzling Demos for Summer!

This Month's CG-ROM Really Heats Things Up!

Our feature demo this month is the exclusive GRAND PRIX LEGENDS from Sierra. This game—previewed in last month's CGW—allows you to experience the adrenaline-pumping thrill of life-or-death racing without breaking any bones!

If you're the nostalgic type, take a gander at BATTLEZONE, the 3D-accelerated remake of the arcade classic. And, for more action, be sure to check out Vantrex Interactive's gorgeous 3D shooter, INCOMING.

For online fighter jocks, we've included the GameStorm front-end for AIR WARRIOR III. And finally, for adventure gamers and X-Philes—the truth is on here! We have a sneak-peak at the much-anticipated THE X-FILES GAME (see the Sneak Preview also in this issue), and all signs indicate that the final product will be well worth the wait.

AIR WARRIOR III From Spitfires to Sabres—
you can fly classic planes in this renowned online sim.

GRAND PRIX LEGENDS Test your racing abilities in the most realistic and death-defying racing sim around.

June CG-ROM Titles

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How to Use the Disc

The CD is Autoplay enabled and should begin upon loading it into the CD-ROM drive. Otherwise, select Run from the Start Menu in Windows 95, and type D:CGW.EXE (where D is the letter of your CD-ROM drive) to run it straight from the CD. Many demos require the disc to be in the CD-ROM drive in order to run; therefore, we recommend installing the demos from our disc.

To Get the CD-ROM

To subscribe to the CG-ROM version of the magazine, call (303) 666-8930. If you already receive the magazine without the CD, you must wait until your current subscription expires before receiving the CD version. Please address subscription complaints to cgw@nedata.com. Neodata is a magazine fulfillment house which is not owned or operated by Ziff-Davis.

*Due to Vantrex Interactive's last-minute name change, Incomin is a product from Advanced Cybertech (the company's former name) on the CG-ROM.
CGW's Home on the Web

Turn to GameSpot for the Fastest Online News and Reviews in Gaming

iff-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 online 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 cgw.gamespot.com/june98.

- **Strategy Guides**
  - **Battlezone** Activision's reincarnation of this memorable title is quite different from the old arcade game, and gamers are loving it. As a hybrid action/strategic game, Battlezone provides gamers with a lot of bang for their buck. If you need more help than the game's manual can provide, turn to GameSpot.
  - **Deer Hunter** Who would've thought a deer hunting game would be so popular? Probably the same folks who thought a fishing game would be a great idea! GameSpot's master marksman takes a shot at this title, and helps you track down that elusive 15-point buck.

- **Designer Diaries**
  - Ever wonder what's going on behind the scenes while those much-anticipated games are in development? GameSpot's Designer Diaries follow the progress of game designers like Jane Jensen, who's embarking on her third Gabriel Knight game for Sierra On-Line, and Tim Schafer, who's currently working on Grim Fandango for Lucas Arts. Tom Hall also gives GameSpot readers regular updates on his new game at ION Storm, Anarchist.

- **Special Features**
  - **Sid Meier Legacy** Now that Sid Meier has left the confines of the business side of the industry, he can focus on his true passion—game design—without disruption. As Sid begins another chapter in his life, CGW's Terry Coleman and GameSpot's Tassos Kalladas sit down and chat with this great designer about his career so far.
  - **Top 10 Online Games** While there are some obvious inclusions on this list, there are a few games that might surprise you. GameSpot chooses the Top 10 online games and selects the best places to play them. Also, be sure to check out GameSpot's PC Workshop to find out how you can speed up your connectivity when playing these games.
  - **3D Level Design** In this two-part feature, GameSpot asks some of the best-known level designers in the business—including John Romero, American McGee, and The Levelord—about the ins and outs of good level design. They also tell us what their favorite levels are and where to find them online. In a companion piece, we review three of the most popular retail level-editors, and also point you to some great shareware editors that you can try for free.

- **Demos**
  - GameSpot has the most thorough and regularly updated game demo libraries on the Web. You'll find demos of many of the games that we've reviewed recently, including Interstate '76 Nitro Pack: The Vigilante Files, Deadlock II: Shrine Wars, Armor Command, Last Bronx, FIFA: Road to the World Cup '98, and more.

Visit GameSpot for demos, hints, tips, strategy guides, and more for the games covered in this issue. Just enter www.gamespot.com/june98 into your browser to find the following gaming essentials:

- **Demos & Patches:**
  - Interstate '76 Nitro Pack: The Vigilante Files
  - Deadlock II: Shrine Wars
  - Armor Command
  - Last Bronx
  - FIFA: Road to the World Cup '98

- **Strategy Guide:**
  - Battlezone
What's the Deal With... Multiplayer Backlash?

Can someone please explain to me the bitching and whining of some solitary computer gamers as they view the coming age of multiplayer gaming with the same bitter crankiness that Churchill displayed looking out over a crowd of suffragettes?

Does anybody seriously think we are in any danger of seeing the end of the single-player computer game? Even if you factor in the games that were so unintentionally bad that only a human opponent could save them from being unplayable, 90 percent of all games released in a given year are your basic, dedicated single-player games with a network or Internet suite tacked on at the end. Hell, Origin can get away with claiming that Wing Commander Prophecy was going to be multiplayer from the ground up, and still ship it single-player only, with hardly a fart of disapproval to be heard.

But let me rebut some of these ludicrous "single player is dead" fantasies...

"AI is going downhill because of multiplayer!" I love this one, because it illustrates two important human tendencies: The first is Good Ol' Days syndrome, in which gamers tend to conveniently forget about the hideous dogs of games that sniffled around every one of their classic loves. Everybody remembers Cw, yet nobody remembers buying Universal Military Simulator 2. Let's face it, The Good Ol' Days...weren't.

The second tendency is never letting your ignorance of how difficult something is prevent you from having an opinion. Most of us know how much of a misnomer the term AI is anyway, and the average quality of computer opponents isn't dropping — games are just getting deeper and more complex. If you want a computer player equal to a human, you can go from tic-tac-toe to checkers to chess to Battleship before you run out of steam. Without resorting to some kind of cheating, most wargame designers are thrilled to squeeze adequate artificial intelligence out of their export systems. I'm impressed that designers can deliver games that begin to rival their board-based counterparts in complexity and still make them remotely worth playing single-player.

This isn't to say that there isn't some dreadful crap out there being foisted as "computer opponents," but this is something that always has been and will always be there. Regardless, the advent of social computer gaming has barely caused a ripple in the bell curve of AI quality.

"I don't want to play a game where the AI is just a placeholder for a human player." Excuse me? It always has been! When we buy a game we can hope it's a competent placeholder, but that's why we have computer players. Something has to take the place of playing with your friends until the early morning hours, and that something is the computer!

And finally, my favorite grips, "This game didn't need to be multiplayer!" Now just who do these folks think they are? The entire concept of gaming began in the dust of Africa a few kazillion years ago, just so we'd have something to do with our fellow saplings other than trying to have sex with them or kill them. And these guys get to decide which games don't need to be played against people? I mean, hey, if you're happy hunkered down in your solitary lair, that's fine, but don't presume to think you can dictate who needs to play a game with another person.

I think that if gamers want to play Tomb Raider II or Wing Commander Prophecy with some friends, they should have that option. It would be nice if I could play Ultima at home with a friend and have to flip coins to see who gets to be the Avatar and who has to be the lono again. But thanks to the lone wolf traditionalists who don't think games need robust multiplayer options, I have to go online with the Young Sociopath's Club or talk to myself on my own computer. There is no middle ground at all.

So in the future, I know that all you dedicated single player types out there — you know, the ones who never wished for multiplayer Cw even just once — can be secure in the knowledge that your wishes still rule computer gaming. You sure don't have to waste time checking for multiplayer support on the games you're interested in. But please let us social gamers enjoy the few multiplayer titles we actually do get once in a while.
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