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Level by level, the all-new single-player experience delivers the intensity of a live deathmatch.

Fear goes state-of-the-art with smothering fog, flickering shadows and retina-searing effects.

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Playing as 3 unique species, Giants: Citizen Kabuto will take you to surreal worlds combining 3D arcade action, blow-your-mind graphics, a dash of strategy and a few dodgy laughs. All of which make a perfect canvas for sheer brute savagery in a single or multiplayer ass whuppin' experience.

So, shut all the doors, turn off the lights, and wheel Grandma into the garden —

**Giants: Citizen Kabuto™ is coming!**

---

**Actual Game Screen**

**The Species**

**Kabuto**

A giant, ferocious beast, ten times the height of any opponent. He has no sensitive side—everyone who comes near him is an opponent, who'd look better dead.

**Meccaryns**

A high-tech and crafty race who rule the sky with ingenious military formations and awesome fire power.
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ESRB
V-71 RIDGE PIRANHA - 12 SPD, QUAD-TURBO, LOADED! KIT, INTERIOR - MINT, ALARM, CONSIDER THIS YOUR CLUE, DON'T MISS OUT! 786715-76

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Lara Croft must really get around, because she’s spawned a new genre almost single-handedly. The success of TOMB RAIDER has brought a host of third-person action games, including some of the best games you’ll see this year. Join us as we empty our Uzis, crack our bullwhips, leap across chasms, and get more rear-end action than a bus seat in these hands-on previews of ONI, MESSIAH, INDIANA JONES AND THE INFERNAL MACHINE, GIANTS, and SHADOWMAN.

The New Face of 3D ACTION

Need A New 3D Card?

If that new game you just brought home runs like a one-legged duck on ice, it’s time to think about an upgrade. Fortunately, the latest crop of 3D cards offer stellar performance, but you must choose wisely. TNT2 or Voodoo 3? Waterfowl assassins Loyd Case and Dave Salvator test 16 new 3D cards and show you the best ones to bag.

Caution: Developers at Play

Ever wonder what tactics game designers use to beat the best games? Learn the secrets of the pros, from Civ II designer Brian Reynolds, Railroad Tycoon II designer Phil Steinmeyer, Blizzard’s Bill Roper, Richard “Levelord” Gray, LucasArts’ Tim Schaefer, Valve’s Gabe Newell, Maxis’ Will Wright, and more.
**PREVIEWS**

**Black & White**
From POPULOUS to MAGIC CARPET to DUNGEON KEEPER, Peter Molyneux has continually redefined the boundaries of what action and strategy games can be. See why we think BLACK & WHITE may be his best game yet.

**Force Commander**
So you think you've seen every real-time 3D strategy game. You'll think differently after you see what LucasArts has in store for its signature franchise.

**Panzer General 3D Assault**
Totally redesigned to take advantage of a new 3D engine, this is one Tiger tank game that really roars. Turn-based gaming will never be the same.

**READ ME**
- 20 Hot Games for 2000: Our hot picks from E3
- CGW hangs out at the Playboy Mansion
- The latest thunder at Ion Storm
- Violent games duck for cover at E3

**HARDWARE**
- Voodoo 4 scoop! We've got the first specs!
- Mice with more brains, less balls.
- Loyd Case - Another year, another DirectX
- Killer Rig

**REVIEWS**

**ACTION**
- **Aliens vs. Predator**
- **Star Wars Episode I: The Phantom Menace**
- **Blood II:** Nightmare Levels
- **Worms: Armageddon**
- **Recoil**

**ADVENTURE/RPG**
- **Baldur's Gate:** Tales of the Sword Coast

**SIMULATIONS/SPACE**
- **Apache Havoc**

**SPORTS/RACING**
- **Jack Nicklaus 6**
- **Microsoft Baseball 2000**
- **Baseball Edition 2000**

**STRATEGY/WARGAMES**
- **Battle of Britain**

**DEPARTMENTS**

**Editorial**
Meet our new Editor-in-Chief, George Jones

**Letters**
Readers chuckle, cry, and vent. We listen.

**On the CG-ROM**
Demos, tools and goodies on CD

**Reviews Introduction**

**Top 100**
Readers rate the top games

**Terry Coleman**
Everybody's a free agent

**Denny Atkin**
Add-ons to revitalize your old sims

**Greenspeak**
Jeff's clutching his Palm Pilot a little too closely

**Johnny Wilson**
...is on vacation this month (honeymooning in Paris, the lucky stiff)
AGE OF EMPIRES II
THE AGE OF KINGS

Knights.
Castles.
Joan of Arc.
Oh my.

www.microsoft.com/games/age2
Remember, if you get the wind knocked out of you, stay down so I can examine the color of your face.
Guess you could say we like to go out of our way to make sure stuff looks real.

Why? Because we can. Our 3D graphics accelerator performs over 100 billion operations a second.

And considering our chip is compatible with a ton of games and software, maybe it's time to upgrade your present computer with a 3dfx Voodoo3® board, or make sure it's built into your next one.

For more information, check out our website at www.3dfx.com. So powerful, it's kind of ridiculous.
DESTROYING YOUR ENEMIES
ISN’T ENOUGH...

"The elaborate architecture within these 3D environments is some of the best Next Generation has seen on the PlayStation."

-Next Generation

As Raziel, stalk the shadows of Nosgoth hunting your vampire brethren. Impale them with spears. Incinerate them with torches. Drown them in water. No matter how you destroy them, you must feed on their souls to sustain your quest — the ruin of your creator, Kain.

- Shift real-time between the material and spectral planes
- Dark gothic story

"...the completely revamped sequel to Legacy of Kain promises high immersion factor."

-Spin
...You must devour their souls

Legacy of Kain: Soul Reaver

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WORLD WAR II LIKE YOU'VE NEVER SEEN!

Control up to four soldiers in either 3rd or 1st person views!

State of the art 3D accelerated "Insanity" engine produces life-like terrain and atmospheric effects!

4 player co-operative action over LAN

Carelessness costs lives as enemies hear you, see you and even chase you!

HIDDEN & DANGEROUS

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I have big, giant-size, 14-and-then-some feet. The kind of feet that make shoe salespeople smile to themselves when I hold up a pair of Nikes and ask if I can try some on in my size. I'm not bitter, though; I'm always glad to be able to make people laugh right in my face, especially in the mocking, derisive way store-employee employees do when they bring out a pair of size 12s and smirk, "This the biggest size we have, sir." Thanks. Actually, just thinking about their passive-aggressive taunts gets me riled up. Screw this column. I'm going down to the local Foot Locker, going right up to one of those wannabe referees that work there, and... and... and...

Ahem. Anyway, the point I was making is that I have very big feet. But you know, even if I wore a size 28 EEEEE, I still wouldn't fit into the shoes left by my predecessor, Johnny Wilson. Having been a reader of Computer Gaming World for the last 10 years or so, I understand only too well the legacy of great storymaking he's left behind, and I can assure you that is one thing that won't be changing.

So what happens to Johnny now that I'm the Editor-in-Chief? Well, like any action hero, Johnny got the girl (he recently got married) and rode off into the sunset. Of course, the "sunset" is an office
FIND THE TRUTH.

In the remote French village of Rennes-le-Château centuries of questions culminate in one frightening moment in time.

NOW.

MARCH 12, 1295. CAMPAGNE-SUR-AUDE
The Knights Templar build a lookout post at the summit of Bezu. For years, these elite soldiers of God stand guard over an unknown treasure.

JUNE 20, 1772. POUSSIN'S TOM
An actual tomb—identical to the one in Poussin's 1641 Les Bergers d'Arcadie—is discovered near Arques. The crypt is said to have held the mysteries of God.

TODAY. RENNES-LE-CHÂTEAU
Gabriel and Grace follow a stolen child to this small French village. The riddles and mysteries they will encounter guard the most tightly held secret of all time.

Blood of the Sacred
GABRIEL KNIGHT 3
Blood of the Damned
A 3D MYSTERY ADVENTURE

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AUGUST 2, 1940. PAS DU LOUP
Adolf Hitler dispatches a small division of soldiers and archaeologists to search for a "treasure of immense wealth" said to be hidden within the valley. The project is soon abandoned.

MARCH 17, 1244. MONTSEGUR
A mysterious treasure is smuggled out of the Cathar fortress of Montsegur. Two days later the remaining "heretics" are slaughtered by the crusaders of Pope Innocent III.

JUNE 1, 1885. ST. MARY MAGDALENE'S
The ancient village receives a new parish priest, Bérenger Saunière. While renovating the abbey, he makes an unsettling discovery in a hollow column. Soon after, Saunière has wealth enough to refurbish the entire village.

JANUARY 22, 1922. VILLA BETHANIA
After hearing his final confession, a neighboring priest rushes from Saunière's deathbed, refusing to administer last rites. Never sharing what transpired, he was said to have lived the rest of his life in torment.

Solve a true historical mystery within a surreal, captivating storyline.
Control your point of view using unlimited camera movement.
Navigate stunning, real-time rendered 3D environments.
Legends of treasures lost and monsters to be defeated abound in the region. Almost all have at least some basis in truth. Are you up to the task? Will you return with even more fame than you accumulated in your previous travels? Or will you journey off; never to be heard from again-the source of your own legend, in turn...?

Continue your adventures with the character you created in the original game.

Join up with new friends or meet old enemies.

More powerful spells, talkative NPCs, and additional enchanted items to be found.

Multiplayer support - up to 6 players via modem, LAN, or Internet.
Content Ratings

just got my July issue. Greeting me was Johnny Wilson’s column about the Littleton tragedy (July, page 21). Honestly, I was a bit surprised; I hadn’t made the association between the June cover and the shootings. However, that’s just me being ignorant of the Real World. Digging into the article, though, one thing grabbed my notice. Johnny calls for standardization of the rating icons and a need for parents to be able to see what their kids are buying. So, CGW, put your money where your mouth is. Insist that all the games in the magazine have the rating icon. In the meantime, CGW, keep up the good work.

Steve Boyd
Via the Internet

One Vote for Johnny

I completely agree with Johnny Wilson’s editorial that graphic violence does make us pay attention and think about what’s at stake. In some cases it even does a better job than some parents. I really hope the editorial sinks in.

Zorik Ishayev
Via the Internet

...and One Against

I disagree with Johnny Wilson’s July editorial regarding how violent games can offer a positive social value. While I’ve enjoyed some of the offending games myself, that was during my adulthood, not my formative years. I’m quite convinced that violence in the media is a social negative. While I support the right of the game publishers to publish violent software, I refuse to support them myself.

Fred Kuhiman
Via the Internet

X-WING ALLIANCE Review

When I received your July issue, I was excited to see what my favorite magazine had to say about X-WING ALLIANCE. My problem is this: you gave away the ending! Now, I understand in order to do a review, you have to give an overview of the story, but in this case you not only told us what to expect, but exactly how it ends...you did take a little of the hard-earned thrill of finishing the game.

Mike Smith
Via the Internet

Thirty Nguyen responds: My review of X-WING ALLIANCE didn’t give away any plot elements that weren’t on the back of the box, which reads: “Ultimately, you will join the Rebel Alliance for a series of covert assignments and uncover information about the Empire’s second Death Star project. The choices you’ll make will affect the outcome of the mission.” I was just confirming that this actually happened, and didn’t let loose any of the juicy details, like how you meet Boba Fett and discover that he’s actually a very pissed-off Jar Jar Binks. (The hatred of millions of Phantom Menace fans will do that to you.)

Joe Pate
Via the Internet

Agony of the Feet

I was shocked, sickened, and utterly flabbergasted while thumbing through your latest issue. The object of my disconcernation is the ad depicting a row of shoeless game designers standing in front of a line of women wearing bikinis. I have two daughters, and I shudder to think that they could ever be abused in this way! Everyone knows that, given the likelihood of going shoeless for days at a time during binge gaming, gamers have an inordinately high occurrence of foot maimal. Plus, those are the ugliest feet I have ever seen! I demand a full refund of my subscription. Then, just maybe, the healing process can begin.

Fred Kuhiman
Via the Internet

Neil Kohlhoff
Via the Internet

Reactions to John Dyer’s Letter

I have been reading your mag for years and never found anything that offended me or my family. So when I read the letter (Issue #180) from John Dyer I could not believe what he was saying.

I’m the father of three girls and have been a gamer all my life and had a good upbringing, and I know the difference between right and wrong. What kind of father would I be if I didn’t teach my children the same?

I have to ask Mr. Dyer if he ever looks at a car wreck. If he says no I would call him a liar. We all have looked. Does this make us bad people?

Matthew Rando-Chanon
New York, NY
Via the Internet

We received many similar comments about John Dyer’s letter in our July issue. We thought we’d close out this topic by printing a particularly eloquent letter from an 18-year-old gamer who seemed to crystallize the views of many who wrote in.

Look at the Big Picture

As an 18-year-old high-school student, I was shocked by the Littleton tragedy as much as anyone, but I was (and still am) quite angry with people like John Dyer who rush to blame the computer industry. I have been playing video games since I was four, and I own some violent games, like HALF-LIFE and QUAKE II. Does this make me a potential killer? I think not. The graphic images found in video games can be found in any film or TV show nowadays, and just as it is your responsibility to regulate what shows your child watches, it is your responsibility to regulate what games they play. While many ignore it, there is a ratings system, and it is not the computer industry’s place to play parent for you. Incidents of teenage violence are increasing throughout the country, and I think it’s time we look at the big picture. In social psychology, there is a term called “self-serving bias,” which basically boils down to a failure to look within. It’s easier to blame our problems on video games than to look at the more serious, internal issues of hatred and disillusionment, and the breakdown of parenting in our society.

The bottom line is this: it is not the game company’s nor the government’s place to regulate what we see and hear. It is their responsibility to give parents the proper resources to protect their children from material they deem inappropriate, and they most certainly do.

Matthew Rando-Chanon
New York, NY
Via the Internet

Via the Internet
ON THE CG-ROM

Want Demos? We've Got 23

Our CG-ROM crew worked overtime this month to bring you 23 killer demos for your gaming pleasure. This month's top demo is a World War II squad-level action game with an amazingly realistic look and feel. History & Dauntless lets you command a squad of Britain's elite S.A.S. commandos deep inside Axis territory. Using careful planning and sound tactics, you'll have to keep an eye on pilots that have been captured by the Germans. After selecting eight soldiers for the campaign, you get a team of up to four men for each mission. During the mission, you can control any of your men from either a third-person or first-person perspective, or pause the action and give commands from a top-down map interface. You may be surprised to see an action game coming from the makers of the Battlezone series, but TaronSoft's experience making fine wargames is apparent in the high degree of realism in weapons, vehicles, and historical ambience.

HIDDEN & DANGEROUS

GENRE: WWII commando sim
EXECUTABLE: hidden_dangerousshd_demo.exe
Play the first two missions of this evolutionary action/wargame.

ALIENS VS. PREDATOR

GENRE: First-person shooter
EXECUTABLE: alien_v_pav_macros_alien_demo.exe
Hunt colonial marines as the fast and deadly Alien.

AUSTIN POWERS TRIVIA

GENRE: Trivia game
EXECUTABLE: austin_powerssetup.exe
Test your knowledge of the Austin Powers movie and popular culture trivia.

CARNIVORES

GENRE: Dinosaur hunting game
EXECUTABLE: carnivorescarnivoresdemo.exe
Go on a hunting trip to an island full of dinosaurs.

CONFIRMED KILL

GENRE: WWII flight sim
EXECUTABLE: confirmed_killsetup.exe
Online WWII flight sim including the Pacific theatre.

DAWN OF ACES

GENRE: WWII flight sim
EXECUTABLE: dawn_of_acessetup.exe
Challenge your friends online or practice against the computer.

DEEP 3

GENRE: Space sim
EXECUTABLE: deep3setup.exe
Head to the tavern for a friendly game of darts against the computer.

ELITE DARTS

GENRE: Dart sim
EXECUTABLE: elite_dartssetup.exe
Choose to play as a Fullard or an Assassin in this classic fantasy shooterto.

HEXEN II

GENRE: First-person shooter
EXECUTABLE: hexen_2h2demo.exe
Try your luck on four different slot machines, or play blackjack to your heart's content.

HOYLE CASINO GAMES

GENRE: Real-time strategy
EXECUTABLE: hoyle_casino_gamessetup.exe
Try your luck on four different slot machines, or play blackjack to your heart's content.

Video Clips

Aliens vs. Predator
Giants

Toolbox

DirectX 6.1
GameSpy

Additional August CD Titles

TOMB RAIDER II GOLD

GENRE: Action/adventure
EXECUTABLE: tomb_raider_2_goldidomi99.exe
Explore one of the new expansion levels for Tomb Raider II.

RAILROAD TYCOON II:
THE SECOND CENTURY

GENRE: Strategy
EXECUTABLE: railroad_tycoon_ii_2ndcenturysetup.exe
Take railroading into the modern age with a demo for this expansion pack.

NORTH VS. SOUTH

GENRE: Wargame
EXECUTABLE: north_vs_southdemo.exe
Play one sample battle as either the Union or the Confederates.

EUROPEAN AIR WAR

GENRE: WWII flight sim
EXECUTABLE: european_air_war_europe_demo.exe
Try your hand at CWG's flight sim of the year for '98.

MICROSOFT BASEBALL 2000

GENRE: Baseball
EXECUTABLE: mbaseball_2000msh2000.exe
Play a few innings of an all-star game in Fenway Park.

EXECUTABLE:

/ executable

PRO-PINBALL

GENRE: Pinball game
EXECUTABLE: pro_pinballsetup.exe
Play three balls on one sample table.

SHADOW COMPANY

GENRE: Real-time strategy
EXECUTABLE: shado_companysetup.exe
Command a squad of trained mercenaries, left for dead in hostile territory.

STAR WARS: THE Gungan Frontier

GENRE: Strategy
EXECUTABLE: star_wars_gungan_frontiersetup.exe
Build and manage an ecosystem in the Star Wars: Episode 1 universe.

TOTAL ENTERTAINMENT NETWORK

GENRE: Online gaming service
EXECUTABLE: itemsetup.exe
An introduction to one of the most popular online services for gamers.

TEST DRIVE 5

GENRE: Arcade racing game
EXECUTABLE: test_drive_5setup.exe
Drive your choice of two Corvettes on one demo track.

TEST DRIVE OFF-ROAD 2

GENRE: Arcade racing game
EXECUTABLE: test_drive_off_road_2setup.exe
Race a Humvee on the Santa Cruz track.

TOMB RAIDER 3

GENRE: Action/adventure
EXECUTABLE: tomb_raider_3setup.exe
The intrepid Lara Croft heads for the South Pacific.
Racers, start your mayhem. Grab hold of one of 10 wild vehicles and race through the windy streets of Chicago, where you’ll have to deal with tough opponents, alleyways, drawbridges, newspaper racks, tunnels, and the police. Throw in five race modes and over 50 city landmarks, and there are plenty of sights to see. Just don’t drive like a tourist.

See more action at www.microsoft.com/games/midtown
CGW's Top 20 Games of E3
At a Surprisingly Good E3, These 20 Games Were the Best of the Best

Game of Show

Freelancer
The chosen among us had seen FREELANCER before, so we knew what kind of dazzle-fest was in store when Chris Roberts closed the door to the meeting room and said, "So let me tell you about FREELANCER." We had been preaching the gospel of this good game since the first time we saw it, in early March. But the ignorant among us couldn't fathom what was so gosh-darn special about Microsoft's upcoming space combat/explore-ration/trading title. After our fly-through, the raised eyebrows around the room showed that the formerly ignorant were now fully educated. And quite impressed.

Ion To Dump Two Founders

Porter and O'Flaherty will soon be out

Coaster Tycoon: Todd Porter's Games

<table>
<thead>
<tr>
<th>Game/Developer/Year</th>
<th>Description</th>
<th>Units Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knights of Legend (Origin) 1989</td>
<td>Soulless, mechanical ULTIMA knockoff</td>
<td>N/A</td>
</tr>
<tr>
<td>M (3D) 1993</td>
<td>Sci-fi role-playing, with retarded AI</td>
<td>unfinished</td>
</tr>
<tr>
<td>Forgotten Castle (55) 1993</td>
<td>A 3D demo of a game</td>
<td>unfinished</td>
</tr>
<tr>
<td>Gnome (P/Level) 1992</td>
<td>Perfectly simulates putting a moose in a giant robot</td>
<td>21,075</td>
</tr>
<tr>
<td>Dominion (Ion Storm) 1993</td>
<td>CGW's Game of the Year nominee</td>
<td>16,885</td>
</tr>
</tbody>
</table>

*PC Data only; N/A: No data exists before '93.
FREELANCER conjures up fond memories of what we imagined games like PRIVATEER and ELITE could be—a wide-open science-fiction game with a wide-open, nonlinear storyline. In the game, you play an interstellar trader who gets caught in a power struggle between four "houses." As you play, you'll decide what goods to trade, upgrade your ship, and take mercenary missions from the various houses, which appear to have the trappings of feudal Japan.

And then there are the graphics. Oh, mana. We saw a scene set in a gasly nebula that looked like it had been beamed in straight from the Hubble telescope. We saw massive ore-processing stations that had a sense of grand scale we'd never seen before. Throughout the entire demonstration, we also saw a cinematic style we're not accustomed to in computer games. Even the combat in FREELANCER is a step beyond what we're used to. Gamers will be able to engage the enemy with nothing more than a mouse and avoid the monotonous turning battles space combat often devolves into.

FREELANCER showed us a bright future of PC gaming that goes far beyond the current state of the art. We can't wait to get there...or at least give it a test drive.

Age of Empires II

If you're one of the two million or so players of Microsoft's AGE OF EMPIRES, perhaps the most important detail about AGE II is when it's coming out: November. Why the wait? Although the engine hasn't changed, it's taken the development team at Ensemble Studios a year to rewrite the unit pathfinding alone. The game features all-new art for its 13 new civilizations, each of which has its own language, wonder, and unique "special unit" (see Elliott Chinn's detailed descriptions on www.gamespot.com). You'll be able to use unit formations, but the designers dropped facing in combat, saying it was too difficult to tell what was going on. In any event, we may have to wait a little longer for it, but AGE OF EMPIRES II will easily be one of the biggest games of the upcoming holiday season.

Anachronox

Tom Hall's mighty RPG has been in development at Ion Storm for a while now, but at E3 the team was finally able to show off the game in all its glory—and it looks awesome. ANACHRONOX is a gorgeous-looking 3D RPG (based on the Quake II engine) that jumps across dimensions and galaxies, with a plot that borrows from fantasy, science fiction, and anime elements and gameplay reminiscent of the best console RPGs. Most impressive in the demo we received was a trip through a Matrix-like digital world—though when all's said and done it may be hard to pick just one cool moment in a game as rich as this one.

CGW's Reality Check

Loyal fans of Reality Check will notice a change this month: PC Games is gone. Welcome to the wonderful world of capitalism, in which one day we'll all be working for Microsoft. Now, here's the latest roundup of 10 recent games and their corresponding review scores from the remaining major gaming and Web sites. All scores use each pub's own scoring system.

<table>
<thead>
<tr>
<th>Game</th>
<th>CGW (out of 10)</th>
<th>PC Gamer (out of 10)</th>
<th>GamaSutra Plus (out of 10)</th>
<th>PC Accelerator (out of 10)</th>
<th>GameSpot (out of 10)</th>
<th>GameCenter (out of 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Army Men II</td>
<td>2.5 stars</td>
<td>68%</td>
<td>3 stars</td>
<td>7</td>
<td>6.8</td>
<td>3 stars</td>
</tr>
<tr>
<td>EverQuest</td>
<td>4 stars</td>
<td>86%</td>
<td>9</td>
<td>9</td>
<td>8.4</td>
<td>5 stars</td>
</tr>
<tr>
<td>HOMM III</td>
<td>4.5 stars</td>
<td>86%</td>
<td>5 stars</td>
<td>7</td>
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*no rating available at press time. □ red indicates editor's choice games

news.blurbs

E3 Edition

C&C Talent Leaves Westwood to Form Startup Erik Yeo, the lead designer and main creative force behind Westwood Studios' immensely popular COMMAND AND CONQUER franchise, and Lewis Peterson, producer on the C&C titles, have left Westwood to form their own company, 7 Studios. The name comes from a group of seven designers (including Yeo and Peterson) who have all committed to the company. So far, only two others have been formally announced: Margaret Stahl (ZORK GRAND INQUISITOR, DUNE 2000, SLAVE ZERO) and Damon Coun (C&C COMMANDOS). At E3, the team was scrambling around looking for potential publishing deals, and they did formally tie the knot with Midway. No word yet on exactly what Yeo and the rest will be up to for their first game, but it is expected to be a PlayStation 2 title, with elements of strategy and action.

We'll continue to follow 7 Studios' progress as we learn more.

Sid Does CIV III Sid Meier and Brian Reynolds will finally be doing CIVILIZATION III, as Firaxis signs an agreement with Hashbo Interactive. (See Terry Cohen's column this month for details.)

New LucasArts Shooter LucasArts made a surprise announcement of a new Star Wars Episode I game at E3, a Jedi Knight-style first-person shooter titled Episode I: Obi-Wan. No details are available yet, other than that you'll play the role of the young Obi-Wan.
Black & White
This game, centered around making moral decisions, may start the moment you buy it—the marketers are considering packaging it in both white and black versions, with the white box costing an extra $5 earmarked for charity. Once the game's installed, you'll guide a civilization and an enormous beast as you seek to become God in the gameworld. Countless good and evil choices are made as you play, with the world, your followers, and your beast reflecting either the corruption or purity of your soul. From Electronic Arts and Petri Molyneux (POPULOUS, DUNGEON KEEPER), BLACK & WHITE is the "god game" to watch in 1999. (Take a look at our preview on page 44.)

B-17 Flying Fortress II
Hasbro and Wayward Studios are bringing forth the most detailed bomber simulation yet. You can man every station of the bomber, and in network games, players can fly as gunners, bombardiers, and so on. Fighters such as the P-47 and Me-163 are also modeled in detail, so you'll be able to fly escort for or attacks against the bombers as well. Ultra-detailed physics and realistic terrain should bring you right into the action.

C&C Commando
This upcoming third-person-perspective action game from Westwood Studios will give CGW assistant editor Thierry Nguyen the chance to live out his lifetime fantasy: to actually be the Commando unit in COMMAND & CONQUER. We're hoping that the game's gorgeous graphics and unique multiplayer angles will be enough to stop him from wearing that stupid camouflage bandana to work two days a week and screaming "Come get some!" any time a member of the sales staff walks by his cubicle.

Dark Reign 2
While DARK REIGN II is embracing every 3D buzzword in sight, what really matters is how that will affect gameplay. The terrain is the most dramatic we've seen in a real-time strategy title and should have a major impact on tactics. The sense of scale is impressive, with towering Mech-like units dwarfing infantry. The most intriguing feature is the cycling of day and night, allowing players to build up during sunlit hours for brutal nighttime attacks. Activision's original real-time strategy game was a bit lost in the glut of similar titles a few years back, but the sequel looks primed to forge new ground.

Deus Ex
While completion is still a long way off (think spring 2000), progress on this first-person RPG (which uses the UNREAL engine) is going great. DEUS EX may not have had the flashiest graphics of the show, but seeing the attention to intricate world detail and hearing design god Warren Spector talk about the design decisions behind the game made the preview worthwhile. And besides, who doesn't want to play a spy RPG?

Running Scared?
As depressing as the din was in the L.A. Convention Center's South Hall this E3, there were some sounds you wouldn't hear even if you listened closely. You wouldn't hear the tortured cries and splashing blood of Raven's SOLDIER OF FORTUNE. You wouldn't hear the profanity-laced dialogue of Xatrix's KINGPIN. Why? The news that the Columbine High School gunmen reportedly played computer games like DOOM and quake drew the unfriendly attention of the mainstream media, so game companies played it safe at this year's E3.

Prior to the Littleton, Colorado, massacre, Interplay had been handling KINGPIN as one of its highest-profile games. But after the shootings, the game fell off the map. KINGPIN wasn't mentioned in press releases immediately prior to E3 and is conspicuously absent on the cover of Interplay's press CD, where all the company's other games are depicted. The game was being shown at E3—interested (that is, cleared) journalists could obtain a special stamp that let them past security into Interplay's private room, away from the center of the show.

There was one other place to see KINGPIN, and that was behind a black curtain at the back of the Convention Center in a tiny, hot, non-air-conditioned alcove where Activision's SOLDIER OF FORTUNE could also be found. To see that unabashedly bloody shooter, game journalists had to be escorted behind the curtain by Activision staff. With copious amounts of blood and viscera whose arms and legs get blown off high-powered weaponry, SOLDIER OF FORTUNE was exactly the kind of violent game the mainstream media was hungry for.

According to one source, at least 12 camera crews were turned away and denied the opportunity to see SELLER OF FORTUNE on the convention's opening day. It's hard to notice the irony of big game companies like Activision and Interplay dodging mainstream media, considering how everyone and his brother in the gaming industry has openly lusted after media attention. Not now. Along with the Activision and Interplay gore-fests, the toy guns and other weaponry usually seen at E3 were inconspicuous this time around, and other violent games also did their best not to be noticed.

While we'll have to wait to see if real-world violence will have a lasting impact on gaming, the short-term effects are undeniable. —Robert Coffey

Under Heavy Media Fire, the Goriest of 3D Shooters Take Cover at E3

Flight Combat: Thunder Over Europe
FLIGHT UNLIMITED blew sim players away, but everyone asked where the guns were. Now Constantine Hartopoulous and the Looking Glass crew are bringing us that and much more. Realistic flight models, stunning terrain, and unprecedented recreations of night fighting—complete with searchlights—highlight this sim. Hardcore sim fans will go nuts over the game's customizability; you'll have the ability to tweak aircraft and environments with ease and unparalleled flexibility.

Giants: Citizen Kabuto
We were wondering what Planet Moon's designers (the people
The heat waves radiating from Ritual Entertainment’s motor home at E3 weren’t from the sun but rather from the scorching graphics of F.A.K.K.2 and the designers’ torrid gameplay descriptions. The game is a third-person-perspective action-adventure in which you play the role of Julia, a fantasy heroine whose planet is under attack. Julia (modeled on B-movie queen and 1993 Penthouse Pet of the Year Julie Strain) must solve puzzles and wield huge weapons—often fighting with one hand and blocking with another—to take down the invaders. The game’s QUAKE III engine is being used to dazzle in creating an amazing interior and exterior environments. F.A.K.K.2 won’t be a knockoff of the movie sequel coming out in October, or a repeat of SIN. The game has come a long way since we previewed it in our May issue, and we think it’ll be one of the hottest games for 2000.

Need for Speed: Motor City

Forget your preconceived notions about the NEED FOR SPEED series. The next game from Electronic Arts’ NFS team is something altogether different. Featuring a brand-new engine with over 10 new tracks, MOTOR CITY is forsaking the world of high-powered luxury cars for a spin through the realm of classic cars and hot rods. Over 30 licensed vehicles will be available for you to race and customize, including such beauties as the 1957 Chevy Bel-Air Sports Coupe and the 1970 Mustang "Boss" 302. Most intriguing of all is the game’s online component, which will be an entire virtual racing world complete with a functioning economy for buying, selling, and trading cars and parts, and for challenging others to races of varying stakes. An online racing RPG? We are so there.

Oni

Rumor has it that none other than Steven Spielberg spent some time at the Bungie booth checking out Oni. We understand why. This upcoming third-person-perspective action game (previewed in this issue on page 62) had the entire CGW staff drooling over the single- and multiplayer possibilities. Oni has one of the freshest approaches to the 3D shooter we’ve seen. Hand-to-hand combat supplements the guns-and-ammo mentality this genre is famous for, and the game’s sharp anime style—inspired by Ghost in the Machine—impressed not just Stevey but everyone at the show.

Panzer General Assault 3D

The original PANZER GENERAL was the best-selling wargame of all time. PANZER GENERAL ASSAULT was one of the best-looking wargames at the E3 show, and proof that 3D acceleration can be used to terrific effect in a well-crafted turn-based game. (See Terry Coleman’s exclusive hands-on sneak preview on page 47.)

Shogun

For those of us who grew up watching The Seven Samurai or Kagemusha: The Shadow Lord, Electronic Arts’ SHOGUN is as close as we’re likely to get to a Kurosawa experience on our PC screens. The overarching strategic wargame is reminiscent of the best of the old Konami games like GENGHIS KHAN II, while the tactical combat—filled with luscious models of 3D samurai—has the most sophisticated set of tactics and formations yet seen in a real-time strategy game. Easily one of the most promising games of the year, in any genre, due this autumn.

The Sims

SIMCITY way up close. THE SIMS lets you create a house and then take control of a virtual life. You guide your onscreen doppelganger through his or her life, not only meeting basic food and entertainment needs but also advancing his or her career, finding a mate, and making friends. As the family grows, you eventually take control of the spouse and kids. Most intriguing is the ability to expand the world. If you download a soccer ball, for instance, that file will also have the rules of the game embedded in it; suddenly your Sims and their neighbors will be able to play soccer in the backyard.

Swat 3: Close Quarters Battle

Set in the year 2005, SIERRA’S SWAT 3 is one of the more impressive squad-based tactical shooters we saw at the show. Missions will take place in real-world locations, real-world ballistics will allow high-powered weapons to fire through walls and doors, and advanced AI will let you command your unit without having to babysit them.
Loot and Extort Your Way
to infamy in the seedy world of the 17th century Caribbean. Strike terror in the hearts of your victims: board ships, ransom hostages and sack towns. The only rules are the ones you make. Cutthroats: Terror on the High Seas makes you the captain of a ship bristling with cannons. Seek a Letter of Marque and fight for King and country as a privateer, or become a ruthless pirate. Either way, remember to ply your crew with rum and treasure or face a mutiny. Will you survive to retire a Pirate King? Or will you dance the hempen jig on Gallows Rock?

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EIDOS INTERACTIVE

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Jesus rose from the grave to forgive sins.

INTRODUCING LOCKE – an ancient warrior whose moves are so lifelike, it’s hard to believe he’s been dead for 10,000 years. Resurrected for the noble purpose of saving the daughter of a warlord, Locke goes about his business in an anything but noble fashion – hacking, slashing and otherwise mutilating a field of enemies that don’t go down easy. Which is precisely why Locke has such an intricate fighting system that features real-time attacks, combinations, and fatalities as well as stealth mode for slitting throats, projectile weapons to kill from afar, and 30 magic spells. Of course, if 25 types of enemies aren’t enough for you, try the multi-player mode that invites up to 4 people in deathmatch and dungeon fare. Revenant is a living, breathing, and often horrifying world filled with caves, dungeons, ruins and many more customizable levels to explore. But no matter where you go with Locke, we think you’ll agree: Life is better the second time around.

To enter the Revenant world go to...
www.eidosinteractive.com
This guy rose to commit them.

Revenant
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PIPEDLNE

Send notices to: cgwpipeine@zd.com

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THE GOOD

ACTUAL GOOD GAMES While there may not have been one out-of-the-park E3 smash, there were lots of really good-looking games this year—and far less suckage than in previous E3 shows. One good sign: We were going to write a "Five Worst Games of E3" list, but we couldn't come up with enough candidates.

LOS ANGELES No offense to Atlanta, which is a wonderful city, but this time E3 returned to its more proper place in the center of the entertainment universe. Now, how about Vegas?

THE BAD

MEDIA SMELLING BLOOD Vultures from the mainstream press swooped down upon E3 in hopes of finding violent content to exploit...or, report on. A convention full of games, and all these guys wanted to talk about was DOOM.

BOOTH BABES We tried not to look. Really. But they were everywhere this year, in every conceivable kind of costume: go-go girls, cheerleaders, biker babes—the works. But nothing was worse than the schoolgirl-cut-clad vixens at the G.O.D. lot. That was just unfair.

THE UGLY

EIDOS PARTY Here's a brilliant idea: Host a really cool party, spread rumors that David Bowie is going to play, and then invite 10,000 more people than you have room for! The CGW editors were stuck in line for hours with hundreds of other disgruntled industry types, only to be denied entry. Our only consolation was knowing that we would get our revenge by dissing them here.

Tribes 2

The next iteration of Sierra's online multiplayer hit will introduce a new race, more vehicles (including a tur- reted tank), new game types, and both new and enhanced weapons. The most dramatic upgrade will likely be the game engine, which has been almost overhauled and looks sharper than ever, with water, environmental hazards like quicksand, and vastly improved landscapes.

Vampire: The Masquerade

The role-playing renaissance is still in full swing, and this was the coolest-looking RPG of all. Nihilistic Software designers—formerly of LucasArts' JEDI KNIGHT team and other companies—are fashioning a state-of-the-art, wholly original vampire epic based on White Wolf's popular pen-and-paper RPG. Since our (now infamous) cover story in April, the game has come a long way, and E3 did wonders for this game's buzz. You heard it from us first, but we'll say it again: This game has the potential to set this already hot genre on fire.
A Jedi Knight must remain focused.

Mastery of the Force requires that one purge all unnecessary activities from daily life.

 STAR WARS EPISODE I  
 THE PHANTOM MENACE 

Prepare to immerse yourself in the epic adventure that is The Phantom Menace. As the central character, you will journey to all the stunning locations of Episode I, where you are destined to play a decisive role in every key event. All-consuming? Yes. But then, there’s no such thing as a part-time Jedi.

www.lucasarts.com/products/phantommenace  
www.starwars.com
We Talk to the Man Behind 1998's Best Game

Q. What are your official and unofficial positions at Valve?
My official position at Valve is managing director. When Mike Harrington and I started the company we had trouble taking the title thing very seriously. There were just the two of us, and having one of us be "president" and the other be "chairman" seemed silly. Our unofficial positions are "prone" and "supine."

Q. Half-Life has won numerous awards. When did you know you had something special?
At the 1998 E3, a bunch of our competitors were hanging out at our booth trying to be blase while they watched our demos. At one point in the demo, the big tentacle from the monster breaks through a window and grabs a scientist. One of the leads for a competitor's product blurted out, "Holy s——!" That's when we knew.

Q. You made enough money with Microsoft to retire. Why 12-hour days at a game company instead of daquiris on the beach?
Working on games with the people here at Valve is pretty much what I want to be doing. Daquiris and the sun get pretty boring after a while, but being part of the excitement of building games like HALF-LIFE and TEAM FORTRESS 2 is something I could see myself doing for a long time.

Q. Is it true that Gordon Freeman is modeled after your former boss, Bill Gates?
Actually, I think Steve Ballmer was the one always using the crowbar in staff meetings, not Bill.

Q. Is it true that the dimension-rendering experiment gone awry in HALF-LIFE is a thinly veiled allegory for the chaos that will ensue if the Justice Department successfully breaks up Microsoft?
Actually it was a thinly veiled allegory of my attempt to upgrade my home machine to Windows 98. With the really gruesome bits removed.
—Mark Asher

Ion Storm continued from page 30

accusing him of inciting rebellion. Porter's maneuvers against Wright were particularly surprising, considering Wright had helped Porter obtain a lucrative buyout of his previous company, Distant Thunder. Following Wright's departure, a steady stream of Ion staffers flowed out the door—more than 50 last year alone.

But the exodus may now be over. Mike Wilson believes Ion Storm may now become "the powerhouse it always should have been. Everyone that truly understands the goings on at that company can tell you that 99 percent of their problems stemmed from Todd Porter and his hand puppet O'Flaherty. It took John (Romero) and Tom (Hall) longer than it should have to fix the problem, but the important thing is that it's fixed, and that the games coming out of that tower look phenomenal. I expect great things from them now."

Bob Wright likewise thinks it took too long to rectify the problem. According to Wright, "John [Romero] hates confrontation. John didn't want to run the business, he just wanted to be a celebrity." He says Porter has "a tremendous capacity to rise above impending doom. I've never seen anything like it. It's like trying to drown a cat. He stands on the bodies of people he's buried." — Ken Brown

Diediediejarjar.com

Usually, each CGW editor has his own, unique Web pick. But this month, the choice was so overwhelmingly obvious that we have joined together to speak as one. We refer, of course, to the profoundly unlikeable, mustache-mouthing, butt-ugly parish of Star Wars Episode I: The Phantom Menace. We loved the movie. Really. Most of us have seen it at least twice already. But what in the world were Lucas and his minions smoking to inflict this nails-on-a-chalkboard digital abomination on us? And to think we thought that the Ewoks were bad. Grab your torches and pitchforks and chant with us now: Jar Jar Binks Must Die!

Tchotchke of the Month

Tchotch*ke (choch'ke): slang, from Yiddish: a cheap, showy trinket
—American Heritage College Dictionary, Third Edition

Now this is a tchotchke! All aspiring Tchotchke of the Month winners should study this month's item as an example of how to do it right.

In promotion of TOTAL ANNihilation, KINGDOMS, Cavedog Entertainment sent us this functioning catapult, which is small enough to fit comfortably on a messy desk yet powerful enough to put a sizable dent in the forehead of, say, a lazy CGW editor who fails to make his deadlines. As a bonus, Cavedog also supplied a starter box of rocks, labeled "Munitions," though our experiments have proven that shards of broken glass make for a much more convincing work incentive.
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Wow. It's the only word you can use to sum up BLACK & WHITE the first time you see it. Just before E3, game design legend Peter Molyneux demonstrated his latest brainchild on a cinema screen at the British Academy of Film and Television Arts in front of roughly 200 developers, marketers, and journalists. The sighs and periodic applause that broke the audience's engrossed silence from time to time said it all. The game looked impressive in the first minute or so, but one action in particular made the entire audience sit up and take notice for real: the first demonstration of the zoom function in BLACK & WHITE's proprietary 3D-world engine.

BLACK & WHITE is recognizably an amalgam of many of Molyneux's most famous games to date, including POPULOUS and DUNGEON KEEPER. But it's also quite different from both. B&W follows the familiar Molyneux theme of divine intervention. The basic idea is that the game is full of innocent little people in villages, going about their business and getting on with life's basic activities, like eating, working, and procreating. They are a simple people who will follow any god, given the right sort of encouragement. Your role is to influence them from above in a god-like manner.

The title of the game signifies the elements of evil and good in everyone, and within this context the game will be completely free-form. You can be as nice or as nasty to the people as you like; they'll follow you out of either admiration or fear. Using the animated "hand of God" icon similar to the Keeper's hand in DUNGEON KEEPER, you'll execute a variety of tasks, from pleasing and punishing mere mortals to casting spells and moving objects.

The goal of BLACK & WHITE is to get as many of the little people to worship you as possible. Along the way the folks you attract serve as your power base. The more people you can get to dance around the runes at your citadel, the more mana you acquire and the more spells you will have at your disposal.

**Divine Intervention**

Molyneux cites two of his childhood activities as part of his inspiration for BLACK & WHITE: burning ants and playing with Action Man. He claims he wanted to come up with a game that afforded him the same intense pleasure he used to get from burning ants in the garden with a magnifying glass, or scaring them if he felt particularly benevolent—the kinds of decisions only a vastly superior being can make.

If the little people in BLACK & WHITE correspond to the ants, then the entities comparable to Action Man are what the game currently terms "creatures." Much larger than the little people, a creature is a being chosen by each player to serve as God's earthly implement. These giants appear at the beginning of the game in a completely raw state, and it is up to the player to develop a creature's personality. Like the DUNGEON KEEPER model, but infinitely more advanced, B&W has you "train" your creature by trial and error, reward and punishment. If you want your creature to be evil and fearsome, then you direct it to eat little people, destroy things, and fight other creatures. When it does something nasty you can rub its tummy and pet its head; if it does something nice, or not brutal or evil enough, you can slap it around. If you want it to be kind to the little folk and considerate of other creatures, you have to take a slightly different approach. Generally speaking, the idea is to encourage and reinforce your creature's habits.

Each creature's development will affect its appearance. Creatures can grow fat or thin; they can become tall and heroic or slopped and evil. When they get injured in combat their skin shows scars. According to Molyneux you will be able to recognize the orientation of a developed creature pretty much instantly; online gamers will be able to recognize each other by looks alone. All of which is pretty revolutionary; while many current games allow players to apply skins, characters don't constantly change according to game conditions, as they will in BLACK & WHITE.
There will be a multitude of creatures you can choose from at the outset, and all of the ones we've seen are so well animated it defies belief. Your choice, to a certain extent, will reflect the sort of creature you want to develop. For example, if you want a passive, good-natured creature, you can choose a cow (honestly); if you want an aggressive, solid fighter, you might choose a lion. Others include an Aztec man and Peter's personal one, a strange, rather gorilla-like red creature.

Molyneux takes pains to stress that you don't have any direct control over either the little people or the creatures. You can only lead by example, punishing or beseeching pleasure. Meanwhile, the creatures themselves may emulate your deeds and attract their own followers among the little folk.

**God's-Eye View**

The zooming effect mentioned previously may not be the most impressive of the game's innovations, but it's definitely a standout. You can manipulate the 3D view in BLACK & WHITE to swing 360 degrees around a set point to view it from any direction, and then you can zoom in or out. BLACK & WHITE isn't the first game to do this, of course, but the function's range here is simply stunning. For example, one of the game's villages has a storehouse area that houses a barrel. You can zoom in on the barrel to reveal an object on top of it: an apple. You can then zoom in further to clearly show something white wriggling on the apple: a worm. You can then pull back the camera view to reveal, barely a second later, an overhead planetary perspective, with the village itself reduced to a tiny segment of an island. The feature boasts a seamless transition between absolute micro and absolute macro management.

The existing graphics are impressive, with animation playing a big part. Once you get in relatively close you'll see amazingly detailed animations on the human characters, right down to their lifelike faces (the plan is to make each one represent someone who has worked on or tested the game). All the while, trees sway realistically in the wind and smoke veils moodyly across the landscape. Furthermore, the surrounding environment changes depending on how you treat it. If you are an evil god, it will gradually get darker and more sinister, while benevolent gods will be rewarded with fertile, picturesque landscapes.

**Polytheistic Play**

Molyneux readily admits that he is searching for a storyline that will tie all of B&W's elements into a believable and workable single-player game. Because of the free-form concept behind the game's progression — in which things change dynamically depending on how you interact with your environment — the single-player game is a much more complex beast to handle. Molyneux states that he wanted to create an environment in which two gamers could reach the same juncture in the game via completely different routes. This would require non-linear storylines that have the same overall goals but allow enough flexibility for the free-form concept to work.

At the outset, BLACK & WHITE will offer two online multiplayer modes: one, a kind of chat world in which you can upload your existing game creatures and mingle, and the other, an eight-player landscape in which you can compete in a proper gaming scenario. Lionhead, Molyneux's design studio, is planning to follow this up with a gaming world in which hundreds can play, forming alliances, clans, and the like.

BLACK & WHITE still has at least another nine months' development time ahead of it, but it is already one generation ahead of much of the competition. As we said at the beginning: Wow. **CGW**

1. **LET'S COMPARE SCARS**
   Past battles can leave permanent scars on your "creature."

2. **MAN HAS GROWN WICKED**
   It's not a Molyneux game if there isn't any spell-singing mayhem.

3. **LIFE IN SIMPLER TIMES**
   BLACK & WHITE will allow you to zoom in closely to observe your chosen people in their daily lives.

4. **MONKEY SEE, MONKEY DO**
   The graphics engine will support standard gee-whiz tricks like reflection, as seen in this shot of Peter Molyneux's personal creature.

5. **LOVELY LILLIPUTIANS**
   Your creature can also get a cult following of its own, wowing the little people as it lays down for a cozy rest.
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It's tough being a turn-based wargame these days. Every time you go out to the 'hood to hang with all the cool real-time strat gamers, they make fun of your 2D art. They use their newfound 3D sound effects to drown you out in the conversation, and they go positively apoplectic laughing at the thought of playing turn-based games on the Internet. All in all, it's hard to fit in when the face you show to the world is a hexagonal grid.

So what's a poor, down-on-his-luck turn-based game to do? Well, some turn-based games have beefed up their sound, tried hand-painted maps, or paid higher extortion fees to buy more shelf space at retail and show off their expensive laminated boxes. But one realm turn-based games haven't burst into in a big way is that of 3D acceleration. I'd guess, oh, about four dozen different game designers—most of whom, coincidentally, were developing real-time games—have, over the past three years, told me that there was "no compelling reason" to develop a turn-based game using 3D acceleration, because "you didn't gain anything." After seeing PANZER GENERAL 3D ASSAULT (PANZER 3D), I couldn't help wondering how many of these same developers will end up developing turn-based 3D games in the next several years.

You see, PANZER 3D isn't just a nice step forward for eye-candy in turn-based games—though goodness knows, the game is simply delightful visually. It's also a big leap in terms of immersion for any strategy game—historical, fantasy, science fiction, whatever—that tries to create a rich, believable environment on an operational scale, which is where most commanders (would-be Pattons and bloodthirsty Orc Kings alike) do the bulk of their campaigning.

Why Turn-Based 3D?

One thing that we must make clear is that PANZER 3D is not the first turn-based game to use 3D acceleration. That distinction goes to STAR TREK: BIRTH OF THE FEDERATION from MicroProse (see our review next issue), which uses the FALCON 4.0 engine for tactical starship combat. On the other hand, you can play a complete game of BIRTH OF THE FEDERATION without bothering with the 3D component (by toggling off the tactical combat), whereas in PANZER 3D, the 3D is seamlessly integrated into the game.

This game isn't simply PANZER GENERAL II with some 3D fluff mixed in. PANZER 3D has been redesigned from the ground up to take full advantage of the new PRINCE OF PERSIA 3D engine, complete with dynamic lighting. Instead of quaint sprites, we now get fully 3D models of tanks, aircraft, half-tracks, and other vehicles; we finally get rid of those stiff excuses for soldiers from PANZER II as well.

To be fair, PANZER II had compelling hand-painted maps, and many of the same talented SSI artists are working on PANZER 3D. But the Europe you'll see in PANZER 3D is almost as detailed as a geological survey map due to the different graphic approach used here. Because the terrain is fully 3D this time around, you can actually see enemy units deployed on the slopes of a hill, where they appear formidable in a way not possible in a 2D world.

According to executive producer Dan Cermak, the 3D engine allows for "true-to-life line-of-sight and fog-of-war." After playing PANZER 3D for a while, we'd agree: You begin to get a feel for the terrain, much as a real battlefield commander would. Lines of communication and routes of approach for advancing enemy armored columns are a lot easier to figure out in a 3D world.

While some turn-based games have attempted a 3D "look" in a 2D layout—TalonSoft's BATTLEFIELD series comes to mind—the only games that come close to matching the visual elegance of PANZER 3D are tactical affairs like MYTH II, but these games don't have PANZER 3D's scope.

Why a New Interface?

The first PANZER GENERAL had one of the cleanest interfaces I've ever seen, right up there with WARCRAFT and BATTLEZONE—and keep in mind that PANZER GENERAL was designed over five years ago. SSI now freely admits that though they loved the number of options included in PANZER GENERAL II they got a bit "button happy" with the interface.

In PANZER 3D, we're back to the familiar "click here to select," "click there to move or fight" interface. You can still get information about troops and terrain with a simple right-click of the mouse as well. But PANZER 3D doesn't stop there. Unlike either of the earlier games in the series, you don't have to muddle through before you go into combat. Every unit is depicted with a number of "dots" showing how many strength points it has. As the unit takes losses, dots from the right side are colored in red. So it's easy to see when a 10-point unit has taken 40 percent damage, without having to remember what a "6" on a Sherman tank really means, when you're thinking about tackling an enemy Panther.

Even better, the interface shows suppression with yellow dots. Let's assume that your unit gets suppressed by enemy artillery before making its attack. You will see losses in red, suppressions in yellow, and the true combat readiness of the unit depicted in green. For new players, suppression has been one of the few confusing aspects of the PANZER GENERAL series. With an interface that shows what's happening visually, combat is suddenly much easier to understand.
Multiplayer Tip #1
Don't deplete your afterburners cruising around. You'll need them when someone locks on a homer, or when you're trying to catch that guy in front of you. Keep it at 50% or more for that burst when you REALLY need it.

Multiplayer Tip #2
Use napalm to herd players into traps. Players have a tendency to back off from napalm bursts (with good reason). Herd them into a wall or corner and launch a frag missile into the wall next to them. The result is quick death for your opponent.
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Multiplayer Tip #3
Use Vauss as much as possible in outdoor battles so you can keep a good distance from your opponent. Use Napalm indoors whenever possible and use super lasers against opponents in small tunnels since the lasers are harder to avoid.

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No Prestige?

In a big departure from earlier games in the series, PANZER 3D no longer makes your career in the German, British, or U.S. armies dependent on accumulating Prestige Points to impress the brass back home. Instead, the key to success in PANZER 3D comes from how many leaders you have, and how good they are. Unlike heroes in WARLORDS III or MASTER OF MAGIC, leaders in PANZER 3D never threaten to overwhelm the action, because they don’t function as independent units. Rather, each leader is assigned to an individual armored, air, artillery, or infantry combat unit.

Each combat unit has a certain number of abilities based on the unit type and nationality. A German tank unit, for example, might be able to move up to three times in a turn, and fire up to twice per turn. However, no combat unit can do anything without a leader to command it.

Thus, you assign leaders to units based on each leader’s abilities—except that it isn’t that simple. For example, General Hans might be able to increase the movement of the unit he is with. The temptation would be to assign him to your lead armored unit. Then again, you might choose to place him with a crack infantry unit, so that it could better keep up with the advancing armor.

As with any good game, you can’t do everything you want. In PANZER 3D, you tend to have plenty of troops, but rarely of the type you really need (such as Tiger II tanks), much less enough leaders to get them all onto the battlefield. Particularly in the campaigns, this makes for some tough decisions, and allows a lot of “what if I’d done that instead” replay value.

Surprise Attacks

PANZER 3D has a lot of pleasant gameplay surprises. Paratroopers have a greater role than in PANZER II; bombers, along with new rules for precision bombing, are back with a vengeance; and fighters can actually dogfight during rain storms (though they can’t stage ground attacks). With a capable leader, infantry units can infiltrate, patrol, and in some cases go all-out and ignore enemy suppression fire. Armor, antitank, reconnaissance, and artillery have a host of new abilities, keeping things lively. Anyone who’s ever worried that a historical game lacked options should take a good look at this one.

What I found most refreshing about PANZER 3D is that so many of the wargame devices we’ve grown used to over the years are still there, provided you want to dig for them. But you can play a really fun game of PANZER 3D without ever having to look up data on late-WWII Soviet tanks in the Tables of Organization and Equipment appendix. Yes, old warhorses like Zones of Control are in the game, but the clean interface makes them feel less artificial, less intrusive.

And every time I thought I might get jaded, I ended up zooming back and forth over the battlefield, checking out the contours of the terrain. And I’ll readily admit I spent a lot of “research time” moving the cool 3D vehicles around.

As the original PANZER GENERAL did nearly six years ago, PANZER GENERAL 3D ASSAULT will definitely bring turn-based strategy/war games back in big way. It’s beautiful, it’s accessible, and it retains the panache of the original while giving us a ton of new battlefield options—particularly the leader system—to entice us to once more jump into our military sandbox. I’m already polishing up my craggy Patton imitation. 

A true 3D engine lets you see the dominating high ground around this town.

The 3D models let you spot this Elefant tank at a glance.

This half-track has four casualties (red), five strength lost to suppression (yellow), and half-strength effectiveness (green).

Our dashing leader has five "stars" of experience. With each new star, he has a chance of gaining new abilities.

Other game functions, such as game saves and multiplayer, are out of the way here.

Other leaders (and the units they command) can be easily accessed by clicking on them in this toolbar.
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After a Long Wait, the Empire Strikes Back With a Vengeance

Force Commander

by Terry Coleman

The Battle of Hoth, from George Lucas' The Empire Strikes Back, is one of my all-time favorite cinematic conflicts. Each time I watch it, I suffer adrenaline depletion for days afterwards. I assumed that the next film would bring even more exciting sci-fi battle scenes. But despite the thrilling speeder chase in the forest, Return of the Jedi left me with little more than a profound desire to dismember Evaks.

Enter LucasArts' FORCE COMMANDER game, which was supposed to take battles like Hoth and put them on your PC screen. In spite of all the press drooling over the prospect of a Star Wars strategy/wargame, what I'd seen of the FORCE COMMANDER design in the past couple of years really wasn't up to the challenge. It may have promised a reasonably competent real-time strategy game, but the words "competent" and gameplay choices: Do I request elite troops for this battle and risk not having enough Command Points for them later? Should I upgrade my green troops? Will Darth Vader ever invite me to his bachelor pad for some authentic Tatooine moonshine?

All the combat algorithms and unit movements seem appropriate, given that Star Wars has its own, shall we say, unique laws of physics. I was particularly impressed by the pathfinding: units didn't routinely walk into trees or get lost—a plus in any RTS game.

But when you see the units up close, you won't be thinking much about the physics. You'll be too busy picking your jaw up off the floor after gawking at the 3D. Over a year ago MYTH introduced a wonderful real-time 3D tactical engine, and purists will remember that WARHAMMER: SHADOW OF THE HORNETED RAT beat even MYTH to the 3D punch. But where FORCE COMMANDER leaves similar games behind is in its scale. When you adjust the free-floating camera to gaze upward from a stormtrooper's point of view and see an AT-AT towering above your head like the Empire State Building, it's the next best thing to being in a George Lucas movie.

Star Wars Episode V, Part 2

So while you still stamp out Rebel sedition in your role as an Empire commander, I'm happy to report that FORCE COMMANDER has been totally revamped from its 2D origins. It's now a fully 3D strategy game that retains the best devices of the real-time strategy (RTS) genre, such as ease of use and rapid play, while avoiding some of the sillier RTS trappings. For example, you can't build bases (and crank out troops) in 35 seconds that would take you a month to erect in "real" realtime. If you want reinforcements, you have to request them. Whether or not you are granted them depends on how many Command Points you've accumulated.

Command Points allow you to retain a core of experienced units, upgrade your units, and the like in a fashion similar to using Prestige in PANZER GENERAL. Command is a nice touch, because it leaves you with a lot of

Polygon Commander

From a technical standpoint FORCE COMMANDER is quite impressive. The game doesn't just display a lot of polygons; it moves a huge number of large and small Star Wars vehicles all over your screen simultaneously. And unlike HOMEWORLD or other highly anticipated 3D games that take place in airless space, FORCE COMMANDER has to deal with rolling and broken terrain. Thus, in addition to the ice world of Hoth, you'll battle over vast plains, dense jungles, majestic mountains, and wide deserts.

Now this is TAC AIR SUPPORT A lot of Star Wars units that you don't usually see, such as these A-Wing craft, make an appearance in FORCE COMMANDER.
(where even the sand looks scrumptious), and
the majority of the maps are huge. Because of the varied
terrain, you'll need to use combined arms. The
towering Walkers can easily stride across streams that
stop other troops cold, but they won't get far without infantry
support. Hovercrafts' ability to glide
over the terrain allows them to go
almost anywhere, but they lack the
concentrated firepower of heavier
units. In some missions, you'll have to deal with mud slides or active volcanoes, and
the occasional night mission means that units with infrared sight capability are a must.

Aside from the terrain differences mission types vary from seek-and-destroy to stealth
reconnaissance to set-piece assaults. The action takes place between the Empire Strikes Back and Return of the Jedi, but it includes a few worlds not seen in either of
those films. There's no fog-of-war, but there is limited visibility on the battlefield. And
what the intelligence briefings tell you may be different from what the Rebels actually
have waiting in store for you.

**Thrawn Room**

Without giving away too many plot twists, I can tell you that there is a critical junc-
ture in the game where you are forced to make a moral choice that will affect not only
your career with the Empire but also the entire course of the war. Our old friend
General Thrawn makes an appearance along with a
few other characters you'll recognize from either the
movies or the best-selling
line of Star Wars novels. I
didn't see enough of the cut-scenes to tell if the
plot for this game would
be anywhere near as com-
pelling as that of Star-
craft, but it is a continuation of the Star Wars
series, after all, so I'm not
particularly worried
(although I'll admit it'd be
too nice to see Tim Schafer
do a full-blown Star Wars
adventure game in the
GRIM FANDANGO engine).

Undoubtedly, critics will
whine that FORCE
COMMANDER isn't the
most original real-time
strategy game out there.
Fine—let them miss out
on the grand near-cine-
matic scope, the intriguing
missions, the clever
Command Point system,
and some new Star Wars
units (troop carriers,
among others). For my
part, I'll be happily
awaiting the day when
I can finally take out
that pesky Rebel shield
generator on Koth and realize my movie
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Third-Person Shooters Enter the Second Age

While the third-person perspective has been around since the advent of gaming, it took Lara Croft and TOMB RAIDER to transform the voyeur-cam game into a legitimate genre. What’s notable about new games like INDIANA JONES AND THE INFERNAL MACHINE, GIANTS: CITIZEN KABUTO, MESSIAH, and ONI is that the third-person perspective they use is—as far as developers are concerned—less about trying to fit into a genre than of finding the best way to present the game.

So why third person? Why run the risk of your game character’s butt blocking the action? In the case of INDIANA JONES AND THE INFERNAL MACHINE, the decision was dictated by the character’s visual appeal. “Obviously the strongest appeal of playing Indy is seeing it,” says Wayne Cline, production manager for that title. “People want to see the hat and the whip. It’s much more believable than just telling them it’s there in a first-person game.” This sentiment is echoed by Bob Stevenson of the GIANTS: CITIZEN KABUTO team. “A third-person perspective fundamentally connects the player with the game character and environments all at one time,” Stevenson says. “We have three main characters, so it’s even more important to be able to see them on the screen and identify with them.”

The removed perspective is also used to highlight gameplay elements. In the case of ONI, Konoko’s hand-to-hand moves need to be seen to be used effectively; similarly, the bodies Bob the cherub possesses in MESSIAH need to be seen in order for their capabilities to be best appreciated.

The big hurdles in third-person games are maintaining believability and handling camera movement. Animation is crucial, as is placement of the character in his environment. “You don’t want to have your guy skating around, unattached to the ground,” says Cline. Camera movement is even trickier, with that aspect of the game taking up as much of the MESSIAH development team’s time as any other game element—blocking a player’s ability to see what’s going on around him is like writing a one-way ticket to the uninstall utility.

While the third-person action genre may have been birthed by Lara Croft, it may grow to adulthood in the hands of Konoko, Bob, Kabuto, and Indy. What follows are what we’re betting will be some of the hottest third-person titles this year.

OUT-OF-BODY EXPERIENCE

by George Jones

Call ONI a blend of VIRTUA FIGHTER 3, KARATEKA, and QUAKE, and you won’t be far off the mark. Realize, however, that at the same time you won’t be very close to the mark either. ONI, you see, defies the kind of simple description the gaming industry is so fond of.

In ONI, as in many other 3D shooters, you’ll run, you’ll encounter enemies, and you’ll destroy foes with elaborate weapons. But the big moment comes when the ammo runs out and you make like Jackie Chan, laying waste with your fists and feet. Try executing a flying backflip kick in QUAKE, and you’ll quickly see that this isn’t a feature you normally find in this genre.

According to gaming company Bungie, ONI is a "full-contact action game," and as far as we know, it’s the first of its kind for the PC. You play the role of Konoko, a rookie member of the Technological Crimes Task Force, a futuristic SWAT team of sorts that maintains order in the near-future, anime-inspired universe the game takes place in.

The story begins with Konoko’s first mission as a member of the TCTF, when events unfold that make her wonder about the nature of the organization she works for. From here, Confusing Things Happen, meaning that, among other things, you get sucked into a story
that blurs the line between the good guys and the bad guys.

**Fists of Fury**

But put the story stuff aside for now, because ONI the game is secondary to ONI the game, for a number of reasons.

ONI—the game—boasts a superb urban environment with building interiors that transcend the generic cookie-cutter styles most games embrace. Making the most of transparency effects, many buildings feature elaborate glass-lined stairways, dramatic balconies, huge windows, and all of the perfect elements for the kinds of brawls Konoko will find herself getting into. After all, what good is a balcony in an action game if you can't flip someone over it?

Lest you be confused, brawling is the crux of this game. The controls are just like those of a 3D shooter. You use the mouse to turn right and left and the keyboard to execute the usual moves—jump, run forward, run backward, strafe left, strafe right. You can also use the mouse to change the vertical angle of the camera so you can see high or low. There are two small additions, however, that make a difference: kick and punch. Although Bungie staff are adamant that ONI is not just a fighting game, Konoko's moves rival those of her VIRTUA FIGHTER and TEKKEN counterparts. The first time you land a punch on a bad guy, swing around another one's neck like you're on a jungle gym, and then kick a third guy on your dismount, you'll know what we're talking about.

Various attacks are performed much as they are in the current generation of fighting games. Depending on several factors—your direction of movement; whether you're standing, kneeling, or jumping; and how close you are to the enemy—you'll execute a flying kick, an elbow to the face, a headlock flip, or one of any number of other attacks. As the game progresses, Konoko's moves will get more and more sophisticated, to the point where kicks and punches may take preference over guns and rockets.

Moving Konoko around using these controls is made even easier by the fact that the camera angle never changes from its behind-the-action perspective. When Konoko gets in front of a wall, the game's engine goes into "Jello Cam" mode and simply renders the wall transparent, which is an elegant way of maintaining both a consistent angle and a realistic sense of space.

But sometimes you have to fall back and rely on superior firepower. Konoko's fists are supplemented with weapons ranging from semiautomatic handguns to heavy machine guns with attached grenade launchers to kick-ass rocket launchers. Unlike many 3D shooters, in ONI weapons don't float in mid-air. Instead, you'll have to pick them up the hard way, by kicking in the face of the foe holding said desirable weapons. And when you do pick them up, it'll be by holding down the crouch键 as you move past the weapon—a sliding maneuver that conjures up all sorts of cool John Woo possibilities.

But be careful, grasshopper. The AI opponents you'll square off against—like the big, burly Tanker character or the stealthy, agile Ninja—are also armed with an arsenal of attacks and sophisticated...
Disciples: Sacred Lands

The day of reckoning has come...
A new age is dawning...

And only the chosen will survive...

Enter the realm of the Sacred Lands and take on the quest as champion of your people and defender of your god.

Turn-based strategy set in a fantasy world.
Captivating storyline unfolding through four complete campaigns.
4 distinct races, each with their own strengths and weaknesses.
Unique experience model that allows for multiple paths of character progression.
Over 100 spectacularly animated spells.
intelligence that won't allow you to repeatedly exploit their weaknesses.

**Tricks of the Trade**

The most challenging trick for the Bungie crew is going to be balancing the two different modes of combat. If they can successfully pull this off, Oni will be an action gamers' dream, with varying gameplay modes and the kind of pacing that most 3D shooters lack. Gameplay mechanics, such as a limit on the weaponry Konoko can carry, or areas of the game where loud weapons set off alarms, will help balance the contact-versus-weapons issue. Hopefully Bungie designers will go even further than this and use the game's storyline to create situations that require different types of tactics. Thankfully, there is one mode of gameplay in any 3D shooter that requires no storyline whatsoever: multiplayer. And in this realm, Oni shines like no other action game on the market. Realizing this, Bungie is going all out with Oni's multiplayer component. You'll be able to play as any of the game's characters, each with a set of unique moves and special attacks.

Bungie developers are still working out many of the details of the multiplayer action, but even in the very early state Oni is in today, they literally had to pry us away from the computer. The design team mentioned that they're envisioning a King of the Hill game, and we hope they incorporate other more task-oriented mini-games into the mix. One problem the designers are facing is how to deal with Internet play. Because of the hand-to-hand combat in Oni, latency could be a huge problem. LAN play, on the other hand, works fine. (We know because we got multiplayer gamefiles for about an hour and a half playing at Bungie's San Jose offices.)

**You Go, Girl**

It is entirely appropriate that Bungie, the company responsible for Marathon, the first Mac-only 3D shooter, and Myth, the first 3D real-time strategy game, is developing Oni. In hands other than theirs, we would be more than a little concerned about the outcome. But given the current buzz surrounding the third-person perspective, the game's anime setting, and the gameplay innovations Bungie is adding into the mix...well, let's just say that the moutning off has already begun around the CGW offices over who will be the ruler of the Oni roost. Lara Croft may have opened the door for the third-person-perspective action game, but Konoko, Oni's heroine, could lead the charge to a whole new level.

**Bringing Up the Rear**

The coming year looks like it's set to deliver a bumper crop of third-person action games, with the eagerly anticipated Drakan most likely to hit shelves first and Accolade's car-crunching, pedestrian-splattering giant-robot shooter Slave Zero right behind it. Taking place in absolutely enormous game worlds, Drakan's mix of on-foot combat and dragon-riding air combat puts it at the top of our list.

G.O.D. has a trio of third-person games in development: the pulp horror game **Nocturne**, the gritty **Max Payne**, and the wildly imaginative movie tie-in **Heavy Metal F.A.R.K.** Unfortunately, Max Payne wasn't showing at E3, but Heavy Metal looked great. The game slated to ship first, Nocturne, is the one we have questions about—hopefully, the designers will add some killer AI and monster behavior or this gorgeous game could get dull fast.

It should be no surprise that Eidos, the company that unleashed Lara Croft, is hoping to keep its third-person winning streak alive with Urban Chaos and Omikron. Developed in France, Omikron is a true weird RPG/action hybrid featuring a character blessed with "virtual reincarnation" ability that lets him take over other bodies. Urban Chaos takes place in a near-future world in which gamers will investigate a nasty cult as both the Bruce Lee-esque Roper and gymnast-turned-cop Darcy. Expect requests for nude codes for Darcy to flood Usenet seconds after the game's release.

Finally, Monolith is jumping aboard the third-person bandwagon with the Scanners-style Sanity, in which players will use devastating psychic powers while trying to keep their overtaxed heads from exploding, and Westwood Studios is expanding the Command & Conquer line with C&C: Commando. We didn't get to see much of this mission-based shooter at E3, but its beautiful graphics and the promise of a new way to fight in the C&C universe has us excited.

**Three Men Enter**

Oni's multiplayer combat will add a whole new dimension to deathmatch contests, especially if the designers add in multilaceted modes of play.
by Terry Coleman

With all the hoopla surrounding *The Phantom Menace* and its supporting games, the other signature franchise of George Lucas might seem a bit like a redheaded stepchild—albeit one wearing a fedora. Forgetting about *Indiana Jones' Desktop Adventures* (we've tried), there hasn't been a major game based on Indy's exploits since *Indiana Jones and the Fate of Atlantis*, the underrated LucasArts adventure game released five years ago. Until now.

If you're expecting a traditional adventure game, say in the GRIM FANDANGO style, you might be in for a bit of a letdown. For *Indiana Jones and the Infernal Machine* is unashamedly, without a doubt, a powerful challenger to the TOMB RAIDER throne. And why not? TOMB RAIDER obviously drew inspiration from the Indiana Jones films, just as Indy was a product of Lucas' and Spielberg's fond memories of adventure serials of the 1930s.

**Exhuming McCarthy**

As *Infernal Machine* opens, WWII is over, and the victorious Allies have a new worry: the Soviets, who are trying to tap into the secrets of the Tower of Babel. Now, we all know that the U.S. government could just sic the Ark of the Covenant on them, but that wouldn't make for much of a game. So you, timeworn fedora flapping in the wind, assume the role of Indiana Jones.

First, you hoof it to the Utah desert, where, in a manner typical of tomb robber tutorials, you learn the simple keyboard interface. There, you find that *Infernal Machine* is a very user-friendly game. For example, when you want Indy to jump up and grab a ledge, you just position yourself reasonably near, push the up arrow, and you're there—none of this "having to find the exact pixel" crap. Every control works in similar, common-sense fashion, whether you're jumping across a chasm or driving a Jeep through the hills.

While you're performing an action—especially a dangerous one—the camera often pulls away to heighten the drama. This had even a jaded old adventurer like me chuckling with delight—and relief, given the horrible camera implementation in *The Phantom Menace*. I'm also impressed that Indy can be killed when you do something obviously stupid.

On the other hand, the game is so linear that it actually helps with gameplay: you can't move on from one level, for instance, without getting all of the items you need for the next. None of the puzzles we saw were so difficult as to keep...
Ken Slater puts the finishing touches on five years of intense training.

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Journey through 7 environments including an opulent Persian palace, a fantastic dirigible, and Tibetan cliffs.

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Prince of Persia 3D

Is it in you?

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anyone stuck for long, and Indy
muses out loud to himself with over 2,000 lines of recorded
dialogue (surely a sign of too many harrowing adventures),
giving you clues on how to proceed.

Trans-World Airlines
The 17 levels in the game take you all around the globe,
from the United States and South America to Asia and the
ruins of ancient Babylon. Everywhere, it seems, you find a
bunch of cookie-cutter Soviet thugs, along with a half-dozen
or so Russian “bosses” (in the action game sense) to be dis-
patched. Since you also have to face a serpent god, scorpions,
and Indy’s least favorite foe, snakes, you’ll come to
appreciate the 1940s weaponry you find along the way,
which includes a machete, a bazooka, and the occasional
satchel charge, all to com-
plement Indy’s Smith &
Wesson pistol and trade-
mark bullwhip.

My main concern is that
this “heavily story-driven
game” (according to
LucasArts) has only a half-
dozenz or so characters
that you interact with in
any way other than by
opening fire. We do get
Sophia Hapgood, our
heroine from ATLANTIS
(now a CIA agent), and
her Soviet counterpart,
Gennady Volodnikov, who
promises to be a nasty vil-
lain. The music, by the
same composer who
scored OUTLAWS, is excel-
lent; we just hope that
LucasArts uses it through-
out the game to dramati-
cally drive the action
along. INFERNAL MACHINE
is gorgeous, seemingly
well paced, and filled with
interesting foes. For those
of us who love third-
person action games, it’s
a dream come true to see
Indy, the original tomb
raider, in 3D action.

by Robert Coffey

One thing’s for sure:
Nobody’s going to mis-
take MESSIAH for a
Disney title. While the diaper-
swaddled lil’ angel featured in
the game may seem wholesome enough, the seedy assort-
ment of pimps, hookers, canni-
balistic sewer dwellers, and
leather Speedo-clad barkeep-
ing priests that populate the
game world should keep this
unique third-person action
game from topping Ralph
Reed’s Christmas wish list come
December. Gamers, on the
other hand, may well respond
with devotion, since MESSIAH is
one of a handful of titles with
the potential to deliver some
truly unique gameplay.

Cast as Bob, heaven’s
smartest and toughest cherub,
gamers will plummet to Earth
in a ball of fire and feathers,
sent by the Big Guy himself to
STRATEGIZE. COLONIZE. DOMINATE. ERADICATE.
THERE'S MORE THAN ONE WAY TO RULE THIS GALAXY.

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Control covert operations
Oversee empire growth and progress

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KLINGON
An aggressive military makes up for their lack in tact.

ROMULAN
The enigma of the universe, they are smooth and deadly.

FERENGI
Masters of economics, but watch out. They're tricky!

CARDASSIAN
Their ruthlessness, efficiency and stealth make for a lethal combination.

Building an empire takes time. You need to be diplomatic, technologically advanced, and stealthy. And sometimes, war is the only solution. You choose from one of the five major alliances. You'll get all their strengths. All their weaknesses. And every decision matters.
You wake aboard the Von Braun with a mind-altering implant in your brain and no memory of recent events. As you wander the dark, eerie decks of the derelict spacecraft, you discover an alien material is slowly taking over the ship — feeding upon the flesh of your former comrades, leaving zombies and corpses in its wake. Behind the engulfing terror, you sense the presence of the evil cyber-being, SHODAN. She is seductive and sinister. And she pulls all the strings in the most chilling role playing game ever. Enter Shodan's terrifying world to discover her ultimate plan — or die trying. For all the gory details, visit www.lookingglass.com
to find his way through a grim and gritty near-future world as the game begins.

Is There an Exorcist in the House?

Don’t confuse Bob with the angelic juggernaut from REQUIEM: AVENGING ANGEL—this seraph isn’t about to kick anyone’s butt; in fact, press the Fire key and Bob simply points his finger and says “bang”—right before someone sends him back for a premature reunion with his heavenly employer. Fortunately, Bob has a couple of skills that will serve him well in the physical world: His wings may be too tiny for actual flight, but they will allow him to hover and to rise to places that others can’t reach. More important, Bob can enter the bodies of humans and possess them.

Possessing an NPC lets you utilize the unique talents and abilities of that character. Take over a cop and you can use his shotgun and grenades—a handy option for an unarmed angel. Possess a rat and you can squeeze through small spaces or lead a pack of your vermin brethren in a bloody recreation of Willard with your enemies standing in for Ernest Borgnine. This possession

ability is the meat of the game and will be the game’s primary way of dealing with the obstacles and trials that await on Earth. You’ll need to possess DJs to enter nightclubs, nuclear technicians to operate scientific equipment, and so on. With 50 characters to possess, each with unique attacks and special abilities, there are tons of play possibilities.

While this might imply that the game is actually an elaborate puzzle with one true path, that isn’t the case. The designers are taking pains to offer multiple options and paths through the gameworld. For instance, we watched as Bob buzzed through a couple of rooms only to be blocked by a security door. At that point, Bob could have taken over a cop to get by the security systems. Alternatively, he could have possessed a nearby worker and dropped some machinery on a co-worker, thus prompting a team of medics to rush to the scene and open the door long enough for him to sneak through. Or he could have stealthily flown to a series of pipes high above the room, eventually leading him out.

LAW AND DISORDER: Buxom cops, prostitutes, subterranean cannibals, and rocket-launching subway dwellers are just some of the wildly imaginative denizens of MESSIANA.

figure out just why everything on Earth has gone horribly wrong. Charged with finding the source of this evil to see if it can be destroyed, the surly Bob balks, prompting God to bless/curse him with mortality and give him a sense of hope to spur him on in his quest. Defenseless and weeping pitifully, Bob is left
In those rare cases where there is only one character type that will get you past an obstacle, the designers are making sure you won't get trapped and have to reload a saved game because you just shot your ticket out of that room. All crucial character types will randomly respawn somewhere nearby; you'll just have to find and possess the needed character.

**Acts of God**

While gamers could just charge through the game, guns a-blazing, MESSIAH will reward players who take a less violent, more tactical approach. Bob's tiny size is perfect for avoiding confrontation by sneaking around the game's seedy bars, sewers, and pornography dens. Players who time their possessions of characters so they go unnoticed will largely be able to move through the game world unmolested. Further, possessing incidental characters will often grant you access to restricted areas and benefits. For example, take over a DJ to enter off-limit sections of a nightclub, where you'll find power-ups for health or enhanced flight.

There is one caveat to possessing characters: You have to act like them. Possess a cop and fail to follow orders and you'll draw the unwanted attention of your pistol-packing peers. Pick up a harpoon gun while occupying the body of a prostitute and you can bet that cops and everyone else around you will notice and attack.

Since all characters in the game behave like those with other characters, choosing the right person to possess in the right situation is important. While possessing one of the CHOTS (Cannibalistic Humanoids of the Sewers) is great for getting through the sewers, it's not a good choice if you want to slink past your sworn enemies, the police.

**Deus Ex Machina**

Powering all this soul-seizing is a game engine that coughs up some of the snazziest graphics in action gaming. The game environments are rich in detail and nonrepetitive textures, and the engine also allows the creators to insert AVI videos. The AVIs are used for everything from running films in monitors in the game world to animating steam seething from grates in a much more realistic manner than in other games.

As cool as this is, the real highlight is the character modeling. Models composed of up to 300,000 polygons are run through the game engine, which converts the data into crucial points on that model before finally rendering the image onscreen. The number of polygons rendered is dynamically scaled, both for the horsepower of the individual user's machine as well as for distance. Polygons are dropped as characters recede from the foreground, when fine detail wouldn't be visible anyway. The end result is a set of characters that are almost tactically real, with heft and texture that make them hyper-authentic.

Given MESSIAH's drop-dead gorgeous look and enticing, ambitious design, the game's future success or failure will hinge primarily on its ability to deliver gameplay that really sets it apart from the pack. If the AI or level design encourages little more than nonsensical shooting, or reduces Bob's possession ability to little more than a novelty with no real gameplay value, then the game will probably be doomed to the purgatory of 'What might have been.' We're praying this MESSIAH is the real deal.

**Giants: Citizen Kabuto**

When you make it possible to zoom in on someone's face and shoot right into his eyes from two miles away, what do you do for an encore? That's the challenge faced by the developers of the game MDK. After forming Planet Moon Studios, they came up with an odd answer: GIANTS: CITIZEN KABUTO.

Where MDK had you as a lone explorer, GIANTS puts you in the shoes of technology-packed soldiers, a deity, and a very angry giant.

MDK's back-story was weird. GIANTS is just flat-out bizarre, but it's also deeper. On an Eden-like island floating in space (called, appropriately enough, Island), the Sea Reapers learn that a threatening mechanical force is approaching. They create Kabuto, a powerful giant, to be their guardian.

Unfortunately, Kabuto views everyone as hostile and drives his creators off island and into the smaller, surrounding islands. While the Sea Reapers consolidate their power, the expected mechanical threat arrives in the form of the Meccaryns. After winning a battle, the Meccaryns decide to stop to fix their ship before going on shore leave. When they decide to stop off at Island, the game begins.

In a style reminiscent of STARCRAFT, the single-player game will let you experience the story through the eyes of each of these major players. The sides you play will vary throughout the game. You may engage an island as the Meccaryns and then, through a plot twist, play as Delphi the Sea Reaper before switching back to commanding the Meccaryns.
There'll be about 30 island levels to play in total, evenly divided between races.

**Saving Smartsies**

Gameplay will be mission-based. Completing each island level will involve carrying out different tasks. For example, the Meccaryns may run into a Smarty (the neutral natives who'll help anyone that protects them), who asks them to find him some food. You and your buddies hunt down some native life and bring back chunks of meat, and when you return, the Smarty will realize that his wife was kidnapped and ask you to rescue her. Once you rescue her, he'll have his meal, and then build something to get you to the next island. In general, most of these missions will be required, but a few of them will be optional, with a reward of an extra-useful trinket upon completion.

The game engine is Planet Moon's own, and it will support Glide, OpenGL, and most likely Direct3D. Because this game takes place on an exotic series of islands, Planet Moon designers plan to create very lush and vibrant levels. There aren't any dingy ruins or gritty city streets here. Instead we get tiny villages surrounded by lush green foliage, or islands covered in rich layers of red, orange, and yellow. Terrain deformation is fully supported, as best demonstrated by a massive creature stomping the ground, causing gigantic ripples to radiate across the land.

The camera system is interesting: the default angle is the traditional behind-and-slightly-above-the-character perspective seen in other games. Each side has a few specific camera angles (such as profile view), and there are context-sensitive perspectives. The design team anticipated that when performing certain actions, certain views would look better. There is a context-sensitive angle key that accesses the most appropriate angle at a given moment. This provides quick and easy access to the best view for the action you're taking.

For now, team Moon is concentrating on single-player play and making sure it progresses smoothly. But by the time you read this, they should be testing the multiplayer balance.

---

**They Might Be Giants...**

**Meccaryns**: Best described as cockney space cowboys, the Meccaryns focus on technology. You will play their leader, Reg, and spend the single-player game looking for your comrades and defeating the island inhabitants. They'll have a set of commands that allow you to issue basic wingman-style commands, such as “seek cover.” Their arsenal is made up of oddball inventions like the super-stealth suit (you become a moving bush). Rescued Smartsies will upgrade your weapons and build your supply base. Meccaryns will also have the additional element of inventory management, allowing you to outfit them appropriately for each mission. Finally, they can use jetpacks to scoot around the islands.

**Sea Reapers**: The youngest (and only “good”) Sea Reaper is Delphi. After Kabuto drives the Reapers away, they follow the evil Sea Reaper Queen; Delphi breaks away and sets out to correct things herself. Representing the magical force, she casts spells that can summon creatures to destroy obstacles or eat her foes, or that can create whirlwinds to scatter the enemy. Another spell makes her fly forward extremely fast. That, combined with her sword, makes her very lethal in hand-to-hand combat. Her sword can also turn into a bow with magic arrows. For mama, Delphi will absorb soul energy from fallen foes. She has about 10 major spells to cast, and she will learn some on her own, or via the Smartsies.

**Kabuto**: The giant himself, Kabuto represents sheer brute strength. His massive size has a downside: He needs to feed himself. Without energy, he's not as strong as he could be, and he's easier to take down. So he needs to find and herd vamps (sheep-like creatures) to serve as a steady food supply. Also, if he doesn't quite feel like eating just yet, Kabuto can stash food on his horn for later snacking. To protect his food, Kabuto is capable of creating “Mud Shepherds”—whip-cracking vimp defenders that he makes by baking some special mud. With that exception, Kabuto focuses purely on destruction and mayhem, in keeping with his ability to swat down enemies and smash buildings with ease.
In 2015 war is declared.

You are the U.S.

- Intelligence reports a Chinese ground unit.
- Switch to tactical mode. Ready helicopters.
- Command fight over a Chinese tank platoon.
- Destroy two tanks. Helicopters are damaged.
- Move to strategic mode and set way points on the map.
- Engage artillery to the North. Launch an air strike to the East.
- Switch to platoon commander of an electronic warfare unit.

Victory is imminent.

You are China

- Mobilize armored unit into Kazakhstan.
- Lay minefields in tactical mode.
- Move to maps. Conduct reconnaissance.
- Mobilize antiaircraft weaponry. Launch air offensive to the North.
- Two tanks are destroyed by U.S. helicopters.
- Return to maps. View U.S. artillery enter minefield.
- Switch to helicopter platoon commander. Head East.

Victory is imminent.

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Shadowman

He's Not Your Average Zombie

by Jesse Hatt

The undead tend to get a pretty bad rap. In any story involving them, they’re always getting shot, stabbed, burned, and generally mistreated. Interestingly, SHADOWMAN gives you a chance to see things from the zombie's perspective. Instead of mindlessly shuffling around in search of fresh brains, the Shadowman is a well-spoken former English major who’s got the heavy burden of saving the world. The former scholar is no type of the Living Dead kind of zombie; he's strictly of the New Orleans voodoo variety.

SHADOWMAN will be developer Iguana's attempt to break out of the pure shooter mold and into the hybrid adventure-action genre. Adventurers will appreciate the diverse levels, puzzles, large inventory, actual plot depth, and nice variety of character attributes. For the action gamer, there is a solid selection of impressive weapons and plenty of finely crafted enemies to use them on.

Dead Alive

The lands of the living (Liveside) and the dead (Deadside) play like two different games. Each world uses different character models, weapons, and inventory. For instance, in Deadside, a gun isn’t useful, since everyone is already dead; instead, there will be all sorts of weapons that will cause zombies to burn up, or write in pain and explode. The designers had a lot of room to be creative with the level design. In Liveside, a variety of settings including a prison and London’s seedy underworld all share a dark, sinister feel. In Deadside the constraints of existing human architecture aren’t present, so the designers could run wild with wild, fantasy environments. Particularly disturbing is the gigantic asylum, complete with its own cathedral and voodoo altars. Inside you'll find crazed half-pig, half-human lunatics patrolling the halls, hacking up huge piles of bloody meat and dragging pieces across the floor with meat hooks where their hands should be.

Another key feature is the magic teddy bear. This allows Shadowman to travel to any area he has already been to, in Liveside or Deadside. You'll have simultaneous adventures going on in both worlds and will probably find yourself warping back and forth quite often. Sometimes you'll use the teddy bear to explore a different area if you get bored, or just to escape from a bad situation and fill up on health in a safer area. Along with the invaluable dynamic-save function, all of these features make for a very nonlinear style of gameplay that could satisfy a lot of different gamers’ tastes, or at least keep players interested.

The design philosophy behind SHADOWMAN reflects the current era of hybrid games. There is a little RPG, adventure, action, and some platforming thrown in for good measure. There's ubiquitous third-person jumping (which seems out of place here, only because the rest of the game is so strong), but the designers are being merciful with that. A few minor points aside, SHADOWMAN looks to be a sound contender for raising the bar in a genre begging for new life.
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Insider Game Tips From the Guys Who Make the Games

CAUTION: DEVIL AT PLAY

You're getting stomped. The computer player, a lousy algorithm, is running your troops through a virtual Cuisenart. When you go online, faceless 14-year-olds from Backwoods, Nowhere, regularly hand you your head on a platter. It happens to all of us. Even CGW editors have been seen hiding strategy guides behind the covers of Sun Tsu's The Art of War or Kurt Busiek's Astro City.

We decided it was time to head straight to the source to locate the path to victory. We hit up the top names in game design and asked for their winning strategies, whether for their own games or the games they play when they're not developing. What follows are tips, in their own words, from a veritable who's who of game developers. Even when the tips don't fit your style of play, they serve to show that even these lofty talents at times can get stomped—and stomped—just like the rest of us. We know that makes us feel better.

Richard "Levelord" Gray has been designing levels since the days of DOOM. His work can be found in BLOOD, DUKE NIKE 'EM 3D, and Sin.

In AGE OF EMPIRES, my advice is to select the Hittite civilization. The Hittites kicked ass in their day, and they still do in their virtual kingdom today. Their strengths lie in two aptitudes: They have full tower capabilities for defense, and Heavy Horsemen and Heavy Catapults for offense.

I like the small map size because I can finish a map in an hour or so, and the "Conquest to Win" setting because it forces the opponents to come get me, rather than sit at home and win by building a Wonder.

My war strategy is simple: Build an encompassing wall/tower perimeter near resources with enough room for farming. I will even move my town center, if need be, to nearby resources. I didn't know this was possible until the Great Chieftain (John) Romero told me that if you destroy your initial town center (select it and hit Delete), the game will allow you to build another one anywhere you want.

The next stage of my strategy is to amass resources while building as many towers as my stone resources will allow. An onslaught of enemies is soon to be at my walls and I want to make sure they are properly greeted.

Finally, once enough resources have been retrieved, I build a good army of Heavy Horses and Heavy Catapults. The climax is mounted when I open a section of my protecting wall and charge the advance. Nothing is more exciting than plundering the five or six remaining opponents with my double-strength catapults—who themselves are protected by the horsemen.

Brian Reynolds, the heir apparent to Sid Meier's legacy, was the lead designer on CIVILIZATION II and ALPHA CENTAURI, and is now working on CIVILIZATION III.

I've been playing a lot of IMPERIALISM lately. Although I'm a fairly hard-core strategy gamer, I suggest playing on the relatively easier levels. As with IMPERIALISM, the hard levels mostly feel like they add a period of gratuitous torture to the beginning, followed by the remaining 90 percent of the game being business as usual. If you can manage to build one extra Knight at the beginning, you can use your starting military forces to pretty much run roughshod over as many Indians as you like to claim the resources you think you'll need later.

Unfortunately, there seems to be little point in trying to be nice to the Indians, since on anything but the very easiest levels it's utterly unaffordable until much later. But by then the other powers will long since have conquered every single New World province. Watch out for the technology screen, since the automatic settings will quickly bleed you dry of cash. I like to get my technology the old-fashioned way: by stealing it. If you can afford a trade consulate or two, it's usually worth having one or two Old World neutrals as trading partners to supply you with lumber, wool, or whatever. Be sure to read the combat hints in the manual before attacking any kind of fort.
Gabe Newell is a gamer who left a comfortable position at Microsoft to found Valve, the creators of HALF-LIFE. The rest is history.

Many of us at Valve seem to take a perverse joy in playing games the wrong way. I’ve been playing HEROES OF MIGHT AND MAGIC II, but I suspect I’m a pretty lousy player. Basically I approach it as an RPG rather than as a strategy game. If I were to play this way in a multiplayer environment, I’d get crushed. I spend too much time sending my heroes to all of the power-ups on the map no matter how far out of the way they are. I always opt for experience over gold. And I will keep the opposing force bottled up in their last castle just so I can finish building out all of my castles to their maximum level. None of this is very sound strategically.

I hate rebuilding units, so I usually avoid any combat, except where I have overwhelming force. I also have one hero who gets all of the good items, while my other heroes explore. However, given the map designs, I often find that my heroes end up fairly balanced, as my primary combat hero is wandering around in the underworld rather than being useful.

I also spend too much money on inferior units. I suspect that it’s easy to figure out which units are reasonable investments for the amount of damage they cause and can take. However, I can never resist the temptation to spend money when I’ve got it rather than wait for more powerful units to develop, and end up with several hundred pikemen who never seem to actually manage to make it across the map before combat is over.

Brad Wardell is the founder of Stardock Software, the creators of ENTREPRENEUR, 1998’s sleeper business sim/vagabond. He’s also a nationally ranked TOTAL ANNIHILATION player.

Here are some tips at TOTAL ANNIHILATION that should help you avoid being completely annihilated by most players. Expand, expand, expand. Most players will simply not expand their base beyond their initial starting point. In fact, many will simply try to fortify their little corner of the map. If you call yourself a “defensive” player you might as well say you’re a “defeater” player. Winning in TOTAL ANNIHILATION almost always revolves around who has the most resources, not who has the best military tactics.

Don’t go for advanced units right away. TOTAL ANNIHILATION was designed as a combined arms game. The advanced tanks, for instance, do not replace the first-level ones; they are meant to work together as part of a whole force. It’s amazing how people will try to build a submarine or a destroyer right away. By the time you’ve build that first sub, I could have a dozen Skeeters out there.

Attack early; attack often. I don’t mean that you should try to finish your opponent off early with a giant rush of tanks. But from very early on, you need to put pressure on your opponent. Make him feel like he’s on the defensive. I don’t normally rush players, but I can see why many new users think everyone is rushing them. They tend to take on strategies that absolutely require being left alone for 20 or 30 minutes.

Use the Ctrl-(number) keys to group your units together. It’s absolutely critical that you form your armies into effective battle groups. Nothing is more effective than an attack on a player with two groups when the other player hasn’t grouped his units. It’s very difficult for an unorganized player to defend against an attack from two directions.

Tim Schafer has created adventure games for LucasArts since MANIAC MANSION. His latest title, GRIM FANDANGO, was set in the land of the dead. Ironically, it breathed new life into adventure gaming.

The only game I’ve been playing lately is ZELDA, and I wouldn’t have finished it without a walk-through I found on the Web. So my only tip is this: Get a walk-through off the Web if you want to finish ZELDA.

Arguably the father of “god games,” Will Wright is the creator of the original SIMCITY and one of the co-founders of Maxis.

My favorite ship in X-WING ALLIANCE is by far the A-Wing. If you’re driving it right, nobody ever hits you. The shields on it suck, so you have to make sure you don’t have any collisions. If you can avoid collisions, the A-Wing seems invincible. It has so much speed that you can take on any of the other fighters one at a time easily. Also, it’s great for catching incoming bombers, because the quicker you can intercept these guys, the more leisurely you can sit there and pick them off. The X-Wing is not that much slower than the A-Wing and it’s got much better shields and firepower, but that extra speed is worth so much in the game. It’s also just a joy to fly.

Because of the automatic guns, the Otana, as long as you’re not vastly outnumbered, is really nice. You can be shooting at two ships at once by targeting with the automatic guns while using your forward firing laser to attack another ship. So I would say the rate at which you take out fighters is probably the highest with the Otana.
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Phil Steinmeyer is the head of PopTop Software, the folks who created Railroad Tycoon II, the outstanding follow-up to Sid Meier’s classic strategy game.

When starting a Railroad Tycoon II game, if I see coal and iron close to a steel mill, I’ll jump on them like Bill Clinton on a Big Mac. In general, though, any cluster of two or more resources near an industry that can process them will work.

My favorite engines are the GG-1, the 2-6-0 Prairie, and the 4-4-0. The GG-1 is fast, reliable, and can handle a grade quite well; in short, it’s nearly perfect. The only problem is the high cost of electrifying your track. The Prairie is a “good enough” train. It’s reasonably fast and can handle a respectable load, as long as the route is flat. It’s also dirt-cheap — use it on low-revenue routes to keep your costs down. The 4-4-0 is versatile train and the best of its era (about two-thirds of all engines built in North America in the mid- to late 1800s were 4-4-0s). Of the new boys in the Second Century, the expansion pack, the TGV is best: a great passenger hauler. It’s expensive, but not outrageously so.

In multiplayer games, my favorite dirty trick is to lay little bits of single track at the ends of your opponent’s track, near his big stations, right at the start of the game. As he expands, he has to roll over your track, paying you a small revenue bonus for every train that passes over. As for multiplayer scenarios, Antarctica is the map we play most around here. The secret: Ignore the coal and iron. Go for grain and cattle around Adelle and Iya Valley.

Among the single-player scenarios, I like Hell and High Water a lot. It’s very different from most of the other scenarios, and tough to get a “gold win” on. The premise of this scenario is that an exploded super power plant is spewing gases into the atmosphere, and you’ve got to plug it before the gases heat the atmosphere and cause global flooding. Of your train options, go for the Thalys engine. It’s normally a passenger engine, but in this scenario its speed will make up for other shortcomings. Haul three carloads at a time; more will slow the engine down too much, and less is inefficient. Try to get several runs down into North Africa before the flooding cuts that route off. If done right, you can not only win the gold but also prevent the breaching of the dam at Gibraltar.

Dave Kaemmer is one of the founders of Papyrus, the developers of Grand Prix Legends, a daunting but incredibly immersive racing sim.

Here are some tips to help out the beginner in Grand Prix Legends. Set the graphics options up to maximize the frame-rate. Seeing a smooth view helps more than just about anything. Start out at a relatively easy track; Monza is a good choice and is a favorite with online racers. Ideally, you should have pedals for the throttle and brake. Turn off the driving aids (throttle help, braking help, automatic shifting), since they’ll only hold you back later. If you don’t have pedals, use a joystick to steer and the joystick buttons for throttle and brake. In that case, turn the driving aids on; they help control wheel spin and brake lockup, and if you are using the buttons to accelerate and brake, it’s a bit harder to shift yourself.

Now here is a tip that no one seems to heed. Start out in a Training session, using the Novice trainer car. This car will go faster than you’re probably used to going, but the power is low enough that you won’t be in over your head to start. Learn to slow before a corner, and get back on the power through a corner; this really settles the car and ultimately makes it possible to go faster. Once you know the track very well, and can lap it with no off-course excursions, move up to the Advanced trainer. Now you will be really moving, and you have to learn to use the throttle and brake more carefully. Driving the Grand Prix car after getting used to the trainers has been described as feeling like “Wile E. Coyote on a rocket.” To drive fast and consistently, you must be very smooth and precise with the controls, which is much easier to learn while driving the trainer cars.

Tsunishi “TK” Kawahito is a leading flight sim developer, with two of the genre’s finest titles under his belt: JANE’s LONGBOAT 2 and MiniSim’s EUROPEAN AERIAL WAR.

STARCraft/Brood War is the game we play when I have friends over and we need a multiplayer fix. We usually play it in co-op mode, where it’s us human players against the computers. I’m best playing the Terrans, and worst playing the Zergs. My favorite unit in this game has to be the Wraith. I know it’s not the best unit, but I almost always have at least two groups of 12 fighters supported by a Science Vessel. Of course, I use the Siege Tank/Goliath combo for any ground assault and Battlecruisers armed with Yamato cannon for air assault.

ALPHA CENTAURI still gets played from time to time, mostly in single-player mode but sometimes in multiplayer co-op mode. I usually play the University or UN, and I always go green and try to rely on the Galaxies. My favorite unit is the Needler gunner (do you detect a trend here?). I usually don’t build any marines or tanks. I rely on the marines for city defense and use fighters to attack and drop bombs to capture enemy cities. I replace-drop miners with drop troops once they become available, and both fighters and drop troops are replaced by greenhirters later. The secret project that I try to get in is a Weather-Portal, which moves from city to city. The Kerbal’s Trans System, Hunter-Seeker Algorithm, and Space Elevator.

Veteran Blizzard developer Bill Roper did all the voices in Warcraft II. All of them.

It is tough to choose which species in StarCraft is my favorite, since they all demand such distinctive gameplay styles, but my current favorite is the Terrans. I really enjoy the level of mission specialization that you can achieve with units like the Ghost or the Science Vessel. Their units also support each other exceptionally well when tactics require mixed forces. A favorite tactic of mine is to lay out a wide field of Spider Mines, and then place Tanks in Siege mode just behind the explosion radius of the mine. Then, using one or two Vultures, I lure enemy ground units towards my “lightly defended” line of Siege Tanks. Any units that rush in with the intent of attacking the tanks at melee range are quickly eliminated by the Spider Mines that my Vultures have cleverly hovered over. Also, the addition of the Medic and Valkyrie units in Brood War have greatly enhanced the Terran forces, easily making them the equal of any of the older species in the galaxy.
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3dfx’s Next-Generation Chipset Revealed!

The Goods on Voodoo 4

Just when you thought it was safe to buy yourself a 3D card... We did a little digging recently and hit the mother lode. While 3dfx is out there singing the praises of Voodoo3, the company’s designers are working hard on its next new chipset, code-named Napalm.

Much of the criticism of Voodoo3 has focused on its lack of some advanced rendering features (bump-mapping, stencil buffer) and its lack of 32-bit color support. The latter shortcoming will become more critical when games like Quake 3: Arena ship later this year. It appears that Napalm will address most of the criticisms leveled against Voodoo3.

For starters, Napalm, like nearly all 3dfx chips to precede it, will be damned fast. How fast? According to an industry source who requested anonymity, they’re aiming for 800Mpixels/sec. At that rate, Napalm will be more than double the fastest current shipping parts. That much processing power should deliver resolutions of 1600x1200x32 at decent frame rates. How are they going to do that? Our speculation is that Napalm will have an architecture with two rendering pipelines, and that each one will be able to handle one pixel-per-clock. A clock rate set to 200MHz would yield 400Mpixels/sec.

In addition to speed and lots of it, Napalm will be capable of handling 32-bit textures, and it will have a plug-in socket for a transform-and-lighting coprocessor in preparation for DirectX 7, where that part of the pipeline will be exposed for acceleration. Nvidia has also announced its intent to incorporate T&L acceleration in their next chipset, due out sometime this fall.

We’ve even heard a rumor that 3dfx’s Napalm may be SLI-capable when it debuts, allowing two boards to work in parallel. The net result is those gamers who are truly performance-obessed may be able to get a fill-rate of 800Mpixels/sec. To help keep this pipeline moving, Napalm will also support AGP 4X. This may seem like an insane amount of rendering horsepower, but Sony has announced PlayStation 2’s spec, and is claiming a fill-rate of about 1.2Gpixels/sec.

This news begs the question: Should you even consider Voodoo3? It depends. If you need to upgrade now, and you want Glide support, the Voodoo3 2000 is a great bargain at $129 (see this month’s magazine 3D feature). But if your performance is still solid on the games you like to play, and you can hold off, then wait until that new game you’ve brought home stutters and lurches. And if your best tricks for upsampling your frame-rate (getting the latest driver version, dialing down some rendering goodies) don’t work, then consider making a move.

So the race is on to break the 1Gigapixel/sec barrier, and 3dfx is pulling out all the stops to be the first company to get there. But it won’t be alone. We’ve heard distant rumblings that Nvidia is also working toward being one of the first to pass that milestone. In the 3D graphics business, there’s just no rest for the wicked. — Dave Salvator

If You Build A Better Mouse...

A t E3, where visual overload is the rule of day, you’d think that graphics cards would reign supreme. Well, graphics are what pull eyeballs into booths, but the news on the graphics front is mostly about more speed and horsepower. The real innovation in hardware this year seems to be in game controllers, with a host of new offerings from Microsoft, Saitek, and ThrustMaster, to name a few.

Microsoft is working on a solid-state mouse, which, according to one Microsoft source, “has no balls but a lot of guts.” The new IntelliMouse Explorer, slated to ship in September, replaces mouse-ball technology with an optical sensor and digital signal processor (DSP), which captures snapshots of the work surface at a rate of 1,500 images per second. The DSP translates changes between the images into on-screen movements. This technique results in smooth, precise pointer movement. The mouse can connect via USB or PS/2. It has a scroll-wheel and two programmable thumb buttons, and features a canted design for better comfort.

Saitek, a newcomer to the mouse arena, took a look at first-person shooter controllers and decided that gamers didn’t really need a new oddball controller. Instead, the company has built a “better mouse.” Its new GM2’s design features a two-button mouse with scroll wheel that has a programmable four-point view hat. The other half of this controller is a USB keypad with seven buttons and a scroll wheel, all of which are programmable. Look for this product this fall.

Even ThrustMaster has gotten into the act with a new gaming mouse. The ThrustMaster entry features USB connectivity, a canted design, a scroll wheel, and three programmable thumb buttons.

Microsoft Strikes Twice

In addition to its new IntelliMouse, Microsoft has been developing a new first-person action controller, code-named Zulu. The product has now been christened the SideWinder Dual Strike and is scheduled to ship in October. You grip this odd-looking device with both hands, and its two component parts rotate against each other, letting you control your mouse-looking. Your left hand has a flattened D-pad to control forward, backward, and strafing movements. There are also eight programmable buttons you can map with either individual keystrokes or chorded or multiple keystrokes. By melding the functions of a game pad with the keyboard and mouse, Dual Strike adds a rotating pad that the Microsoft hardware crew hopes will facilitate easier, more successful gameplay in first-person and action-adventure games.

Although designed primarily for the 3D-shooter crowd, the Dual Strike may make a great sports game controller, relieving sports gamers of the drooled game claw feeling in their left thumbs after grueling hours spent hammering their gamepads’ D-pad. Microsoft’s SideWinder Freestyle with its motion sensor tried to do this, but wasn’t really responsive enough for fast maneuvers. — Dave Salvator
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Another Year, Another DirectX
The Annual Rite of Joy and Frustration Begins Anew

by Loyd Case

It's autumn; winter is fast approaching. The horror creeps up on you, unknown, unseen, unhidden. It follows you home from the computer shop, nestled hungrily in the narrow cardboard box. It lies in wait, as you unpack the game, pop it in the CD, and click on the install button. Then, out of nowhere, you see a message: "This game requires DirectX 7. Do you want to install DirectX?"

You stare for a moment, then flee the room, screaming.

Okay, so it's not that bad. In fact, it's pretty impressive that the DirectX team at Microsoft has been able to pull off annual releases of their gaming API. (Maybe the operating system guys could learn a few lessons.) It's inevitable, however, that some users will have problems, given the insanely broad range of PC hardware available. As with all DirectX releases, Microsoft is striving mightily to ensure backward compatibility in its latest update. But it's as certain as taxes in April that someone, somewhere, has a piece of hardware or a hardware combination that will make it break.

Still, this year's edition of DirectX has some pretty cool stuff, so let's take a close look at the particulars.

The Sound of Music

Microsoft shipped DirectX with DirectX 6.1. According to one prominent designer of game audio, proper composition with DirectX could result in pleasing and effective interactive scores. At first, a number of musicians thought that DirectMusic was an attempt to put them out of work, but writing a good interactive score takes as much talent and skill as composing a piece of music for any other purpose.

An important component of DirectMusic is DLS (downloadable samples), and Microsoft will implement the DLS 2.0 spec for DirectX 7. DLS allows game designers to download custom sounds to your sound card's MIDI hardware. This opens up some interesting possibilities, since all currently shipping PCI sound cards support DLS. MIDI has much less overhead than playing a WAV file from a CD or hard drive. Using a custom sound would allow repetitive sound effects (water dripping, for example) to be played with much less CPU overhead.

Direct3D and Beyond

There are some big changes in store for Direct3D. The biggest one is the implementation of transform-and-lighting acceleration. Right now, that hot 3D accelerator in your PC only accelerates rendering. The CPU still has to handle all of the calculations used to tell the game where to move an object and how it reacts with the lighting in the scene. Much of what we call lighting in current-generation games are really sophisticated tricks played with texture maps and texture blending. Certain types of texture maps are overlaid on the scene to create the effect of lighting. True geometric lights, however, would be a more physically realistic manner. However, geometric lighting is very expensive in terms of CPU horsepower required.

Transforms—the mathematical functions that calculate movement and rotation of objects in a scene—are also CPU-intensive.

When first constructing a game's design, game developers define CPU budgets for various parts of the game. In the past, rendering ate up as much as 80 percent of the CPU budget. But now, with fast 3D cards having taken over most of the rendering chores, game developers are upping the ante. As scenes get bigger, with more polygons and more lights, transform and lighting begin to take their toll. Even a 550MHz Pentium III can't generate enough triangles to keep that hungry TNT2 Ultra fully fed.

So expect to see 3D accelerators in the near future that accelerate transform and lighting. According to Kevin Bachus, Microsoft's group product manager for DirectX, the real win will be in transforms. One reason is that the game programmers want to have more lighting effects than the hardware will support. It's likely that the first cards with T&L acceleration will support only four to eight light sources. That's enough for ambient light, but if the game wants a lot of lights in the scene, the programmer will still need to use texture blending.

Also, the API issue can be a problem. Game programmers have resisted using the DirectX transform-and-lighting engine in the past. However, the DirectX 6 T&L engine "sucked less," according to several game designers, and Microsoft has put a lot of effort into streamlining the pipeline's performance in DirectX 7.

Installation and Configuration

Kevin Bachus also has console envy. That doesn't mean that he wants Sony to ship him a PlayStation II. Rather, Bachus believes that PC games are still too hard to install and configure. To that end, Microsoft is working on ways of making games easier to configure and set up from the beginning. AutoPlay was just for starters.

We still have some time to go before we get to true photorealism.
this game hasn’t been installed yet. It checks the type of game (real-time strategy with 3D graphics). Windows also knows that you have a 450MHz Pentium II with a fast 3D accelerator and a 3D audio card, so the graphics and audio are cranked up to about 90 percent of max.

Of course, with all these nifty new features, you'll have to pony out more dollars to fully take advantage of them. But remember, it will be at least a year before you see titles that really take advantage of this new stuff. By then, your wallet may have recovered from the last round. We still have some time to go before we get to true photorealism. On the other hand, there are great games out there now. So what are you waiting for?

---

**Tech Tips**

**Q.** My CD-ROM drive’s AutoPlay function no longer works. Whenever I insert a CD, nothing happens, even though AutoInsert notification is checked in the CD-ROM property sheet (under System Control Panel, Device Manager). How do I reenable AutoPlay?

**A.** Somehow, an invalid value in a registry key was entered. You need to edit the registry to fix this problem. (Note: It's always best to back up or export your current registry before trying to edit it.)

Here's what to do. Run REGEDIT. Then search for the following key:

```
HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Policies\Explorer\NoDriveTypeAutoRun
```

Modify the value for the NoDriveTypeAutoRun key to 0000 00 00 00 00 00. Exit REGEDIT and reboot.

**Q.** I have an 430FX motherboard, and I would like to install a 166MMX CPU on it. However, I find the voltage regulator specs to be unclear, and I don't know what the core voltage supplied to the CPU will be. It is supposed to be 2.8 volts. The I/O voltage is OK at 3.3 volts. Is the dual voltage requirement of the MMX chip that is confusing me. Can I install this CPU on this board?

**A.** The 430FX motherboards don’t have the proper voltage regulation to handle split-voltage CPUs like the Pentium 166 with MMX. You can, however, use a Pentium MMX overdrive chip in most 430FX motherboards.

**Q.** Does disabling V-sync on the Riva TNT affect performance?

**A.** When V-sync is on, the graphics card will wait until the monitor is ready to start its next refresh cycle before it updates the screen. That generally means that you'll be limited in frame-rate to the refresh rate of the monitor. In some cases, you'll see frame-rates that are one-half of the refresh rate when you flip on V-sync. This happens when the new frame just misses the refresh cycle. Adjusting your refresh rate may fix this. Turning off V-sync means that updates to the display can happen anytime—even in the middle of the refresh cycle. This can have visual effects; things like tearing of the image or even some flashing. So you'll get a higher-frame rate, but it will look uglier. If your game has the option, try triple buffering. The game will always run at up to the refresh rate (rather than one half) and image quality will be good. It does use up a little more of the graphics card memory, though.

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<td>Case</td>
<td>In-Tel G500 full-tower ATX</td>
<td>$1,175</td>
<td>In with the Newtough, out with the Natural.</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Turbine 300</td>
<td>$125</td>
<td>Off the leads.</td>
</tr>
<tr>
<td>Keyboard</td>
<td>Logitech Newtough</td>
<td>$185</td>
<td>Great basic gamepad.</td>
</tr>
<tr>
<td>Mouse/Pointing Device</td>
<td>Logitech Cordless Wheel Mouse</td>
<td>$195</td>
<td>Just feels right.</td>
</tr>
<tr>
<td>Action Game Controller</td>
<td>Gravis GamePad Pro USB</td>
<td>$129</td>
<td>More control than anyone needs.</td>
</tr>
<tr>
<td>Flight Joystick</td>
<td>ThrustMaster EZ Pro 2</td>
<td>$69</td>
<td>Nearly perfect foot placement.</td>
</tr>
<tr>
<td>Throttle</td>
<td>ThrustMaster T70</td>
<td>$129</td>
<td>For the serious sim drivers.</td>
</tr>
<tr>
<td>Rudder Pedals</td>
<td>ThrustMaster Elite RCS</td>
<td>$19</td>
<td>Total: $8,676</td>
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<tr>
<td>Driving Controls</td>
<td>ECCI CDS-4000</td>
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## Lean & Mean

<table>
<thead>
<tr>
<th>Component</th>
<th>Product</th>
<th>Price</th>
<th>The Skinny</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motherboard</td>
<td>Abit BX-2 rev 2.0</td>
<td>$140</td>
<td>Five PCI slots, Software, 440BX—ready for Pentium III.</td>
</tr>
<tr>
<td>CPU</td>
<td>Celeron 466 + slotket</td>
<td>$190</td>
<td>Effectively the same as a PII400.</td>
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<tr>
<td>Memory</td>
<td>128MB Corsair PC100 512MB</td>
<td>$150</td>
<td>128MB at last.</td>
</tr>
<tr>
<td>Disk Controller</td>
<td>Built in IDE/SATA</td>
<td>$50</td>
<td>Stability, speed, and cooling.</td>
</tr>
<tr>
<td>Primary Graphics</td>
<td>Voodoo² Lite</td>
<td>$160</td>
<td>Still gotta have it</td>
</tr>
<tr>
<td>Floppy Drive</td>
<td>Teac</td>
<td>$20</td>
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<td>Hard Drive</td>
<td>Western Digital Expert 9.1</td>
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<td>7200rpm from Western Digital.</td>
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<tr>
<td>CD-ROM/DVD</td>
<td>Pioneer DVD-1035</td>
<td>$135</td>
<td>Slot-drive DVD.</td>
</tr>
<tr>
<td>Monitor</td>
<td>Optiquest V95</td>
<td>$145</td>
<td>Solid 19-inch monitor at a budget price.</td>
</tr>
<tr>
<td>Primary Audio</td>
<td>Diamond Monster Sound MX300</td>
<td>$59</td>
<td>A3D and clean audio for under a C-note.</td>
</tr>
<tr>
<td>Speakers</td>
<td>Boston Acoustics BA-635</td>
<td>$99</td>
<td>Solid performance, great price.</td>
</tr>
<tr>
<td>Modem</td>
<td>Diamond Supra 550</td>
<td>$199</td>
<td>Still my favorite.</td>
</tr>
<tr>
<td>Networking</td>
<td>D-Link 10100 Ethernet</td>
<td>$165</td>
<td>The case for upgraders.</td>
</tr>
<tr>
<td>Case</td>
<td>New Lite T16 Air</td>
<td>$52</td>
<td>In with the new, out with the Natural.</td>
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<tr>
<td>Power Supply</td>
<td>Built in 220W</td>
<td>$5</td>
<td>Better than their &quot;gaming&quot; mouse.</td>
</tr>
<tr>
<td>Keyboard</td>
<td>Logitech Newtough</td>
<td>$45</td>
<td>Still the best-balanced flight stick around.</td>
</tr>
<tr>
<td>Mouse/Pointing Device</td>
<td>Logitech PS2 Wheel Mouse</td>
<td>$45</td>
<td></td>
</tr>
<tr>
<td>Joystick</td>
<td>CH Gamemaster 3D USB</td>
<td>$45</td>
<td></td>
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</tbody>
</table>

The Fine Print: All recommendations based on actual evaluations. Prices listed are average low quotes from Web price search engines like www.computershopper.com or www.pricewatch.com. —Lists compiled by Dave Salvator and Loyd Case
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<table>
<thead>
<tr>
<th>Model Name</th>
<th>Millennia MAX 550</th>
<th>Millennia MAX 500</th>
<th>Millennia MAX 450</th>
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<tbody>
<tr>
<td>Processor</td>
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<td>Intel® Pentium III processor 500MHz</td>
<td>Intel® Pentium III processor 450MHz</td>
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<td>Hard Drive</td>
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<td>8.4GB Ultra ATA hard drive*</td>
<td>8.4GB Ultra ATA hard drive*</td>
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<td>DVD ROM</td>
<td>6X var. speed DVD-ROM drive</td>
<td>6X var. speed DVD-ROM drive</td>
<td>8X var. speed DVD-ROM drive</td>
</tr>
<tr>
<td>Modem</td>
<td>3CIS USRobotics V.90 WinModem**</td>
<td>3CIS USRobotics V.90 WinModem**</td>
<td>3CIS USRobotics V.90 WinModem**</td>
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<tr>
<td>Graphics</td>
<td>16MB nVidia AGP graphics</td>
<td>16MB nVidia AGP graphics</td>
<td>16MB nVidia AGP graphics</td>
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<tr>
<td>Micron U</td>
<td>1-year free* training @ Micron U online</td>
<td>1-year free* training @ Micron U online</td>
<td>1-year free* training @ Micron U online</td>
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<tr>
<td>Warranty</td>
<td>2-year on-site limited warranty</td>
<td>3-year on-site limited warranty</td>
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<tr>
<td>Operating System</td>
<td>Microsoft® Windows® 98</td>
<td>Microsoft Windows 98</td>
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<tr>
<td>Internet Access</td>
<td>Micron pays for 1-year EarthLink Sprint TotalAccess™</td>
<td>Micron pays for 1-year EarthLink Sprint TotalAccess™</td>
<td>Micron pays for 1-year EarthLink Sprint TotalAccess™</td>
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<tr>
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<td>$62/mo.</td>
<td>$47/mo.</td>
<td>$41/mo.</td>
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<tr>
<td>without monitor</td>
<td>$2,119</td>
<td>$1,619</td>
<td>$1,419</td>
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<tr>
<td>Upgrade to</td>
<td>20GB Ultra ATA hard drive*</td>
<td>128MB SDRAM</td>
<td>128MB SDRAM</td>
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<tr>
<td></td>
<td>17&quot; Micron 700Cx (15.9&quot; display)</td>
<td>136GB Ultra ATA hard drive*</td>
<td>136GB Ultra ATA hard drive*</td>
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<tr>
<td></td>
<td>$73/mo.</td>
<td>$59/mo.</td>
<td>$53/mo.</td>
</tr>
<tr>
<td>with monitor</td>
<td>$2,529</td>
<td>$2,019</td>
<td>$1,819</td>
</tr>
</tbody>
</table>

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Mercury Rising

by Loyd Case
photos by Michael Falconer

Welcome to the brave new world of 3D graphics accelerators, where chips run as fast as 190MHz and many graphics cards now have 32MB of RAM—practically an entire PC's worth of horsepower. These chips are even more compact than past generations, and silicon being what it is, a smaller chip can generally run faster. Now chips can be sorted into different speed grades (see "Crazy From the Heat" sidebar). That means the range of choices has widened, so that sifting through the options to find the best one is at best a complex undertaking. But stick with us, and we'll help you make the best choice.

All this graphics goodness means that you can run games at higher resolutions than before, even with all their stick rendering features turned on. Of course, you need a faster CPU to really do the higher resolution justice, which sets off a whole new buying spree. Maybe that's what keeps the U.S. economy going.

The game developers are upping the ante, too. For this roundup, we're using 3D GameGauge 2.0, in which several games use multitexturing and make heavy use of lighting effects. When you factor in the higher resolution (3D GameGauge now runs at 1024x768), frame-rates suffer. Only one game regularly approaches 100 frames per second on any card, and most test games in 3D GameGauge range between 20 and 50 frames per second.

These cards are really the last of their breed: devices that are purely rendering accelerators. The next generation will have technology to accelerate more of the 3D graphics pipeline—especially geometry and lighting.

The Envelope, Please

Amid the sea of graphics card choices, a few contenders stand out. The overall performance leader in our tests proved to be the Hercules Dynamite TNT2 Ultra. At $245, it's not cheap, and there are no frills other than TV out, but its ability to run at high clock rates is unbeatable among TNT2 cards.

Diamond's Viper 770 Ultra deserves a close look, too. Although stability above 166MHz was problematic, the Viper's polished 3D control panel is a huge step toward making the complexities of 3D understandable to end users. Performance certainly wasn't shabby, however, and Diamond's "choose your software bundle" approach relieves some of the boredom of bundleware.

The Comeback Kid award goes to Matrox, for its Millennium G400 Max. The OpenGL drivers lacked polish and speed at test time, but the impressive Direct3D performance almost made up for it. On top of that, the G400 Max posted the best 32-bit scores in our Hi-Res Torture Test. Bump-mapping added a bit of graphical panache to the EXPENDABLE test, and we look forward to more titles supporting Matrox's environmental bump-mapping.

The value award easily goes to 3dfx's Voodoo3 2000. Although it placed roughly in the middle of the pack, it shines along in Glide applications, and you can find it for prices approaching the $100 mark. While it lacks some of the high-end rendering features of the TNT2 or G400, it offers plenty of raw performance at a nearly unbeatable price.

Another low-cost card that performed surprisingly well is the Guillemot Xentor 16. It only has a stock (not Ultra) TNT2 chip, but Guillemot runs it at

That new game you just got home doesn't run nearly as well as your older games.

Top 10 Signs You Need a New 3D Card

10. You're in a QUAKE 2 DeathMatch; you enter a roomful of players and your frame-rate tanks.
9. Your aunt gives you a check for $250 because she's tired of watching over your shoulder when you play at 320x200.
8. You just went to the local store to return your third new game that required 3D acceleration.
7. Product names like Viper, Voodoo, and Rage appeal to your aesthetic sensibilities.
6. That new game you just got home doesn't run nearly as well as your older games.
5. You just heard that the next version of PANZER GENERAL will be 3D-accelerated.
4. You can't run games any higher than 512x384 and get a decent frame-rate.
3. You finally realized that the VIRGE isn't really a 3D card.
2. Your spouse can tell if you got a new computer, but not a new 3D card.
1. Your parents watched you play UNREAL and marveled at the slide show of your vacation.

New, Blazingly Fast 3D Cards Are About to Go Critical
135MHz and pairs it up with 166MHz SDRAM. At $149 ($129 after rebate) it’s a steal, but it won’t run in 32-bit mode at very high resolutions.

Let’s Get Ready to Rumble

This will be a brutal summer for the major players in the graphics card business. At least four major new chip releases are set to hit the streets simultaneously. Users have jumped into the fray, with advocates of different 3D chips beating the drum for their favorite products. It’s almost like the Amiga-versus-PC wars all over again. 3dfx has launched a $20 million marketing campaign to try to build brand awareness. While Voodoo3 is somewhat lacking in sheer features, it’s no slouch in raw performance—and it runs Glide. While Glide only games are increasingly rare, it’s still common to find one offered as an API in addition to Direct3D—much more often than OpenGL, for example. But a highly clocked TNT2 Ultra can now outpace a Voodoo3 overall, even when the 3dfx chip is running in Glide mode. There are exceptions, of course. UNREAL looks and runs far better in Glide than in Direct3D, but Direct3D performance is now “good enough”—especially if you run at 800x600x32-bit color. Still, 3dfx is not out of the running, as some would like. The end users who don’t buy Voodoo3 cards will likely keep their Voodoo2 cards in their systems.

If you look at the 32-bit Hi-Res Torture Test—which Voodoo3 can’t even run—you’ll realize that no one will ever be running regularly at 1800x1200 for a while. But many games perform quite well at 800x600x32 or even 1024x768x32 on a fast system. We’ve seen a number of games in development—QUAKE 3: ARENA most notably—that is using 32-bit source art, and if you’ve seen Q3TEST running, you begin to get a sense of the difference that 32-bit rendering can make for features like fog and alpha effects.

The two real surprises are Matrox’s G400 and the Savage4 from S3, but for different reasons. Matrox had a taste of what it was like to lead last summer, when it shipped the G200 before anyone else shipped its new parts, but the G200’s 3D performance was actually fairly underwhelming. The same can’t be said about the G400, which performs quite credibly. If Matrox can get its OpenGL ICD together, the G400 will become a very strong card for gamers, particularly in the high-clock-rate Max version.

The Savage4 was a surprise because its performance was so weak. But put in perspective, it’s performance is close to that of the original TNT. It’s just that the quirky sands of user expectations have shifted under S3’s feet. The one wild card is S3’s texture compression (SSTC). Quite a few future titles will ship supporting SSTC, most major chip makers have intimated their intent to support it in future chips, and the graphical quality can be incredible. Creative and Diamond didn’t have Savage4-based boards ready for this roundup, and they may be able to squeeze more performance out of the chip than the board makers we tested here.

Finally, the Taiwanese are arriving in force. Companies such as ASUS and Leadtek have made some inroads into the U.S. market in the past, but their current TNT2 cards are nearly as polished as Diamond’s Viper and ship with features like video capture or digital flat-panel support. These cards could be real sleepers if the price is right.

Hercules Dynamite TNT2 Ultra

Put simply, this card rocks. If you examine the cooling fan closely, you’ll notice that it looks a little different from most. Hercules uses a version of TennMax’s Lasagna cooling fan to dissipate heat. Toss in 5ns (200MHz) SDRAM, and you have a graphics hot rod on your hands. Hercules will be shipping the Dynamite with the TNT2 clocked at 175MHz and the memory at 200MHz. I played with the clock setting in the Dynamite control panel and was able to run this card at a spectacular 190MHz for the core clock rate and 220MHz for the memory clock rate with no stability problems. Needless to say, the results were quite speedy. When clocking boards, appreciate that mileage will vary (see sidebar). There’s no software bundle, but there is TV out.

Of course, playing around with the clock rate can get you into trouble if you’re too aggressive, so the company is looking at shipping a tool that will set the card back to a default state from Windows safe mode or the DOS prompt. At 190/220, this is the only card to break the 50 barrier in 3D GameGauge 2.0. It’s clear that Hercules is committed to the performance segment of the market—which, after all, is something of a return to the company’s roots.

Crazy From the Heat

Like CPUs, you can now buy graphics cards in speed grades. With 3dfx or Matrox, it’s fairly straightforward—you pay more for a board with a faster chip. Since nVidia ships the TNU2 to many different board makers, they leave it to the board companies to innovate, either adding features like video input or by jacking up the clock rate. Making sense of this can be a royal headache.

When a batch of chips are made, they can be sorted by performance: Some chips can run quite easily at much higher speeds than the standard rating, and some perform slower. This spread becomes wider the higher the clock rate. So 3dfx will take Voodoo3 chips that can run at high speeds, clock them at 143MHz, and put them on V3 2000s. Similarly, nVidia has sorted into two speed grades: the standard TNT2, which will run at 125MHz; and the Ultra, which runs at a minimum of 150MHz.

The chip speed of the board that you buy will depend a little on the luck of the draw. A TNT2 Ultra chip that barely slipped into the Ultra category may not run much faster than the rated 150MHz, while others may clock well above the default clock rate.

Chips that barely make the cut also tend to run hotter—and the higher the clock rate, the hotter the part anyway. 3dfx has chosen to put a gigantic heat sink on the 186MHz Voodoo3 in the V3 3000. According to Gary Tarroli of 3dfx, it’s not normal for the heat sink temperature to rise to 95 degrees C—five degrees shy of the boiling point of water. That’s a huge hotspot, and there are credible reports of V3 3000s being returned because they simply run too hot.

So, pick your cards carefully and take a long hard look at your PC case. Having a graphics card with a cooling fan isn’t always enough. You need to have a case with adequate cooling and a power supply that circulates air well. Adding an extra case fan can help, too. Even then, the law of averages may dictate that your particular card may always run at the default speed. —loyd Case
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- Check out www.atitech.com for history-making news on RAGE FURY and the latest 32-bit true color 3D games.

QUAKE II FRAME RATES

<table>
<thead>
<tr>
<th>Mode</th>
<th>Frame Rate</th>
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<tbody>
<tr>
<td>32-bit color</td>
<td>66 fps</td>
</tr>
<tr>
<td>ATI RAGE FURY (RAGE 128 QL)</td>
<td>46 fps</td>
</tr>
<tr>
<td>SVGA V4000 3DVISION (TNT)</td>
<td>Not Supported</td>
</tr>
<tr>
<td>DUAL MONSTER FUSION (GENESIS)</td>
<td>Not Supported</td>
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</tbody>
</table>

http://www.atitech.com/ad/cgw

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3D GameGauge 2.0

Testing 3D graphics performance is often more black art than scientific method. But CGW brings you the most complete 3D performance testing anywhere. We use a combination of 3D WinBench, 2D's industry-standard synthetic 3D graphics benchmark, and our own 3D GameGauge, a collection of Direct3D and OpenGL games to use in application-based testing. You've seen 3D GameGauge numbers posted here in CGW whenever we review 3D cards and systems, and we've received a lot of reader mail praising 3D GameGauge and offering some great ideas for improving it. Well, a good thing just got better.

We're proud to announce 3D GameGauge 2.0, the 1999 version of 3D GameGauge. It has some pretty cool stuff, including an increased test resolution of 1024x768x16 and a much better genre spread, including shooters, sports games, flight- and space sim's, and driving titles. New games in 3D GameGauge 2.0 are:

- Valve's HALF-LIFE (OpenGL)
- Interplay's DESCENT 3 (Direct3D)
- Jane's WWII FIGHTERS (OpenGL)
- Ratbag's POWERSLIDE (Direct3D)
- Epic Games' UNREAL (Direct3D)
- EA Sports' MADDEN 99 (Direct3D)
- Rage's EXPENDABLE (Direct3D)
- Pandemic's BATTLEZONE II (Direct3D)

And because many readers requested it, this year's final 3D GameGauge score will be an average of the game's frame-rates, rather than a sum. That way, the final score looks more like a typical frame-rate you'd see in a game, and makes more sense.

Look for 3D GameGauge 2.0 to make its online debut with results, analysis, and all the modified bits you'll need to run it yourself in the coming weeks. In the meantime, bookmark www.3dgamengauge.com as your place for all the goods on Computer Gaming World's 3D GameGauge. —Dave Salvator

Guillemot Xentor 16

When I first benchmarked this card, I had to retest it to make sure I wasn't imagining things. I wasn't. Despite a core clock of 135MHz, this is one fast puppy. The Xentor 16 does have 166MHz SDRAM, which goes to show that memory speed makes a difference when you're moving a lot of texture data around. This is a sparse card, with no software bundle except a soft DVD player from Xing (which actually works pretty well for watching movies).

This card exceeded the performance of some of the TNT2 Ultra cards we tested, and it can be just the drivers or just the memory clock. Somehow, Guillemot's designers managed to squeeze every last drop of performance out of the card. So if you're looking for something that can run 32-bit color but you can't afford one of the Ultras, this is the card to choose. You can't run in 24-bit color at very high resolutions, but no card performs really well at 1600x1200 with newer titles. The Xentor will run quite ably at 800x600x32. Don't forget to send in the rebate coupon!

3D GAMEGAUGE

Voodoo3 2000

Most people focus on the Voodoo3 3000 or the not-yet-shipping 3500, but the 2000 is the real gem as far as I'm concerned. For a price approaching a C-note, you get Voodoo3 SLI performance in 3D, very credible 2D performance, and support for 3dfx's Glide API. It's a great budget card.

Of course, you don't get any amenities in this price range. There's a sampler of Eidos games and no TV out. But the card is very well mannered, taking everything we threw at it without a hiccup (except the 32-bit Hi Res Torture Test, of course). This is an ideal card for Pentium II/233 or 266 systems (if you've got a free AGP slot). There's even a PCI version for breathing a little extra life in those older Pentium systems. Also, 3dfx has done a good job of supporting AMD's 3DNow! in its drivers. Ironically, the lack of full AGP support makes this a very workable card in some of the more finicky Super 7 KG-II motherboards. So if you're focused on 3D gaming, but are budget-challenged, spend a little time with the 2000. You'll like what you see.

3D GAMEGAUGE

Diamond Multimedia Viper 770

The Viper 770 lives up to its hype—almost. I had a version of this card running at 175 MHz core clock rate and 200MHz memory clock for quite some time. But the shipping Viper wouldn't remain stable above 166/192—although it was rock-solid at that clock rate. Even so, overall performance was pretty impressive.

There are a lot of other reasons to like this card. Diamond's unique "choose your software bundle" approach is a nice touch, though at the price of the card the company should have picked up the shipping and handling. On the other hand, you're not getting demos, but the real games.

The real beauty of the Viper 770, however, is the 3D control panel. It's slickly designed. Tool-tip pop-ups explain the 3D features you're altering. It's easy to set and change profiles for various games, as they are automatically created whenever you run a title. If you do change a feature, you can get a thumbnail preview of the effect—and pop it up to full screen if you desire. I spent an hour just mucking around with the control panel. It's not cheap, but it's worth it.
As 3D cards get faster and faster, we have to come up with new and ever-more-diabolical ways of testing them. For this roundup, we used 2D's WinBench 99 and 3D WinBench 99, the industry-standard synthetic benchmarks. We used WinBench 99's Business Graphics WinMark test at a resolution of 1024x768x32. In 3D WinBench 99, we tested at 1024x768x16, triple buffered at a refresh rate of 85Hz. We use triple buffering here because it all but eliminates page-flipping overhead, a nagging problem of testing when you use double buffering. 3D WinBench is a really excellent testing tool for shaking down a 3D card's drivers and making sure that the card implements rendering features correctly.

We then tested with 3D GameGauge 2.0 (see sidebar, page 99), a suite of six Direct3D and two OpenGL games; we derive the final score by averaging the frame-rates of these eight games. One interesting

## Benchmark Test Results

<table>
<thead>
<tr>
<th>Graphics Cards</th>
<th>WinBench 99 Business Graphics WinMark (1024x768x32)</th>
<th>3D WinBench 99 (1024x768x16)</th>
<th>3D GameGauge</th>
<th>Jane's WW II Fighters</th>
<th>Quake II</th>
<th>Expendable</th>
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** TEST NOTE: Cards listed with default and max values have clock-rate sliders that we ran at default and fastest stable speed.

* The Hi-Res Torture Test score is the average of the frame-rates of PowerSieve, Battlefield II, Expendable, and Jane's WW II Fighters running at 1024x1280x32.

DVR – Did Not Run

** We included test results for the Hercules Dynamite TNT, a current-generation 3D card, for the purposes of comparison.

* Can do 32-bit rendering but lacks sufficient memory to run at this resolution.
result: On the cards that can be overclocked, the difference in 3D GameGauge performance isn’t that significant when they are clocked up, despite the fact that some cards do get a nice bounce in the 3D WinBench test.

Finally, we ran what we affectionately call the 32-bit Hi-Res Torture Test, in which we take POWERSLIDE, JANE’S WWII FIGHTERS, BATTLEZONE II, and EXPENDABLE, and test at a very high resolution, 1600x1200x32, to separate the men from the boys. Not surprisingly, most of the cards slowed down quite a bit, though Matrox managed to average about 24fps across these four games—an impressive feat.

For our test system we used an Intel SE440BX2 motherboard with a Pentium III 500MHz CPU, 128MB of PC100 SDRAM, a Vortex 2-based sound card running Aureal’s reference drivers, and EIDE storage components.

—Dave Salvator

<table>
<thead>
<tr>
<th>MADDEN 99</th>
<th>BATTLEZONE II</th>
<th>HALF-LIFE</th>
<th>UNREAL</th>
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</table>
Welcome to Sigil, the "City of Doors," a place with gates that lead anywhere in existence, provided you have the proper key. It is a neutral ground and watering hole for races across the multiverse, all under the watchful shadow of the Lady of Pain, the enigmatic ruler of the city. It is a place where the word is mightier than the sword, where thought defines reality, where belief has the power to reshape worlds and change the laws of physics.

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Matrox Millennium G400 MAX

When I first took a look at the Millennium G400, I thought, "Ho-hum."

Then Matrox announced the G400 Max, and I sat up and took notice. The G400 Max clocks at 166MHz, and ships with 32MB of 5ns (200MHz) SDRAM, although we couldn’t get an actual memory clock rate. With dual rendering pipelines, hardware acceleration, environmental bump-mapping, and support for direct3D (one of which can be a TV), the G400 is a sweet card.

The one black mark here is OpenGL. The ICD that Matrox shipped us was still beta quality, and it can best be described with one word: slow. Matrox really needs to pull together a decent ICD before Quake 3: ARENA hits town.

Direct3D performance is quite good, and G400 had the best performance in our 32-bit Hi-Res Torture Test. The image quality seemed a little more vibrant. This was partly due to the bump-mapping—EXPENDABLE looked better. But the color saturation in BATTLEZONE II looked better, too. If you stick mostly with Direct3D, then the G400 Max is a superb card. But if you’re hankering to play OpenGL titles, you’d best take a wait-and-see attitude.

Score

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<thead>
<tr>
<th>Product</th>
<th>Rating</th>
<th>Chipset</th>
<th>Clock Max Memory (MB)</th>
<th>Clock Max Memory Clock Rate (MHz)</th>
<th>Price</th>
<th>The Stylist</th>
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<tr>
<td>S3x Voodoo 2000</td>
<td>★★★★★</td>
<td>Voodoo 2</td>
<td>16</td>
<td>163/143</td>
<td>$115</td>
<td>Recent performance; low cost; Glide support; not the fastest performer; no 32-bit 3D rendering support.</td>
</tr>
<tr>
<td>Diamond Viper 770</td>
<td>★★★★★</td>
<td>TNT2 Ultra</td>
<td>32</td>
<td>166/132</td>
<td>$225</td>
<td>Solid performance; users choose bundle; textural; user-oriented control panel; performance slider.</td>
</tr>
<tr>
<td>S3x Viper 170</td>
<td>★★★★★</td>
<td>TNT2</td>
<td>16</td>
<td>135</td>
<td>$149</td>
<td>Very good performance in a low-cost card; $129 after rebate, but only has 16MB.</td>
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<tr>
<td>S3x Viper 170</td>
<td>★★★★★</td>
<td>TNT2 Ultra</td>
<td>32</td>
<td>180/120</td>
<td>$245</td>
<td>Spendy card with the best active cooling system in the roundup; TV out; performance slider; pricing.</td>
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<tr>
<td>Matrox G400 Max</td>
<td>★★★★★</td>
<td>G400 Max</td>
<td>32</td>
<td>169/200</td>
<td>$249</td>
<td>Very good 32-bit performance; OpenGL needs a little work; dual-monitor support; pricey.</td>
</tr>
<tr>
<td>S3x Viper 170</td>
<td>★★★★★</td>
<td>Voodoo 2</td>
<td>16</td>
<td>169/166</td>
<td>$100</td>
<td>Very good, raw 16-bit performance; supports Slide; comes with coupon for Unreal Tournament.</td>
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<tr>
<td>AGP Voodoo Deluxe</td>
<td>★★★★★</td>
<td>TNT2 Ultra</td>
<td>32</td>
<td>155/183</td>
<td>$249</td>
<td>Good performance; video in and out; good capture tools; clock rate slider.</td>
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<tr>
<td>ATI All-in-Wonder 123</td>
<td>★★★★</td>
<td>Riva 9200</td>
<td>32</td>
<td>105/110</td>
<td>$199</td>
<td>Stick TV and video capture software makes up for so-so 3D performance; the best convergence card you can get.</td>
</tr>
<tr>
<td>Diamond wounds 3200 Pro</td>
<td>★★★★★</td>
<td>TNT2 Ultra</td>
<td>32</td>
<td>130/150</td>
<td>$249</td>
<td>Very good performance; business-only bundled; digital flat-panel support; TV out; performance slider.</td>
</tr>
<tr>
<td>Matrox G400 16MB</td>
<td>★★★★★</td>
<td>G400</td>
<td>16</td>
<td>123/125</td>
<td>$149</td>
<td>Performance is pretty good at the specific clock rate; dual monitor support; relative low cost.</td>
</tr>
<tr>
<td>S3x Viper 170</td>
<td>★★★★★</td>
<td>TNT2 Ultra</td>
<td>32</td>
<td>150/166</td>
<td>$190</td>
<td>Decent performance; may be hard to find.</td>
</tr>
<tr>
<td>ELSA Enzor III</td>
<td>★★★★★</td>
<td>TNT2</td>
<td>16</td>
<td>125/140</td>
<td>$169+</td>
<td>Performance loss for a TNT2 card due to slow memory clock; 3D glasses are an interesting add-on.</td>
</tr>
<tr>
<td>Diamond wounds 3200 Pro</td>
<td>★★★★★</td>
<td>TNT2 Ultra</td>
<td>32</td>
<td>140/160</td>
<td>$199</td>
<td>Performance is okay; some business bundle as the pro, but no digital flat-panel support.</td>
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<tr>
<td>S3x Viper 170</td>
<td>★★★★★</td>
<td>TNT2 Ultra</td>
<td>32</td>
<td>150/150</td>
<td>$189</td>
<td>Unlamented card, but performance is decent.</td>
</tr>
<tr>
<td>Hercules Terminator Boost 90</td>
<td>★★★★★</td>
<td>Savage 4 Pro Plus</td>
<td>32</td>
<td>125/135</td>
<td>$129</td>
<td>Texture compaction may make this a decent card, but I wouldn’t bet on it; very low cost for 32MB.</td>
</tr>
<tr>
<td>Cybertek 300</td>
<td>★★★★★</td>
<td>Savage 4 Pro</td>
<td>32</td>
<td>115/125</td>
<td>$139</td>
<td>It’s slow, but it does have 32MB.</td>
</tr>
</tbody>
</table>

* Includes glasses

3D Web Sites Worth a Look

The Chip Guys and Their Fan Sites:
- nVidia
  - www.nvidia.com
- ATI
  - www.ati.com
- Matrox
  - www.matrox.com
- S3
  - www.s3.com
- 3dfx
  - www.3dfx.com
- www.planet3dfx.com
- www.3dfxmania.com
- Matrox
  - www.matroxusers.com
- www.voooodoo2.com
- www.voooodoo2.com
- www.deltaplus.com
- www.tweak3d.net

General 3D Sites:
- www.dimension3d.com
- www.tweak3d.com
Vroom! Vroom!

www.creative.com
Is your PC's audio up to speed?

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- High Priests
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- Nuclear Workers
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- Because of the revolutionary RT-OT technology, your system is constantly pushed to the limit while never slowing down. Even with dozens of characters on screen!
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- Support for all major 3D video and audio cards.

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Use your smart bomb.

The deadliest weapon you have
only fires neurons.
Better keep it loaded.

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How Do We Rate?

Outstanding The rare game that gets it all right. A must-play experience.

Snickers

Very Good Worthy of your time and money, but there are drawbacks.

Twix

Average Either an ambitious design with major flaws, or just vanilla.

Butterfinger

Weak Seriously lacking in play value, poorly conceived, or just another clone.

 lays the Table

Abysmal The rare game that gets it all wrong. Pathetic. Coaster material.

We review only finished products—no betas, no patches.

Disagree with the candy ratings? Contact: tom_price@zd.com

Quote o' the Month

"If you want to play through the whole game in one sitting, go right ahead! In fact, try hanging from your toes and playing it upside down—you'll have bragging rights on Usenet."

—Jesse Hiatt, reviewing ALIENS VERSUS PREDATOR

THE DARK SIDE VERSUS THE LIGHT SIDE

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Star Wars Episode I: The Phantom Menace 122

AUGUST REVIEWS

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We sense an ejection.
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Prepare to adjust your strategy as you navigate your Armada through an infinite 3D battlefield where the enemy can attack from any point in space.

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In Space, No One Will Let You Save
New Characters, New Weapons, New Levels...Same Old Game

by Jesse Hiatt

I make my way through the dark corridors of the abandoned space colony, the drone of the generators and the pulsing of my proximity detector my only company. A blip appears on the viewer, 30 yards away and getting closer, followed by two more. There is no available cover, nowhere to hide. The detector shows multiple signals right on top of me and I still don’t see anything. Panic starts to set in. I hear the distinct squeal of Xenomorphs and the scratching of claws on metal. "Where are the bastards?" Suddenly, in a flash of claws and teeth, an alien appears. I lay into it with my pulse rifle, but it is moving too fast. I manage to blow off the tail and a limb but it keeps on coming. At last a few high-explosive rounds find their way into its thick, chitinous skull and the alien comes apart, showering me with acidic blood and leaving me with no armor and precious little health.

With the lights low and the headphones blasting, ALIENS VERSUS PREDATOR (AVP) definitely has its moments. These types of heart-pounding thrills are exactly what action gamers are after; unfortunately AVP faces a lot of stiff competition in an arena currently jammed with great games. It’s further handicapped by funky AI, the lack of in-game saving capability, scarce interactions with NPCs, and a slim plot. To be brutally honest, AVP seems like a decidedly pre-HALF-LIFE game in a post-HALF-LIFE era.

The game designers made a good effort to set AVP apart. It’s essentially three shooters in one, giving you the option of playing any of three different characters—Alien, Predator, or Colonial Marine—each with its own weaponry, innovative vision modes, and preferred tactics. The levels are set up to capture the feel of the Alien and Predator movies on which the games are based, and they include lots of nice touches, like the knife stuck in the table of the spaceship cafeteria (from the nimbly-peg scene in the Aliens movie) and the loose recreation of the climactic scene in Aliens depicting the alien queen in the airlock.

Shoot, Die, Reload, Repeat

AVP’s main problem is it doesn’t offer the option of saving in the middle of a level, so you wind up playing it over and over again—and this is a game where survival is very difficult. The fifth or sixth time around there are no more surprises, and you start playing by rote. Even the difficulty settings don’t change the number or distribution of the enemies. Predictability detracts from the suspense, frequently making the game repetitive and boring. Some will tell you that eliminating an in-game save adds to the challenge. Well, no one is forcing anyone to save. If you want to play through the whole game in one sitting, go right ahead! In fact, try hanging from your toes and playing it upside down—you’ll have bragging rights on Usenet. But there’s no reason to shut out gamers who prefer a friendlier save option.

Adding a dynamic save option still might not have been enough...
He is coming.
Walking between worlds...
Traveling the road of souls from Liveside to Deadside.
And back again.
A dead man is coming, skull in one hand,
and lines of power in his back.
A voodoo mask in his chest.
A dead man is coming, skull in one hand,
flambeau in the other...
A possessed man is coming,
stalking evil in tenements and deserts,
subways and swamps,
spirit world and real world.
Shadowman is coming... to stop the Apocalypse.
To save your soul.

SHADOW MAN
Walk on the Deadside
REVIEW • ALIENS VERSUS PREDATOR

GANG WARFARE Hordes of attacking aliens are commonplace and make survival difficult. Unfortunately, the lack of a mid-level save option means you'll fight them over and over again.

To propel this game to the front of the pack. Despite its assets, ALIENS VERSUS PREDATOR never strays far from the all-too-familiar lone-gunner style of gameplay. Most of the time you basically hunt for switches between wave after wave of marginally intelligent enemies. This may sound like the plait of a jaded, cynical party-pooper, but it's probably safe to assume that there are lots of other folks just as tired of this approach.

Other shooters have raised the bar for what we can expect from an action game in terms of interaction with NPCs and overall AI. In AVP I ran into aliens who got stuck in corners or tried to walk through walls when there was an open door nearby. Humans had the unfortunate habit of falling off things and killing themselves (which made my job easier). And to top it off, the only friendly I ran into as a marine just stood there and ignored me after I saved his butt from a pack of ravaging aliens.

Technical considerations aside, a good plot can transform a mediocre game into a great experience akin to enjoying movies, books, or theater. With such an incredible wealth of material to draw from (four Alien and two Predator movies and a bunch of comic books) and the backing of an entertainment giant like Fox, AVP can only be seen as a missed opportunity. There are some vague tidbits about the all-powerful "company" making a hybrid of the alien (Xenomorph) and Predator species, and periodically an officer will show up on a video screen to bark some orders to the marines, but that's about it. These serve to give you an idea of what to do next, but they don't really tell much of a story. Incidentally, the beta version's placeholder videos, featuring guys who I suspect were employees of AVP's development firm, Rebellion, were more entertaining than the ones used in the final version.

Hunt Club

Perhaps because the single-player experience left something to be desired, AVP shipped with impressive multiplayer capabilities, including cooperative, deathmatch, a cool predator fox hunt, Last Man Standing, and a full-featured skirmish mode for practicing against bots. Each mission type has literally dozens of options, and when you've set up something you like you can host games on the Net or send them to friends. The game ships with everything you need to play over Mplayer (which, incidentally, is free of charge and has some great features), but here again AVP suffers in comparison to other games. You can lead a gamer to the server, but you can't force him to play. The game ships with only seven levels to play via network, and no level editor. Granted, not many casual gamers bother to make new levels anyway, but the diehards who do are responsible for breathing new life into stale network games. After running around dark corridors for a while, it doesn't matter how many options you have—you're likely to get bored.

Still, AVP has some remarkable moments when it captures the feel of the movie perfectly. Compared to the other shooters out there right now, and more importantly to its own potential, AVP is just a little disappointing.
Tom Clancy's
RAINBOW SIX
ROGUE SPEAR™

MISSED ME?

Team Rainbow is back in full force. Rogue Spear, the sequel to PC Gamer's 1998 Action Game of the Year, immerses you even deeper in the explosive action of an elite multinational strike force.

Rogue Spear feels so real, you'll be yelling 'Tango Down!' in your sleep for weeks. And the multiplayer action is to die for. Remember when stalking the enemy? Walk softly but strike like a thunderbolt. You only have one shot to save the world.

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Includes DVD-ROM, 6 CD-ROMs and Strategy Guide

“A great game for those who like well-crafted plots, interesting and well-acted characters, and healthy doses of murder, intrigue and mystery.”
—Sci-Fi Universe

“Best Adventure Game of the Year.”
—Just Adventure

“Plot and puzzle are evenly balanced to propel you forward...you’ll be too embroiled to give up.”
—PC Games

“A Star Wars meets Indiana Jones meets Sherlock Holmes interactive adventure”
—Unsealed Entertainment Webzine

“An absolutely outstanding gaming experience”
—Antagonist Games Network

“98 Editor’s Choice Award”
—WarZone gaming site

“Combines a rich visual experience... with a detailed story and hours of gameplay.”
—Next Generation

“A great story and engaging puzzles.”
—Computer Games Strategy Plus

www.southpeak.com
Rocket Jockeys
LucasArts' First Racing Game Is a Speed Demon's Dream

by Robert Coffey

It's a couple of space shuttles on their sides, tie yourself behind them, then sit on a snow saucer. Provided the shuttles don't tear your arms from your body when they fire up, steer them with a couple of dog leashes as you dodge buildings and tumbling rocks. Jump the Grand Canyon, shoot through a zero-gravity tunnel, fly through a keyhole.

Repeat. Such is the sensation of playing STAR WARS EPISODE 1: RACER, one of the first games based on the new Star Wars movie.

Ricorocket Racing

Where RACER succeeds most is in creating an incredible sense of sheer speed. Swooshing through more than 20 tracks spread across eight unique worlds, you can practically feel the whiplash as you rocket at a velocity just this side of the sound barrier, trapped in a tiny, fragile pod tethered behind two enormous engines. Special turbo boosters only heighten the exhilaration when you kick them in to blast past (or through) your opponents.

This breakneck, daredevil sensation is augmented by the tracks. Every world offers unique hazards, be they the frozen, skid-inducing fields of Ando Prime or the vision-obscuring methane lakes of Malastare. And each planet has its own set of recurring elements in each of its tracks (all of which are spread out among three increasingly difficult racing circuits). For instance, the prison labor camp planet of Oovo IV features zero-gravity tubes used to transport ore through the planet. Navigating these tubes is challenging enough the first time around, but there are more chunks of hazardous rock to dodge in later tracks, and the entrances and exits grow increasingly dangerous and disorienting deeper into the circuit. It's to the designers' credit that these elements never feel repetitive and succeed in giving each planet its own distinct flavor. Toss in some insolent turns, repositioning doors, and AI racers who'll just as soon go through as around you and you're pretty much assured a thrilling ride.

Visually, the game is stunning, with imaginative textures that never seem tined and some great lighting effects. The lighting is particularly effective on Mon Gaza, where different shades of red dance on your racer as it shoots through tunnels boring through a volcano's core. The sound, great throughout the game, is particularly effective here as well, with a rich, heavy burbling adding to the illusion.

Given such spectacular graphics, the game's explosions are disappointing. Dinky, dim, and downright dull, they're nothing like what you'd expect from machines that can outrun a bullet. Crashes and flameouts were high points in the film, but they're a real lowlight here.

Caution, Bumps Ahead

Where RACER fails short is in the secondary parts of the game. While new podracers are unlocked as you progress through the circuit, they're rendered moot, since the ability to upgrade and customize your racer means you probably already have the machine you want.

Upgrading racers is another problem, thanks to a flat-out weird interface. You can purchase upgrades from the Watto character from the movie, but the strange bar graph that illustrates a new part's effectiveness never really lets you know if you've bought it or not.

Multiplayer games are also disappointing, mostly due to balancing issues. Basically, if you crash before anyone else, you're screwed. In one game, one of my opponents shot right through me, crashing my racer within three seconds of the start. After resetting, I was never able to catch up; further, all of the racers spread out and never really caught sight of each other again.

**COMPUTER GAMING WORLD**

**PROS:** incredible sense of speed; great graphics; inventive challenging tracks.

**CONS:** Unbalanced, lackluster multiplayer racing; vague upgrade interface; wimpy explosions.

**REQUIREMENTS:** Pentium 166, 32MB RAM, 190MB hard-drive space.

**3D SUPPORT:** Direct 3D.

**MULTIPLAYER SUPPORT:** LAN (2-8 players); 1 CD per player.

**Price:** $19.99

Publisher: LucasArts

www.lucasarts.com

FENDER BENDING

Pitched battles for position are commonplace in the single-player game but sadly infrequent in multiplayer matches.

This breakthrough, daredevil sensation is augmented by the tracks. Every world offers unique hazards, be they the frozen, skid-inducing fields of Ando Prime or the vision-obscuring methane lakes of Malastare. And each planet has its own set of recurring elements in each of its tracks (all of which are spread out among three increasingly difficult racing circuits). For instance, the prison labor camp planet of Oovo IV features zero-gravity tubes used to transport ore through the planet. Navigating these tubes is challenging enough the first time around, but there are more chunks of hazardous rock to dodge in later tracks, and the entrances and exits grow increasingly dangerous and disorienting deeper into the circuit. It's to the designers' credit that these elements never feel repetitive and succeed in giving each planet its own distinct flavor. Toss in some insolent turns, repositioning doors, and AI racers who'd just as soon go through as around you and you're pretty much assured a thrilling ride.

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The Phantom Blemish
Weak Game Mars Popular Franchise

by Tom Price

Salute alert: The game STAR WARS EPISODE I: THE PHANTOM MENACE closely follows the plot of the movie Star Wars Episode I: The Phantom Menace. So if you haven't seen the movie yet (and if you haven't, I hope you're recovering from your coma) please put down the magazine, go see the movie, and then come back and we'll talk. I have seen the movie, and despite the overwhelming hype and correspondingly huge potential for a letdown I found it very enjoyable. Playing the game, however, is about as enjoyable as cleaning a wookie's litterbox.

I've Got a Bad Feeling About This

STAR WARS EPISODE I: THE PHANTOM MENACE is a third-person adventure game that ends up relying heavily on action to make up for a very flawed design. Playing first as Obi-Wan then as Qui-Gon, Captain Panaka (Queen Amidal's guard), and the Queen herself, you'll hack and slash your way through oceans of battle droids and other action figures on Naboo, Tatooine, and the galaxy's capital, Coruscant. Along the way you'll have some token puzzles to solve, but they're so shoddily designed that I solved most of them by accident.

There's a lot of following people around and getting them to follow you, which gets unbelievably tedious, especially considering how bad the AI pathfinding is. On the Escape From Theed level, you must escort the Queen through the droid-infested garden to her awaiting ship, but she kept getting hung up on corners and wouldn't continue until I returned and asked her politely to please follow. Trail ing Par Jar Binks around the swamps of Naboo was equally annoying—big surprise there. He would run ahead too quickly to follow, leaving me to search each area for his stupid reptilian butt. I wasn't much motivated to save him from the battle droids.

Graphically, the game is about as ugly as the Rancor pit monster in the morning. Everything is laid out on a grid with repeating lowres textures and square polygons. The Naboo swamps are particularly unappealing, looking a bit like the first TOMB RAIDER, but worse. The game is being released concurrently for the Sony PlayStation, and the PC graphics look like no more than a high-res port of the PSX.

Most frustrating, however, is the near top-down camera angle you are stuck with. It makes scouting ahead impossible and some of the open desert levels on Tatooine seriously disorienting. Ceilings are transparent, but it's easy to get stuck beneath a ledge or rooftop during some key battles, my character actually slipped offscreen a few times.

There's a Star Wars Fan Born Every Minute

Just so you don't think I'm a total snob, let me say something positive about TPM. The sound, from the cool lightsaber "whoosh" that we all tried to make as kids by humming through our teeth, to the trademark put-your-ear-up-to-the-inside-of-a-Slinky-ricochet-of-a-laser blaster, is the one element of the game that does justice to LucasArt's reputation for quality effects. The voice acting is top-notch as well, with many of the actors from the movie reprising their roles.

LucasArts seems to have phoned this one in. There's a good game in here somewhere, but the whole experience seems dumbed down for the sake of all the nongamers whom they're counting on to buy the game simply because it has Star Wars in the title. Instead of taking this opportunity to introduce nongamers to the joy of computer gaming, they took the path of least resistance and ended up with a product that will please few. The hard-core gamer will find little of interest, but hard-core Star Wars fans (and I'm sure there's a lot of overlap between those groups) will buy it anyway. My advice to them: Don't remove the shrinkwrap. The game will be worth something on the memorabilia market, and you won't have missed anything by not playing.

**PROS:**
- Cool lightsaber sound
- Good sound overall.
- CONS:
- Bad graphics, unchangeable camera angle, bad AI, poor use of license.

**REQUIREMENTS:**
- Pentium 200, 32MB RAM, 233MB hard-drive space.
- **3D SUPPORT:** Direct 3D.
- **MULTIPLAYER SUPPORT:** None.
- Price: $49.95
- Publisher: LucasArts
- **WATTO YOU SAY?** Unlike in other LucasArts titles, the NPCs in THE PHANTOM MENACE are as dumb as Tatooine dirt—and about as pretty.
- **STAR WARS EPISODE I: THE PHANTOM MENACE**
  - ESRB rating: E (Everyone)
THE DIRECTOR’S CUT OF THE HIGHLY CONTROVERSIAL
GRAND THEFT AUTO IS NOW ON SALE.
SHOPLIFTERS WILL BE PROSECUTED.

“A deep, addictive, naughty game play experience.”
— Next Generation

“Best game soundtrack.”
— PC Gamer

“Stomach-turningly perverse.”
— PC Format

“Beneath contempt.”
— UK Police Federation

“Controversial, hip and louder than a Spice Girl in a blender.”
— GamesMansion.com

This is the original, uncut, full version of Grand Theft Auto, fully tricked out with the all-new GTA London: 1969 Mission Pack. It’s more fast cars, more dangerous streets, and more cops to outrun and outwit than ever before. Now you can tear through three of America’s toughest cities, plus the mean streets of London, leaving a trail of mowed-down mercenaries, hired killers, and rival gang members in your outlaw wake. All of the wild car chase action of the original is here, times two. Please, while it may be tempting, just don’t steal this game.

Published by

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Destruction
A Veritable Cornucopia of Action Titles

Recoil
Publisher: Electronic Arts
Price: $34.95
www.ea.com

Designed by Washington-based Zipper Interactive, RECOIL is a blend of furious action and combat strategy. The game’s back-story is either captivating or laughably derivative, depending on your tolerance for gothic fiction: You’ve been recruited by a small group of dissident hackers to stop an evil empire.

Your ride to redemption is an experimental Battle Force Tank (BFT), a multifunction combat vehicle—viewed in third-person perspective—that can morph into four different units: land, hover, amphibious, and subsurface. Unfortunately, there’s little discernable difference in the way your vehicle looks or performs, so this whole feature set is pointless.

Blood II: The Nightmare Levels
Publisher: GT Interactive
Price: $19.99
www.gtinteractive.com

Have you ever had one of those days when you felt like using the decapitated heads of your enemies as soccer balls? Now, thanks to Monolith Productions’ expansion pack for BLOOD II, you can go ahead and vent your frustrations with a little zombie-head soccer. This is just one of the new goodies available in the expansion pack called (appropriately enough) THE NIGHTMARE LEVELS.

The flayer and the combat shotgun are the two new weapons. The flayer is similar to a grappling hook, while the combat shotgun provides a decent amount of power (and accuracy) over longer ranges.

New enemies include Gremlins—annoying little buggers that attack in large groups. There’s also the Nightmare, which I found to be a major disappointment; it’s too hard to be scared of something that looks like a mutated puppy-dinosaur.

Most of the new levels have a dark, gothic feel, with the notable exceptions of the Sorority House and the Church. While not revolutionary in terms of level design, they’re well laid out and fun to play. Overall, there are four new single-player levels and six new multiplayer levels.

It definitely took guts to include the Sorority level, where zombies are invading and gleefully wiping out the sorority sisters. You’ll have a chance to save some of the sisters or you can just watch them get whacked by the Zombies as they plead for their lives. Given the recent media frenzy over school violence, Monolith is bound to get some flack for this level.

There’s enough in this package to keep serious BLOOD II fans happy until BLOOD III arrives. If you weren’t a fan of BLOOD II the first time around, then you’d best stay away.

—Jim Lynch

Worms Armageddon
Publisher: Hasbro Interactive
Price: $29.95
www.hasbro-interactive.com

Laugh if you want, but I consider WORMS 2 the best game of last year, if not one of the best multiplayer games ever created.

At least that’s what I thought until the arrival of WORMS ARMAGEDDON, the third and final chapter—or so they say—of Team 17’s wildly popular series. This changes everything.

WORMS is essentially a souped-up version of those old side-scrolling artillery games, like SCORCHED EARTH, set in a surreal cartoon world loaded with twisted humor and exaggerated comic violence. Up to six teams—human or computer-controlled—take turns blasting each other to bits, using an incredible variety of lethal weaponry, from mundane (guns, grenades) to maniacal (mad cows, exploding sheep). The last team wiggling wins the game. Single-player matches are hot, but the game really takes off in multiplayer mode.

A full list of improvements and additions would fill two full pages, so here are some highlights: Single-player options have been expanded to feature deathmatches, missions, and specialized training exercises, where exceptional performance earns cheat codes. Team handcapping and alliances are now possible. Other goodies include slow-motion replays, more colorful and detailed landscapes, and support for video resolutions up to 1024x768.

New weapons include Aqua Sheep, Flame Thrower, Earthquake, Skunk, Indian Nuclear Test, Mole Bomb, Long Bow, Magic Bullet, and Suicide Bomb, among many others. WORMS ARMAGEDDON also introduces Utility Crates, which contain special enhancements, like Low Gravity, Jet Pac, Double Speed, and Laser Sighting. Donor Cards allow others to nab Utilities left by dead Worms.

The built-in landscape editor is easy to use and has more options, including the ability to import virtually any image as a WORMS battle-field. Add in more than 50 predesigned levels, plus the ability to randomly generate billions of unique landscapes, and no two games should ever be alike.

If you loved WORMS 2, you’ll go ballistic for WORMS ARMAGEDDON.—Scott A. May

On the plus side, the designers provide a decent variety of imaginatively drawn game worlds (indoor/outdoor, urban/rural) as well as some genuinely challenging battle scenarios. Add to this some kick-ass weapons of mass destruction—glazed with some of the best lighting, explosion, smoke, and shockwave effects I’ve seen—and this game gets the adrenaline pumping. Too bad it doesn’t last, thanks to repetitive gameplay that slowly builds excitement but ultimately goes nowhere new.

Despite its failings, RECOIL still packs one hell of an initial punch. But in the end, it’s merely an average shooter wrapped in deceptively appealing eye candy.

—Scott A. May
“European Air War’s outstanding gameplay and wealth of features make it the current leader of the WWII simulation crop.”
-PC Gamer, 89%, Editor’s Choice Award

“This World War II simulation captured the feeling of being in a living, unpredictable combat environment better than any other sim released this past year.”
-Computer Gaming World, 4 stars

“The care and attention to detail that went into every aspect of European Air War, from the hefty manual to the bomber nose art, represents a serious achievement.”
-CNET GameCenter

“Falcon 4.0 is the deepest, most complex air combat sim yet... The campaign also creates the greatest sense of playing a small but important part of a huge battle.”
-PC Gamer

“RACKING UP THE KILLS!”

“No previous sim covers so many different weapons and so many tasks in detail... it’s all here and it’s all beautifully executed.”
-Washington Post

“Bottom line: this sets the new standard in flight sims”

“Falcon 4.0 is an incredibly detailed simulation that in many ways exceeds training systems in military use.”
-Computer Gaming World
Baldur's Gate Gets Better

TALES OF THE SWORD COAST Opens Up a Whole New World

by Elliot Chin

BALDUR'S GATE, the year's best-selling RPG, just got bigger thanks to TALES OF THE SWORD COAST, Interplay's official expansion package. TALES isn't a traditional add-on disc. Instead of being a mere after-the-fact product that continues your adventures once you complete the original game, this add-on plugs in and seamlessly opens up a new area within the BALDUR'S GATE universe.

Brave New World

TALES OF THE SWORD COAST adds a new dungeon, a new town, a faraway island full of intrigue, and a higher cap on experience points. The lost item is welcome news; the challenges in TALES—particularly the enhanced final showdown at the end—are extremely tough. This new experience cap means that most characters can advance at least one more level. Thieves and druids will now be able to go as high as the 11th level. The advanced levels also mean there are more spells: Some new fourth-level

spells and a host of fifth-level spells have been added. While the special effects don't do justice to the power of a fifth-level spell (we'll have to wait for PLANESCAPE for some truly cool spell effects), these new additions get the job done. But where are the truly spectacular AD&D spells like Cone of Cold and Wall of Force?

A new range of monsters make their appearance in TALES OF THE SWORD COAST, although you'll need to spend a few hours exploring the new town of Ulthar's Board and the other locales before you can meet them. There are more than a few surprises in store; both story- and creature-wise, so I won't ruin it for you. Let's just say that everything is not as it appears, and winter wolves are the least of your worries.

Your first stop in the newly enlarged world of BALDUR'S GATE will be Ulthar's Board, a quiet seaside town in the north, which serves as a gateway to half a dozen quests. You can take a tour of Durlag's Tower, a trap-infested keep in the south built by a demented dwarf and now inhabited by some serious monsters. You can also get spirited away by your friend Shandalar to a mysterious island to retrieve a special cloak. Another quest involves retrieving the logs from the lost ship of Balduran, fabled founder of the city of Baldur's Gate. In addition to these large quests, there are also smaller ones that involve finding a lost boy or retrieving a family heirloom. And then there's the tower and island themselves to explore. Just be sure you are high level (sixth or up) before undertaking these quests, as they are difficult.

Walk, Don't Run

Aside from adding new elements, TALES OF THE SWORD COAST also addresses the main complaint with BALDUR'S GATE: pathfinding. The default setting for the expansion package has

the computer processing more information for pathfinding, so your party doesn't get stuck nearly as often. I still noticed some annoying problems, but the need to keep clicking repeatedly and micromanage each individual has been lessened.

Unfortunately, several other problems, like the lack of a quest log and the inability to run, have not been addressed in TALES. Navigating the journal for incomplete quests is still a headache, but at least the quests are better presented, creating less vagueness about where to go and whom to meet. Thankfully, all the TALES quests appear in the same chapter you already are in.

DO I HAVE TO GO THERE?

Durlag's Tower is a new dungeon, with many traps and some heavy-duty AD&D monsters. While you're inside, don't piss off the knight.

IT BURNS The new quests prove to be considerably more difficult, as evidenced by this fatal battle with a powerful wizard.

RAP SESSION Your "friend" Shandalar offers you one of the new quests in TALES OF THE SWORD COAST.
Knife Flight
A Vicious, Living Campaign World Makes This Chopper Sim Fly

by Jeff Lackey

Jet jockeys fly several miles above the earth, relying on avionics and the brute strength of weapons systems to strike from extremely long range. The Apache helicopter driver, however, is required to fly at high speeds below treetop level, relying upon stealth and ground features to get within visual range and then slowly and carefully rising above the surrounding terrain to unleash firepower upon his surprised victim.

If you like getting down and dirty, if you like being right in the middle of the action, then chopper sims are for you. And if you like chopper sims, Empire Interactive's Apache HAVOC has what it takes to become your next addiction.

It's a Wild World

APACHE HAVOC allows you to pilot either the American AH-64D Longbow or the Russian MI-28N Havoc B attack helicopter in a fully dynamic combat environment. Whether you're flying single missions or full campaigns, the war raging around you is filled with an enormous variety of air, sea, and land vehicles, all engaged in their assigned missions. And the war won't wait for you—battles are being won and lost while you decide what missions to fly.

You're free to select from any available helicopter group and the missions tasked to that group, which include Recon, Scout, Interdiction, CAP, Deep Strike, and Rescue. It's then your task to check out the map and adjust the waypoints to afford the most advantageous approach. Choose your weapons loadout, then jump into the cockpit, spin up the engines, and head into harm's way.

There are three campaigns: a Cuban attempt to oust the U.S. from Guantanamo Bay, a drug-based war located in the Golden Triangle around Thailand, and a conflict between Russia and the U.S. over (what else?) oil in the Caspian. The terrain is accurately reproduced and quite different for each region. You can fly for either side in any campaign, with different objectives and types of forces yielding significantly different experiences. For example, flying a Havoc in Cuba allows you to start with a huge force advantage. On the other hand, the U.S. Apache pilot faces a desperate situation in which he's surrounded and outnumbered.

These campaigns give new meaning to the term "fully dynamic." You're surrounded by advancing and retreating ground units, fighters engaged in dogfights for air superiority, helicopters playing dangerous cat-and-mouse games with SAM vehicles, and much more. And unlike simulations in which your side's overall success hinges solely upon your individual success, here there are other factors that affect the war's outcome. This results in...
a campaign that is significantly different from what you may be used to—one that requires a different approach if you hope to prevail.

For the Want of a Nail

In many flight-sim campaigns, if you successfully complete your mission, everyone on your side also succeeds. This leads to an egocentric approach to mission planning and execution. In APACHE HAVOC, you're a mere cog in the war machine. You may easily accomplish a simple recon mission, but if enemy armor breaks through your lines and overruns key objectives, the war may be lost.

Here's the secret: This is as much a strategic wargame as it is a flight sim. While the AI in APACHE HAVOC is decent, it's no match for a human brain; thus, you have a better chance of being a decisive factor in a critical battle than your AI comrades. Overall success in this sim is dependent upon your ability to constantly assess the ebb and flow of the war on your battle map and focus your missions on the areas that are most crucial. A Tour of Duty option adds to the complexity by putting a time limit on your reaching campaign objectives. Do well and time is added; mission failures result in time being subtracted.

While the action-filled environment results in an engrossing experience, there are a couple of factors that detract from your effectiveness on the battlefield. All the radio communication you hear, informing you of action across the battlefield, is voiced by a single actor. This means you can't distinguish between your wingman, a fighter pilot, or a tank driver.

A Lean, Mean Fighting Machine

In spite of these problems, the world of APACHE HAVOC is exciting and addictive. Graphics are superb, with every detail of the portrayed units displayed. The default resolution is 640x480, but higher resolutions are available at a cost: The 2D cockpit is fixed at 640x480, which results in a “floating” cockpit at higher resolutions. (Empire plans a patch with hi-res instrument panels.) Fortunately a cockpit-free mode is available, with displays visible in the corners. Weather is accurately portrayed and has a realistic degradative effect on instrumentation. Line-of-sight effects, critical in helicopter sims, are accurately modeled. The avionics are somewhat elementary, but they're still accurate enough to be called realistic. Likewise, flight physics—including excellent ground effects—feel correct.

BOTTLED IN A key to victory is carefully planning the routes of your defensive forces.

The bottom line is the outstanding and dynamic battle environment. The game's magic became most apparent during a Scout mission in which I was flying along a narrow road nestled in the jungle, searching for a reported tank formation. Flying over a rise too quickly revealed a Russian helicopter group that immediately attacked. After expending my Stingers and still facing two Havocs and a Hind, I turned tail and ran low and fast, aiming for a friendly SAM I found on the map and screaming at my base to send help. Dodging enemy fire and the ground, taking hits that were degrading my chopper's performance, I saw the lovely vision of two F-16s appear on my air radar; the hunters became the hunted, my pursuers quickly knocked out of the sky. I limped back to an alternate FARP and managed to land in one piece, feeling an exhilaration rare in gaming. Truly great stuff.
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Still Golden
Activision Nabs JACK NICKLAUS Franchise and Sinks a Beauty

by Scott A. May

No doubt about it: The long-running JACK NICKLAUS golf series accounted for more than its share of publisher Acclaim's finest moments. But now that the franchise has been sold to Activision, there's been a question of whether it would continue to improve, or simply fade into obscurity. The latest addition, JACK NICKLAUS 6: GOLDEN BEAR CHALLENGE (JNG), proves that the future is brighter than ever for this venerable series.

Improvements abound, beginning with Hypnos Entertainment's spectacular new graphics engine. For my money, this is the first golf sim in which the variable skies, breathtaking vistas, and lushly detailed foregrounds are in perfect visual sync. JNG has no feeling of the cut-and-paste course construction, with out-of-scale objects tacked onto flat backdrops, characteristic of every golf sim that preceded it. The transition from front to back is seamless, and the illusion of vertical depth is amazing, without the use of 3D video hardware.

Size Matters
Another huge graphic improvement: the king-sized, motion-captured golfers, rendered with polygons and wrapped in a variety of texture skins. So large that you can count the tassels on the golfers' shoes, the animations are wonderfully lifelike, offering a wide range of limb motions, from subtle pre-shot waggles to graceful follow-throughs. No fewer than 10 cameras let you view the action from every conceivable angle.

Other goodies include a ball flight model that not only reacts realistically to environmental effects (wind, humidity, terrain) but is rendered pixel-perfect. The simulated ball trajectory—with the ball catching air, increasing speed as it arcs upward—looks and feels true to life. No other golf sim can match it.

Included with the game are six Nicklaus-designed 18-hole courses, providing a nice medley of backdrops and challenges: Shoal Creek Golf Club, Sherrwood Country Club, Sherry Monte-Castillo, Nicklaus North (in Whistler, Canada), Muirfield Country Club, and Cochise Course at Desert Mountain. Play each course straight, or change the pin placement to vary the challenge.

Links by Design
If that doesn't get your putter fluffing, JNG also offers a full-blown course and hole designer, with the ability to import and convert any course created with JN5. Not enough? Activision also supplies gamers with Internet links to thousands of user-created courses, free for downloading. In terms of long-term playability, JNG is the champ. But beware: Although the course designer is well-documented, accounting for about two-thirds of the entire user manual, it's still a golden bear to use, with a steep learning curve for average gamers. But if you have patience, you'll find reward.

Pregame setup now offers much deeper handicap options, including—for the first time, if I'm not mistaken—the ability to adjust the speed of the dreaded swing meter for each golfer. Yay! At last, a golf sim that's actually playable for gamers with less-than-lightning-fast reflexes. Three swing types are available: two- and three-click traditional, and Mouse Meter, another so-so attempt to simulate natural club motion.

Final kudos go to the game's new color-coded putting grid, which makes green reading a piece of cake, vastly improving your chances of sinking that 40-foot birdie. And check out the new Smart Replay feature, which lets you replay and save any shot on the current hole, from three different angles. Outstanding.

No matter how you hook or slice it, JACK NICKLAUS 6 breathes fresh new life into what could have been a tired old franchise. Variety, innovation, and long-term appeal make JNG a must-have.
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Gatesball Gets Better
MICROSOFT BASEBALL 2000 Takes the Grand Old Game Into the Millennium With Style

by Brett Todd

Microsoft entered the PC baseball game wars in an underwhelming fashion last summer with the middling BASEBALL 3D 1998. The visuals were stunning, but fans were unimpressed with the game. Diamond action only vaguely resembled that of the national pastime. Manual fielding required the reflexes of a 12-year-old hopping on golfballs and Jolt cola.

Of course, with money to be made, Microsoft wasn’t likely to be turned off by one failure. So the wizards of Redmond commissioned the independent development firm WizBANG! to craft an update, and MICROSOFT BASEBALL 2000 was born.

As someone who suffered through last year’s game, I wasn’t sure that this was such a hot idea. Boy was I wrong. The WizBANG! designers have removed virtually all of the problems of BASEBALL 3D 1998 and given us a surprisingly good arcade baseball game. Statheads may still nitpick, but anyone interested in realistic, action-oriented hardball should definitely apply here.

Berry Berry Good

Gameplay features all the typical bells and whistles. You can suit up for exhibition, season, playoff, and home-run-derby action. There’s still no multiplayer option (this was promised last year but not delivered), but you can take on a buddy hosedated on the same machine. One neat new option is the ability to play the current day’s contests from the 1999 schedule. This is great for a quickie or if you want to change the conclusion of a game you just watched. There is no career mode or draft for season play, although players and rosters can be fully edited or created in the GM (general manager) utility.

The game truly shines on the field. It’s hard to explain how, but cutthroat as I would prefer, but they still provide a serious challenge. Hits are few and far between on the higher difficulty settings. I was hard-pressed to reach base safely during my first half-dozen contests, let alone actually beat the computer.

A Pretty Pitcher

MSB 2000 remains unparalleled in terms of graphic presentation. Virtual playballers and stadiums look good enough to have been snagged directly from This Week in Baseball. Mark McGwire’s hulking frame, Shannon Stewart’s lithe physique, and Boomer Wells’ great big gut are all present and accounted for.

Ditto for homey Wrigley Field, impressive Yankee Stadium, and the sterile SkyDome.

Animation is equally splendid. Batters swing from crouched, open, and closed stances. Cuts look great, giving you a real sense of accomplishment whenever you tag one. Pitchers rear back and deliver convincingly. Fielders jump and dive for balls.

Lockup Hell

My only real problem with MSB 2000 is its chronic instability. I experienced a number of hard lockups in virtually all modes of play at various other times. The home run derby simply dropped to Windows the first dozen or so times I tried to run it. Needless to say, this was incredibly frustrating.

But other than that, I couldn’t ask for anything more in an arcade baseball title. MICROSOFT BASEBALL 2000 delivers accurate diamond action without sparing the fun factor. Couple that with the bargain price, and you’ve got a real winner here.
“I’ve played every age of sail wargame that’s come out in the past 12 years and this is the best of the lot.”
-William Trotter
PC Gamer
Wargame Columnist

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No Hitter

INTERPLAY BASEBALL EDITION 2000 Is Strictly Minor-League Ball

by Brett Todd

Ah, the sounds of spring. Birds chirping, hardballs snapping into freshly oiled leather, and the ring of cash registers everywhere announcing the start of computer baseball season. No fewer than four companies had updated ball titles on the shelves by the end of April: One was INTERPLAY BASEBALL EDITION 2000 (IBE 2000), an arcade title and the successor to the late, lamented VR BASEBALL line that the publisher canned last fall.

You may be asking yourself why the company would even bother. After all, haven't EA Sports and Microsoft pretty much sewn up the arcade baseball market with TRIPLE PLAY 2000 and MICROSOFT BASEBALL 2000? And with HIGH HEAT 2000 cozying up to hardball aficionados, what would be left for Interplay? Good questions, but ones that really don't need to be answered, because IBE 2000 is an unfinished, sub-par title. Only the most fervent baseball game completists will find anything here worth bothering with.

Strong Start

At first glance, IBE 2000 looks promising. All of the standard baseball game options are here: exhibition games, season play, home run derby, and an interesting tournament mode. Game settings can be tweaked toward run-happy arcade play or sober simulation. Hitting can be set to arcade or simulation, pitch speed can be regular or fast, and so on.

The game does a decent job recreating the specifics of the national pastime. Computer pitchers will play head games and, if PC batsmen are vulnerable to your own mound machinations. Plays are a little faster than real life, but not so rapid that you can't handle all the fielding yourself, and the physics are quite good. Run totals are more MLB than NFL. Stats are also appropriate when playing with the simulation batting option on, so don't expect to rack up McSWolan numbers or strike out the side every couple of innings.

Unfortunately, you have to actually play the game to appreciate these finer points. And that's a big hurdle. Problems start with the graphics. Visually, IBE 2000 is horrendous. Based on Interplay's MESSIAH engine, the look is somewhere between Salvador Dali and Taco Bell. Colors are garish and somewhat disturbingly surreal. Stadiums provide no shred of atmosphere and seem to be floating in a void. Players are muscled caricatures that resemble second-rate QUAKE 2 skins. These guys should be totting BFGs, not Louisville Sluggers.

No Wood

Yet as bad as the graphics are, the animation is even worse. Hitting is essentially impossible. Your batter stands well off the plate and inexplicably balls out with every stroke. It resembles an exaggerated stretch or a checked swing more than an actual cut; he never comes close to making contact with the ball. So forget about timing and the satisfaction of getting good wood (so to speak). The pitcher-batter duel is the most important single aspect of baseball. If you don't get that right, then you don't have a baseball game. Period.

Other facets of the animation are almost as terrible. IBE 2000 players run in an unintentionally hilarious hunched-over fashion, missing only the knuckle dragging. I mean, I'm fixated on Planet of the Apes too, but this is ridiculous. Fielders rotate to face in new directions instead of taking actual steps. First basemen will occasionally make outs without coming within five feet of the bag. There are more careless errors here than in a full season of Vladimir Guerrero performances.

Audio is fairly good, if subdued. The crack of the bat, background buzz of the crowd, and words of the PA announcer all echo appropriately around the park. The generic play-by-play broadcaster will give you hives, however. His lines are very limited—expect to hear "He's got a nasty stiff curveball" about a dozen times per half inning.

Hit the Showers

Everything about INTERPLAY BASEBALL EDITION 2000 screams beta. Which perhaps isn't all that surprising when you consider that its predecessor, VR BASEBALL EDITION 2000, arrived just eight months ago. Interplay needs to take a good long break from the baseball biz and rethink what it's trying to accomplish here. With so much else to choose from out there this summer, not many fans are going to bother with a half-finished game such as this.

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Spreadsheets and Spitfires
This Turn-Based Ace Is Tense and Compelling

by Loyd Case

When Luftwaffe ace Adolph Galland was asked by Luftwaffe head Hermann Goering what he needed to defeat the Royal Air Force, Galland replied, "A squadron of Spitfires." Playing BATTLE OF BRITAIN, you begin to understand just how tough those Spitfires were for the Germans. BATTLE OF BRITAIN (BoB) is not a flight sim but rather a strategy game based on the world's most famous aerial battle. The game is very much a classic Gary Grigsby design, with lots of depth and micromanagement to the nth degree—and as if you couldn't guess, it's turn-based.

Germans Plan, Then Watch

In many ways, BoB is really two games in one, offering the option of playing as either the Germans or the British. Playing the German commander, your task is to plan out the bombing campaign against the British. You can win in the longer 1940 campaigns by achieving air superiority over the British or by a combination of air superiority, industrial damage, and terror bombing of cities. There is also a set of 1941 campaigns, in which the Germans simply cannot win by air superiority alone.

As the German commander, you can manage your air fleets down to individual raids. Alternatively, you can delegate some of the chores to the AI, which is quite competent, and you can freely tweak individual raids as you like.

As in any realistic military situation, your resources are limited. Bouncing a few more bombs on a target that's already rubble means you've wasted resources and lost an opportunity elsewhere. You have a fixed rate of replacement for both aircraft and pilots, and if your losses exceed your replacement rate, you may find yourself having to scale back your raids.

You need good intelligence for damage assessment, so planning good recon missions is critical. The clumsy interface gets in the way of raid planning, as you have to click buttons and click on the map to set up raids—no dragging route lines or raid markers around the screen as you'd expect in a true Windows game. Most of the German game is played out in the planning phase. And though you can perform some minimal redirection during the reaction phase, you mostly watch your raids get carried out.

British Play Whack-a-Mole

The British planning phase consists mainly of moving aircraft, AAA batteries, and barrage balloons. Since the design limits the number of units you can move in a given turn, you have to plan carefully—which makes for some tough gameplay decisions.

As the German player, you can actually walk away from your system during the German reaction phase. Once committed, there isn't much the Germans can do to significantly affect raids. As the British player, though, you're glued to your seat. In some ways, playing Brits in BoB feels almost like a real-time strategy game, although you can pause at any time to give new orders. You're constantly launching new patrols and intercepting raids as you detect them.

The defensive AI of the British seems more challenging than the German offensive AI, though when on the defense, you always feel as if you're playing catch-up. But the AI is surprisingly good, and it's worthwhile letting the AI set up some of the German raids. As the RAF commander, you're always reacting to the German incursions while trying to husband your resources.

The different styles of play between the German and British sides will help keep this on your hard drive for a long time.

Overall, BATTLE OF BRITAIN is a deep, challenging wargame that feels almost anachronistic by the standards of today's real-time, 3D-accelerated battles. Even so, if you're a student of this material, or you're just looking for a good turn-based game—of which there are few enough these days—look no further than BATTLE OF BRITAIN.
Russian Front Redux
A Seasonal Treat for Lovers of Borsch and Hexgrids

by Jim Cobb

East Front II (EF II) is like the second robin of spring: the song of the first dampens the latter’s impact. TalonSoft’s second stab at the Russian Front is a nice addition to the Campaign Series and a considerable improvement over EF I. Yet EF II lacks the initial thrill of the preceding game in the series, West Front (WF), largely because it’s the same system but with borscht flavoring.

EF II is not a complete clone of WF. Graphics reflect a change in territory, ranging from Chekovian villages and churches to Stalinesque cities. The 17 dynamic campaigns and two historical linked campaign games capture the immensity of the battles in the Eastern European theater. The 148 scenarios feature various types of combat, from partisan actions and trench battles to armored melees involving nine nationalities. Also added are numerous new vehicles and units. They include cossocks, 55 tanks, and heavy tanks, and even prototypes of German armored fighting vehicles that never actually saw combat but can be used in the game via the versatile scenario editor.

EF II continues TalonSoft’s policy of providing good documentation and training opportunities, with five different tutorial scenarios. The 240-page manual not only explains the game well but also contains many pages of tips from the TalonSoft staff and veteran gamers alike. Combined with the many charts, the manual helps you to handle hordes of infantry and exploit advanced technology. This help is very important when playing the vast campaign games and dealing with the cunning of human opponents in email or TCP/IP games.

Platoon Leader
For all these changes, EF II remains a platoon/vehicle game. The amount of movement and combat you can undertake with your units is subject to action points—and there are never enough action points to go around, which generally makes for some challenging in-game decisions.

You can quickly derive a unit’s morale, assault, defense, and overall status from onscreen data, which keeps things from getting overwhelming. Button bars, hot-keys, and menus let you handle not only your units but also many different terrain views, detailed maps, and the like, making information—to find the enemy—a key to mastering the game, as it should be.

Likewise, the helpful “smart” cursor shows combat odds when it passes over a target. The combat algorithms themselves are simple. Fire combat compares the attacker’s value, attenuated for terrain, to the defender’s value, modified for supply and commanders. Against the target’s defense value, modified for terrain. The point reduction, retreats, disruption, and morale checks (MCs) of the units involved. Of these results, MCs are the most frequent and subtle. The computer generates a 10-sided die roll and, if the roll is higher than the unit’s morale value, the unit loses a point and retreats. A unit can regain morale each turn by passing an MC, but multiple failed MCs can lower morale to the point at which the unit disintegrates. Thus, morale hits become real killers in EF II. One would expect that bad troops would have low morale values. Not so: They have low defense values, causing more adverse odd attacks and, thus, more MCs. In this way, EF II avoids subjectivity national stereotypes by using objective strength and defense determinations. As in WF, morale effects could be improved if other units near a retreating unit also checked morale.

Great System, Less Filling
The system in EF II is still a good one, because it manages to encompass in a comprehensive yet playable form a variety of WWII battle conditions, including supply, command, and morale. The changes from West Front are welcome, but the kinks aren’t completely ironed out yet. The AI, for example, seems decent at times, but it’s easy to beat, mainly because it’s clueless about indirect fire. Bottom line: East Front II is better than the original, but not quite up to the level of West Front, much less the Operational Art of War, also available from TalonSoft.
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Go to #109 @ www.computergaming.com/infolink
Aliens Versus Predator

by Joe Grant Bell

Aliens are the speed demons in the game. Instead of using weapons, they employ such natural defenses as razor-sharp claws and powerful tails. What they lack in long-range attacks, they more than make up for in speed, power, and mobility.

Aliens

Aliens vs. Predator is a game that calls for specialization. No more playing another generic soldier (though that option’s available if you must be one); in AvP you can choose your method of death dealing. Here’s a quick overview of the game’s three races, their weapons, and some general tips for playing as the speedy Alien, the crafty Predator, or the gung-ho Colonial Marine.

Fighting Tooth and Nail

Claws are the Alien’s weakest attack, but strength and weakness are relative terms. Make no mistake—claws are potent. A single swipe usually is enough to kill a weak human enemy. Tap the Claw Attack button to initiate a double-sweep of your claws. Hold it down, and you’ll shred your target with a rapid clawing motion.

The Alien’s tail complements the weaker claws. In its primary attack mode, the tail deals slightly more damage than claws, but when charged up with the Tail Attack button, it deals excellent damage. One charged-up tail attack will usually kill a human outright. Around three will level a Predator. The tail automatically targets any enemy within its range, so you can usually just face in the foe’s general direction to score a devastating hit. It’s often good to kill or soften an enemy with a tail attack before switching to claw attacks.

The Alien’s ultimate weapon is its bite, or jaw attack. This becomes available only when you’re close enough to your prey and its head is squarely lined up in the center of your screen. When conditions are right, the Alien’s inner set of jaws extends from the top and bottom of your screen. When this happens, press the Claw Attack button. Your inner jaws will spring out, biting off your enemy’s head and scoring an instant kill. Better, you’ll receive the same kind of health bonus a Marine would after walking over a Healthpack.

You can use the jaw attack to finish off living enemies, or to target a recently killed enemy lying near your feet. You must be quick with the recently killed; you have only a few seconds before they fade away. Although the amount of health the jaw attack restores varies, you’ll always receive far more health from biting a living enemy than a dead one.

Colonial Marines

The Colonial Marine lacks the Alien’s vast mobility and the Predator’s durability and cloaking. Although he can use Flares and an Image Intensifier to augment his view of the world around him, neither solution is perfect, and neither highlights enemies like the Alien’s default vision mode or the Predator’s specialized vision mode. The Marine’s one great advantage is his arsenal. He can carry a wide range of weapons, and there isn’t a useless one among them. His best weapons can shred an enemy in a millisecond, and even the weakest possesses great punch.
Hunting vision is the default vision mode; it's the "fishbowl" view from Alien 2. It highlights enemies with a bright glow depending on their type: Marines are in blue, Predators in green, and other Aliens in red. Unlike the Predator's specialized, enemy-specific vision modes, Hunting vision mode highlights all enemies; there's no need to adjust or flip modes to see different enemies.

Navigating vision makes everything look like a black-and-white photonegative. Objects and enemies are clearly visible only at close range, and distant objects are sort of whitened out. The Alien won't enjoy the enemy-highlighting effects in Navigating mode. Thus, Navigating vision is inferior to Hunting vision anywhere there's moderate to good lighting. Its one distinct advantage, however, is that it works independently of light. Thus, it's perfect for navigating extremely dark areas, such as ventilation ducts and rooms in which you've destroyed all the lights.

**Tough Little Hatchlings**

Falling from any height will never damage the Alien (unless the fall ends in spikes or gets the Alien sucked into space). So just run whenever you can and don't worry about the fall. Running is valuable at all times; for example, running at full speed will extinguish flames if you're caught on fire. No other species can do this.

Just like in the movies, the Aliens have acid for blood. If you're gonna go down, at least take the Marine or the Predator down with you by getting as close as you can while dying.

In the single-player game, some humans (most non-combatants, such as lab technicians) will flee or cower in terror rather than attack, hence becoming the Alien equivalent of a delivered pizza. Line up your jaw attack and munch away.

---

**Eyeing the Prey**

SPINAL WHIPLASH: Soften up your opponents with a powerful tail swipe before slicing with your claws.

**They're Coming Outta the Walls!**

Marines have no innate special powers, but they do carry equipment that gives them permanent, useful abilities. For example, the Motion Tracker is always available in Normal vision mode, but not while the Image Intensifier is active.

Normal vision is exactly what it sounds like. Use this mode instead of Enhanced vision mode whenever there is light. Employ Flares to illuminate dark areas. Flares tend to make everything look a little strange, but they improve visibility. It takes a while to learn where to throw Flares, though; tossing them into alcoves or behind walls can produce impenetrable shadows.

The Image Intensifier activates Enhanced vision mode. This vision mode is a lot like looking through night vision goggles: Everything looks green and grainy. This isn't an optimal vision mode for well-lit places, but it works well in total darkness.

**Marine Weaponry**

**Pulse Rifle:** Rapid and accurate at long range. A second or two of gunfire is all it takes to shred an Alien; Predators are best dispatched with heavier weaponry, or with the Pulse Rifle's built-in Grenade Launcher.

**Grenade Launcher:** Use the Fire/Secondary button to toggle between Normal, Frag, and Proximity Mines. Normal grenades detonate in three seconds, or instantly upon impact with a living target. Use their bounce to bank rounds around corners or down shafts without exposing yourself to return attacks. Frag grenades spread shrapnel for that added punch. Proximity Mines stick to a surface and detonate when someone passes close by, making them perfect for setting traps.

**Smartgun:** More potent, faster-firing pulse rifle without a Grenade Launcher. The secondary-fire mode turns tracking on and off; tracking gradually homes in on targets. You still must aim manually, but it does fine-tune your shot. This can ensure that your shots hit their marks. With a clip of 500, it's good for clearing rooms.

**Flamethrower:** Each napalm canister provides you with 100 units of ammo. Be warned though: Setting enemies on fire doesn't kill them instantly; your enemies sustain continuous damage when they're on fire. This works best for taking out Facehuggers.

**Sadar Rocket Launcher:** Along with its immense power come some drawbacks: It's a big weapon, and it covers a good portion of your view while it's equipped, which tends to weaken your situational awareness. Use it against a swarm of enemies, preferably one far away. It also has a large, destructive blast radius—don't get caught in it.

**Minigun:** It deals damage at an incredible rate, taking out any enemy in a split second. Its only liabilities are its limited ammo, its big kick, and your inability to run while it's firing. Learn to fire it in pulses instead of holding down the trigger.

---

See the Review

THIS MONTH, PAGE 115 • 3 STARS

These strategies were excerpted from Aliens Versus Predator: Prima's Official Strategy Guide. Be sure to buy the full guide for more strategies on playing and finishing the game.
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ALIENS VERSUS PREDATOR

**Predator**

The Predator is durable and fast, possesses potent weapons, and has no glaring weaknesses. Its limitations are mostly matters of degree: it's fast, but not as fast as the Alien; it has good weapons, but not as good as the Colonial Marine's. Its unique disadvantage is its reliance on Field Charge to power its special equipment and many of its best weapons. Without Field Charge, the Predator's options are fairly limited.

**Hunting Tools**

- **Wristblades**: These deal moderate damage but lack the reach of the Alien's close-combat weapons. Hold down the Fire/Secondary button to charge it up and inflict an extra-powerful punch. The target must be extremely close, and your aim precise. Since the other weapons are more potent, these should be used infrequently. Their main advantage is that they don't require energy and they don't force the Predator to unclaw.

- **Speargun**: This sniper weapon will, in single-player episodes, result in an instant kill when it hits anything. Used in conjunction with the Predator's ability to zoom on targets, the Speargun affords excellent long-range sniping ability.

- **Pistol**: This is an excellent short-range weapon; a single shot often will dispatch your prey in single-player episodes, and a few shots usually do the trick in multiplayer. Its spheres explode when they hit something, causing splash damage within a small radius, which you need to watch out for.

- **Plasmacaster (Shoulder Cannon)**: This is a potent and versatile weapon. Tap the Fire/Primary button to fire a quick shot; these deal moderate damage and consume a relatively small amount of energy, but won't kill most enemies. Charge it up for a high-powered shot, which will kill just about anything outright. Either hold down the primary-fire button and let it go, or first hold down the secondary-fire button for a while, let it go, and then press the primary-fire button. On a full Field Charge, you can fire either 25 quick shots or five to six fully charged high-powered shots. In certain vision modes, the Plasmacaster will autoaim for you. Use it, and it won't drop your cloak, so it's a great stealth weapon.

- **Disc**: This is an extremely potent weapon, capable of killing just about anything in one shot. It's also a unique weapon, since you get only one. After tossing it, you have to make sure to snack it back. If it's lost, that's it. Like the Plasmacaster, the Disc locks onto a target if you're in the correct vision mode; it'll also track its target after autoaiming, so it has an even better chance of hitting.

**You're One... Ugly... Mother—**

**Normal Vision**: Again, this mode is just as it says. It's a good choice for relatively well-lit areas where your primary goal is to navigate. It lets you see colors and relative areas of light and darkness that may be lost when you switch to specialized vision modes. All other modes will wash out the colors but will work regardless of lighting.

**Thermal Mode**: Thermal mode makes everything look blue. Humans stand out vividly as multicolored heat signatures. Other creature types are not highlighted and can be harder to spot than in Normal mode.

**Electrical Mode**: This mode turns everything red. Aliens show up white. Other enemies aren't highlighted.

**Predator Tech Mode**: This vision mode makes the world look green. Predators are readily visible, and other species aren't. Your Predator Disc shows up bright white in this vision mode, so it stands out from the scenery. Thus, Predator vision mode is ideal for locating and retrieving the Disc, which you may lose or overlook in other modes.

**The Jungle... It Just Came Alive and Took Him**

First of all, Predators can cloak. This renders them partially invisible to Marines, although movement tends to give away a cloaked Predator. While cloaking is highly effective against humans, Aliens can see through it, so it's useless against them.

With their high durability, Predators can fall from great heights without sustaining damage.

Finally, when you encounter enemy Predators in single-player, they can self-destruct. They crouch as they try to do this. When this happens, finish them off.
How to Create a Truly Custom League—in Spite of the Program

High Heat Baseball 2000

by Rob “Kenesaw Mountain” Coffey

A great game as it is, HIGH HEAT BASEBALL 2000 (HH2K) has one glaring omission: a real custom-league utility. Later versions of the game may include one, but while you’re waiting there is a way you can get around this omission. All you need to do to draft a league of superstars and play against your buddies is the willingness of some dedicated wonk to do the extra work. As the dedicated CGW wonk, let me tell you how it’s done.

Concessions

To set up a custom league you’re going to have to make a few concessions. (And we’re not talking snack bars here.) First, unless you have at least 14 players, you’ll have to accept that you’ll be simulating some games against computer-controlled clubs. Secondly, you’ll need at least nine human owner-managers. Finally, since you can’t exclude any team from the draft (including those CPU-controlled clubs), you won’t be able to use HH2K’s draft utility for your draft. You’ll have to record everything on paper first.

Since HH2K doesn’t schedule interleague games in seasons of fewer than 162 games, the key to ensuring the greatest number of human-versus-human games is to dump all your managers into the same league and play either an 81- or 16-game season. With nine human participants, for example, you’d use the AI and put three teams in each division, leaving five “shadow” AI teams scattered throughout the league (games against these teams are simulated). With 10 players, you might want to drop them into the two five-team divisions, making the West a shadow division. The drawback here is that HH2K’s playoff tree will select at least one team from the shadow division. So you’ll have to play your postseason as exhibition games and keep track of wins and losses yourself.

Hold your draft the old-fashioned way, with pen and paper, requiring managers to record each pick on a sheet of paper. Once the draft is over, the commissioner collects the rosters and goes home for the real work.

The Tough Part

After starting a new league, the commissioner sets each team in both leagues to human control, since you don’t want the computer drafting all the best players. The draft is then started, with the dedicated wonk dutifully placing the appropriate players into each team. For the shadow teams, you can simply dump anyone onto those rosters; however, if you have shadow teams in your league, a little effort to assign the worst players to those squads isn’t a bad thing, since you want the simulated games to be a wash for all the players. Save your season and take a well-deserved break.

After the draft, there are bound to be errors, with players placed on the wrong teams. Use the trade utility to move players to the proper teams. Save your season one more time and you’re ready for opening day. Play ball!

Important Notes

• You must select Save Box Scores prior to your draft if you want to view box scores after games.

• Atlanta Brave Kerry Ligtenberg is listed as Terry Lyte, and the New York Mets’ Rick Reed is listed as Rick Rhodes. Their stats, if not their names, are correct.

• In an oversight, Greg Swindell is not included on the ’98 roster list.

DRAFT DAY Make sure you’ve selected all the options you want prior to starting your draft. There’s nothing worse than discovering you’re using the wrong roster set a couple of hours into the job.

See the Review

180 ISSUE • 4.5 STARS
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**Sim City 3000**

A) In just under a year's time, this city has grown substantially, as has its hunger for power. Notice how the funding has kept up with city development, with income still exceeding expenditures.

B) One way to get around traffic congestion and reduce automotive emissions is to build a mass-transit system. Lay tracks parallel to the most heavily traveled routes, placing train stations at regular intervals within walking range of each zone.

C) Even though it's expensive to hook up existing road nets and power plants to outside areas, the long-term benefit will more than offset the initial cost.

D) Coal- and oil-based power plants are notoriously bad for your city's environment. So place these power plants along the edges of the map so that at least half of their pollution "drifts" into a neighboring territory.

**Heroes of Might and Magic III**

During play, press Tab and then enter any of the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>nweigotbetter</td>
<td>Hero gains a level</td>
</tr>
<tr>
<td>nweonlyamodel</td>
<td>Gain all structures</td>
</tr>
<tr>
<td>nweisirkin</td>
<td>Instant loss</td>
</tr>
<tr>
<td>nwctrojanrabbit</td>
<td>Instant win</td>
</tr>
<tr>
<td>nwephisherprice</td>
<td>Brighten screen</td>
</tr>
<tr>
<td>nwctin</td>
<td>Selected hero get all spells and 999 spell points</td>
</tr>
</tbody>
</table>

**Roller Coaster Tycoon**

Type in one of the following names during the game for a little fun (and some inside jokes from the game's designer):

- Chris Sawyer: guest photographer enters the game
- Melanie Warm: happiness increases for all guests
- Simon Foster: guest artist enters the game

**SPORTS**

**Madden 99**

If you're going into gridiron withdrawal, these hacks should keep you happy until Madden 2000 ships in a few months. Type in any of the following cheats during play:

<table>
<thead>
<tr>
<th>Code</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>afc</td>
<td>AFC all stars</td>
</tr>
<tr>
<td>all70s</td>
<td>All 70's team</td>
</tr>
<tr>
<td>afc</td>
<td>NFC all stars</td>
</tr>
<tr>
<td>arch</td>
<td>Madden 98 team</td>
</tr>
<tr>
<td>cleveland</td>
<td>Cleveland stadium</td>
</tr>
<tr>
<td>eastadium</td>
<td>EA stadium</td>
</tr>
<tr>
<td>astrodome</td>
<td>Astrodome</td>
</tr>
<tr>
<td>nfc</td>
<td>NFL equipment team</td>
</tr>
<tr>
<td>all90s</td>
<td>All 90's team</td>
</tr>
<tr>
<td>stats</td>
<td>Stats leading</td>
</tr>
<tr>
<td>ea</td>
<td>EA sports team</td>
</tr>
<tr>
<td>oldmiamistadium</td>
<td>Old Miami stadium</td>
</tr>
<tr>
<td>Tiburon</td>
<td>Tiburon stadium</td>
</tr>
<tr>
<td>all60s</td>
<td>All 60's team</td>
</tr>
<tr>
<td>oldtampabay</td>
<td>Old Tampa Bay stadium</td>
</tr>
<tr>
<td>oakland</td>
<td>Oakland stadium</td>
</tr>
<tr>
<td>rrk</td>
<td>RRK stadium</td>
</tr>
<tr>
<td>NFL75</td>
<td>NFL 75th anniversary team</td>
</tr>
<tr>
<td>MADDEN</td>
<td>Madden all-time greats</td>
</tr>
<tr>
<td>99 browns</td>
<td>'99 Cleveland Browns</td>
</tr>
</tbody>
</table>

**Deer Hunter II**

Weather Cheats—Type these in during play:

<table>
<thead>
<tr>
<th>Code</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>dh2blizz</td>
<td>Cycles through weather more quickly</td>
</tr>
<tr>
<td>dh2lightning</td>
<td>Lightning</td>
</tr>
<tr>
<td>dh2rain</td>
<td>Rainy weather</td>
</tr>
<tr>
<td>dh2snow</td>
<td>Snowy weather</td>
</tr>
<tr>
<td>dh2thunder</td>
<td>Thunder</td>
</tr>
<tr>
<td>dh2weatherrange</td>
<td>Stops rain or snow</td>
</tr>
</tbody>
</table>

Weapon/Carnage Cheats—Type these in during play:

<table>
<thead>
<tr>
<th>Code</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>dh2screamm</td>
<td>Slow bullets</td>
</tr>
<tr>
<td>dh2screwdriver</td>
<td>Never have to reload</td>
</tr>
<tr>
<td>dh2bullets</td>
<td>Camera follows bullets</td>
</tr>
<tr>
<td>dh2eagle</td>
<td>Camera's eye view (camera follows fired bullets)</td>
</tr>
<tr>
<td>dh2friday13</td>
<td>More blood when a deer is shot</td>
</tr>
<tr>
<td>dh2magicbullet</td>
<td>Bullet travels straight with camera</td>
</tr>
<tr>
<td>dh2snownight</td>
<td>Show weapon's sight status</td>
</tr>
<tr>
<td>dh2swing</td>
<td>Reduces weapon wobble</td>
</tr>
</tbody>
</table>

**ACTION**

**Army Men 2**

Enter message mode by pressing \ and then type \[ when all else fails... (including the \) to enable cheat mode. Finally, enter one of the codes below to activate a cheat.

<table>
<thead>
<tr>
<th>Code</th>
<th>Item Gained</th>
</tr>
</thead>
<tbody>
<tr>
<td>iuniform</td>
<td>Blue uniform</td>
</tr>
<tr>
<td>grayuniform</td>
<td>Gray uniform</td>
</tr>
<tr>
<td>stanuniform</td>
<td>Tan uniform</td>
</tr>
<tr>
<td>minesweep</td>
<td>Mine sweeper</td>
</tr>
<tr>
<td>invincible</td>
<td>Immune</td>
</tr>
<tr>
<td>restart</td>
<td>Restart</td>
</tr>
<tr>
<td>zombies</td>
<td>Enemies turn into zombies</td>
</tr>
<tr>
<td>stealth</td>
<td>Sarjeant has stealth ability and is faster</td>
</tr>
<tr>
<td>flamingman</td>
<td>Flaming man</td>
</tr>
<tr>
<td>appear</td>
<td>A lot of enemies appear from nowhere</td>
</tr>
<tr>
<td>call</td>
<td>Calls for massive air strike</td>
</tr>
<tr>
<td>fullhealth</td>
<td>Full health</td>
</tr>
<tr>
<td>seeall</td>
<td>See all enemies on the map</td>
</tr>
</tbody>
</table>
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<td>3Dco.</td>
<td>Heroes III Expansion Pack</td>
<td>133</td>
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<td>Shatterman</td>
<td>116-117</td>
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<td>Activision</td>
<td>Activision Games</td>
<td>&quot;C2-C4.1&quot;</td>
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<td>Aegisoft</td>
<td>1-800-software.com</td>
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<td>Rage Fury Board</td>
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<td>A3D</td>
<td>88</td>
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</table>

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AGE OF EMPIRES II

A new game is coming soon to your computer! AGE OF EMPIRES II, the sequel to the award-winning Age of Empires, offers an even more realistic and immersive experience. Play as one of five powerful civilizations, each with its own unique strengths and weaknesses. Build up your economy, train your armies, and conquer new territories. With improved graphics and sound effects, AGE OF EMPIRES II is sure to be a hit with fans of the original game. Make sure to get your copy today!
Each month, 2,000 CGW subscribers are selected at random to rate 100 computer games. The results of that poll are combined with the results of previous months to yield a cumulative average for the best plays in gaming. If you receive a ballot, please return it with your ratings so that other gamers and game publishers can benefit from your feedback.

### Top Action Games

<table>
<thead>
<tr>
<th>Rank</th>
<th>Game</th>
<th>Company</th>
<th>Score</th>
<th>Rating</th>
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<td>1</td>
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<td>Valve</td>
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<td>2</td>
<td>Jedi Knight: Dark Forces II</td>
<td>LucasArts</td>
<td>8.48</td>
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<td>3</td>
<td>Quake II</td>
<td>Activision</td>
<td>8.40</td>
<td>4.5</td>
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<td>4</td>
<td>Quake Pack 1: Armageddon</td>
<td>idSoftware/Rival</td>
<td>8.39</td>
<td>4.5</td>
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<td>5</td>
<td>Quake Pack 2: Dissolution</td>
<td>idSoftwareRival</td>
<td>8.28</td>
<td>4</td>
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<tr>
<td>6</td>
<td>Thief: The Dark Project</td>
<td>idSoftware</td>
<td>8.22</td>
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<td>7</td>
<td>Jedi Knight: Mysteries of the Sith</td>
<td>LucasArts</td>
<td>8.21</td>
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<td>8</td>
<td>Resident Evil 2</td>
<td>Capcom</td>
<td>8.20</td>
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<td>9</td>
<td>Rainbow 6</td>
<td>Red Storm</td>
<td>8.12</td>
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<td>10</td>
<td>Shogo: Mobile Armor Division</td>
<td>Amonito</td>
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### Top Adventure Games

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<td>Luigias</td>
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<td>Curse of Monkey Island</td>
<td>LucasArts</td>
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<td>Sanitarium</td>
<td>ASC Games</td>
<td>8.14</td>
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<td>Twinen's Odyssey</td>
<td>ActionCity</td>
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<td>5</td>
<td>Zork: Grand Inquisitor</td>
<td>Activision</td>
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<td>Blade Runner</td>
<td>Virgin/Westwood</td>
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<td>Red Orb</td>
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<td>King's Quest: Mask of Eternity</td>
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<td>Tex Murphy: Overseer</td>
<td>Access</td>
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<td>Black Dahlia</td>
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### Top Classic/Puzzle Games

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<td>You Don't Know Jack: The Ride</td>
<td>Berkeley</td>
<td>8.33</td>
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<td>2</td>
<td>You Don't Know Jack 3</td>
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<td>7.92</td>
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<td>3</td>
<td>Smart Games Challenge 2</td>
<td>Smart Inc.</td>
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<td>Worms 2</td>
<td>MicroProse/Masbro</td>
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<td>You Don't Know Jack TV</td>
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<td>Shanghai Dynasty</td>
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<td>Lose Your Marbles</td>
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### Top Sports/Racing Games

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<td>EA Sports</td>
<td>9.04</td>
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<td>2</td>
<td>Links LS 1999</td>
<td>Access Software</td>
<td>8.92</td>
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<td>3</td>
<td>FIFA 99</td>
<td>EA Sports</td>
<td>8.60</td>
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<td>4</td>
<td>NHL 98</td>
<td>EA Sports</td>
<td>8.52</td>
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<td>5</td>
<td>World Cup 98</td>
<td>EA Sports</td>
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<td>FIFA Road to World Cup 98</td>
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<td>Need for Speed III</td>
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<td>Motocross Madness</td>
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### Top Simulation/Space Combat

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<td>Wing Commander: Prophecy Gold</td>
<td>Origin</td>
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<td>2</td>
<td>Longbow 2</td>
<td>EA/Interplay</td>
<td>8.37</td>
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<tr>
<td>3</td>
<td>Wing Commander: Prophecy</td>
<td>Origin</td>
<td>8.33</td>
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<td>European Air War</td>
<td>Morello</td>
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<td>Falcon 4</td>
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<td>F-15 Eagle</td>
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### Top Strategy Games

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<td>Heroes II: Power of Loyalty</td>
<td>3DO/New World</td>
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<td>SimCity 3000</td>
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### Top Role-Playing Games

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<td>Baldur's Gate</td>
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<td>Might and Magic VI</td>
<td>3DO/New World</td>
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<td>Fallout 2</td>
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### Top Wargames

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Games on unnumbered lines are tied with game on line above. ★ = Top game of genre. 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.

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Sometimes you can go home again. Just ask Sid Meier.

MEIER'S GETTYSBURG with EA.) While neither Firaxis nor Hasbro would confirm it, our sources tell us that there will be at least one add-on pack for CIV III, and Brian Reynolds is working on a scenario editor as well.

It's hard to overlook the irony in this situation: Sid Meier, in particular, was most unhappy with the manner in which he was treated in the final years at MicroProse. Now he (along with Brian and Jeff) gets to once again do games for the label, MicroProse, that Sid founded with Bill Staley. Sometimes you can go home again.

SSG + SSI + Atomic = E3 Surprise

The folks at Firaxis aren't the only high-profile free agents to jump ship. In search of more stars at the recent E3 trade show, I wound my way down a never-deserted, dimly lit hallway. I smiled and tossed a few coins at the faithful throng worshipping at the iMac temple, since despite Apple's claims I couldn't see a high-profile game running on any Mac in sight.

I was ready to move on to the main exhibition hall, but I felt this strange urge pulling me inexorably toward the next door. Braving the crush of well-meaning if confused PR folks, I sprinted past the copies of-screen savers and innocuous "family games," past the six-foot-high tower of empty MYST boxes (MYST re-digitized for the new millennium...puh-leeze!) and emerged into a new world.

SSI had one of the most stunning booths at the show. Oh, sure, the display included the usual suspects like CHESSMASTER 1,000,001 and CREATURES XIV, but the new offerings showed that SSI/Mindscape had pulled off a real coup, stealing both SSG's REACH FOR THE STARS and Atomic Games' CLOSE COMBAT: BATTLE OF THE

Free Agents on the Fringe

HPS Simulations recently won a Phase II contract to do military simulations for the U.S. Air Force, which means it will be at least another year before we civilians get to see POINT OF ATTACK 2. On the plus side, John Tiller of BATTLEGROUNDS fame has signed with HPS. Tiller's new game system will cover the American Revolution, with CAMPAIGN 1776 scheduled for release in mid-to-late summer of this year. Following that, Tiller plans to do a new series called PANZER CAMPAIGNS; the first of these, SMOKENSK, should be released this autumn.

As far as we know, Tiller is still in the process of completing work for TalonSoft. Although this might seem awkward, TalonSoft head Jim Rose is used to juggling; While

Terry Coleman is still waiting to see Lara Croft reduced to a cardboard counter in a Revenge of the Panzer Cheerleaders boardgame.
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Shiny New Wings
Free and Inexpensive Add-Ons Revitalize Your Old Sims

While combat flight sims may not be as popular as shooters and real-time strategy games, what sim fans lack in numbers they more than compensate for in talent and enthusiasm. A wide range of user-created freeware modifications and third-party commercial and shareware add-ons are currently available, offering dozens of ways to revitalize the sims that may be gathering dust on your shelves.

Mmm... Meat Water
MicroProse's EUROPEAN AIR WAR may not seem to need much help. After all, its dynamic campaign helped it capture our Simulation of the Year award. Nevertheless, you can always make a good thing better. First of all, if you don't yet have the EAW 1.1 patch, grab it from www.microprose.com. In addition to tweaking flight models and bailouts, it improves the game's AI and adds new hi-res graphics modes that make the game look much sharper.

But the EAW improvements don't stop with MicroProse. Head over to www.meatwater.de/ls_page1_eng.htm, download the MeatWater EAW SoundPack, and prepare for an exciting aural experience. MeatWater's replacement sounds are much richer and more dramatic than the standard EAW effects, and they help make the sim feel even more immersive. (MeatWater is also working on sound packs for RED BARON 3D, HALF-LIFE, and some other games.)

Now that the basic sim is tuned, head over to EAW at eawonline.telefragged.com. Here you'll find new campaigns, information on editing EAW files, and new flyable aircraft. Particularly intriguing is ENEMY COAST AHEAD, an add-on that lets you fly the Me-410A, Ju-88A, Ju-88C, Ju-87 B Stuka, Mosquito Mark VI, B-26 B Marauder, and Heinkel He-111H in the sim. Another favorite is EAW Control, an easy-to-use graphical interface for tweaking settings in the EAW.ini file.

GTT: Tweaks R Us
Game Tool Technologies is a company that specializes in Mission Designer for WW2 FIGHTERS. It is another $15 application that lets you generate air-to-air and air-to-ground missions, choosing pilots from a list of real 339th Fighter Group airmen. The mission created by the utility even feature cinematic briefings.

GTT has also created a version of its Camo Commander utility for FIGHTER SQUADRON. This shareware program lets you alter the paint jobs on planes in the sim, the sim there, very useful discussion forums, and links to the FSExtreme Annex, where you can download new aircraft, new skins for existing planes, custom missions, replacement sounds, and more.

If you're a RED BARON 3D enth-

What sim fans lack in numbers they more than compensate for in talent and enthusiasm.

adding new capabilities to flight simulations. Some of their earlier products were covered in this column last year. They've been busy since then, and if you haven't checked them out recently, head over to www.gttweb.com.

Among the more interesting offerings, the HORNET: KOREA ActiveX Air Combat Designer points to a possible future direction for game software distribution. This freeware utility generates random missions for HORNET: KOREA. It's similar to GTT's mission generators for WW2 FIGHTERS and F-14 ADV. The difference is that this is an ActiveX application that runs straight from your Web browser. There's nothing to install; just go to the page, create a mission, and save it in your PC's hard drive.

NetChanger, a $15 shareware utility, lets HORNET: KOREA pilots play online in any of the game's combat theaters. Dynamic and it includes a number of custom paint schemes for the B-17 and P-51. Finally, FALCON 4.0 players should definitely grab Skyfix, a free tweak that makes the sim's skies look much richer, and GTT's freeware replacement cockpit art, which adds new maps and more readable dials.

Something for Everyone
Activision's FIGHTER SQUADRON features a file format called OpenPlane, which lets technical users add new planes and scenery to the sim. Head over to www.openglance.org and you'll find detailed information on the format along with such downloadable aircraft as a Fokker D.VII. The next stop for FIGHTER SQUADRON fans should be Pete Hawk's superb Fighter Squadron Extreme site at www.hawkmodels.com/sdoo. You'll find loads of information on siast, at the Promised Land (www.webreg.net/personal/myworld/default.htm/graphics.htm) you'll find a variety of replacement graphics textures and sounds that give the sim a nice facelift.

Want to practice your carrier traps while you await the release of JANE'S F/A-18? Download VERTIGO, the freeware MS-DOS flight sim from www.obs.nau.dk/~norup/vertigo/vertigo.html. Although there's no combat, the sim's flight models are quite sporty, and carrier landings are a blast in the Corsair, Tomcat, and U-2. The download is a mere 1.3MB.

No matter what sim you fly, head over to www.stickworks.com and grab Bob Church's CTFI program. This utility lets you adjust the scaling, centering, and "dead zone" of your PC's joystick. A little tweaking can make touchy sims like FIGHTER SQUADRON much more controllable.
Blinded by Science!

CGW's Resident Luddite Joins the Palm Pilot Cult

Unlike some people here at Computer Gaming World, I am not a techno-weenie. Yes, I may be a weenie—and, in fact, a rather large one—but I'm not a weenie who gets his polishes, as it were, from high-tech gadgetry. This is in direct contrast to CGW gearheads like Dave Salvator and Danny Atkin, who on any given day can be seen hunkered up to some sort of electronic gizmo, uploading holographic images, or beaming digital messages back to their home planet, or whatever it is that they do. I just try to stay low and hope they have mercy on me when civilization begins.

Don't get me wrong, though. I like toys, too—a lot. But it's starting to creep me out, this electronic umbilical cord we're all attached to these days, this obsession need to be connected all the time. Cell phones, beepers, pagers, laptops, palm pilots, discmans, game-boys—is it all really necessary? And when is it going to end? When we have AC sockets implanted in our tushies?

My whole deal, really, has been that there is a time and place for everything, and this electronic junk has upset the natural balance of things. What am I talking about? Well, for example, remember when personal phone calls used to take place in private, behind a door? Now, thanks to cell phones, lots of people think they can just have any kind of phone conversation wherever they are, no matter who is around. I hate it. The last thing I need, after a hard day breaking my back playing games at Computer Gaming World, is to sit on a crowded commuter train listening to some loudmouthed babbling yammer on the phone with his wife about what they're having for dinner. I mean, take it home, buddy. I'm trying to read here.

With computer gaming, it's the same thing. As much as I am addicted to it, as much as I start to drool and get the shakes if I go more than 12 hours without casting a spell or firing a rocket launcher at my co-workers, I've always felt that there was a time and place for it. In my case, that's at work, or at home, after my family is asleep.

For years, I prided myself on the fact that I would never take a laptop loaded with games on vacation or on the road, nor would I ever buy a GameBoy. Seeing other dweeby guys playing computer games on airplanes or trains, or anywhere in public, would elicit a secret feeling of smug superiority on my part. I'd feel a twinge of embarrassment for them, too, as if they were doing something vaguely sordid and distasteful by gaming in public. Wow, that guy really doesn't care what people think about him, I'd sadly note to myself. A grown man, playing Diablo on a train. Then I'd shake my head wistfully and return to moulting the words of my Green Lantern comic book.

Anyway, the reason I am going on about this is that I want you to understand that what I'm about to tell you is an anomaly, a fluke, a total disconnect from who I really am. I want you to understand it because, until recently, it would have been unheard of. So this is what I did: I broke down and bought a Palm Pilot.

Anyway, that's the big secret about the Palm Pilot, the thing that no one will admit out loud: It is a game machine.

Around the CGW office, a creepy kind of cult mentality—similar to that found in Saturn drivers and Starbucks patrons—has formed around the tiny Palm Pilot. At first, of course, I resisted. Watching all the editors sitting around the conference table, tapping away on those things, brought out my standard reaction when faced with something new: ignorant derision. "I remember when pen and paper was good enough," I'd croak. And, "Hey, maybe you guys could use the infrared port to beam yourselves a personality!"

And then something happened to me. I began to change inside. I began to believe. Day after day, I'd watch them less with derision than with envy. I started asking questions about them. I began pricing them on eBay. I want to be One Of Them. I began to think. It all started to make sense. Wouldn't it be cool to be able to access my phone list from anywhere, with one tap of a button? Wouldn't it be great to finally get organized and keep a To Do list? So, I did it—and there's been no looking back. I love it. I can't function without it now. I was right, too, the phone list is great, and so is the datebook. I haven't found much use for the To Do list yet, because there's a minor problem: I don't really do anything. "Find something to do" is all that's written there right now.

But, if you ask, I've been looking upon these devices and scoffing. I am going to let you in on the big secret about the Palm Pilot, the thing that everyone knows but no one will admit out loud: It is a game machine. It's a stealth GameBoy for adults. All that tapping you see going on around you—that is not the sight of people being organized. That is the sight of people playing Tennis, chess, and Space Invaders. That guy next to you on the train? He's not locked in concentration organizing his appointments or grimly calculating his expenses. He's wandering, with growing frustration, when he's finally going to get one of those long skinny pieces to clear all those rows.

Palm Pilot gaming is only going to get more serious, too. At E3, EA Sports slipped me a demo version of TIGER WOODS GOLF for the Palm Pilot—and it was cool. You just watch how popular this becomes—and expect other major gaming companies to jump on the Palm Pilot bandwagon soon after.

The moral of this story, kids, is this: Don't think independently. Don't fight the future. Screw books. Embrace the new technology now. It is inevitable. My Palm Pilot brothers and sisters will welcome you with open arms. Think of it: Gaming morning, noon, and night, at home or on the road.

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