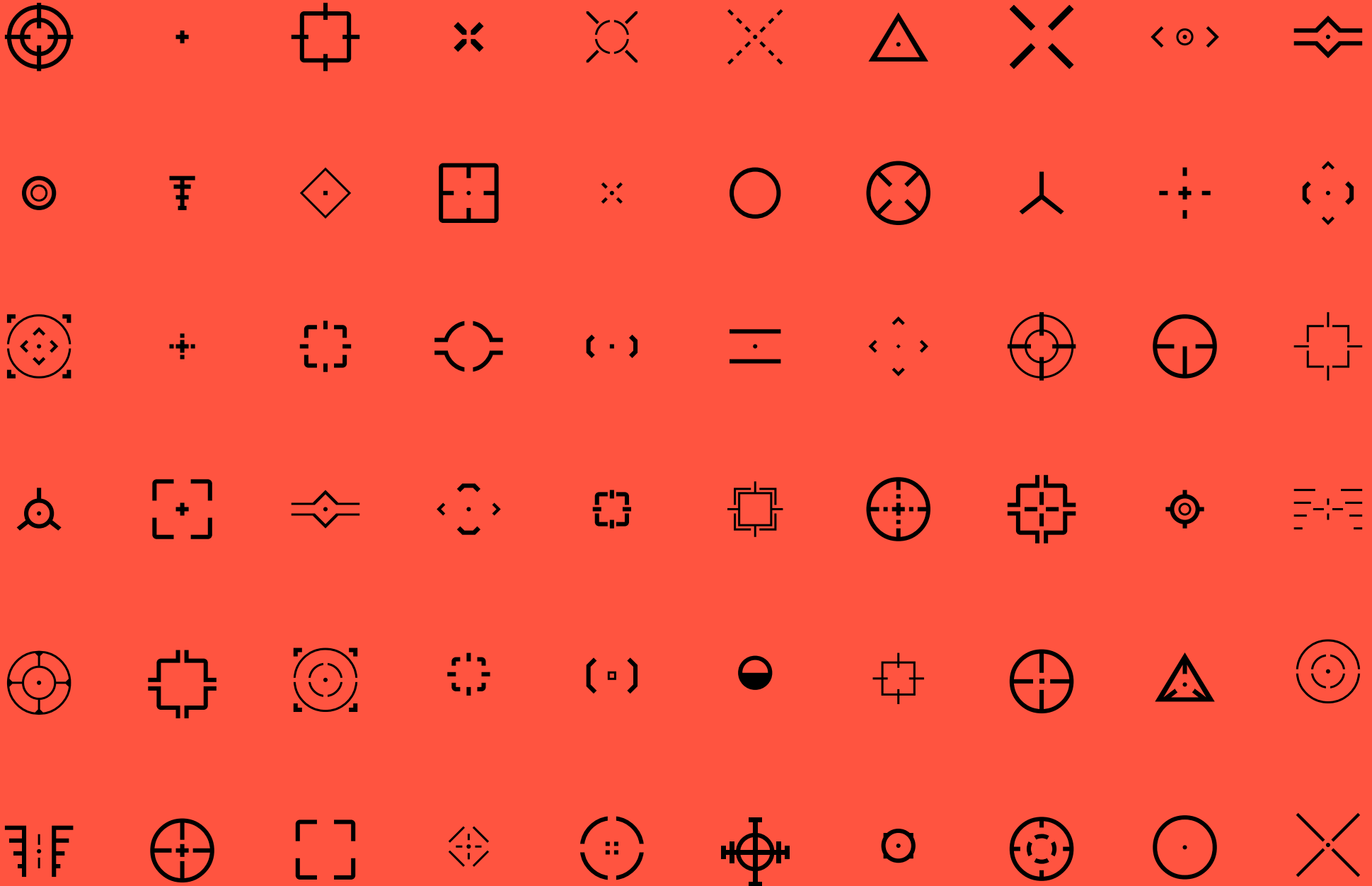


BITMAP BOOKS PRESENTS



I'M TOO YOUNG TO DIE

THE ULTIMATE GUIDE TO FIRST-PERSON SHOOTERS 1992-2002





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I'M TOO YOUNG TO DIE.
HEY, NOT TOO ROUGH.
HURT ME PLENTY.
ULTRA-VIOLENCE.
NIGHTMARE!

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INTRODUCTION BY STUART MAINE

If you're reading this, then I suspect that, like me, you have fond memories of the era of classic first-person shooters. But while it's true that I can still remember the first two games I bought for my brand-new, big, beige PC (*DOOM 2* and *Dark Forces*), I'm not exaggerating when I say that without FPSs I wouldn't be writing this today.



Quake (1996)



Introduction

I'd always loved videogames, but it had never occurred to me that I could be involved with making them. I couldn't code, wasn't an artist, and didn't have any formal game creation training (not that such a thing really existed back then anyway).

While working at a cyber-cafe in 1996, I spotted an advert on the development studio Bullfrog's website asking for playtesters for the games they were working on. So I took a week's holiday and acted as a free Quality Assurance tester, helping to playtest *Theme Hospital* and - after some badgering - *Dungeon Keeper*. Of course I still wasn't a games developer, but I could see it was possible for me to get into the industry if I could prove that I was worthy of a chance.

Enter id Software's *Quake* and Ben Morris' level editor, *Worldcraft*. I'd dabbled with level editors before but something about the evocative atmosphere and sheer flexibility of *Quake*'s 3D environments hooked me. I set about making levels, twisting the id-provided textures and gameplay features to suit me, while putting lessons on balancing and pacing absorbed through years of play

into my creations. My levels were crude by modern standards, but they were good enough to land me a job at Psygnosis and I've been a games designer ever since. Not only did *Quake* help me secure a 25-years-and-counting career, but it was through friends at work that I met my wife, so I'm not kidding when I say that I owe the life I have to first-person shooters.

Throughout all of the above I played every FPS I could get my hands on, so this book is a celebration of the birth and formative years of this incredible genre. This was a period of wild imagination during which risks could be taken and a few people could produce entire worlds. A time before teams and budgets grew as players demanded ever higher fidelity from their games. Even though I was obsessed with classic FPSs, research to determine which games to include in this book revealed a surprising number that I'd missed. Some were only released in specific countries, others were obscured by bigger games arriving at the same time, or tied to hardware platforms that failed to take off. I want to showcase games you've never



↑ *Doom's atmosphere and pace made it a revelation*

heard of, to remind you of FPSs you played back in the day but have since forgotten, and perhaps reveal something new about games you're already familiar with.

It's time to warm up the Slipgate, load a Klobb, grab a crowbar and get fragging. I hope you enjoy reading this book as much as I've loved researching and writing it.

Stuart Maine

"I want to showcase games you've never heard of, to remind you of FPSs you played back in the day but have since forgotten, and perhaps reveal something new about games you're already familiar with."



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FOREWORD BY JOHN ROMERO

The birth of the first-person shooter was one of the most exciting changes in gaming in the industry's history. I was there from the beginning, and watched the genre grow from the incredible speed rush of *Wolfenstein 3D* at 70fps on a CRT monitor connected to a 386 DX 33 to today's wide variety of FPS sub-genres playing on a huge range of hardware platforms.







FLOOR 1	SCORE 900	LIVES 3		HEALTH 92%	AMMO 38	
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↑ DOOM and its sequel introduced a brutal array of weapons

You wouldn't think that *Pac-Man* would be the catalyst for this genre, but it was. Every step you take along the journey matters, and some of those steps are more important than others. Discovering and playing *Pac-Man* was one of my important steps. It might seem improbable that there were too many games in the '70s, but there was a video game crash in 1977 before the famous one in 1983. The cause? Too many *Pong* machines! The industry was choked with them. Also, remember that this was the start of the arcade era. The '70s were full

of black and white video games that were very limited, but nonetheless there were a ton of games. Many were clones of clones, but some really stood out, like *Space Invaders* and *Asteroids*. Then along came a video game with COLOUR, incredible sound, humour, and a game design that defied the industry. It was *Pac-Man* and it was an international obsession. It was a major disruptor and showed me that a game can come out of nowhere and change the world.



↑ Raven Software licensed id's technology for Heretic

While we were making *Wolfenstein 3D*, the first FPS and the one that laid the basic blueprint for the genre, we had a *Pac-Man* machine in the office. In the '70s and '80s there was a Maze Game genre, and *Pac-Man* was the greatest of its time. We had huge respect for *Pac-Man*, and *Wolfenstein 3D* was going to be another kind of great maze game - this time with guns out in front. In fact, *Wolfenstein 3D* was so blatantly a latter-day maze game that I put a secret level in it that was *Pac-Man*, complete with the song, the

ghosts, and some Nazis. It was a great way to show the player that these games weren't so far apart - up to *Wolfenstein 3D*, 3D games had been 90-degree-cornered maze games.

"We followed that up with the release of the source code and now, well, you can run DOOM on a pregnancy test."



↑ HeXen: Beyond Heretic *focused on puzzles as much as combat*

"We had a Pac-Man machine in the office."

But after *Wolfenstein 3D* it was time to grow up. The genre needed a more serious game to propel it forwards, a game to really make a mark and define more expansive rules for design, gameplay, balance, suspense, and community. We called the game *DOOM*. The levels themselves defined a whole new way to see and play 3D games. The enemy AI, the infighting, the weapon balance, and the suspense of creeping through dark halls

with echoes of Hell surrounding you showed how immersive a game could be. And it was so open to its players: the first to allow them to modify the game to do new things, create new levels and share them with the world. An explosive start for the modding community! We followed that up with the release of the source code and now, well, you can run *DOOM* on a pregnancy test. Speedrunning began with *DOOM*, and *DOOM*'s final gift was multiplayer gaming with co-op and Deathmatch, which had never been seen before.

Our next game would be our last game-changing contribution to the FPS. *Quake* introduced a full 3D world with six degrees of freedom - meaning that you could look around with the mouse in all directions for the first time. We worked with new companies like Nvidia to define future 3D pipelines for GPU cards to come. *Quake* was built for the internet, with the client/server architecture that is used by most online games today. *Quake* featured an in-game console to change variables and issue commands to the game's client. *Quake* was also the catalyst for the creation of Machinima and eSports.

Beyond *Quake*, the FPS flourished. Newer games changed the genre forever, like *Half-Life* in 1998, with its incredible storytelling in the first person. Valve did it again in 2004 with the even more incredible *Half-Life 2*. The tactical FPS sub-genre appeared with *Rainbow Six* and *Ghost Recon* at Red Storm. Multiplayer-only FPS, starting with *Quake 3 Arena* in 1999, continues even today with the evolution to battle royale games like *Player Unknown Battlegrounds*, *Fortnite*, and *Warzone*.

Large scale FPS games like *Destiny*, *Destiny 2*, *Ghost Recon Wildlands*, *Ghost Recon Breakpoint*, *S.T.A.L.K.E.R.*, and the latest *Halo Infinite* shows there's plenty of life left in the FPS, and there are still so many new design ideas to be integrated into the genre that we can all look forward to years of innovation.

I was really happy to write the foreword to this excellent compendium of FPSs, my favourite genre. I talked about some of the bigger games, but there are so many others that made their mark by being different, and introducing unique gameplay that should not be forgotten. Some of their contributions are bound to be included in future shooters; I guarantee it. If anything, this awesome collection of FPS knowledge serves as an incredible resource for any FPS game designer. Now turn the page and start reading about, downloading, and playing some of these FPS masterpieces!

Remember: those that fail to learn from history ... are DOOMed to repeat it.

John Romero

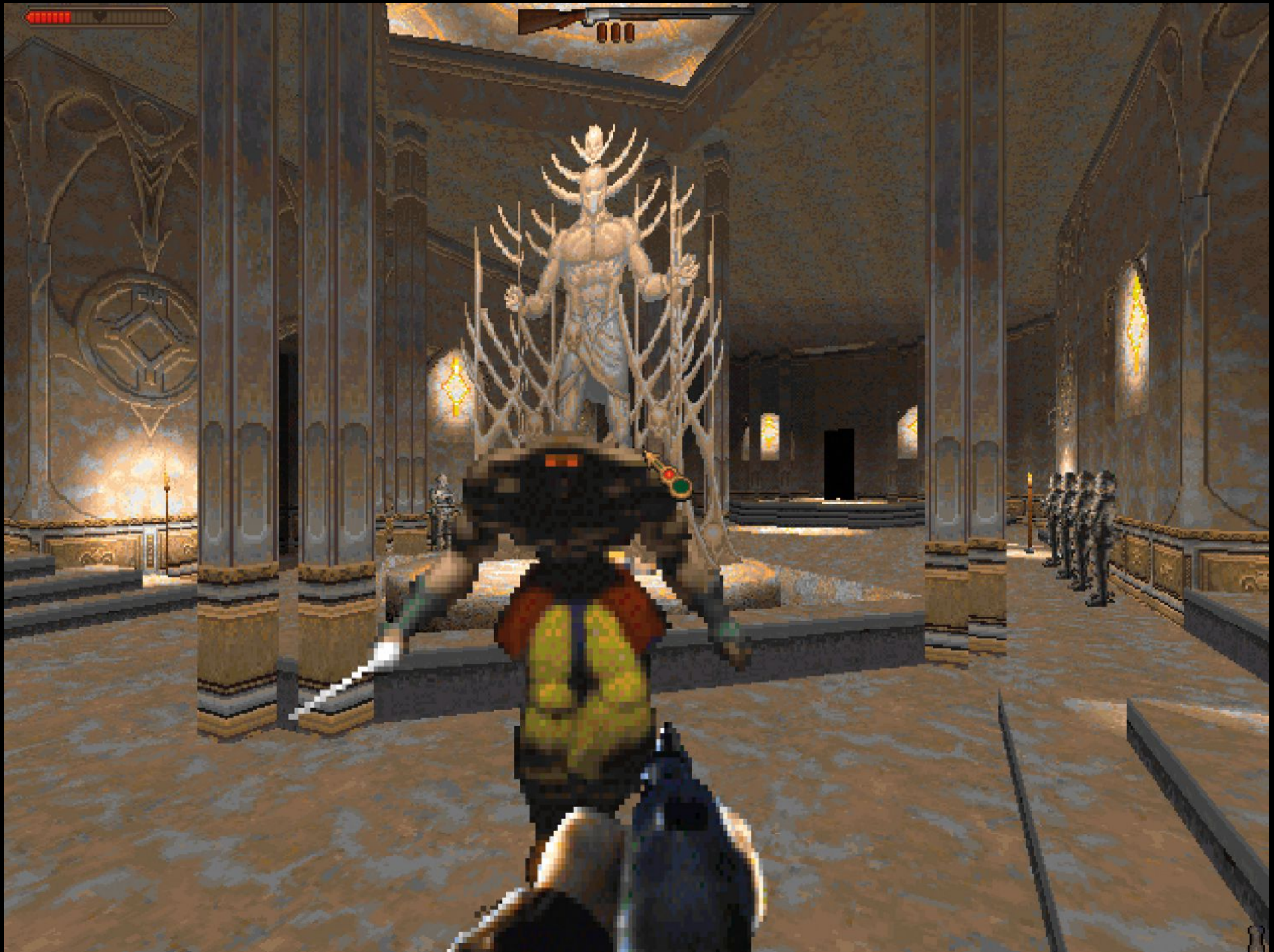


AN OVERVIEW OF FIRST-PERSON SHOOTERS

We've chosen to predominantly focus on 1992 to 2002 because each year in this period delivered rapid advancements in the first-person shooter (FPS) genre, including changes in gaming platforms, the engines powering the games, controls, graphics and even audiences.







We begin with 'precursors', the first-person games that contributed to the birth of the FPS as a distinct genre. Then, starting with the gameplay of id's *Wolfenstein 3D* and world-building of Blue Sky's *Ultima Underworld*, we follow the genre as it rapidly evolves before beginning to stabilise into the modern FPS.

Each year's games are presented in release order, followed by any particularly obscure games with indeterminate release dates. Alongside each main writeup, we indicate who developed the game and the first platform it was released on.

As an aside, early FPSs were usually referred to as 'DOOM clones' because that game both popularised and dominated the still-young field of first-person gaming. The genre title 'FPS' began to be used from the late '90s as *DOOM* aged and new games introduced their own twists on first-person action. However, the term 'FPS' is used throughout this book, reserving 'DOOM clone' - in the generally negative sense - for games that are extremely similar to id's game. While we've tried to include most of the big-name FPSs

alongside as many obscure titles as possible, this book doesn't attempt to cover every single FPS released during this period. Most exclusions were games that are simply too forgotten to allow for the necessary in-depth research, or have gameplay that's just too similar to that of other titles (see 'DOOM clones'). Apologies in advance if your favourite game isn't included! For the most part, each game's sequels and expansions are included in its entry, rather than separately. This approach has allowed us to cast as wide a net as possible in terms of the number of games included, rather than digging into every game in every series.

Finally, each year's introduction will highlight gaming hardware or issues that were affecting gamers at the time, hopefully building up a sense of how the FPS genre fitted into the wider videogame world.

What makes a game an FPS?

The first-person shooter is one of many videogame genres, but even what those genres are is subject to debate. Perhaps because they're defined as much

by their technology as their artistic visions, videogame genres are identified in a whole range of ways. Some use their themes in the same way as books and movies do, giving us horror or fantasy games. Others are defined by what you do in-play, such as platforming or puzzle games. We also have genres named after the camera that you use to view the game world, like first- or third-person games, but as you can imagine, simply classifying games by how you view them is rather flexible in terms of whether a particular game counts as part of a genre.

In an article on *gamestudies.org*, Michael Hitchens provides the following useful list of what constitutes an FPS. They must:

- Employ a first-person perspective.

- Give the player an anthropomorphic avatar that interacts directly with the game world.

- Have as the primary gameplay mode both the player avatar attempting to damage other game entities and those game entities attempting to damage the player avatar.

Place movement of the player avatar mainly under the control of the player.

We'll cover the first point in more detail below. The second effectively dictates that you are more-or-less person sized within the game world, meaning no giant-mech games are included. Next, we need combat between you and enemies, so no exploration- or narrative-only games, and no hunting sims, as these don't tend to feature dangerous foes. In addition, FPS combat tends to focus on shooting enemies with guns or magic spells over melee attacks, though I have blurred the lines here in a couple of cases. Finally, the last point means the game's camera - your viewpoint - is generally under your control, so light gun shooters with their scripted, 'on rails' cameras are disqualified.

I've used personal judgement for games that allow you to swap between first- and third-person, feature driving or flying sections, or put you in control of a small mech. Apologies if you don't feel that a particular game should have been included.

How big is the FPS genre?

After *Wolfenstein 3D*, and more particularly *DOOM*, popularised the FPS, it rapidly became one of the most popular videogame genres, growing from a value of \$135 million in 1995 to \$1.4 billion in 2013 (which equates to around 23% of game sales that year). More recently a 2019 report showed that three billion people played games, among whom a third 'liked' first-person games. Given the value of the entire games market that year, that billion people playing FPSs could give the genre a value of anywhere up to \$38 billion.

Why is the FPS genre so popular?

The most obvious trait of FPSs is that they merge the camera you view the game world through with 'you' - the player - and your in-game avatar. Beyond wearing a virtual reality headset, this sense of 'being there' is most at its most visceral in FPS games precisely because there's no external camera or onscreen avatar involved. You're not moving a buxom archaeologist or moustachioed plumber around while manipulating a camera to maintain a good view; instead

you're seeing the game world through your own eyes, exactly like day-to-day reality.

Besides helping to deliver the fantasy that you're on Mars or the UNN Von Braun, removing that extra layer of 'I'm playing a videogame' provides several advantages. Most importantly, it makes ranged combat extremely intuitive; all you have to do is look at an enemy and push the button to shoot them. As an aside, this is why FPS weapons must feel powerful to make a game satisfying to play. Because FPSs revolve around the verb 'shoot', your weapons are your means of reaching out and interacting with the game world and so must feel like you're making an impact. Anyway, this intuitive ease of simply looking at an enemy to shoot them - without worrying what your separate in-game avatar is doing - helps explain why FPSs are ideal for gameplay revolving around combat.

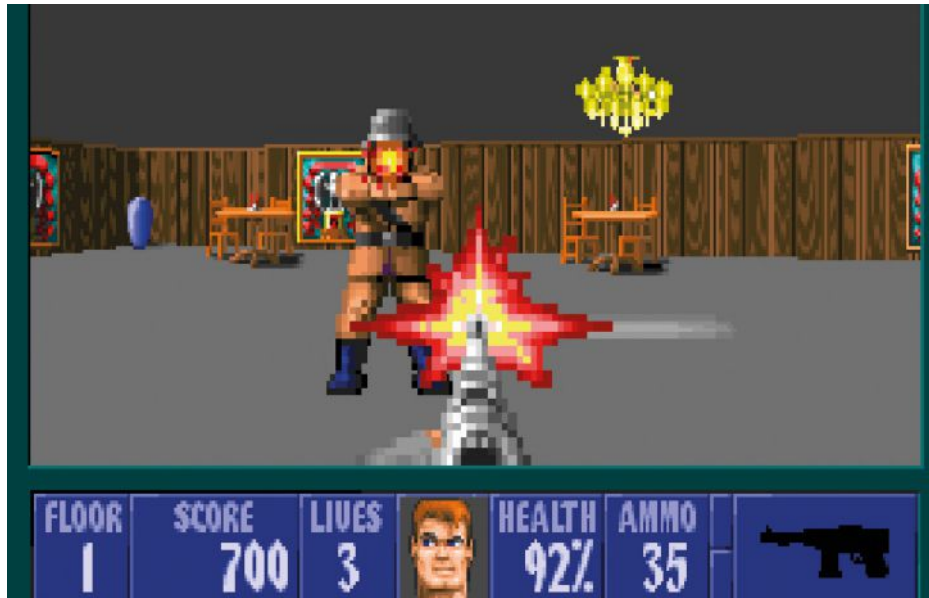
Also, because FPSs merge the camera, you, and your avatar, they leave you free to make very direct decisions. You might think that FPSs simply revolve around 'twitch skills', but while it's true that you need good hand-eye coordination and

reflexes, before you get to any of that you need to have decided what you're going to do. As a result, FPSs actually revolve around the uncounted micro-decisions that you make while playing them without realising it. Which enemy should you shoot first? Are there exploding barrels nearby you should shoot instead? Should you fire first or run for cover? And beyond those, you're intuitively making more strategic choices, such as weighing up how much ammo you have, or whether you have enough health to win this fight or should run back to that last health pickup. Interacting with the rules of a game - how its threats, weapons and other systems combine - is what makes FPS combat fun, and mastering those rules is what gives them long-term depth. After all, unless you're taking part in eSports, winning a deathmatch bout doesn't earn you any actual prizes. The reward is the same as in advancing any other difficult skill.

To sum this section up, FPSs mean you only need to worry about what you want to do, not about where the camera is pointing or what your avatar is doing.

Of course there are weaknesses to binding your view of the game so tightly to your avatar. Firstly, FPSs struggle to provide an accurate sense of depth, making melee combat and platform jumping difficult because it's hard to judge precise distances. Secondly, the limited peripheral vision of in-game cameras means you can't see dangers around you as easily as in reality. This forces games to use audio cues, radars, 'lean' buttons, or *Thief's* you're-safe-if-you're-in-shadow mechanic to let you spot approaching threats. This lack of spatial awareness is why most stealth games play in third-, not first-, person, and why everyone complains about the forced stealth sections often featured in classic FPSs.

Before we move on, I think it's fascinating that making you and your in-game avatar the same entity in an FPS doesn't seem to cause us any sense of disconnect. The fact that what you see on the screen maps 1:1 with your position means it's always 'us', even when you're told you're playing as someone else. You can hear Duke Nukem quipping away or see the Master Chief's armour-clad arm holding



↑ Gunning down soldiers, not monsters, in Wolfenstein 3D



↑ Though cartoony, Isle of the Dead features plenty of gore

your gun, but it doesn't matter - you remain immersed in the world, and you do not want to be hit by that incoming fireball.

Why do FPSs make people queasy?

The immersion that FPSs provide makes them second only to VR games in being able to trigger simulator sickness. This cousin to motion sickness occurs because your eyes are reporting that you're moving but the fluids in your ears say you're not, resulting in nausea as your brain gets confused. There

are no definitive conclusions about specific triggers, but it's generally agreed that fast movement, having your viewpoint wobble through 'head bob', and extremely bright, saturated colours all contribute.

While simulator sickness is a pain for some players, it nonetheless demonstrates how convincing FPSs must be to your brain. Look at it another way: have you ever physically jumped back in your seat or found yourself leaning to try and see around a corner while playing

a game? I'd wager this happens more while playing FPSs than any other genre.

What's the connection between FPSs and violence?

That FPSs can so easily fool your brain may be part of the reason the genre has consistently attracted concern that these games encourage real-world violence. To be fair, this probably wasn't helped by id's early thematic choices, with the first time most people were exposed to FPSs being to shoot

Nazis and dogs, fight Satan's minions or blow their friends into grisly chunks with a shotgun.

This was combined with early games having no age ratings, so there was nothing to stop kids playing violent games. This is related to the issue of the older generation having equated 'games' with colourful platformers, rather than realising that there can be games for adults as well as kids, just as in any other creative medium (in the same way that rock and roll, comics,



↑ Games like Blood revelled in their over-the-top violence

and Dungeons & Dragons faced controversy).

Whether videogames encourage violence is a nuanced and emotionally charged issue, but broadly it boils down to: if games that are so immersive that they can fool your brain also actively reward killing, could that affect your values and judgement after playing? There have been many (many) studies showing that yes, games increase violent tendencies, that no, games have no effect on real-world violence, or that the

effects are negligible either way. We touch more on this area and the creation of videogame age ratings later, but frankly this is too broad a topic to discuss in detail. Nonetheless, it feels disingenuous to not mention that FPSs have been linked to stories of real-world violence and mass shootings almost since the birth of the genre.

A brief history of the FPS

I won't dig too deeply into the history of the FPS here because



↑ Soldier of Fortune attracted controversy over its GHOUL technology

the games, interviews and introduction to each year that follow are designed to give a sense of how both the genre and the wider gaming world evolved. But to provide some context, here's a quick summary of the FPS' birth and early evolution.

Before we even get to the first 'videogame' FPS we have electro-mechanical (i.e. only mechanical components, no electronics involved) games like SEGA's 1969 Missile. This presented the action from your perspective as you fired, then

guided, glowing missiles at incoming planes. Or perhaps 'first-person' games began with interactive fiction like Will Crowther's 1976 Colossal Cave Adventure, which presented scenes as if you were there, using text, then later, static images.

But it's generally agreed that the first real-time - albeit with movement restricted to a grid - first-person game was 1973's Maze. Later this evolved into the networked Maze War, demonstrating that right from

the start, FPS players wanted to shoot at each other. This was followed by first-person games set in space, such as 1974's *Spasim* ('SPAcE SIMulator'), or in tanks, such as 1975's *Panther*, or 1980's *Battlezone*.

We also have detours into maze games like 1981's *3D Monster Maze* or 1982's *Phantom Slayer*, which had you running through grid-based mazes, often while being chased. These would reach their pinnacle with Paul Edelstein's 1982 game *Wayout*, which ditched grid-based steps, letting you move freely in any direction.

Combining the grid-based movement of maze games with the depth of RPGs were dungeon crawlers like 1980's *Akalabeth: World of Doom* by Richard Garriott, and the game that would become synonymous with this sub-genre, 1987's *Dungeon Master*.

A descendent of the original *Maze* was 1987's *MIDI Maze*, which used the Atari ST's MIDI port to link machines for deathmatches (though that name wouldn't be coined for another six years).

Also sticking to grid movement, but bringing in fast-paced alien

shooting, were games like 1991's *Silent Debuggers*, released by Data East for the PC Engine.

1991 saw the flat-shaded environments of id Software's *Hovertank* quickly followed by *Catacomb 3-D*, which upgraded to textured surfaces. That was followed in turn by the faster, punchier and more varied *Wolfenstein 3D* in 1992. There's some debate over just how much id's John Carmack was inspired to add texture mapping to his engine by seeing the in-production *Ultima Underworld*, with *Underworld*'s designer Paul Neurath saying, "We had shown id an *Underworld* demo the year before, and I recall John Carmack saying that he could write a faster texture mapper." Other sources dispute how much of an influence *Underworld* had.

Either way, *Ultima Underworld: The Stygian Abyss* provided a ground-breaking experience that combined RPG elements like conversations and inventory management with FPS movement. Its 3D engine included jumping, lighting and physics systems, but whether due to unsuccessful marketing, its fantasy setting or high demands (on both gaming systems and its players), it didn't reach a large audience.



↑ Putting you at the controls of a tank, Atari's *Battlezone* was a big hit

While many early gaming genres were born from powerful arcade hardware, the FPS was predominantly associated with home systems. There are a few arcade examples, such as 1992's *Gun Buster*, but we'll almost exclusively be dealing with home computer and console games. Perhaps the closest relatives to the FPS in arcades were light gun games like 1994's *Virtua Cop*, with their emphasis on shooting over movement.

While most of the games we'll cover created their own

universes, some FPSs were based on licensed IP. The 1993 Super Nintendo version of *Jurassic Park* features first-person sections in which you explore buildings and shoot dinosaurs. There's also 1992's *RoboCop 3*, which included FPS levels crammed with both bad guys and hostages.

While *Wolfenstein 3D* would bring the newly emerging genre to the attention of gamers, id's 1993 follow up, *DOOM*, would thrust the FPS in front of the entire world. A massive success, the game would



105	62%	2 3 4 5 6 7		94%	BULL 14 / 200 SHEL 50 / 50 ROKT 2 / 50 CELL 105 / 300
AMMO	HEALTH	ARMS		ARMOR	



↑ Bungie's Marathon shares themes with the developer's next series, Halo

lend its name to the entire genre for a number of years, cross from shareware to being sold in stores, and be followed by equally successful expansions and sequels.

DOOM would also popularise the concept of detaching a game's 'engine' from its content, allowing other developers to license that engine for their own games. Raven Software for example used this model to take DOOM into fantasy settings with Heretic and HeXen, though 1996's Strife would actually introduce

more RPG elements to the engine. And while Wolfenstein had been 'modded' by players, it hadn't been designed with this in mind, whereas id specifically created DOOM to allow players to expand it post-launch, adding new maps, graphics, sounds, etc., culminating in impressive total conversions.

While all this was taking place on PC, Bungie were forging a similar path on the Apple Mac with 1993's release of Pathways into Darkness. But while more narrative-driven than id's games,



↑ System Shock delivers a tense, claustrophobic atmosphere

it would be Bungie's 1994 game Marathon that would set the tone of the studio's future releases.

System Shock was released in 1994, transposing Ultima Underworld's RPG systems into space. While the game innovated in lots of areas, it was complex and somewhat awkward, so its legacy consists of having spawned its iconic sequel, 1999's System Shock 2. It would also give us the best bad guy in this book, SHODAN, who in turn would lead to future antagonists like Andrew Ryan in 2007's BioShock.

While most FPSs would wisely stay away from the notoriously tricky first-person platforming (looking at you, Turok), 1995's PlayStation game Jumping Flash! would be one of the few to make it the core of its gameplay.

FPS games licensing established brands would continue to appear, including a suite of Terminator games from Bethesda, several Alien versus Predator releases, Chex breakfast cereal, Star Trek, and perhaps the world's largest licence, Star Wars, in 1995's Dark Forces.

← Fans are still creating content for DOOM nearly 30 years on



↑ Duke Nukem 3D embraced its over the top setting ...

↑ ... while Quake delivered a world of eldritch horror

The FPS would undergo its next shift in 1996, with two studios demonstrating different paths for the genre. Powered by Ken Silverman's Build engine, *Duke Nukem 3D* proved that even though 'you' were the protagonist of these games you could share that role with a defined personality - a character who talked and had their own attitude. The game also presented a detailed, more 'realistic' world containing interactive objects.

Meanwhile, id released the fully 3D *Quake*, instantly making any

DOOM-style 2.5D FPSs look out of date. In addition to expanding the sort of environments that could be built in FPSs, the switch to 3D fundamentally affected player movement and combat by removing some of the abstractions imposed by the limits of 2.5D engines. *Quake* also shook up online multiplayer gaming, leading to the first big eSports tournaments.

Continuing to allow players to make content for their engines, another 1996 release was the *Quake* mod, *Team Fortress*. This introduced

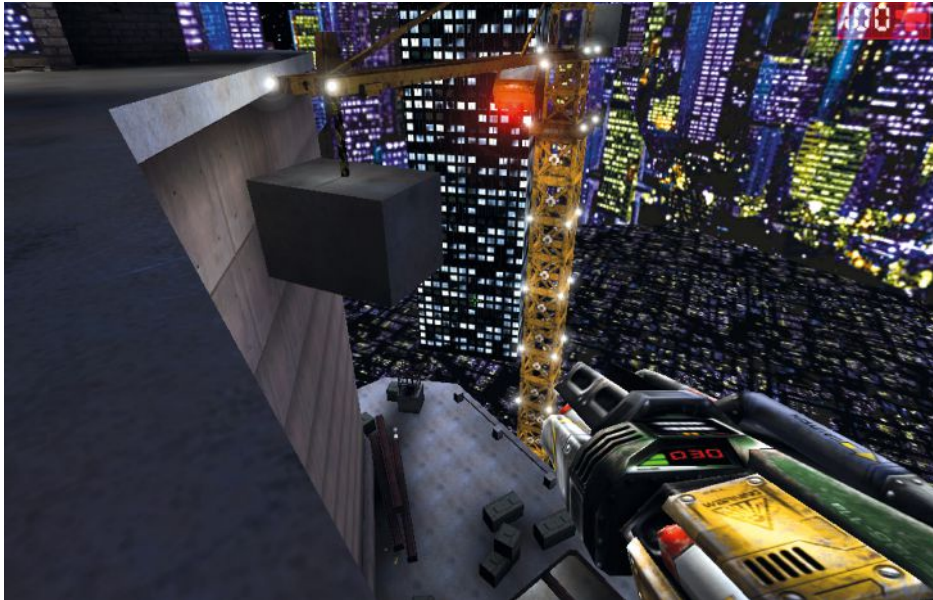
distinct player roles to teamplay and would prove popular enough to be updated and improved in various forms until 2007's *Team Fortress 2*.

While several FPSs had already been released on consoles, they'd all felt constrained by the hardware - particularly the controllers - to varying extents. That would change with 1997's *GoldenEye 007*, which aligned its gameplay and control scheme perfectly, and along with making great use of the Bond licence, provided fantastic split-screen multiplayer.

Around this time, we also saw the emergence of hardware acceleration for home computers, with 3D cards helping with the complex maths required by FPSs. At first, this was something of a Wild West, with companies booming and busting in rapid succession, but the adoption of the DirectX and OpenGL standards helped stabilise the market.

1997's *Jedi Knight* marked the latest in a trend of FPSs that gave players superpowers in addition to their weapons.





↑ Unreal Tournament featured real locations to battle through

Adding depth to combat by providing more options, these Force, magic, cybernetic, psychic or angelic powers are still at the heart of games like 2017's *Destiny 2*.

In 1998 Epic's *Unreal* engine emerged as a competitor to *Quake*'s, introducing larger, more open environments and graphical improvements like coloured lighting to games.

Continuing this trend of opening FPSs up with outdoor levels, 1998 also saw both

Maddox Games' obscure *Z.A.R.* and NovaLogic's *Delta Force* use voxels (effectively 3D pixels) to deliver huge environments.

The same year saw Valve's long delayed *Half-Life* arrive, with the game shifting the genre in the new direction of having events unfold through heavily scripted, player-focused scenes. While expensive to create, this 'playing through a movie' approach would be adopted by studios like Bungie for *Halo*, and would eventually spawn the tightly scripted *Call of Duty* series.



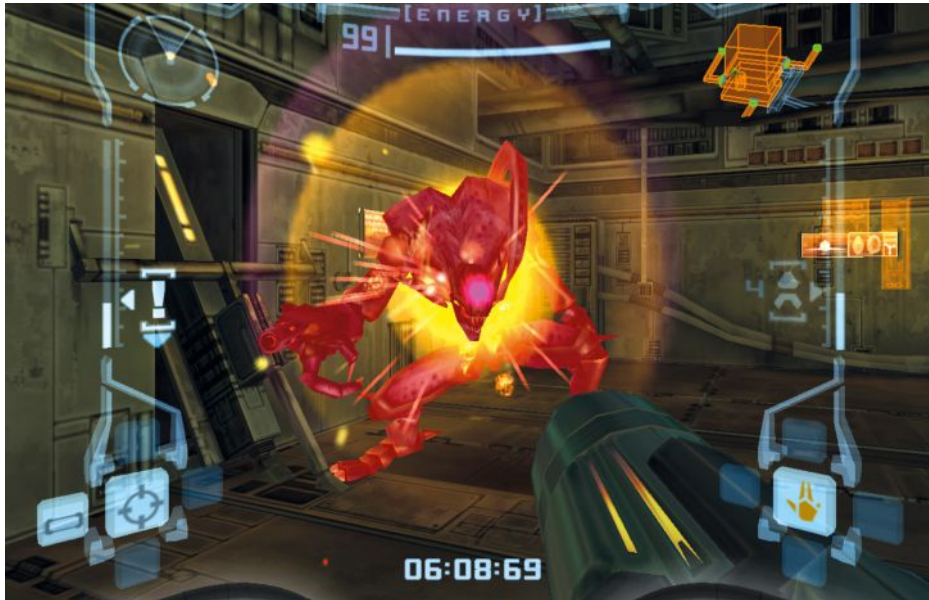
↑ Halo shook up FPS controls, weapons and health systems

Proving 1998 was a banner year for the genre, we also saw the release of *Jurassic Park: Trespasser*. Though something of a disaster, it nonetheless introduced the sort of physics-driven gameplay that would be utilised in 2004's *Half-Life 2*.

Next came *Thief: The Dark Project*, which demonstrated that FPSs could utilise stealth and actively avoiding combat to deliver an entirely different form of tension. Finally, Tom Clancy's *Rainbow*

Six would help usher in more grounded, one-shot-one-kill gameplay, where planning and patience were as important as twitch skills.

1999 saw Epic release *Unreal Tournament*, followed just weeks later by id's *Quake III: Arena*. Both were multiplayer-focused games, proving that the online audience was large enough to sustain games without a single player campaign, and pointing the way to future online-only games like 2002's *Battlefield 1942*. 1999 also



↑ *Metroid Prime* delivered a hostile planet to explore

brought the online-only mod *Counter-Strike* to *Half-Life*. Its mix of accessible realism and punishing one-life-per-round gameplay proved to be so popular it's not only still running but generating huge tournament prizes today, more than 20 years later.

Finally, 1999's *Medal of Honor* would demonstrate that there was an appetite for games based on World War 2 in addition to the by-now familiar demons, aliens and terrorists. The game's success would help to

shift the sort of scenarios we'd be battling through from now on.

It was around this point that games began demanding graphics cards to run, gradually dropping the software-only modes they'd supported up to now.

Deus Ex arrived in 2000 and was the pinnacle of system-driven 'emergent' games that presented options to the player and let them get on with it. In turn this would lead to games like 2012's *Dishonored*.

As the decade closed, increasing graphical fidelity combined with climbing player expectations meant that the time and cost of making FPSs began to grow exponentially. These longer development times would claim several casualties, with some - like 2000's *Daikatana* - arriving battered, and others, such as 3D Realms' *Prey*, emerging in different forms from those originally planned. The most notorious of these projects would be the 14-years-in-the-making *Duke Nukem Forever*.

2001 brought us *Halo: Combat Evolved*, which had made the switch from Apple Mac to become the defining game of Microsoft's Xbox. Despite its rushed development, the gameplay decisions Bungie made for *Halo* would go on to define how FPS health and weapon systems worked for a long time.

Though we'd seen 1991's *Faceball 2000* for the original Game Boy, FPSs on handheld platforms were basically unheard of until 2001's Game Boy Advance. With enough power to run FPSs at a reasonable speed, the console hosted games like *BackTrack*, *Ecks vs. Sever* and *DOOM*.

While *Counter-Strike* demonstrated that game mods could be extremely successful, Valve's 2001 mod *Ricochet* would have less of an impact. Presenting *Tron*-style disc and platform deathmatch, the mod is fun, if limited, but has since become infamous for being the butt of Valve's jokes.

In 2002, the notoriously violence-averse Nintendo worked with Retro Studios to bring one of their franchises to the FPS with *Metroid Prime*. Though challenging, the game presented a slower, exploration-focused take on the genre.

This brings us up to the end of 2002, and the close of the period during which the FPS was undergoing its most dramatic and rapid changes. From 2003 onwards, the genre shifted to a new, more cinematic realism-focused direction, but that's a story for another time.

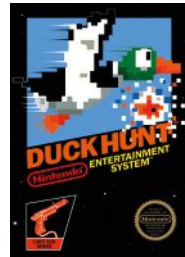
"As the decade closed, increasing graphical fidelity combined with climbing player expectations meant that the time and cost of making FPSs began to grow exponentially."

FPS TIMELINE

Major titles
in the evolution
of the FPS



Battlezone (1980)
Atari's *Battlezone* provides first-person action from the controls of a tank.



Duck Hunt (1984)
Nintendo's Zapper light gun game requires precision and timing.



The Eidolon (1985)
Lucasfilm Games' otherworldly adventure features complex combat.

73

Maze (1973)
Maze and then *Maze War* provided players with the first recognisable FPS.

80

Colossal Cave Adventure (1976)
Players explore a vivid location through William Crowther's text.

Wayout (1982)
More maze exploration but this time with smooth turning and movement.



84

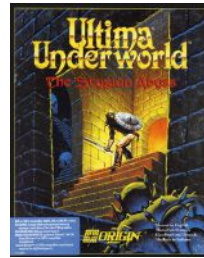
MIDI Maze (1987)
Up to 16 Atari ST players can link their computers and deathmatch.



87



The Terminator (1991)
Bethesda's remarkably ambitious licensed FPS allows you to explore LA.



Ultima Underworld (1992)
Underworld allows players to immerse themselves in a coherent world.



DOOM (1993)
DOOM's arrival jolted the gaming world and triggered the rise of the FPS.



Alien vs. Predator (1994)
The first of several AvP FPSs, this Jaguar game set the series template.

89

Midwinter (1989)
Mike Singleton's freeform FPS mixes guerrilla tactics and simple survival.



92

Wolfenstein 3D (1992)
Favouring speed, aggression and shock over depth, *Wolfenstein* is a hit.



93

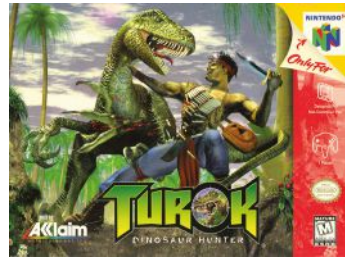
Pathways into Darkness (1993)
Bungie delivers Macs a tense, innovative FPS with a story to dig into.



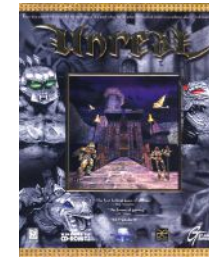
94



Duke Nukem 3D (1996)
Vocal and detail-packed, *Duke Nukem 3D* is the antithesis of *Quake*.



Turok: Dinosaur Hunter (1997)
Iguana delivers the first of several classic Nintendo 64 FPSs.



Unreal (1998)
Both graphic showcase and lonely quest, *Unreal* did things differently.

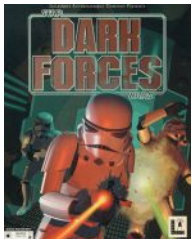
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Star Wars: Dark Forces (1995)
Star Wars fans get to explore the iconic universe from the ground.



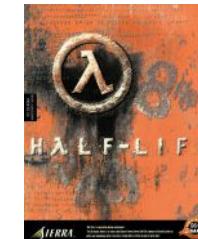
Quake (1996)
Quake's 3D environments and multiplayer change FPSs forever.

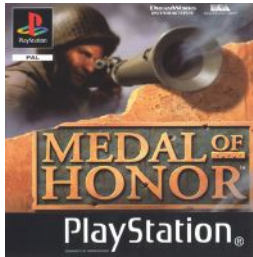


GoldenEye 007 (1997)
After long delays, *GoldenEye* delivers an incredible experience.



Half-Life (1998)
Half-Life sets FPSs on a new path towards cinematic spectacle.

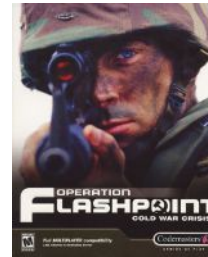




Medal of Honor (1999)
Steven Spielberg presents a more grounded, realistic WW2 FPS.



No One Lives Forever (2000)
The Operative's spy romp is colourful, clever and surprisingly funny.



Operation Flashpoint (2001)
More than just providing action, Bohemia attempts to simulate a war.



Battlefield 1942 (2002)
Battlefield's team-play and vehicles make it an alternative to deathmatch.

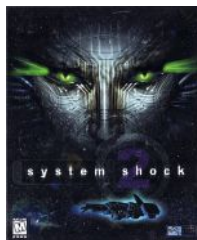
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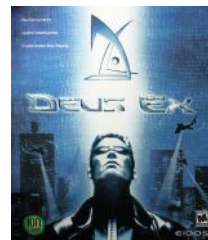
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System Shock 2 (1999)
Terrifyingly immersive, System Shock 2 makes you S.H.O.D.A.N.'s minion.



Deus Ex (2000)
Deus Ex lets you play however you want and live with the consequences.

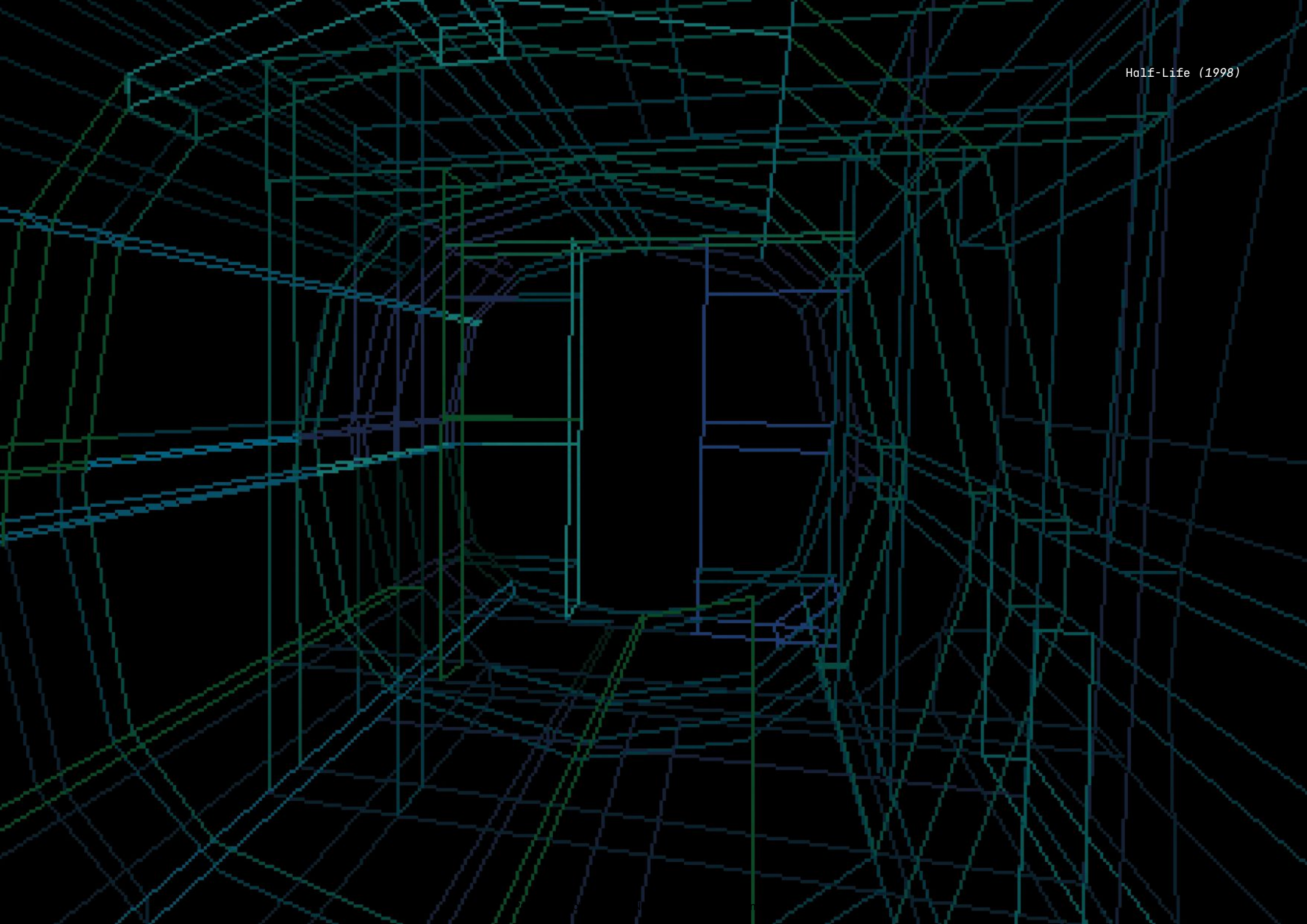


Halo: Combat Evolved (2001)
Packed with bold choices, Halo revolutionises the entire FPS genre.



FPS BREAKDOWN

Before we dig into the games, let's quickly run through the elements that make up most FPSs, along with the terminology involved (like all gaming genres, the FPS has gradually accumulated a swathe of specific terms and odd acronyms, which we'll be using to save space).



ANATOMY OF A FIRST- PERSON SHOOTER

1. Environment

The world you move through as you battle enemies and complete objectives. Some FPSs focus on smaller, more detailed environments while others feature large landscapes, sacrificing complexity for scale. Most of the games we'll be covering break their environments up into discrete levels, which you either progress through in order or move back-and-forth between.

2. Characters

These are either AI- or human-controlled. Technically all AI characters are NPCs (Non-Player Characters) but we tend to use that term to mean characters who don't attack you, such as civilians or storekeepers. AI opponents may magically know where you are or have sight/hearing senses, allowing you to sneak up on them. Each will have tactics on how best to fight you but may also follow scripted commands

(such as 'throw a grenade when you reach this point'). Opponents controlled by another player offer a whole different challenge, moving and fighting following the same rules as you.

3. Pickup

Many FPSs feature items that you can collect, usually by running over them. These might be placed by the map's designer or dropped by killed characters, and can include weapons and ammo, health, power-ups, keys and so on. There might be a maximum number of items of any particular kind that you can carry, encouraging you to swap between weapons to balance your ammo or to use excess items.

4. HUD

Your Heads-Up Display generally means any information you can access at a glance (as opposed to full-screen maps or inventories that hide the action). Your HUD might show which weapons you have access to and how much ammo you have for each, any powers or abilities you have, keys or other items you're carrying, whether you're walking, running, or crouching, and even how visible you currently are to AI characters.

5. Health

One of the most important HUD elements is how much health you currently have; health reduced to zero usually spells game over. Early FPSs featured pickups to recover your health, followed by the later trend of having it recharge over time. Games may also include armour, which generally reduces health loss while it lasts.

6. Your weapon

Most FPSs show your current weapon, initially at the bottom centre of the screen, then off to one side in later games. Some games display HUD information 'diegetically' through your weapon, such as how close it is to overheating, how much ammo is in the clip or whether you have a silencer equipped.

7. Crosshair

Most FPSs display a crosshair as part of their HUD, showing where your shots should land. Crosshairs may also provide information like whether you're pointing at a friendly or enemy target, or your current weapon's firing mode. They may also indicate how accurate your shots will be by growing larger if you're running, then shrinking when you stop or crouch.

If you'll forgive the nerdy tangent, if your weapon is off to one side of the screen one of the challenges developers can face is how far ahead of you your shots should pass through the crosshair (because both gun and crosshair are points in a 3D world).

Details like this, and the relative slowness of aiming with a thumbstick compared to a mouse, led to some FPSs providing auto-aiming to help you land shots on target.

Other elements

Because there are stealth, roleplaying, platforming, realistic and all-out-action FPSs, there are a huge range of elements that some games show on screen. For example, some feature radars or damage indicators to alert you to offscreen threats, while others include a mini-map. Some feature onscreen menus that allow you to issue orders or communicate with teammates. It all depends on how detailed the game's combat is, with some even showing an image of your character so you can see which body locations are currently armoured or have taken damage.



Bullets



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34



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GLOSSARY

2.5D game

2.5D games like *Heretic* use clever programming to display an apparently 3D world while reducing processing cost by only involving the X and Y axes.



↑ *Heretic* (1994)

Framerate

How many times per second the game updates. Higher is better but arguably less important than consistency, with framerate drops noticeable.



↑ *Alien Breed 3D* (1995)

Textures

Placed on flat surfaces (such as walls or 3D polygonal objects) to make them look detailed, textures may be hand drawn or photographed.



↑ *Shogo: Mobile Armor Division* (1998)

Lighting

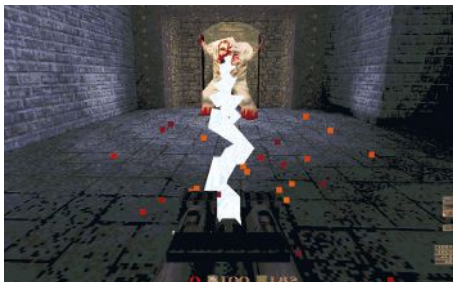
Lights are placed in levels to create atmosphere and shadows. A 3D engine may also calculate lighting (from explosions, for example) in real time.



↑ *Cube* (2001)

3D game

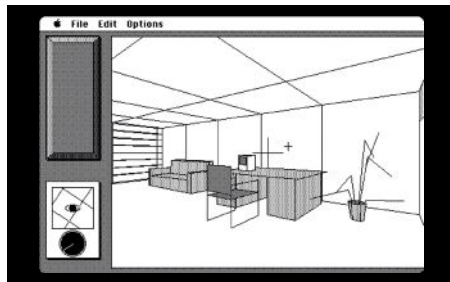
Full 3D games like *Quake* involve all three axes (X, Y and Z), letting you look up and down for real (rather than 'cheating' to achieve this).



↑ *Quake* (1996)

Wireframe

Wireframe graphics only show the edges of the polygons that make them up, without textures added on top (see *The Colony* on page 061 for example).



↑ *The Colony* (1998)

Sprites

Sprites are 2D entities like monsters and pickups. Each frame of a sprite's animation is hand-created, unlike those for a smoothly moving 3D model.



↑ *DOOM II* (1994)

Platform

The hardware the game is being played on. Examples include PC and Mac, consoles like the Xbox, and the handheld Game Boy Advance.



↑ *Mac OS* (1984-present)

FMV

Full-motion video effectively means the game is displaying video content (as opposed to graphics being rendered by the computer in real time).



↑ The Terminator: SkyNET (1996)

Shareware

Players can experience a portion of a game for free (the first episode of DOOM, for example) and then decide to pay for the rest of the game.



↑ DOOM (1993)

Modding

Fans modify games to change or add gameplay, or to produce fresh content. Some mods have gone on to be commercially released.



↑ Gunman Chronicles (2000)

Strafing

Moving sideways while still looking forwards, allowing you to dodge incoming shots without losing sight of your target, or check around corners.



↑ Lifeforce Tenka (1997)

Licence

Also known as IP (Intellectual Property), a licensed game uses an already established brand. For example, GoldenEye uses the James Bond licence.



↑ GoldenEye 007 (1997)

Gameplay

What you actually do second-to-second while playing the game. This can include combat, exploration, puzzle solving, platform jumping and so on.



↑ Blood II: The Chosen (1998)

Stealth

Stealth gameplay involves avoiding detection (as opposed to killing guards in your way). Being detected can mean game over or just a fight.



↑ Tom Clancy's Rainbow Six (1998)

Deathmatch

Battling against other players instead of AI characters, either online or split-screen. Also related to teamplay and modes like capture-the-flag.



↑ Unreal Tournament (1999)

INTERVIEW WITH IAN AND CHRIS ANDREW



The complex calculations required to drive polygonal scenes meant it wasn't until 1996's *Quake* that the FPS would embrace fully 3D environments. Before that, most were 2.5D, using clever tricks to calculate views that appeared 3D. But nine years earlier than *Quake*, Incentive Software's *Freescape* engine was providing true 3D environments to players used to the 2D platformers and puzzlers of the day.



The first game released using the new engine was *Driller* (a.k.a. *Space Station Oblivion* in the USA), but something else the *Freescape* engine shared with later FPS engines was its separation of the core technology that ran the game from the content (environments, sounds, enemies and so on) experienced by players. This allowed Incentive to produce six games using the engine in just three years, with each adding new features alongside more immersive gameplay.

Of course, the hardware running the engine struggled to do so, leading to a framerate of around one per second on the 8-bit computers (compared to the 30 or 60 frames per second modern games aim for). As a result, the games prioritised exploration and puzzle solving over combat. Limitations aside, each *Freescape* game is perfectly capable of transporting you to a new, exciting environment.

I spoke to brothers Ian and Chris Andrew, designer and programmer, respectively, of *Freescape*, about their remarkable achievement.

What were your early experiences with computers and how did you get into making games?

Ian: I have been a games player and designer most of my life: I drew mazes, made a wooden pinball machine, ran obstacle courses with my friends in my close, etc. When the Sinclair

ZX81 was advertised, for £69.95 I believe, I bought my first computer and taught myself Basic. I started by making a *Snake* type game, then when the Spectrum came out in 1982, I made *Mined-Out*, a cross-the-minefield game that is generally considered the first of its kind¹. It was commercially published by Quicksilver early in 1983. I started getting significant royalties, so I quit my other business and started a computer games company, Incentive Software Limited, in Reading, UK. The company was launched with *Splat!*, written by me and a machine code programmer called Ian Morgan². It was successful and led to us publishing many more games plus the adventure game creation tool *The Graphic Adventure Creator*³. Around 1987, the console market was evolving. Instead of going down that route I decided to try making 3D games, which hadn't been done before.

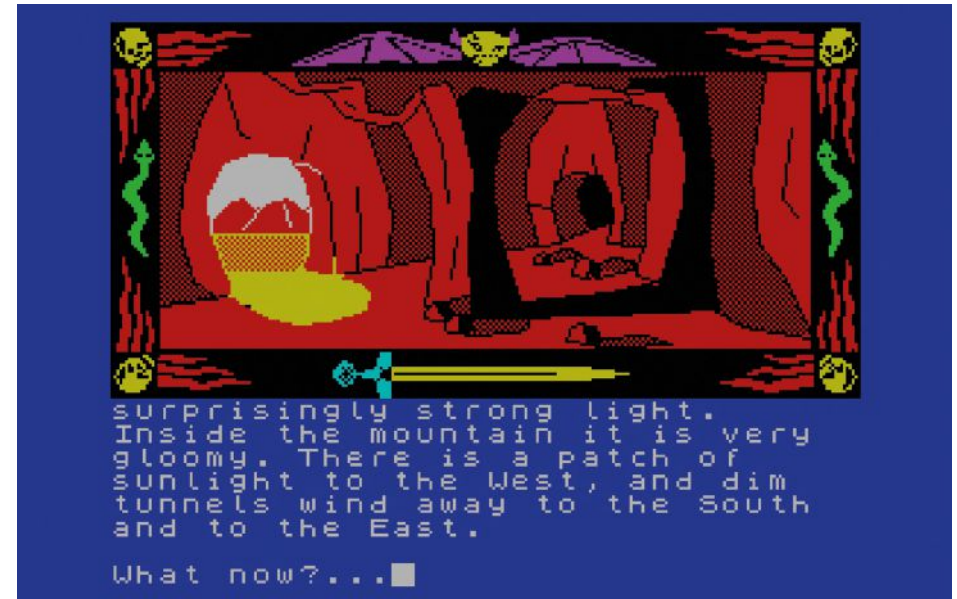


↑ Mined-Out is an exploration-focused precursor to Minesweeper

My brother Chris joined the company to design and build the Freescape engine that was at the heart of these games. The first game was called *Driller*.

Chris: I was first exposed to computers in 1981 at Bath University, where I was doing a Mechanical Engineering degree. I wrote programs in Fortran and Basic and found I really enjoyed it (more than engineering!). After my degree I worked as a programmer on various projects, ranging from radar displays to a database of

ships. During this time, I got a Dragon 32 home computer and started programming that. Ian had started Incentive Software by then and released games like *Mined-Out* and *Splat!* I ported *Mined-Out* to the Dragon 32 using Basic and some 6809 machine code, and also to the Oric and Lynx home computers. In 1986 Ian had an idea for a solid 3D graphics game and I joined Incentive to do the programming. I'd not done any 3D stuff before, but I had a book about it, so how hard could it be?

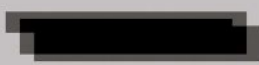


↑ Incentive's Graphic Adventure Creator was a powerful tool

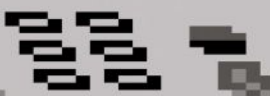
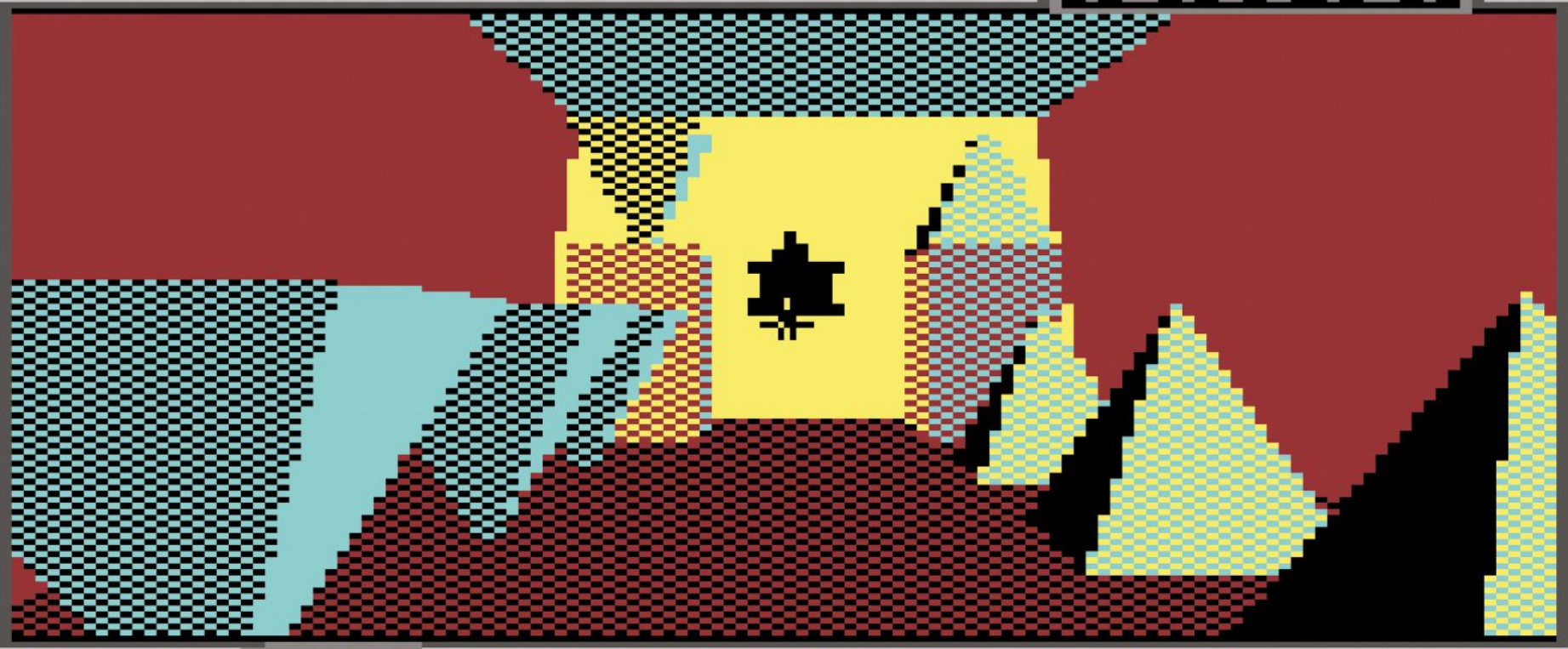
There weren't many 3D games around at the time, so what was the thought process behind creating the Freescape engine?

Chris: Ian's idea was to make a 3D environment and be able to walk round it, solving puzzles as you went. Ian wanted to be able to design and change the environments without having to change the programming, so we designed a data format that the program could interpret. The program became the Freescape engine.

"Ian had an idea for a solid 3D graphics game and I joined Incentive to do the programming. I'd not done any 3D stuff before, but I had a book about it, so how hard could it be?"

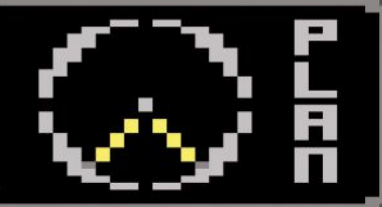


03:59:20



0000000

ANGLE-15°
STEP -250
EXTEND -1



X: 0408
Y: 1240
T: 0136



DRILLER
00000
FEDERATION

SHIELD ENERGY



AREA NEUTRAL STORES

How many people worked on the engine and the surrounding tech, and were the games made side by side with the engine, or was that created first and then handed over to the game-maker?

Chris: It was just me, working on an Amstrad CPC 6128, as it had 128K of memory and a disk drive. Everything was written in Z80 Assembler and the extra memory allowed room for the development tools (Devpac Z80 assembler and debugger). I wrote both the Amstrad and Spectrum versions this way. Later, Steve Northcott⁴ joined to make a 6502 version for the Commodore 64. The engine and first game (*Driller*) evolved together - the engine changed to meet any new game requirements.

Ian: The engine was created first, then as it evolved I did the first game design around the capabilities of the code. I made environments out of cuboids and pyramids and assigned attributes in hex. The engine and the game then evolved in parallel. I designed all the games (see *IanAndrew.com* for the list). The team was about six people, from memory.

"I made environments out of cuboids and pyramids and assigned attributes in hex. The engine and the game then evolved in parallel."

What were the main difficulties of creating a 3D engine on the limited hardware of the time?

Chris: Because memory was so limited, the data had to be very compact; reusing environment elements helped here. Every spare bit was used if possible. Also, on the 8-bit computers there was no room for z-buffering (or indeed processor power), so we settled for an object-sorting algorithm that worked most of the time. Colours were very limited, so stippling was used to make up to 15 shades. The environments were very limited as the coordinates were only 8-bit, so the games were broken down into small areas such as rooms or platforms. Ian and I came up with a system that allowed each object to have its own script, which allowed the creation of puzzles and gameplay. I wrote an editor that allowed Ian to create environments and add scripts (in hex!).

You can see the engine evolving over each game. Were the improvements decided by the needs of the games or was it technology first?

Ian: It was a combined effort, the general brief being to speed up the code alongside adding new features, like spheres. Z-buffering was very processor-intensive and couldn't be used then, as the games would be too slow. So we came up with some unique ordering techniques, including 'box' buffering and 'attach' logic. This ensured enough speed to play the game.

Chris: A bit of both. I was always trying to speed up the engine and Ian was always coming up with new game ideas.

***Driller* and *Dark Side* are tricky games, with obtuse puzzles and a tight time limit. Did you do any external testing and balancing of the games with players?**

Ian: We mainly tested in house, with friends and family providing comments and feedback.

Do you remember who came up with the various themes - science fiction, fantasy and Egyptology - used by the *Freescape* games?

Ian: I came up with the themes. They were chosen to match the capabilities and features of the evolving engine. *Driller* was very abstract, whereas *Castle Master* was much less so.

Chris: Ian was the main creative for the games, although I'm sure I must have had some ideas. I was mainly focused on the programming.

"Because memory was so short, the data had to be very compact; reusing environment elements helped here. Every spare bit was used if possible."

Once you'd released the *3D Construction Kit*⁵, what did you move onto next?

Ian: We developed 16 and 32 versions of the engine, called 'Superscape'. We explored how it could be used for non-games applications. For example, interactive training, simulations, data visualisation etc. The company changed its name to Superscape in 1994, then went public on the London Stock exchange. It finally got bought by the American games company Glu⁶ in 2002.

← *Driller* reviewed well, with *Zzap!64* magazine awarding it 96%



↑ Total Eclipse was followed by a sequel, The Sphinx Jinx

Chris: I didn't have any part in the 3D Construction Kit. I'd moved on to a new 16-bit 3D engine (originally called Fourscape - one better than Freescape). Incentive evolved into Superscape, and we worked on virtual reality applications. Ian later set up a domain name company called DOTCOM Agency (later Traffic Names)⁷ and I joined him in 2001. No more 3D graphics for me.

Finally, did you have any idea at the time how ground-breaking the Freescape engine was? Fully

3D FPS engines wouldn't cross into the mainstream until 1996's Quake, nine years after Driller.

Chris: No, I don't think I realised how ground-breaking it was. It was a great challenge, and I thoroughly enjoyed the time I spent doing it. I think Ian had more of an idea of where it might lead.

Ian: It was interesting, as it hadn't been done before. I like challenges and to do new things. I have come back into gaming



↑ Driller's follow-up, Dark Side, was more polished and deeper

after a break. I am now working on a new original mobile game called *Tumbly Rocks*⁸.

"No, I don't think I realised how ground-breaking it was. It was a great challenge, and I thoroughly enjoyed the time I spent doing it. I think Ian had more of an idea of where it might lead."

Author's notes:

[1] Mined-Out was published in 1983 by Quicksilva and provided Minesweeper-style puzzles (only with more features and modes); Ian's mother helped to test the game.

[2] I've been unable to find much out about Ian Morgan after his work on Splat!, with just one credit for a type-in speech synthesis program for Your Computer magazine showing up online.



↑ Castle Master also received a sequel, The Crypt

[3] Incentive's previous big success was 1985's Graphic Adventure Creator, a remarkable toolkit that allowed players to create interactive fiction adventures. It was written by Sean Ellis, who sadly died early after a short illness.

[4] After Incentive, Steve Northcott worked in the field of VR for companies like SEGA. He's currently Technical Director at Remedy Entertainment, makers of Control, Alan Wake and Max Payne.

[5] Known in the USA as the Virtual Reality Construction Kit, the 3D Construction Kit allowed players to create their own 3D environments and games. The kit works in the same manner as later FPS level creation tools like Worldcraft, allowing users to place basic shapes (cubes, pyramids, and the like) as they fly a camera around a 3D space. By scaling, stacking, rotating and colouring these shapes, relatively complex environments can be created for players to move around in. Through



↑ The 3D Construction Kit is the forerunner to FPS level editors

scripting and customisation, users could create entire games with the tool, all of which was explained on a VHS tape. The 3D Construction Kit was followed by a sequel in 1992.

[6] As the name suggests, Glu Mobile are publishers of games for mobile platforms, with most of their releases based on established brands such as Disney, Kim Kardashian and WWE.

[7] DOTCOM Agency/Traffic Names produced 'casual' puzzle games, such as spot the difference,

word games and sliding-block puzzles. Several of the games are still playable online.

[8] Physics-based puzzle game Tumbly Rocks was released early 2022 for iOS and Android phones and tablets.

THE PRE-1992 'PRECURSORS'

Though we've chosen to focus this book on 1992 to 2002, it's important to acknowledge that the FPS didn't suddenly spring into existence with *Wolfenstein 3D*. True, id's game was the lightning rod that caused the FPS to explode into the games market, but *Wolfenstein* was preceded by an incredible array of games that each had its own approach to first-person gameplay.

The Phantom Slayer (1982)



The pre-1992 'precursors'

This chapter covers the precursors of the FPS, presenting a selection of games, engines and technologies that, with a little imagination, allowed players to project themselves into that game's environment. We've provided a few examples from each of the genres that follow, but there are, of course, many others. Some of these games are hailed as classics, while others have been forgotten or were always obscure, but each is another step towards the FPS that we know today.

Gaming hardware

The games in this section span 1974 to 2002 and so encompass a huge range of gaming platforms. The oldest here is the Imlac PDS-1, an early networked computer that featured a 16-bit processor and displayed vector graphics. Elsewhere we're in the era of the Commodore 64, ZX Spectrum, BBC Micro and Amstrad 464, all machines with slower 8-bit processors, though as they were designed to be affordable they were also limited by factors like RAM chips being expensive.

These were followed by the 16-bit generation of machines, like the Atari ST and Commodore Amiga, which began to provide the sort of power needed to run the intensive calculations required for 3D games. Meanwhile, Japan had an entire range of computers that never reached western gamers, such as the Fujitsu FM-7, which used the same processor as Atari's 1983 *Star Wars* arcade. We also have consoles like the Super Nintendo and SEGA Mega Drive, which called on external hardware such as Argonaut's Super FX chip and SEGA's Virtua Processor to render polygonal graphics with sufficient speed.

Alongside these we have home computers like Apple's Macintosh and a whole range of IBM PC clones, each of which would upgrade their capabilities over the years, often working hand-in-hand with the FPS genre. With first-person games capable of delivering stunning graphics, hardware manufacturers would consult with game developers to ensure they were delivering what was needed. Meanwhile, developers used advancements in technology to find new ways to differentiate themselves from their competitors.

Once we're past the precursors, these computers would be the natural home for the FPS genre for a good number of years, until console processing power and - perhaps more importantly - their controller designs allowed the FPS to flourish on new platforms.

We are of course merely scratching the surface of an enormous range of hardware here, but what unites all of these platforms is that none of them were designed to run the sort of 3D environments we're about to see. Personally, I love that for each of the games that follows, a programmer discovered a hardware limitation and thought 'challenge accepted'.

"We've provided a few examples from each of the genres that follow, but there are, of course, many others. Some of these games are hailed as classics, while others have been forgotten or were always obscure."

3D MAZE GAMES

Examples:

Maze War (1973-74)

3D Monster Maze (1981)

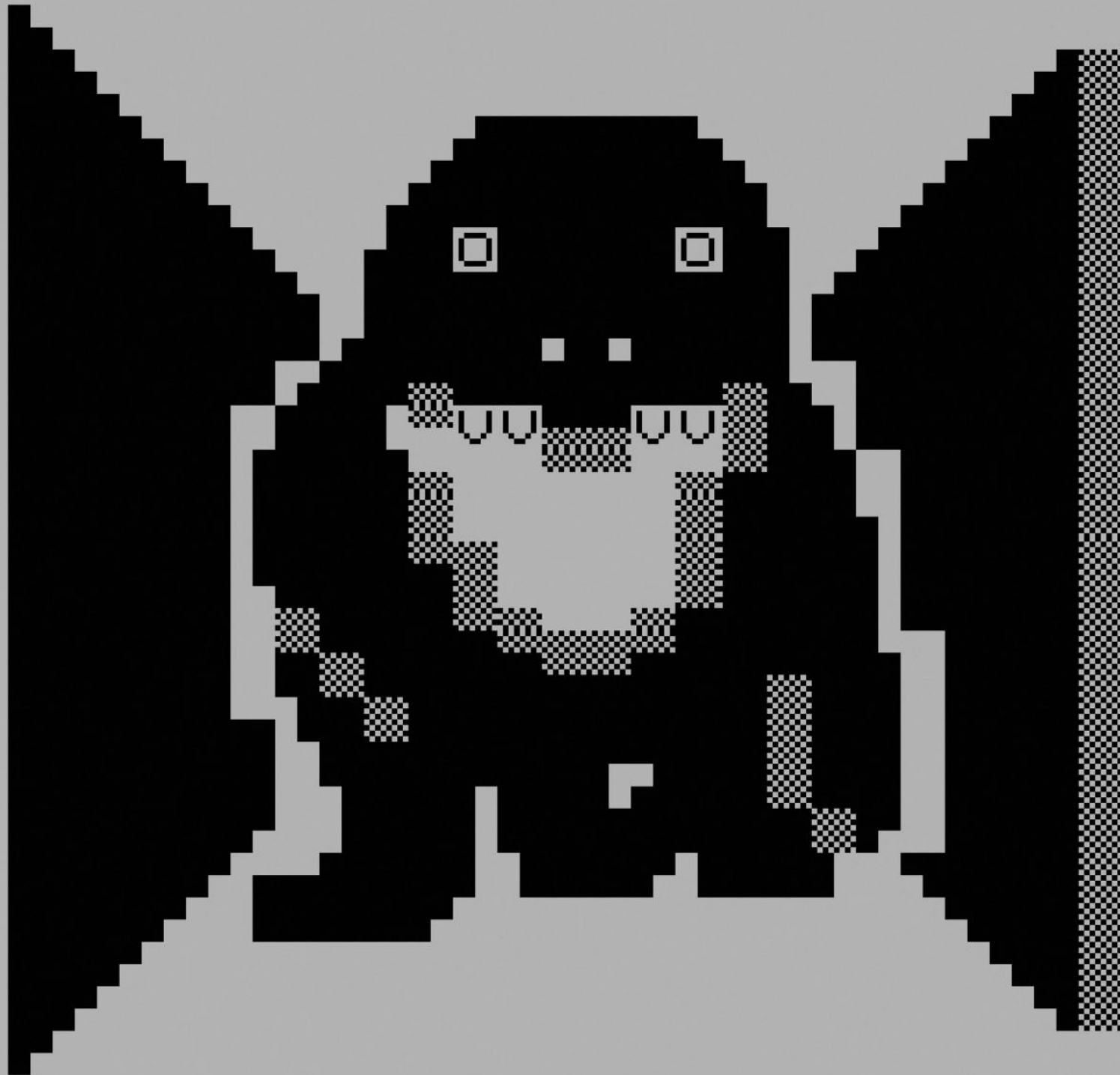
The Phantom Slayer (1982)

Spectre (1982)

3-D Monster Chase (1983)

Maze games are separated from the upcoming dungeon crawlers because although both are grid-based, maze games are focused on simpler goals and fast, real-time action. They also tend to present unwinnable scenarios where developing your skills is the reward, as opposed to being able to complete them.

Developed in NASA's Ames Research Centre, *Maze War* was released in 1973, then gained networked combat around 1974, making it potentially the first FPS in the world. Moving on, *3-D Monster Chase* revolves around searching out keys and bombs while being pursued by enemies, and of course there's *3D Monster Maze* with its iconic, implacable Tyrannosaurus Rex. Each game drops players into a maze and has them explore using simple forward, backward and turn keys, usually without the ability to strafe sideways.



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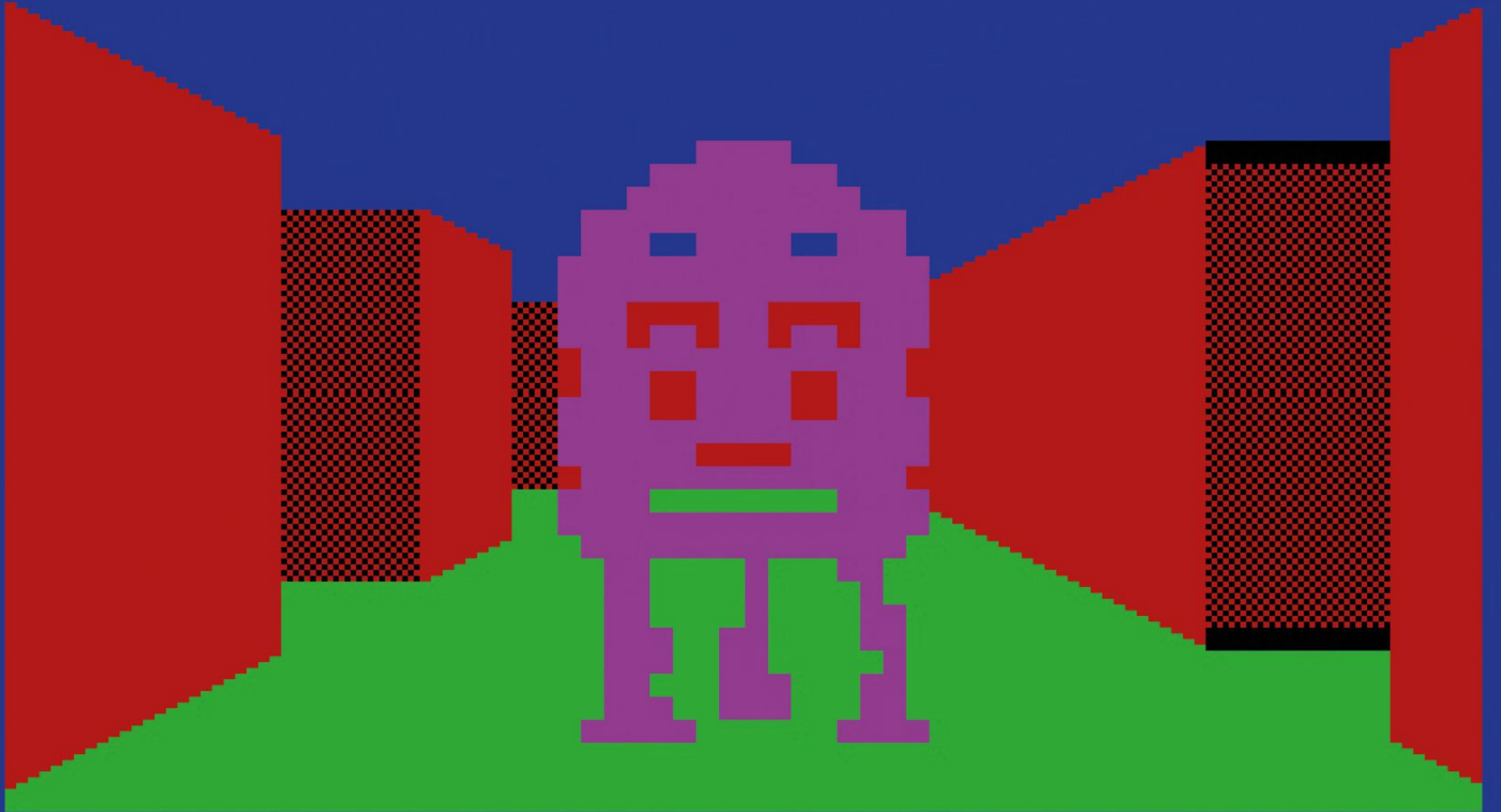
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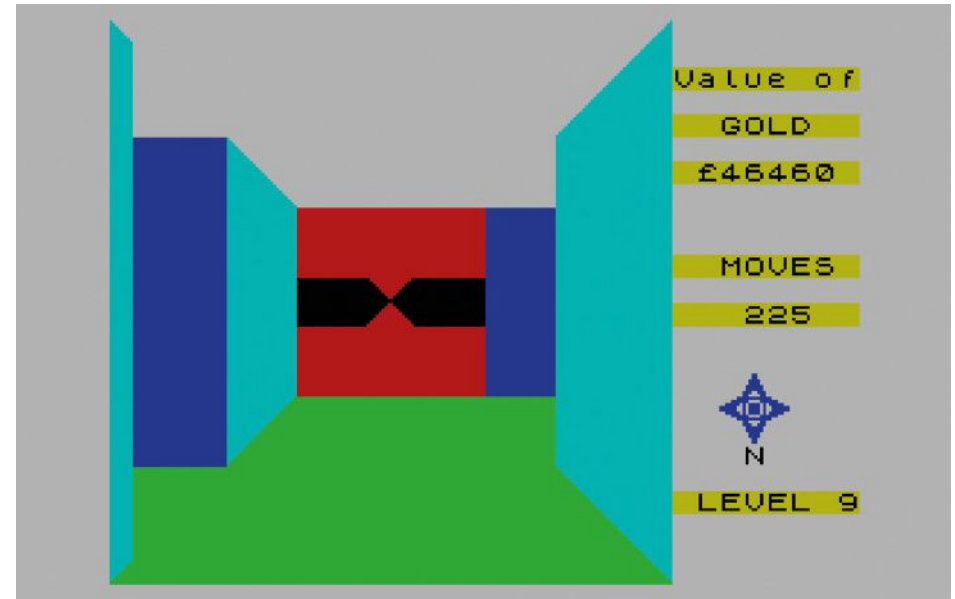




↑ Spectre's map allowed you to play it like Pac-Man

Because their mazes were all made up of identical corridors and hadn't yet moved into including rooms, navigation was a challenge. *Maze War* and *The Phantom Slayer* alleviate this with a map showing your position, but the 'E.S.P. radar' in the ZX Spectrum version of *3-D Monster Chase* can charitably be called less successful. Interestingly, Bob Flanagan and Scott Miller's *Spectre* proved balance was required here, with a map so useful you could ignore the first-person view entirely.

Ken Kalish's *The Phantom Slayer* stands out, because while it also has you moving around grid-based mazes, it features a couple of key differences. Firstly, your view rotates smoothly when you turn, making it surprisingly easy to forget gameplay is on a grid. More importantly, it arms you with a gun, meaning that, unlike in *3D Monster Maze*, you can fight back against the threats homing in on you. Plus, with *Phantom Slayer*'s hooded monks taking more and more shots to kill as the game goes on, you even need to utilise the



↑ 3D Maze Of Gold was a sedate example of this sub-genre

standard FPS tactic of backing off while firing. Kalish said (on LCurtisBoyle.com), "I made the decision to try and elicit successive series involving heart pounding anticipation, then all-out fighting involving a mix of fear and aggression, followed by unrestrained fleeing ...". Frankly, that sounds like a description of playing an FPS to me.

While wandering endless mazes may become repetitive, one thing each of these games nailed was the thrill of being locked into a first-person view and

having to explore a dangerous environment. Indeed, compared to the 2D gameplay seen in most games of the time, their developers worried whether players would understand what was happening on their screen (*The Phantom Slayer*'s instructions tell you to 'Look into your monitor as though you were looking down a hallway'). Still, publishers were clearly aware that the limited viewpoint was key to their game's appeal, leading to *3D Monster Maze*'s chilling warning: 'The management advise that this is not a game for those of a nervous disposition.'

The pre-1992 'precursors'

THE EIDOLON

Released: 1985

Developer: Lucasfilm Games

Original platform: Commodore 64/

Atari Home Computers

You can trace the evolution of the fledgling Lucasfilm Games through their initial releases, with *Ballblazer* giving the ability to fire and catch objects followed by *Rescue on Fractalus!* and its landscape generation.

The Eidolon takes *Fractalus'* mountain creation technology and flips it over to form caves. You explore the claustrophobic tunnels, encountering monsters that come to life and must be fought in one-on-one duels. These monsters are huge characters for the time and are full of personality, including one that cheerfully plays music while you shoot it. Most impressive are the large, threatening, multi-sprite end-of-level dragons.

These battles make up the bulk of the gameplay and can be challenging, because while *The Eidolon* is a short game if you know exactly what you're doing, it will take new players many attempts to master the complicated tactics behind its



↑ Take control of The Eidolon

colour and energy systems. You can choose your shot colours and must watch how many you fire in case missed ones bounce back and hit you (though shots can be caught and converted back into energy, as if there wasn't enough to think about already).

The Eidolon does a lot with relatively little content, and its refusal to teach you the rules gives it an otherworldly atmosphere. It's telling that many online comments about the game revolve around how scary people found it as a kid.

DUNGEON CRAWLERS

Examples:

Alternate Reality (1985)

The Bard's Tale (1985)

Might and Magic (1986)

As first-person dungeon crawlers (or 'blobbers', from players guiding a single blob of characters around) demonstrate, the growth of new genres can directly cause older ones to decline. Dungeon crawlers generally revolve around moving through grid-based environments by clicking on-screen arrows, solving puzzles and engaging in turn-based battles. Individual games could then twist each of those elements, as in FTL's *Dungeon Master*, which has real-time combat, adding an element of coordination under stress.

While a few - such as 1990's *Captive* or 1993's *Hired Guns* - featured a sci-fi setting, the vast majority involved fantasy themes, presumably reflecting the appeal of pen-and-paper role-playing games like *Dungeons & Dragons*. Indeed, Westwood's 1991 game *Eye of the Beholder* was officially licensed. Published by Strategic Simulations, Inc. (creators of the 'gold box' games) and set

under D&D's most famous city, *Eye of the Beholder* gave fans a chance to encounter some of the RPG's iconic monsters.

The line between dungeon crawlers, role-playing games and 'exploration adventures' like *Colossal Cave* is somewhat blurred. For example, 1982's TRS-80 game *Dungeons of Daggorath* featured a first-person view but had you playing a single character and typing instructions, making it something of a hybrid. (If you're wondering where you've heard of this game, it had a role in Ernest Cline's novel, *Ready Player One*.)

Another interesting series is Sir-Tech's *Wizardry*, which ran in America from 1981's *Proving Grounds of the Mad Overlord* to 2001's *Wizardry 8*. While only a few western games are hits in Japan, this series was extremely successful and is still active today. The original game was converted to many Japanese home computers and consoles; it's credited with inspiring the creators of heavyweights like *Final Fantasy* and *Dragon Quest*.

Despite its early popularity, the dungeon crawler sub-genre is now pretty much dormant.

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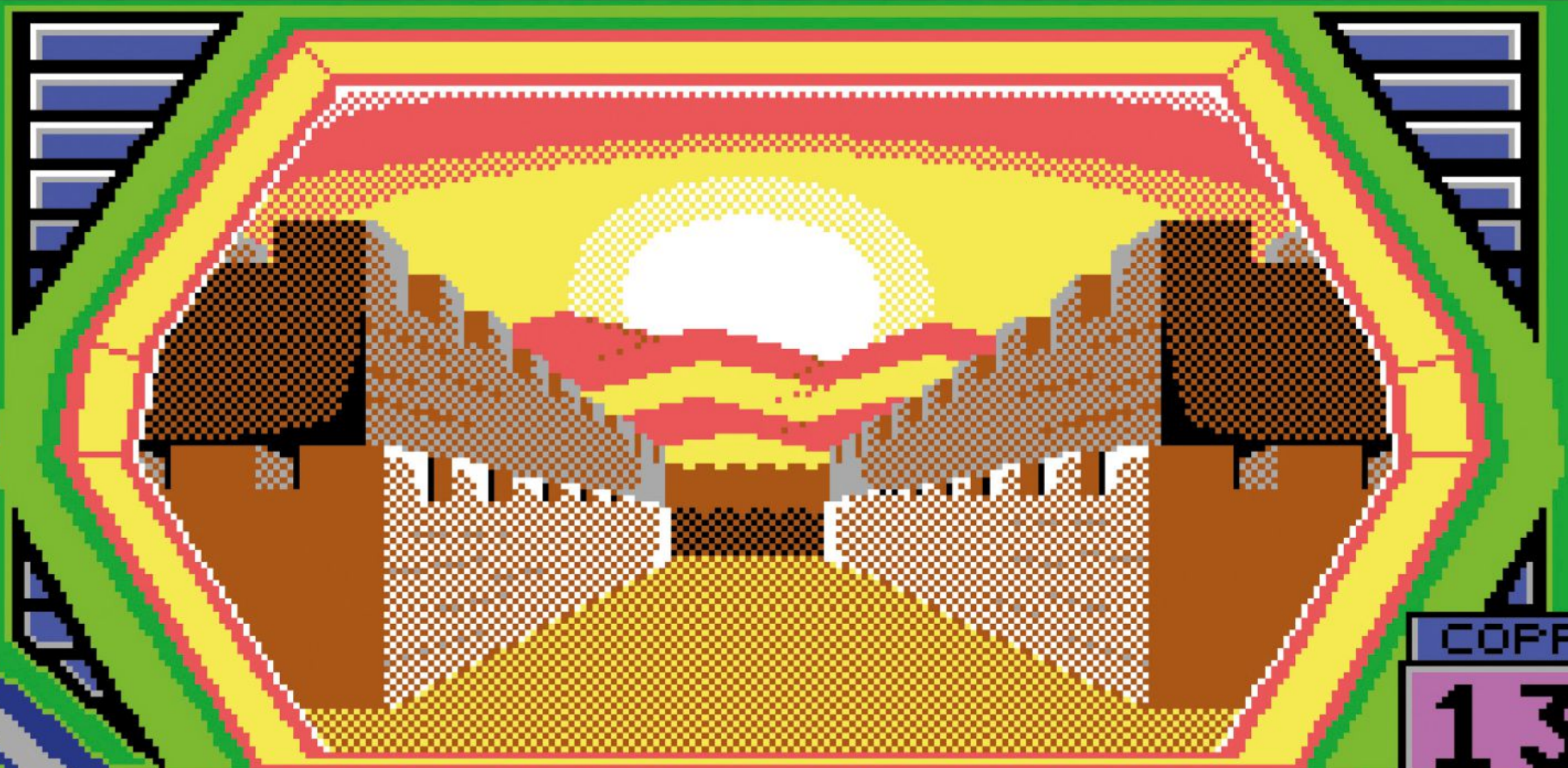
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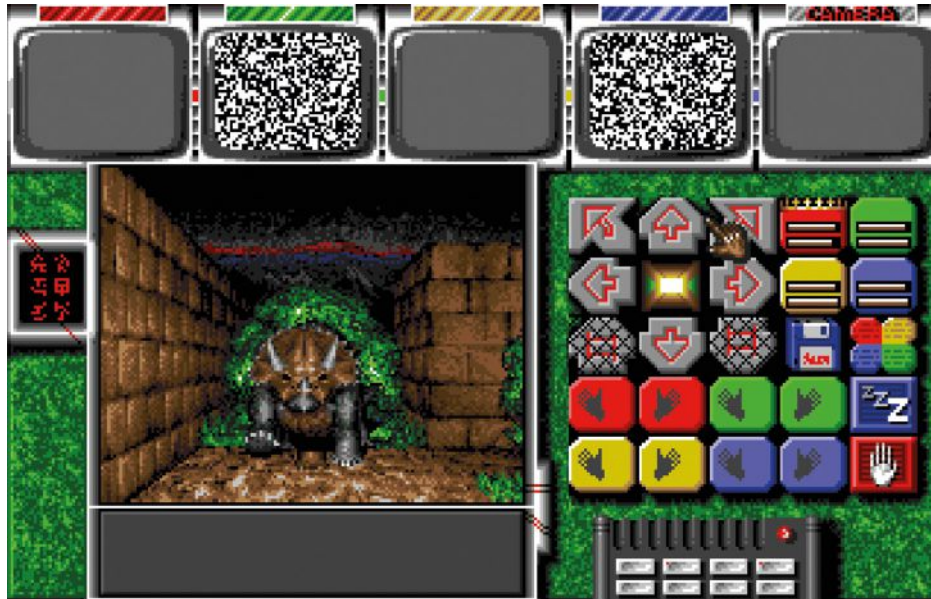
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↑ Captive revolved around remotely guiding four droids

Though occasional games, like 2012's *Legend of Grimrock*, keep the flame alive, first-person dungeon exploration has mostly moved over to real-time series like *The Elder Scrolls* or *Fallout*. The question is whether the original games used grid and turn-based movement purely because the technology of the day wouldn't allow them to be free-roaming FPSs, or was it a decision made for gameplay reasons? The fact that the genre declined rapidly when technology made the FPS more viable suggests it was a necessity, but

nonetheless, these games have a distinct appeal all their own. Turn-based gameplay provides a chance to think, while creating and controlling an entire party of characters doesn't really work in FPSs; detailed inventory management would also fall out of fashion for some years.

Either way, the central appeal of both dungeon crawlers and first-person shooters is the thrill of exploring a hostile environment, so perhaps how you interact with the world matters less than how compelling it is.

← Despite being grid-based, *Dungeon Master* was incredibly immersive

MIDI MAZE

Released: 1987

Developer: Xanth Software F/X

Original platform: Atari ST

Often mentioned during rival Commodore Amiga and Atari ST owners' discussions was that the Atari had a pair of MIDI (Musical Instrument Digital Interface) ports. But while this was indeed great for musicians, as it allowed the ST to communicate with synthesizers and the like, it had no real relevance to gamers until 1987's *MIDI Maze*.

By linking each computer's MIDI ports it was possible to get up to 16 machines playing together, a feature that was unheard of at the time. Each player was represented by a smiley face, and roamed grid-based mazes hunting for the others in deathmatch play. There was only one weapon, no pickups and no ability to strafe, but even so the game was fast and above all, novel.

It was also a kid-friendly FPS, making it ideal for Nintendo, with its strong anti-violence stance. So, in 1991 the developers released a new version on the Game Boy called



↑ Deathmatch, MIDI Maze style

Faceball 2000 - landing a Guinness World Record for 'first handheld first-person shooter'. This was followed a year later by the Super Nintendo version, with both featuring a new single-player mode - though bizarrely, this had to be accessed via a cheat on the SNES.

Japan-only versions for the Game Gear and PC Engine followed; unreleased prototypes have also surfaced for the Atari 400/800 and Nintendo's Virtual Boy. The game was even released for Adobe Shockwave.

THE FREESCAPE ENGINE

Developed: 1987-1990

Developer: Incentive Software

Our interview with Ian and Chris Andrew highlighted the wizardry required to produce Freescape's 3D environments, so let's focus on the games themselves. With the hardware unable to quickly shift polygons it's no surprise they focused on puzzle-solving and exploration over action, so even though each included enemies, the biggest threat was usually the time limit.

Driller's and *Dark Side's* sci-fi environments were perhaps more impressive for their ambition and technical prowess than their gameplay. *Driller* in particular is an abstract experience, and though *Dark Side* is more accessible, its strict limits conflict with exploration of the evocative locales.

With the immediately relatable premise of exploring an Egyptian pyramid, *Total Eclipse* was a tighter game, helped by improvements to the engine and the room-based environment. Like many of the Freescape games, it can be finished quickly if you know what you are doing, but it takes



↑ The full 3D Freescape engine

hours and a good map to get there. *Castle Master* came next, based on exploring a haunted castle while searching for the prince or princess (in a nice touch you can choose either). Thematic, more grounded with its puzzles, and with a great sense of place, it's probably the best game of the series.

There were limited releases of *Castle Master 2: The Crypt* and *Total Eclipse 2: The Sphinx Jinx* before the engine was released in the form of the *3D Construction Kit*.

LIGHT GUN GAMES

Examples:

Duck Hunt (1984)

Time Crisis (1995)

House of the Dead (1996)

While these games are literally 'shooters played from a first-person perspective', they aren't classed as part of the FPS genre because they lack free player movement. Instead, most light gun games automatically pull you through an environment as targets appear, giving the game control of pacing and spectacle at the cost of your freedom to explore.

Light gun games have existed since at least 1936, with jukebox creator Seeburg using light beams to register hits on duck targets. This is basically how light guns still work, just with the sensor mounted in the gun instead of the cabinet.

Perhaps the first big light gun shooter was Taito's 1987 hit, *Operation Wolf*, with its cabinet-mounted Uzi, jungle setting and inexplicable women in bikinis delivering peak '80s movie-style action. It's interesting to note that *Operation Wolf* gives players limited ammunition and shows

how many of each type of enemy are still alive in the level, features that would be ignored by the game's contemporaries. *Operation Wolf* was followed by 1988's *Operation Thunderbolt*, which features two-player gameplay and piles a huge number of enemies onto the screen.

Other key releases include *Virtua Cop* (SEGA AM2, 1994), which uses polygons instead of sprites, allowing enemies to react differently depending on where they've been shot, and *Time Crisis* (Namco, 1995), which makes full use of its on-rails movement to present a cinematic experience. Reloading in *Virtua Cop* involves firing off-screen, while in *Time Crisis* a foot pedal is used to take cover and reload. A pedal would also be used in Taito's *Space Gun* (1990) to allow players to retreat from approaching aliens - or perhaps Aliens, as their design is heavily inspired by HR Giger - that somehow manage to remain threatening despite sounding like irritated dolphins.

Many of the big arcade releases were converted to home platforms and were playable with a range of colourfully named light guns. The Master System had the Light



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Phaser, which clearly isn't as cool as the Spectrum's Magnum Light Phaser, and 1992 gave us both Nintendo's oversized Super Scope and the equally ridiculous SEGA Menacer.

There were also a few dedicated home-only light gun games, such as Nintendo's *Yoshi's Safari* (1993), plus games that allowed you to use light guns in combat. A good example is Hideo Kojima's *Snatcher* (Konami, 1994), which is a cinematic adventure that allows you to use *Lethal Enforcers'* Justifier light gun when fighting enemies.

Despite the home conversions, this genre had its heyday in the arcade and therefore declined along with the arcade scene. This might be because home versions lack the satisfying physical feedback of an arcade's weighty guns, but it's probably more to do with their gameplay. While perfect for a quick blast of action, the on-rails nature of light gun games means they can't deliver the variety, freedom and depth offered by an FPS.

THE COLONY

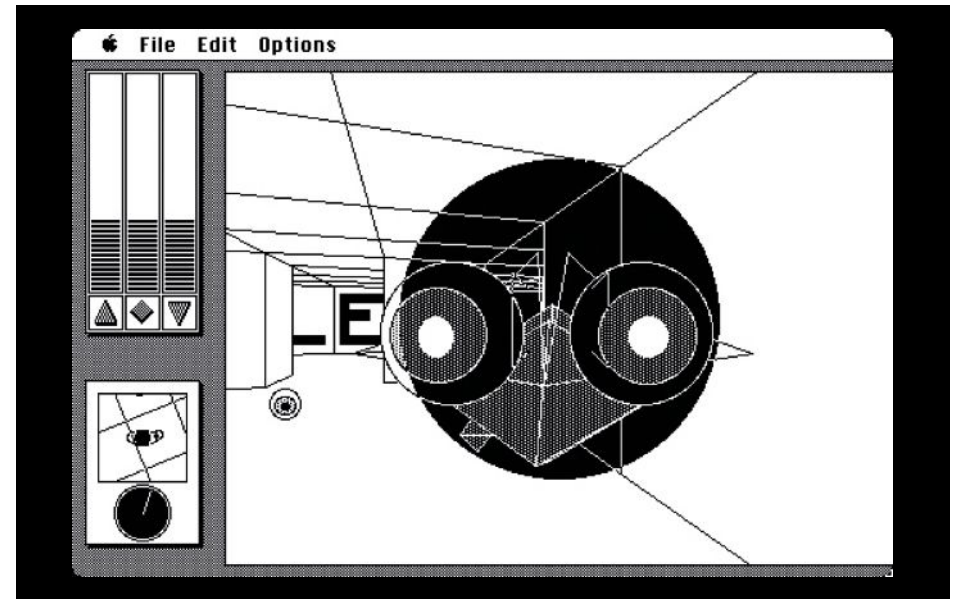
Released: 1988

Developer: David Alan Smith

Original platform: Macintosh

As the games industry matured and team sizes expanded it became increasingly rare to encounter games like *The Colony*, which - for better or worse - were the vision of a lone creator. Made by David Alan Smith using his own game creation tools, *The Colony* blends puzzle solving, exploration and combat, with each element presenting a brutal challenge. Worried that the game would be too short, Smith filled the environment with sudden death traps, rooms that can be entered but not left, and deadly enemies. There are also adventure game touches, such as interacting with objects presented as 2D images, allowing you to press buttons, read messages, open drawers and so on.

The Colony supported both black-and-white wireframe and colour-filled graphics, but though it was released on PC and Amiga I recommend the Mac version for the full experience: it runs at a much faster framerate.



↑ Though punishing, *The Colony* merged FPS with puzzle solving

Fittingly, although the game supported colour graphics, the first Mac colour monitor had only just been released, so most players experienced *The Colony* in monochrome, in which the stark lack of textures gave the game a suitably cold, sterile feel.

The game's challenge and unwillingness to hold your hand meant reviews were polarised, with some praising the game's atmosphere while others were less impressed. In his *Compute!* magazine article, Orson Scott

Card - author of sci-fi novel *Ender's Game* - said *The Colony* was "so annoying and confining for me and [his son] Geoffrey that we both gave up in disgust."

"The game's challenge and unwillingness to hold your hand meant reviews were polarised, with some praising the game's atmosphere while others were less impressed."

STAR CRUISER

Released: 1988

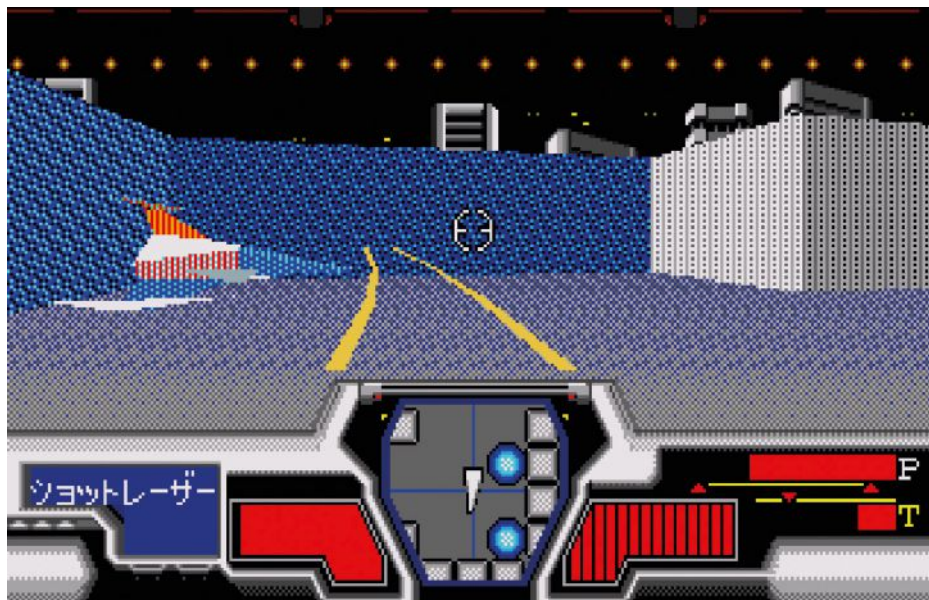
Developer: Arsys Software

Original platform: PC-8801 / X1

Most games in this book are covered on their original platform, but I'm going to make an exception for *Star Cruiser* and focus on its later ports.

First released for the PC-88 Japanese home computer, *Star Cruiser* was ridiculously ambitious for its time. It offered not only first-person movement around grid-based levels, but also space combat and a roleplaying experience with the ability to roam around environments and talk to people. As impressive as all this is, the resulting game is slow, abstract, and doesn't really feel like an FPS. For example, enemies wait in levels for you to bump into them, with combat taking place in a separate arena.

However, the game would be converted to other platforms, such as the Mega Drive in 1990, and hangs together better on those. Now you move around - including the ability to strafe - and battle enemies as in an FPS, which alongside the planetary



↑ *Star Cruiser* mixed on-foot and space combat

exploration and space combat gives the game epic scope. Also worth noting is that unlike most early shooters, which use player-facing sprites for enemies and pickups, *Star Cruiser* renders everything using polygons.

The reason such an advanced game remains so obscure is that it was never released in English, with a planned conversion by Namco being dropped. It wasn't until an unofficial fan translation appeared in 2016 that the rest of the world could play this remarkable game.

"First released for the PC-88 Japanese home computer, *Star Cruiser* was ridiculously ambitious for its time. It offered not only first-person movement around grid-based levels, but also space combat and a role-playing experience."

MIDWINTER

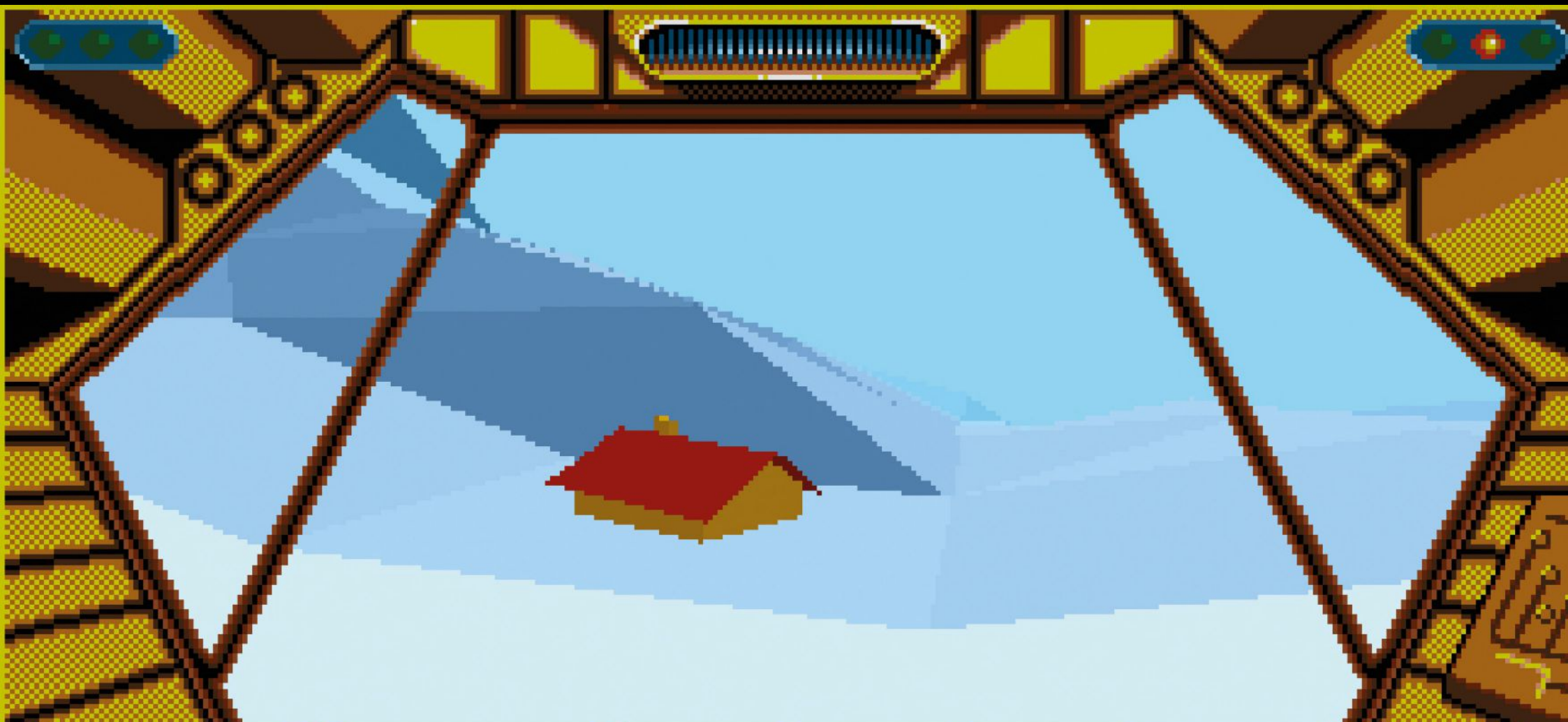
Released: 1989

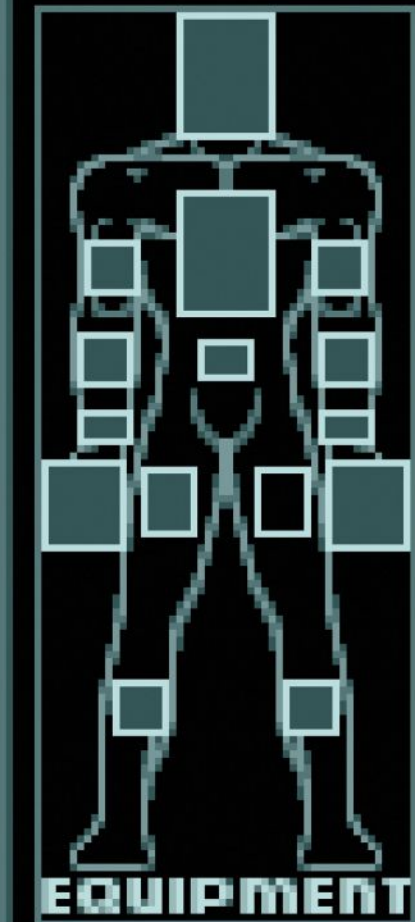
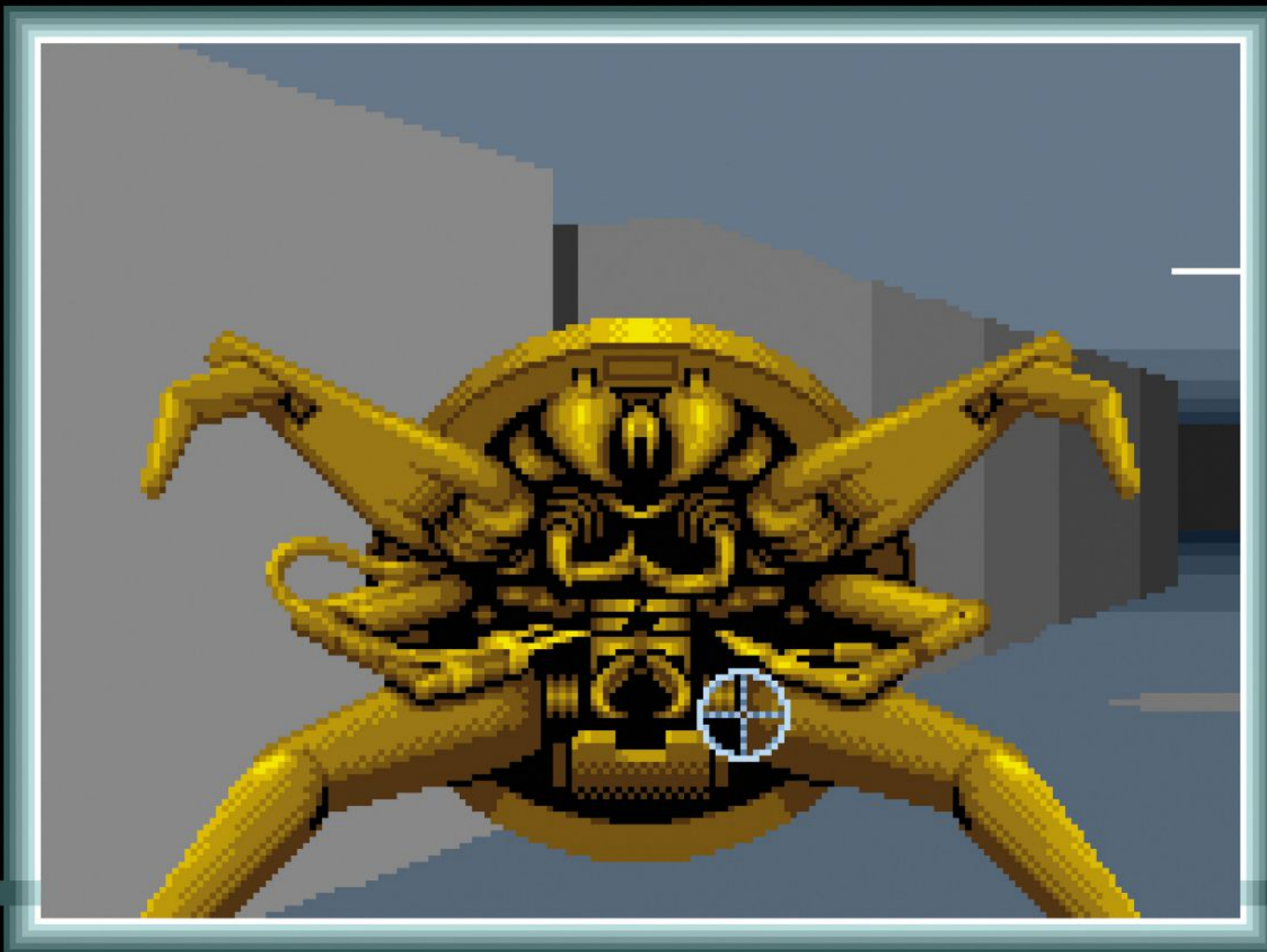
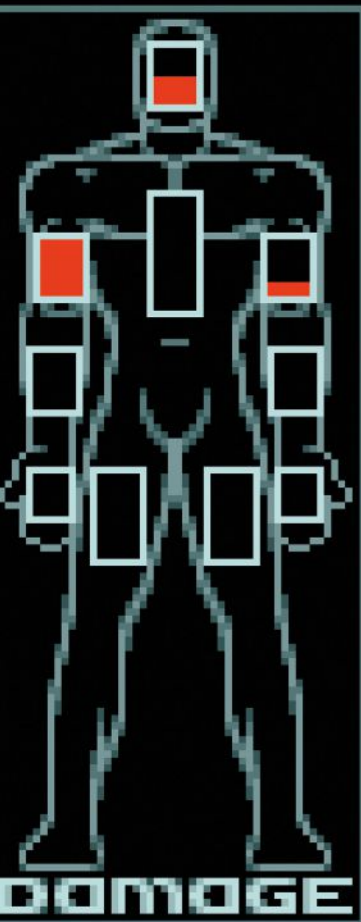
Developer: Maelstrom Games

Original platform: Atari ST / PC

Some games we're covering are revered as beloved classics, but others, like *Midwinter*, are admired as much as being loved. In this game's case, you can find plenty of praise for its ambition and open-world nature, with *Edge* magazine saying it "felt like a blueprint for the future" and *The Late Night Session* adding, "*Midwinter* really felt like it was years ahead of its time." But there are just as many who remember the game for the frustration brought on by its daunting challenge and lack of direction.

The creation of Mike Singleton (who also made 1984's similarly freeform *The Lords of Midnight*), *Midwinter* presents a huge island and an invading force, then leaves you to it. Your goals are to find and recruit new members for the Free Villages Peace Force, sabotage enemy facilities and eventually kill their leader. A nice touch is that each potential resistance fighter is unique and more likely to join you if recruited







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↑ Infiltrate the Corporation

by someone they like. Such diplomacy also played a key role in the game's 1991 sequel, *Flames of Freedom*.

For players who stuck with it, *Midwinter* offered incredible freedom and flexibility, but for many the challenge of working out what you're supposed to do at the same time as just trying to move about and survive made it inaccessible. Like its frozen world, *Midwinter* could prove beautiful but harsh and uncaring.

CORPORATION

Released: 1990
Developer: Core Design
Original platform: Amiga

While best known for *Tomb Raider*, Core Design produced games in a range of genres, including *Corporation* (a.k.a. *Cyber-Cop*), a slow-paced game of careful exploration with a touch of *Ultima Underworld* in its commitment to expecting the player to figure things out.

Corporation utilised the explore-learn-die approach to gameplay, asking you to choose a character and equipment before you're dropped into floors of enemies, hazards and terminals, with no way to know what you need other than trial and error.

The Amiga version's control method adds to the challenge. You play entirely with the mouse, clicking on a 'trackpad' to turn and move, on icons to duck, jump and access your inventory, and directly on enemies to shoot them. The Mega Drive release takes the opposite approach, giving you direct control over movement but auto-aiming for you.

In a magazine interview, Core's Richard Barclay talked about the game needing to be released by a certain date or the studio would go bust, and that they got the maps finished "by the end of the afternoon!" This is reflected in that level designs are the game's weak point, with very few landmarks to aid navigation, and identical rooms and corridors that quickly become repetitive.

Though far from a perfect game, *Corporation* is technically impressive and shows how atmosphere and intrigue can fuel the player's imagination and make a game more than the sum of its parts.

"Corporation utilised the explore-learn-die approach to gameplay, asking you to choose a character and equipment before you're dropped into floors of enemies, hazards and terminals, with no way to know what you need other than trial and error."

THE SUPER SPY

Released: 1990
Developer: SNK Corporation
Original platform: Arcade

Released in Japan in 1990 and America in 1991, *The Super Spy* rather uniquely combines gameplay from the FPS, fighting and light-gun genres. Moving left and right scrolls the first-person view, but your character (visible as a pair of arms and occasionally a leg) only takes up the centre portion of the screen. This means you only take damage from an attack if it actually hits your character, rather than the usual FPS approach of attacks hitting 'the screen'.

After fighting waves of enemies by punching, kicking, stabbing or shooting, you choose a direction. Each floor has several rooms and corridors, and you're only shown the map at one point in each level, so combined with never being able to turn around - you just walk backwards - navigation can be confusing.

The story provides a stabber take on *Die Hard*, with terrorists taking over an office building that you, CIA agent Roy Heart, must fight through. Alongside



↑ A corridor ambush in The Super Spy

bizarre bosses, some rooms contain hostages who struggle with awful translations and occasionally provide healing or a weapon.

The destructible scenery and giant, colourful enemies are cool, and the game has that early '90s arcade-game charm, but it's too long and not actually much fun to play. A lack of variety in the combat, plus awkward controls and unfair elements (presumably to swallow more coins) limits *The Super Spy* to being an interesting curio.

"Each floor has several rooms and corridors, and you're only shown the map at one point in each level, so combined with never being able to turn around - you just walk backwards - navigation can be confusing."

CATACOMB 3-D

Released: 1991

Developer: id Software

Original platform: PC

In 1990 id released *Catacomb*, a Gauntlet-style top-down maze explorer. They also created *Hovertank*, which is played in first-person, but is more of a vehicular maze exploration and hostage rescue game than a shooter. Combine the two and you get 1991's *Catacomb 3-D*, which involves exploring levels while shooting lots of monsters and hunting for secret walls and keys.

While *Hovertank's* environments were flat-shaded, *Catacomb's* are textured. The game hints at RPG tropes, with cryptic scrolls, and names for each of the rooms, though it follows id's cheerfully anachronistic approach, with spells called 'Nukes'.

Catacomb would be followed by a trilogy of sequels, all created by Softdisk, so that id could focus on *Wolfenstein 3D*. *Catacomb Abyss* arrived in 1992, and both *Armageddon* and *Apocalypse* in 1993, with each adding fun new elements to the gameplay.



↑ Catacomb 3-D and Abyss (top)

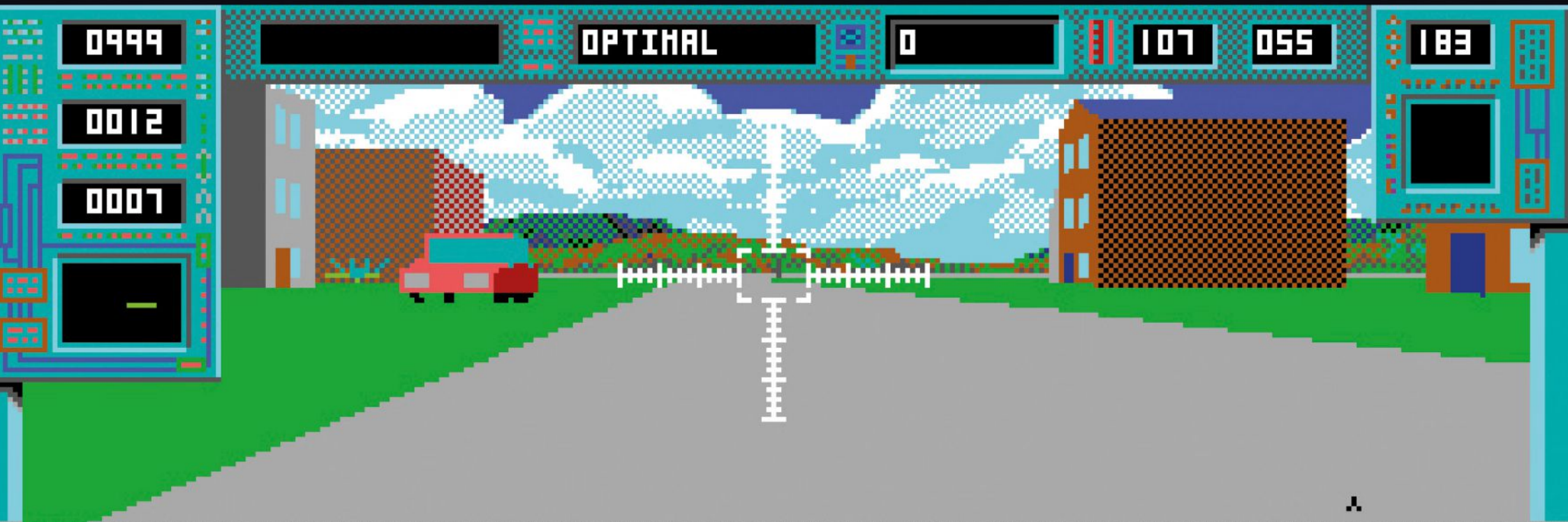
It's interesting to consider just how little *Catacomb* really differs from id's next game, *Wolfenstein 3D*, with both asking you to roam around, shoot enemies with the hand or weapon visible at the bottom of the screen, and search for secrets and keys. But in-play, the games are worlds apart, with *Wolfenstein* providing the tension, speed and aggression missing here, plus the shocking thrill of gunning down 'real' humans instead of colourful fantasy monsters.

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THE TERMINATOR

Released: 1991

Developer: Bethesda Softworks

Original platform: PC

The first of Bethesda's five Terminator games, *The Terminator* was an extremely ambitious open-world FPS that vaguely mapped a 60-mile-square area of Los Angeles. You play as either the Terminator hunting Sarah Connor or as Kyle Reese protecting her, though as you'd imagine, playing as a futuristic cyborg is easier and more fun, allowing you to walk through firefights that will kill Reese.

For the most part you're left to gather equipment and hunt your opponent, with only occasional interludes showing the Terminator terminating to give a sense of progression as you wander about.

In addition to banks, weapon depots and shooting ranges, you can enter a range of shops and either buy or steal things (eventually resulting in the message 'The police are here and would like to have a word with you ...'). There are also neat hidden touches, like Reese opening dog food to attract

a stray dog that barks if the Terminator gets near.

But for all its freedom and flexibility, your real enemy in *The Terminator* is unnecessary complexity. For example, you can drive automatic or manual cars, with the latter requiring you to start the engine then use a clutch key and manually switch between gears as you accelerate and steer. Still, despite proving awkward and slightly aimless, *The Terminator's* scope makes it a remarkable experience for the time. Unfortunately, it would also prove infinitely better than Bethesda's next Terminator FPS.

"In addition to banks, weapon depots and shooting ranges, you can enter a range of shops and either buy or steal things (eventually resulting in the message 'The police are here and would like to have a word with you ...')."

CYBERCON III

Released: 1991

Developer: The Assembly Line

Original platform: Amiga

Rather than indicating the third in a series, the titular *Cybercon III* is the supercomputer you need to destroy. This entails exploring an enormous, fully 3D complex, battling increasingly dangerous robots and managing your suit's power demands. Plus, frankly, trying to work out what to do. *Cybercon* isn't just abstract, it's wilfully obtuse, so before working out how to progress, you need to figure out what progression even looks like.

Your battlesuit's HUD perfectly demonstrates the game's demands: each system has a power bank, affecting performance in your guns, shields and even jumps. There's an inventory of items to collect, use and drop, as well as a bank of symbols you 'play' in order to trigger machinery. Even the spinning circle of lights acts as your radar.

Originating on the Amiga before being ported to the Atari ST and then PC in 1993, *Cybercon* was marketed as a technical



↑ *The challenging Cybercon III*

achievement. Adverts highlighted that the game "has over 1/3 million lines of code" and "contains the fastest, smoothest scrolling 3D graphics ever seen". Ricardo Pinto, the game's designer and artist, said, "A big influence on my design of the look of the game was the original *Tron* film. I was mesmerized by its computer graphics aesthetic." And, yes, it's true that there is something of a digital otherworldliness about *Cybercon* - a sense of esoteric rules behind it all, if only you could understand them ...

INTERVIEW WITH DAVID SMITH



As in all media, game creators are inspired by what came before, deliberately or unconsciously combining elements and approaches in their own work. So, it's interesting to look at these older games and see which of their aspects would be retained by early FPSs, and which would be dropped or only come back into fashion years later. David Smith's *The Colony* is a great example of this, bringing the puzzle elements of adventure games to the FPS four

years before *Ultima Underworld* took a similar approach.

David was kind enough to provide me with some insight into the making of *The Colony* and his later work with Tom Clancy.

Did you play games before setting out to make your own? Similarly, do you remember any particular games helping to inspire *The Colony*?

David: I did play computer games - even before I had my own. I played the text-based *Trek* (the mini/mainframe version) at college. I also played the original *Adventure* text game, though I thought it was a bit boring. I played the original *Pong* and a number of other arcade games - the most important of those was *Battlezone*¹. I was obsessed with that game and got so good at playing it that I could play the same game for hours. I would walk away from it with a huge number of lives

because I almost never lost. The surface of the planet in *Colony* was my recreation of *Battlezone* - instead of tanks and saucers I used alien crab-like things.

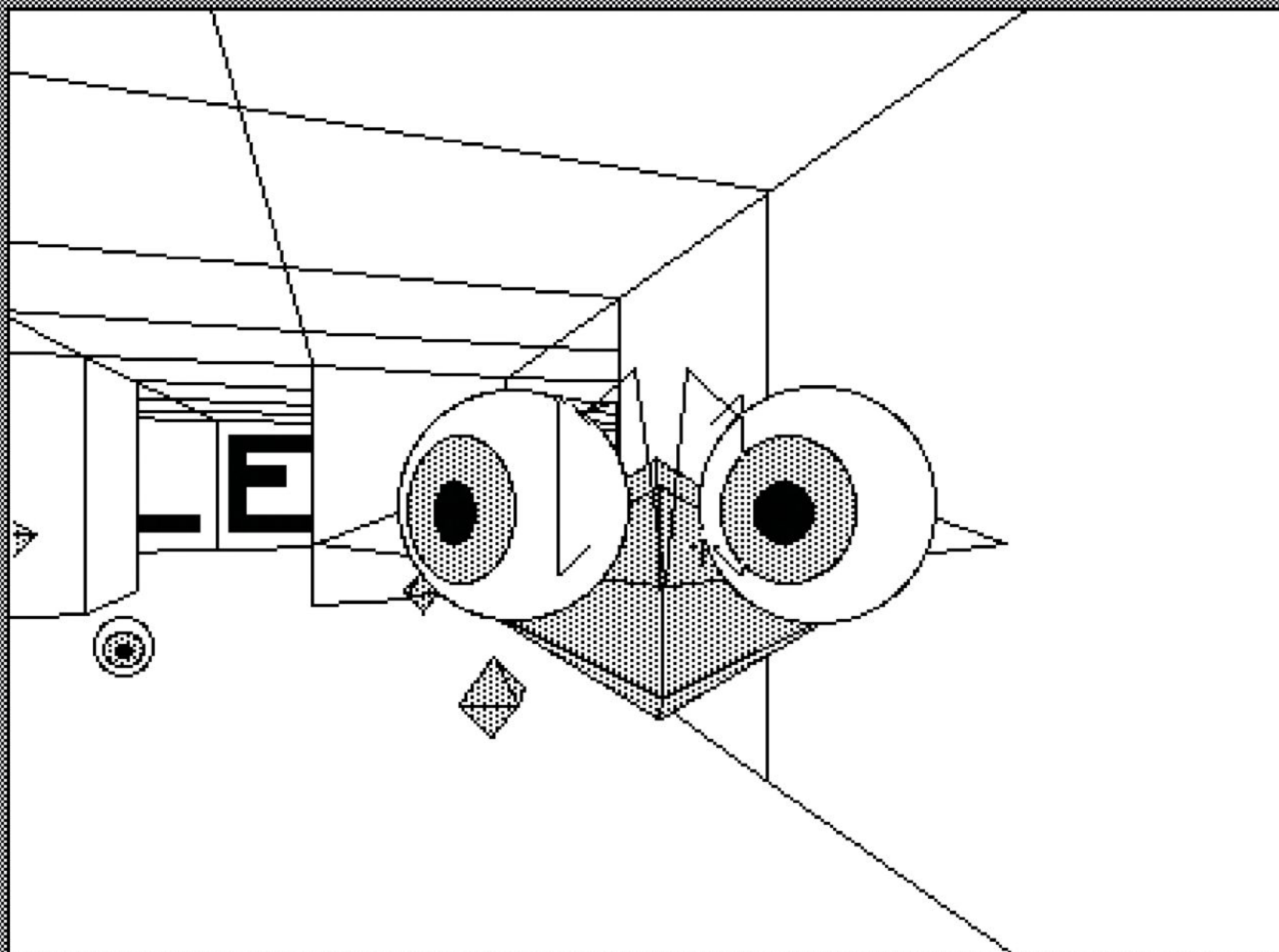
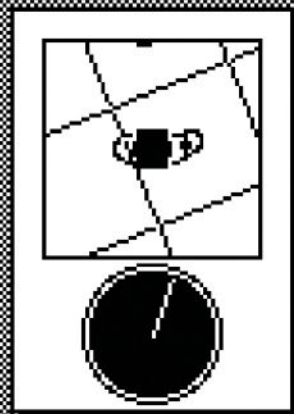
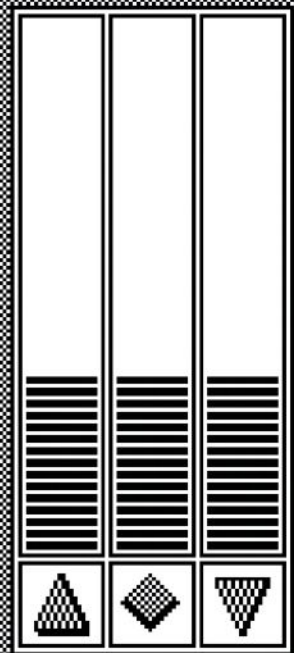
I played quite a few Apple II games as well; *Ultima II* was a favourite. I played the game almost all the way through before I realized that the ship could do broadsides. I started thinking about writing an adventure game at that time and tried a few experiments. I wanted something very visual - a virtual world - but that was impossible using the techniques available at the time.

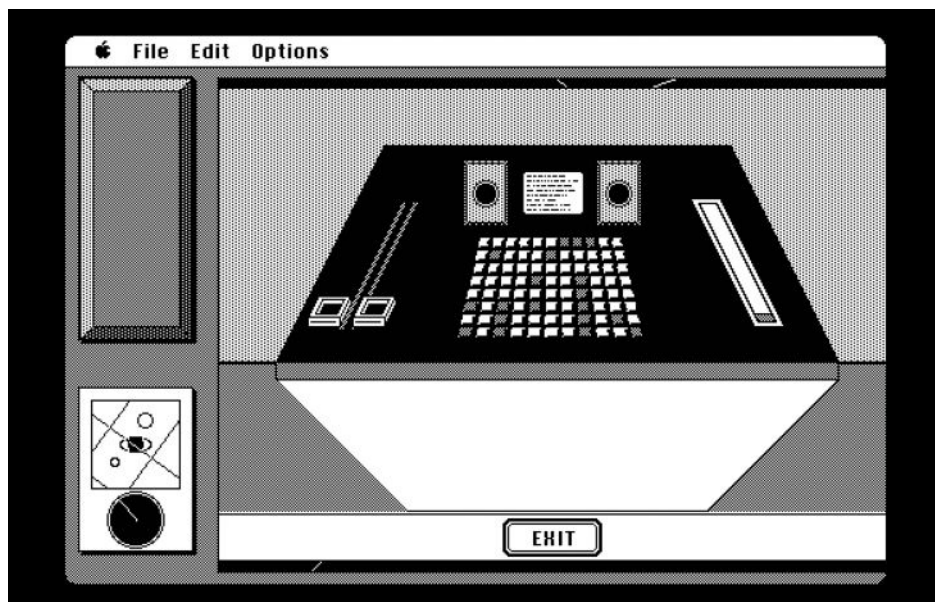
Probably the most important game I played, or really studied, was Bruce Artwick's *Flight Simulator*. He wrote an amazing book called *Microcomputer Displays, Graphics and Animation*. This was extremely valuable for me in understanding how to do real-time 3D on a tiny system.

He introduced the idea of pseudo-degrees: instead of 360 degrees, use 256. This means the 3D rotation fits inside of a single byte. Even better, when you added to the rotation, it would overflow the byte so that it would be exactly what you wanted without having to compute anything. I used this as an index into a pre-computed sine table. If you added 64 to the same rotation value you could use the same table to index the cosine. I don't think that trick was covered by Bruce. Also, since the world was on a grid, I only needed to compute the one rotation and simply performed additions to rotate the entire world.

"Probably the most important game I played, or really studied, was Bruce Artwick's *Flight Simulator*."

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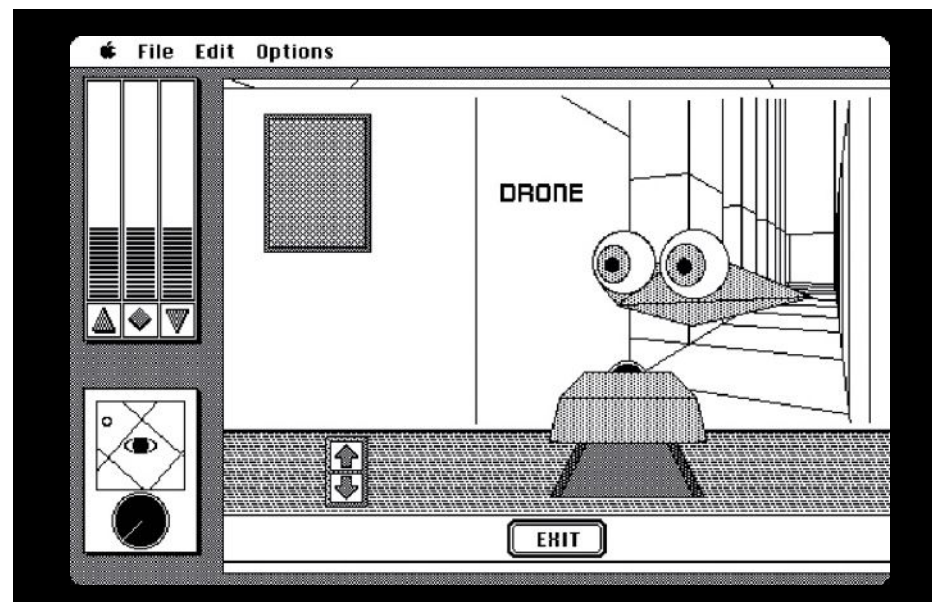


↑ Certain objects can be interacted with in detail

The Colony is much more puzzle, exploration and story focused than the FPSs which immediately followed it. Did you deliberately set out to make an immersive, 'thinky' game or was this just a by-product of the sort of games you enjoy?

There were virtually no examples to go by for what I wanted. There were thoughtful games that had very primitive graphics, but aside from the flight-sim games, there were no real-time 3D world games. I wanted to create a world, not just an experience,

so it was really just creating a story and having the player discover that story. I also wanted it to be challenging - beyond the shooting of course. The puzzles were very much a central part of the experience; it was intended to be a mystery but also a live experience. I think *Half-Life* is a good example of a puzzle/shooter that is closest to what I was trying to do. I did it first, which was cool in some ways, but bad in that I didn't have a good model for what works and what doesn't. I think what Valve's *Half-Life*

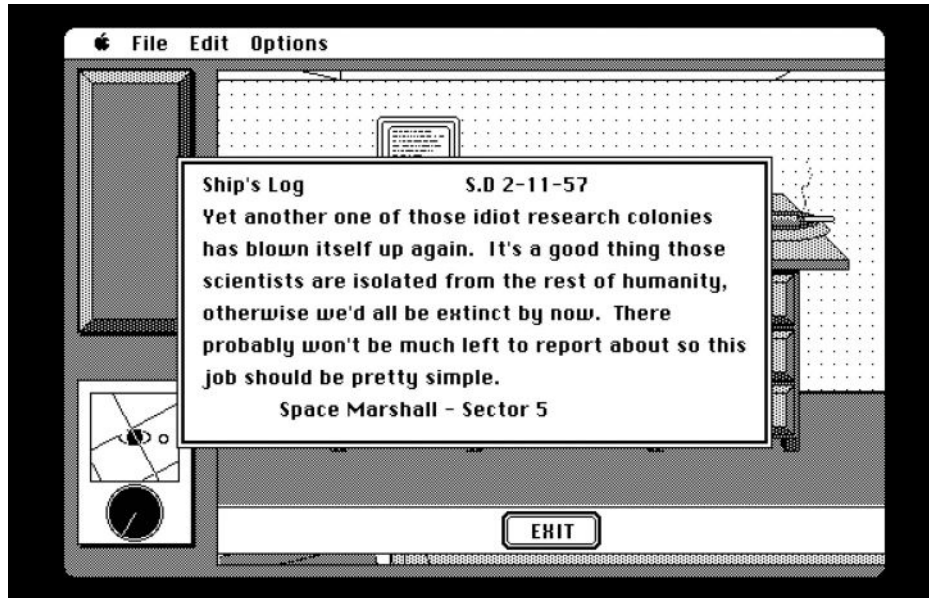


↑ The Colony presents a cohesive world to fight through

did was understand that you need to provide clues and training to the user to make it a successful and fun experience. It is sort of funny that if *Colony* came out today, it might be accused of ripping off *Half-Life*, where it was the other way around - intentionally or not. *Colony* had teleporters, aliens taking over a research facility, even the destruction of the entire facility at the end. I have played *Half-Life* many, many times. The most recent was the recreation of the game with *Black Mesa*², which I really

think is astonishingly good, even compared to other modern AAA games.

"I wanted to create a world, not just an experience, so it was really just creating a story and having the player discover that story. I also wanted it to be challenging - beyond the shooting of course."



↑ Note the lit cigarette, which is instantly deadly if clicked on

People talk a lot about how difficult *The Colony* is, and I was wondering if that was simply because you wanted to ensure players didn't finish it too quickly, or whether puzzle solutions just seemed obvious to you as their creator, as there was no-one giving you feedback?

I did suffer a bit from not having game testers. The Mindscape people did test it, but it was clearly way too hard. Certain things were just plain sadistic. I was indeed worried that people would complete it

quickly. This was made even worse by my not telling the game player why they died. The airlock was especially bad. I figured it was an airlock - close the other door before you open the next - but people didn't realize that and died over and over. I was told I had caused more than one divorce.

In your *The Colony* memoirs on www.croquet.zone you talk about making the game because you couldn't get any publishers interested in your game development tools. Did you ever do anything more with *The Colony's* engine and tools?

I used that engine to create the set visualization for Jim Cameron in *The Abyss*. Ron Cobb, the designer (who recently passed away) sent me the blueprints. It was probably the first real-time set visualization tool ever created. We reworked the tech and ideas to create *Virtus Walkthrough*³.

I also founded Red Storm Entertainment with Tom Clancy. I am working with Brian Upton⁴ again - he was the designer of *Rainbow Six* and *Ghost Recon*.

Can you elaborate a little more on your role at Red Storm Entertainment and working with Tom Clancy? For instance, how did that relationship come about?

Tom read about *The Colony* in a Mac Fanzine and even though he wasn't a computer game player, he decided to try it out. He was very much into wargaming - he and Larry Bond⁵ had huge war game sessions in Tom's basement - which was the basis of his book *Red Storm Rising*.

Tom got addicted to *Colony* and wanted to talk to me, so contacted Mindscape, my publisher. At the time, I was reading his book *Clear and*

Present Danger. I don't remember what we talked about, except that he told me he really loved the game and I told him I really loved his books. He called me pretty regularly after that - about once a week. He would always complain about how hard *Colony* was but never asked for hints. He wanted to get the full experience. After about six weeks he called me to tell me he had completed it and blown up the planet - he was quite excited.

He asked me what I was doing next, and I told him I was starting a new company to create a real-time 3D design tool. Mike Backes, who was working with Jim Cameron on the movie *The Abyss* had a pirated pre-release version of the game and asked me to re-create the sets they were building for the movie, so I did that. I am the very last credit in that movie, so easy to find.

That led the creation of *Virtus Walkthrough*, and Tom became my first investor and board member. We talked quite a bit about what we might do together. We decided to create a submarine simulation game called *SSN*⁶. Brian Upton led the technical design of that game; Juan Benito⁷ was the game

designer. Tom brought in Doug Littlejohns, a former Royal Navy sub commander, as an advisor. Of course, in a real situation, the back-and-forth tracking between subs was over days and weeks. We had to compress that into a few hours, but it was a very accurate recreation of what was happening in the sub commander's mind. That was a Virtus product, but Virtus was not really a game company, so Tom and I decided to create Red Storm⁸ with Doug Littlejohns⁹ running it.

The original idea for the company was extremely ambitious; Tom and I discussed a massive on-line wargaming system for which we would bring in Tom's friends from the military as advisors. This was dropped because it was beyond what was possible at the time: the consumer internet hadn't really happened yet. Instead, Tom introduced me to the FBI Hostage Rescue Team in Quantico. Frank Boosman¹⁰ and I got a chance to visit them and watch their training manoeuvres. That was really amazing. Ninjas dressed in black delivered to the top of a building by a black helicopter proceeded to blow up rooms, kill the bad guys and rescue the 'hostages'. We called

Tom right afterwards and told him that this was the game we needed to make.

"The original idea for the company was extremely ambitious; Tom and I discussed a massive on-line wargaming system for which we would bring in Tom's friends from the military as advisors."

Tom said that he wanted it to be an international group instead of just the FBI and if we made the game, he would write the book, which is how *Rainbow Six* the game and the book appeared. There are some parallel stories about how the game idea came together, but this is how it actually got launched.

Author's notes:

[1] *Battlezone (1980)* is an arcade game developed by Atari that revolves around controlling a tank in first-person, with graphics displayed as wireframe polygons. The only reason I haven't included it as a precursor to the FPS is its specifically vehicle-based gameplay.

[2] *Black Mesa* is an ambitious, 15-years-in-development, ground-up remake of the original *Half-Life*.

[3] *Virtus Walkthrough* was a real-time 3D design tool for the PC, created by David Smith, David Easter and Mark Uland in 1990. The company also released *Deathmatch Maker*, a level editor for *Quake*, with a second version released for *Quake II*, both authorised by id Software.

[4] Brian Upton's videogame career began in 1998 and is still going today, across a range of disciplines. He has also written books on level design and gameplay theory.

[5] Larry Bond is a board and war-game creator as well as an author. Probably his most famous games are those in the *Harpoon* series, which Tom Clancy used during research for his first novel, *The Hunt for Red October*.

[6] Tom Clancy's SSN puts the player in command of the submarine USS *Cheyenne* in a campaign against China. The events of the game were novelised by Clancy and Martin H. Greenberg.

[7] Despite a long career in games (he still consults), Juan Benito is best known for his work on the highly controversial *Six Days in Fallujah*.

[8] While best known for the *Rainbow Six* and *Ghost Recon* games, Red Storm has released others, including Anne McCaffrey's *Freedom: First Resistance*, and *Bang! Gunship Elite*. Since joining *Ubisoft*, the studio has also worked on *Driver*, *Far Cry*, *Splinter Cell* and *Star Trek* games.

[9] More on Doug Littlejohns when discussing *Rainbow Six* later, but the British Royal Navy Captain had just finished serving aboard the HMS *Sceptre* when he met Tom Clancy. Littlejohns offered some criticisms of Clancy's *The Hunt for Red October*, leading to their friendship.

[10] Frank Boosman moved from working in games to technology related areas like *Flickr* and *Adobe Acrobat* and is now at *Amazon Web Services* (used by many games as their server technology).



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1992

Even if id Software didn't invent the FPS, *Wolfenstein 3D* was certainly the moment the genre crossed into the mainstream. Tight gameplay, a compelling theme and the shock of such realistic graphics were critical, of course, but something else that helped *Wolfenstein* to reach so many players was that it was distributed as shareware.





Shareware

As hobby products, early videogames had no formal distribution network and were sold through computer stores or software clubs, usually as a disk or tape with photocopied instructions. As a result, there was a certain amount of luck involved in choosing a game; word-of-mouth recommendations were essential. Over time this evolved into more polished boxed products and magazine reviews, but people still had to pay up front for their games and hope they liked them.

'Shareware', a term popularised by Jay Lucas in the magazine *InfoWorld*, allowed people to pay for software they already had. Apogee's Scott Miller turned this into 'the Apogee model': providing a portion of each game for free so players could decide if they liked it and then pay for the rest (hence *Wolfenstein*, *DOOM* and the like being divided into episodes, with the first episode given away).

The rise of the internet

Initially distributed by floppy disk, full games arrived only after players had posted

payment and waited. Shareware moved online as the internet grew, first through bulletin board systems, then FTP and the World Wide Web. Now people could download shareware directly from the developer or publisher and pay for immediate access.

Of course shareware had its downsides, such as the risk of downloading a virus, and the fact that anyone could release anything, making finding good games a challenge (a problem which still affects the games industry today). But the approach was a resounding success for id, with David Kushner's book, *Masters of DOOM*, reporting their first month's royalties as \$100,000 (more than triple what their biggest previous game had managed). Huge numbers of people were playing, discussing and sharing *Wolfenstein*, and as the buzz grew, it attracted more and more interest.

Developers and publishers

It made sense, then, for id to continue to use shareware to distribute *DOOM*, its sequel, and *Quake*, though each of their games would also see release

as a boxed product through a traditional publisher.

It's worth briefly discussing game publishers here, because the vast majority of games covered in this book saw release through one. Simplifying hugely, each game has a developer - the team that creates the game - but those games are marketed and distributed through a publisher. More importantly, the publisher usually pays for the game's development and then hopes to recoup that money through sales, meaning they have enormous power over the developer. For example, when they sign with a publisher the developer may have to hand over the rights to the IP (Intellectual Property) they're creating, meaning the publisher now owns it. This is why you'll see some game series abruptly change developer, with the publisher assigning subsequent games to whomever they like.

"Apogee's Scott Miller turned this into 'the Apogee model': providing a portion of each game for free so players could decide if they liked it and then pay for the rest."

ROBOCOP 3

Developer: Digital Image Design
Original platforms: Amiga / Atari ST / PC

While most games based on the RoboCop licence were 2D platformers, Digital Image Design used a heavily modified version of their *F29 Retaliator* flight-simulator engine to create an entirely polygonal first-person adventure. There's free-roaming driving, and a flying section, but by far the best parts are the FPS levels. None of its gameplay styles are developed enough to form a full game, but they make up for this with variety.

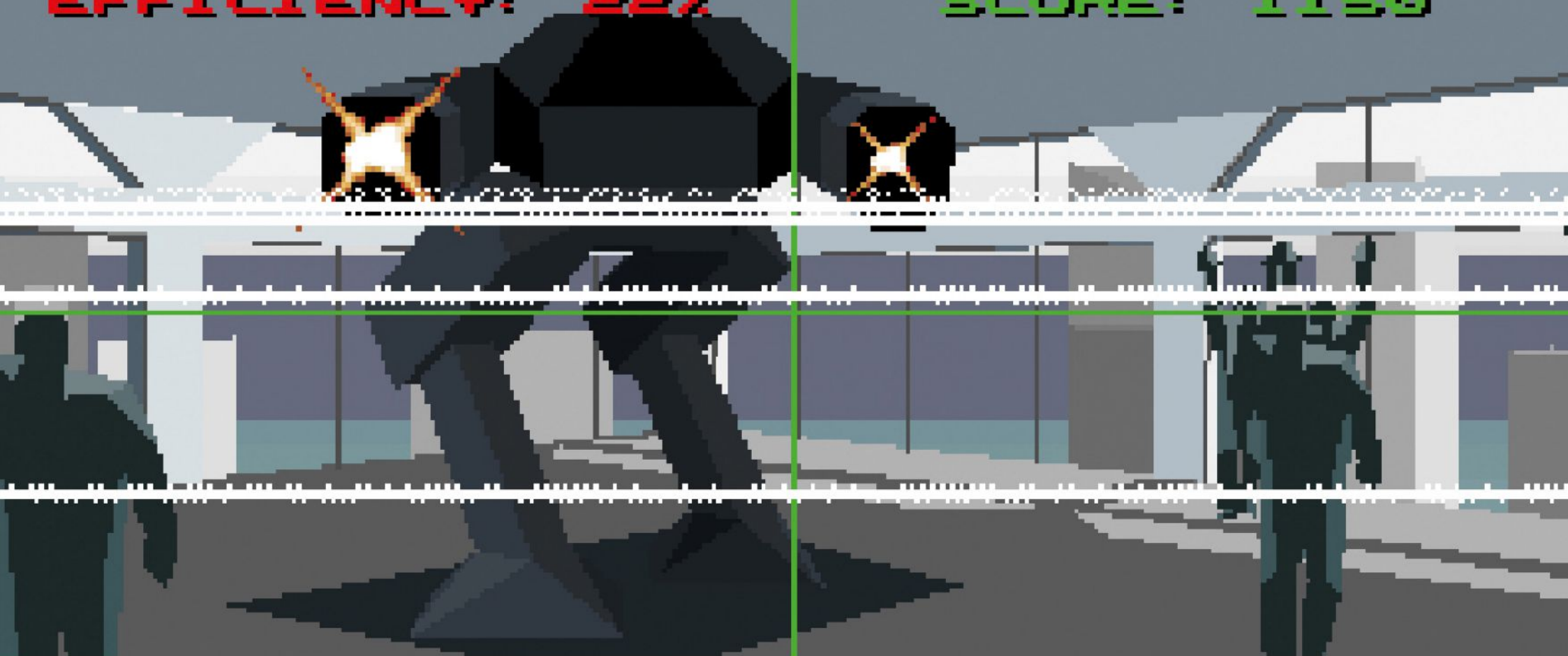
As RoboCop, you search back alleys, police stations, hotels and the OCP building, with a 'hotter/colder' beeper that certainly raises the heart rate. One section lets you choose your enemies, potentially pitting you against several ED-209s. There's even a first-person fight with a ninja robot in which you spam awkward punches and kicks before falling back on drawing RoboCop's gun and shooting them.

You can fire at any position on the screen, aiming near the edges to turn. With no way to

RoboCop 3 neatly expands on the film's plot →

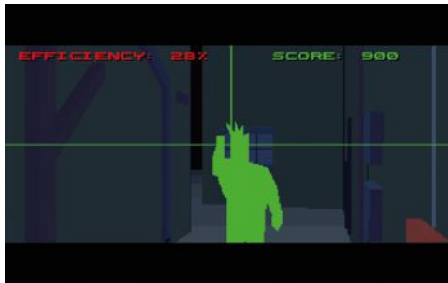
EFFICIENCY: 22%

SCORE: 1150





You see a natural stone wall.
There is no space to drop that.
You are too full to eat that now.
You are too full to eat that now.
You are too full to eat that now.



↑ Taking down RoboCop 3's punks

strafe and the controls making it tricky to navigate corners, enemies gradually chip away at your 'efficiency', getting cheap shots in before you can even see them. You also need to avoid harming civilians and shoot incoming grenades, as both quickly kill you.

Yes, the FPS sections are slow, abstract and clumsy, but there's an undeniable thrill to gliding into a packed room and killing three enemies with three headshots, all without hitting a hostage.

ULTIMA UNDERWORLD: THE STYGIAN ABYSS

Developer: Blue Sky Productions
Original platform: PC

For two games released in the same year, it's fascinating just how diametrically opposed *Ultima Underworld* and *Wolfenstein* are. While *Wolfenstein* focused on speed, *Underworld* revolved around player freedom, and where it stripped back anything that got in the way of combat, Blue Sky kept adding features.

Falling between an RPG and an FPS, *Underworld* was built on a bank of relatively simple gameplay systems that combined to give the game incredible depth and flexibility. The environments are 3D, letting you look up and down, swim and jump. The music is dynamic; you have an inventory and stats; you can create and cast spells, write on the map, plant a tree, bash down doors, eat and be poisoned, and lots more. The combat mixes player skill with invisible dice rolls and can get a little repetitive; it usually consists of stepping forward to attack then backing off, though it does allow you to swing, stab, chop, shoot and even throw things.

There are also conversations with NPCs, complete with olde worlde English ('Thou shouldst watch thyself'), though the game's flexibility extends to letting you murder almost everyone and still be able to complete it.

Underworld was developed by Blue Sky Productions, who would later merge with Lerner Research (best known for simulators like *F-22 Interceptor*) and evolve into Looking Glass Studios. The game's engine originated from 1989's similarly ambitious *Space Rogue*, but was replaced to allow for texture mapping and the last minute addition of a lighting system. There was no grand plan for *Underworld* or its engine, with features added over time. In an interview with *PC Zone* magazine, programmer Doug Church said, "We wanted to do a *dungeon simulator*, and none of the programmers had really done this sort of game, so we were pretty ambitious and not too smart."

Though its fans loved it, *Underworld's* demands - both in its technical specs and in the dedication required from the player - made the game a slow seller, causing Origin to dial back its advertising. That

said, the publisher was already struggling to explain the complex game's premise, with one ad calling it "*the first continuous-movement, 3D-dungeon, action fantasy!*"

Adding designers to the team for the sequel, *Ultima Underworld II: Labyrinth of Worlds* (rather than programmers creating all the content, as in the first game), brought more polish, colour and variety to the quest. Unfortunately, it too sold steadily but slowly, meaning Origin, and later new owners Electronic Arts, had little interest in a third game. As a result, the series would lie dormant until a spiritual sequel, *Underworld Ascendant*, was released in 2018.

Irrespective of its sales, it's easy to trace a line of descent between *Ultima Underworld's* technical innovations and freeform ethos, and later immersive FPSs like *System Shock* and *Deus Ex*. *PC Gamer's* Tony Ellis summed it up nicely with: "*Wonderfully, richly, impossibly interactive, UUII was a game from the future.*"

WOLFENSTEIN 3D

Developer: id Software

Original platform: PC

In 1992, id (originally Ideas from the Deep, later shortened) was best known for its shareware-distributed 2D platformers following the adventures of Commander Keen. But behind the scenes, John Carmack - id's engine programmer - was working on convincing the slow PCs of the day to draw first-person mazes. These initial experiments - *Hovortank* and *Catacomb 3-D* - incrementally built towards the game which would blow id's previous successes out of the water and set its direction for the next three decades: *Wolfenstein 3D*.

Playing as BJ Blazkowicz, you explore the dungeons and corridors of Castle Wolfenstein, mowing down Nazi soldiers, dogs and over the top bosses, including the infamous Hitler-in-a-robot-suit. Even today the prominent swastika flags and DeathCam™ showing each boss' graphic demise still raise an eyebrow, though id weren't asked to tone down the gore until the Super Nintendo conversion (more on this when discussing 1994's *Super 3D Noah's Ark*).

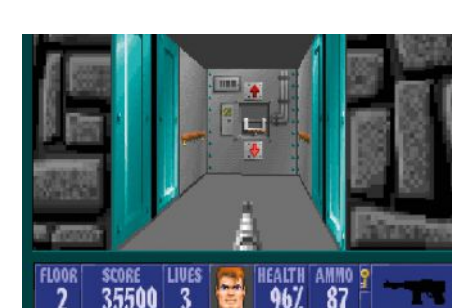
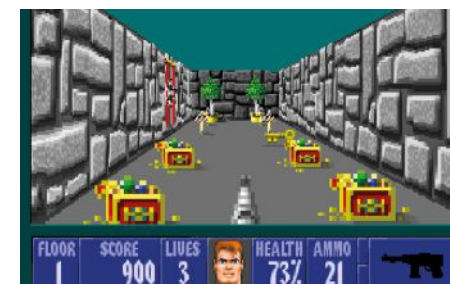


↑ *Wolfenstein 3D* doesn't skimp on the violence ...

Wolfenstein's setting is based on Silas Warner's 1981 Apple II stealth game, *Castle Wolfenstein*, which id bought the rights to, and despite the speed of the player's movement *Wolfenstein 3D* still retains the 'feel' of a stealth game. Enemies deal huge amounts of damage, so charging into rooms means death, though the generous auto-aim and high damage you kick out dispatch foes just as quickly. This gives the game a stop-start rhythm of cautious firefights and racing through labyrinthine corridors. The

feeling of being in a maze is reinforced by the lack of roof texture, meaning it always feels vaguely outdoorsy.

"Enemies deal huge amounts of damage, so charging into rooms means death, though the generous auto-aim and high damage you kick out dispatch foes just as quickly."



↑ ... though exploration is also key

From a modern perspective, *Wolfenstein 3D's* limitations are clear, though each of them clearly originates from the focus on speed: in order to get the player's movement smooth and fast the engine has no lighting, angled walls or variation in floor height.

Plus, to focus the gameplay on exploration and combat, id stripped out proposed features like searching or dragging dead bodies. The result, particularly in later episodes, wavers between attempting to provide



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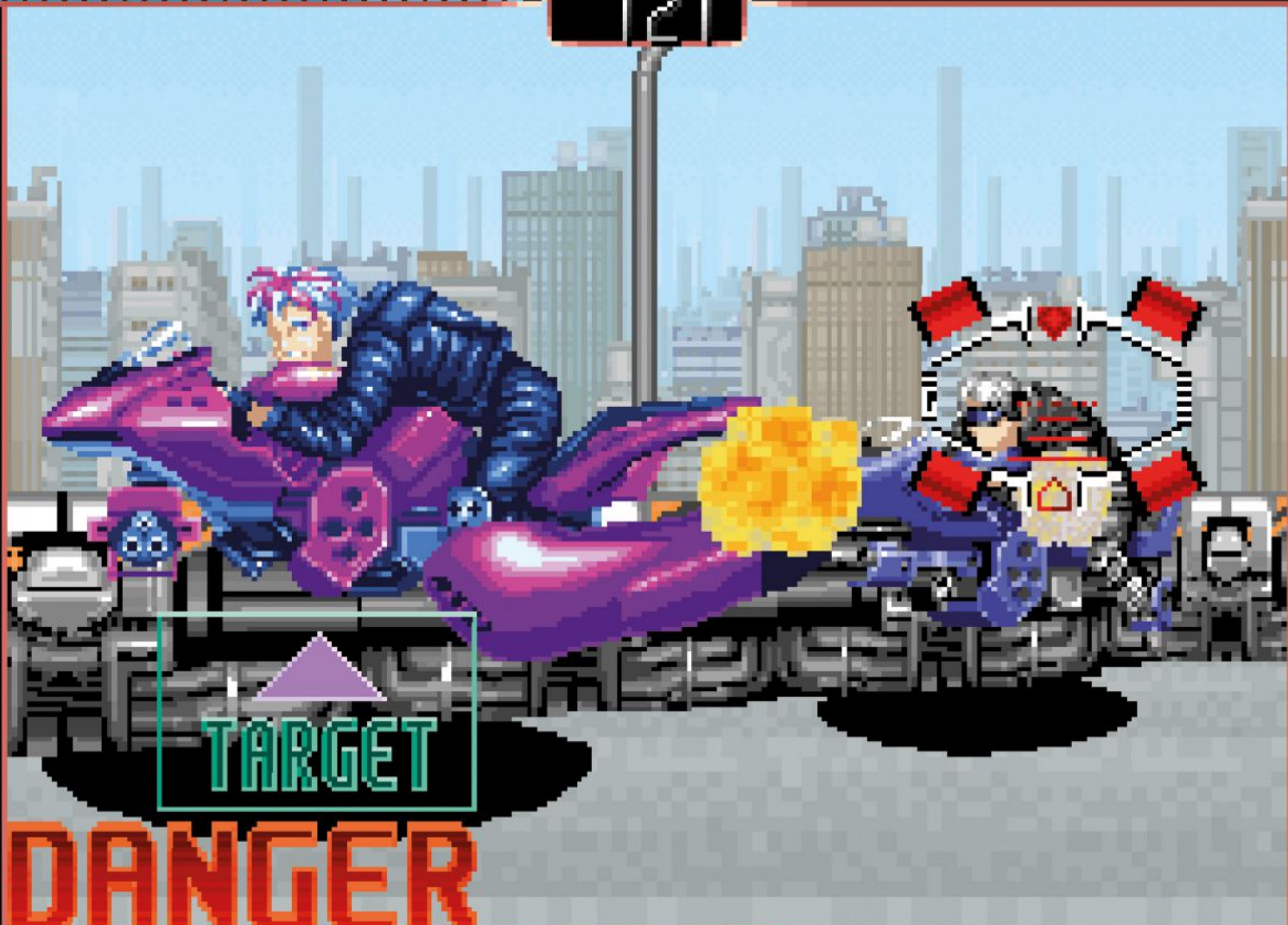
TARGET LIFE



TIME

121

OPERATION SIDE



TARGET

DANGER

642406

SCORE
LIFE



PUSH 2P BUTTON

CREDIT 8

immersive castle environments and *Pac-Man* style mazes (to the extent that a level paying homage to *Pac-Man*'s maze was hidden in the game).

Compared to later FPSs, *Wolfenstein 3D*'s gameplay incorporates arcade-like elements such as the player having lives, an approach that would quickly be dropped for the more modern save/load system. Kills, speed and collecting the treasures hidden in the castle's many secret chambers earn you extra lives, and if you lose one you restart the current level with your weapons reset.

Though the game's technology and gameplay are both limited, it's easy to see how incredibly immersive *Wolfenstein 3D* must have been to players used to turn-based dungeon exploration during which enemies politely awaited their turns. Here, the environment constantly feels dangerous, and it comes as a shock when you first realise that enemies can open doors and patrol the levels. Even so, id were really only getting warmed up ...

GUN BUSTER

Developer: Taito
Original platform: Arcade

Gun Buster (a.k.a. *Operation Gunbuster*) is a fantastic demonstration of the sheer imagination and verve of the early '90s Japanese arcade scene. While it includes features that wouldn't be common in home FPSs for some years - glass, rain, co-op play - the game's most notable feature is its control scheme. Up to four players can crowd round the huge cabinet, each using a joystick to move and strafe while simultaneously holding a gun that not only aims the crosshair but turns your view.

Levels are little more than claustrophobic arenas filled with pillars to hide behind and sprite furniture to be smashed by gunfire. Combat is similarly intense, pitting you against a series of robotic bosses that could easily have stalked from the pages of any of Masamune Shirow's manga. As if the complex controls weren't tricky enough, the action is relentless, with bullets flying everywhere, constant explosions,



↑ Part of *Gun Buster*'s appeal is its' cool, 90's anime characters

small enemies being spawned that fire smaller missiles and even characters who suddenly appear at the front of the screen to stab you. Also of note is that in contrast to *Wolfenstein 3D*'s 'hitscan' enemy shots, which either instantly hit or miss, here some projectiles must be shot down while others need to be dodged.

While it's no surprise that the challenging pat-your-head-while-rubbing-your-tummy controls made *Gun Buster* an intimidating arcade game, it's nonetheless

a fascinating glimpse at an evolutionary path the FPS could have taken.

"Up to four players can crowd round the huge cabinet, each using a joystick to move and strafe while simultaneously holding a gun that not only aims the crosshair but turns your view."

← Some *Gun Buster* levels revolve around chasing down fleeing targets

INTERVIEW WITH SCOTT MILLER



Having made, written about, designed and produced games for over 40 years, Scott Miller is responsible for some of the biggest hits in this book. He founded Apogee and helped id Software get started, then set up 3D Realms, creators of *Duke Nukem 3D* and publisher of Build-engined games, and is even credited with introducing the idea of players paying to unlock later episodes in games.

Even before setting up Apogee you were active in the gaming scene. Can you give us some insight into what made you decide to set up your own games company?

Scott: I had been making little text and ASCII-based games for a few years before officially starting Apogee in 1987¹. And with Apogee it was just because I thought I needed a company, without really knowing why back then.

When I started Apogee, I started releasing my games onto bulletin board systems. I released two of my previously made and published text adventure games (via *Big Blue Disk*, a monthly subscriber-based magazine that came on disks, a competitor to *Softdisk*²) *Beyond the Titanic* and *Supernova* online, but without much success. Both games were released in full, and had splash screens that asked for people to send me money if they liked the game.

Coming up with the concept of dividing your games into episodes through shareware was Apogee's big break³, but how much of a risk did you think the approach was at the time?

This was definitely not a risk an established company would have taken, so an innovation like this simply had to come from someone like me who had little to lose. I was lucky that it worked beautifully. People don't pay for what they already have in hand, but they WILL pay for more levels in a game they already know they really like.

"The coder, John Carmack, had made a clever breakthrough that immediately put him ahead of everyone else on the PC. Turns out, Carmack would stay ahead of everyone else almost the entire decade."

You famously helped id get set up so they could work on Commander Keen games for Apogee, which would in turn lead to *Wolfenstein 3D*. Was there a single event that told you to support these relatively unknown guys or was it a combination of things that led you to do so?

After I contacted them and convinced them I was legitimate, they sent me a demo that blew me away. The demo was a little mock-up of Mario running around in a *Mario World*-like level. The part that stunned me was that pixel-smooth screen scrolling, something I'd never seen on a PC before. The coder, John Carmack, had made a clever breakthrough that immediately put him ahead of everyone else on the PC. Turns out, Carmack would stay ahead of everyone else almost the entire decade when it came to game engines.



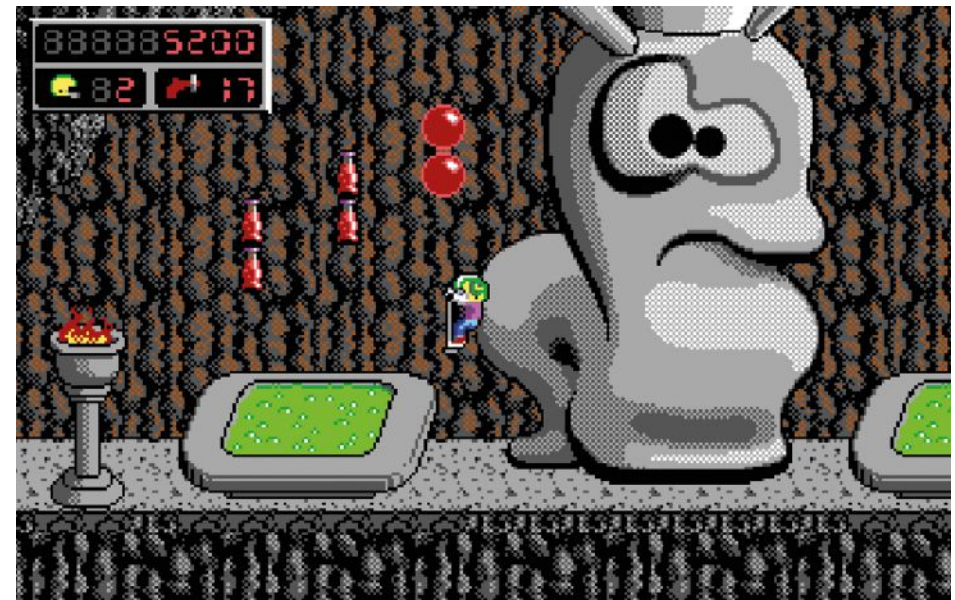
↑ The Kroz games were an early shareware hit

I knew I needed to work with these guys, whatever the cost. So I told them to send me an idea for a game and I'd fund it. They sent me a one-paragraph idea describing *Commander Keen*⁴. I sent them a cheque without hesitation.

"I knew I needed to work with these guys, whatever the cost. So I told them to send me an idea for a game and I'd fund it."

Mobygames.com has this as part of its entry on 3D Realms: "3D Realms has never had a game budget or used a spreadsheet for budget planning - they only had expense tracking." I'm interested in how that worked; how much did 3D Realms get involved with what the developers were making?

That was something I said many, many years ago. The idea was, we only cared about making a great game, and the budget wasn't important. Luckily, we were in a position not to have to budget



↑ The Commander Keen games featured smooth scrolling

after our early successes. We generally knew that a game would cost us a few million dollars to make (back in the '90s) and that was easily doable for us many times over.

In general, I handled our external projects while my partner, George Broussard⁵, handled the internal projects. For example, I was involved with *Max Payne*⁶ from day one, helping to pick the game's genre, its look and feel, the hero's name, on and on. I literally wrote thousands

of design notes for *Max Payne* during the game's development, all still in my archives. And many of that game's key ideas came from me, like the slow-motion gunplay, the name 'bullet-time', the sniper-cam. So yes, 3D Realms was significantly involved. We were also heavily involved with the game's marketing and the box design; I personally wrote all of the marketing text, and selected all of the press quotes we used on the box. I also wrote or co-wrote the press releases for all Apogee/3D Realms games.



↑ Packed with horror references, Blood delivers exactly that

↑ Blood's tone varies, but tends towards black comedy

"We purposely designed Duke Nukem 3D to be humorous nearly from the beginning. After all, you can't take a lead character who goes by 'Duke Nukem' as too serious."

I was working in a cyber cafe when Duke Nukem 3D came out and every weekend, after I locked up, my friends and I would play FPSs on the LAN until the early hours. We'd play some Quake but our main deathmatch game was

Duke 3D because rather than po-faced 'serious' shooting, it let you have fun while killing your friends. Was that a deliberate direction for the project from the beginning, or did it just emerge from the weapons and elements in the game over time?

We purposely designed Duke Nukem 3D to be humorous nearly from the beginning. After all, you can't take a lead character who goes by 'Duke Nukem' as too serious. And our reasoning was that id Software had super-serious, non-funny gaming all

locked up. So, we knew we had to take a different approach. And honestly, we liked being somewhat silly!

You've talked before about deliberately courting controversy with Duke Nukem 3D, but each of the Build games skirted lines, such as Blood's gore and Shadow Warrior's Asian theme. Were there ever occasions when 3D Realms had to rule out ideas or content, or was this completely up to the individual teams?

Well, I remember in Duke Nukem 3D my partner George wanted to put in some stuff that made fun of religion, and I was able to talk him out of doing that. I just thought that religion should be off-limits because it can affect people in powerful ways, and we shouldn't cross that line.

But overall we pursued controversy because being in the press for any reason seemed like a good idea to boost awareness of a game. The only time we didn't like being in the press



↑ Duke Nukem 3D established the Build engine's speed and flexibility

was getting a bad game review, and luckily that didn't happen often.

Prey and Duke Nukem Forever are both outside the scope of this book, and a lot has been written about them already, but I was curious about the sudden shift from 3D Realms releasing eight unique FPSs (plus many other games) in two years to suddenly focusing on internal projects that took over 10 years. Was this a deliberate decision to focus on fewer, bigger games?

We definitely didn't purposely try to make a 10-year game! With *Duke Nukem Forever*, we always hoped we were within two years of release, it's just that we didn't staff up properly and we couldn't make the game we wanted to. It was 100% an internal management failure. With *Prey*⁷, the game took only two years to make, once Human Head Studios⁸ began development on it, and I was heavily involved with its design from the start. Human Head is a super-professional studio and got that game done on schedule - I loved working with



↑ Chunky weapons and eclectic enemies in Duke Nukem 3D

them, and especially my main contact there, Chris Rhinehart⁹. He and I became good friends.

"We definitely didn't purposely try to make a 10-year game!"

I wanted to ask about 2018's *Ion Fury*¹⁰. What triggered the decision to make that game? There hadn't been a big Build engine game since 1999 and suddenly you're making a brand-new game in that engine, as opposed to using something like Unity.

Retro FPS games have been making a comeback, seen with our release of *Rise of the Triad* (the 2013 reboot sold over 400k copies on Steam)¹¹ and *DUSK* (by New Blood)¹², so we wanted to make another retro game and it just made sense to us to make one using our original Build engine. And it was a big hit for us! It really shows that gamers have come to care less about graphics quality and more about pure gameplay and fun. I mean, look at games like *Minecraft* and this should be more than obvious.



↑ Like Blood, Shadow Warrior added new functionality to the Build engine

↑ Shadow Warrior's arsenal features some fun weapons

Author's notes:

[1] Apogee Software was Scott's first publishing venture and focused on shareware to sell games. Apogee had ties to many of the game studios operating in Dallas, with people who left the publisher setting up on their own. The studio was succeeded by its own division, 3D Realms, created to differentiate the new breed of 3D games they were publishing from their old back catalogue. Apogee returned as a publisher in 2021, going full circle by helping indie devs.

[2] Softdisk was a games publisher that released 'disk magazines' containing games and programs before the internet took over. The founders of id Software worked there, as did people who would go on to join Origin Systems.

[3] The Kroz games were 'Rogue-likes', using ASCII characters to display their dungeons, and were programmed by Scott. Making the first episode free and asking people to pay for the rest was a huge success, allowing Scott to quit his day job and focus on growing his publishing empire.

[4] Commander Keen was a series of 2D platforming games created by id Software that came about because John Carmack had made a demo of a Mario level. Nintendo weren't interested in moving into the PC market so id created their own platform character. The game's most notable feature was its smooth scrolling, something that PCs of the time struggled with.

[5] After releasing games using the name Micro F/X Software, George Broussard partnered with his high school friend Scott as co-owners

of Apogee and later 3D Realms. Broussard is best known for leading development of Duke Nukem 3D and Duke Nukem Forever.

[6] Max Payne is a third-person shooter developed by Remedy Entertainment (who would move on to Alan Wake and Control). The game is notable for its noir style and comic panels, but is best remembered for giving players control of 'bullet-time' and allowing them to mow down enemies in stylish slow motion.



↑ Ion Fury's Shelly 'Bombshell' Harrison quips like Duke Nukem

[7] There have been several Prey games, both released and cancelled, but this refers to the 2006 game made by Human Head Studios. Running on the DOOM 3 engine, the game went through delays and production issues but is interesting for featuring portals and arbitrary gravity.

[8] Formed by ex-members of Raven Software, Human Head Studios operated from 1997 to 2019 and is best known for the Rune series. Following the studio's closure, the team formed Roundhouse Studios as

part of Bethesda Softworks' stable of developers.

[9] Chris Rhinehart is creative director at Roundhouse Studios and has been involved in games like Heretic, HeXen and CyClones.

[10] Developed by Voidpoint, Ion Fury mixes the classic Build engine feel with modern additions to the FPS genre. It's very much a spiritual successor to Duke Nukem 3D, with the same interactivity, over the top violence and gleeful humour.



↑ Ion Fury utilises modern computers to push the Build engine

[11] Created by Apogee Software and Interceptor Entertainment, the Rise of the Triad remake runs on the Unreal engine and mixes classic and new elements. One thing that hasn't changed is the game's sense of humour, with one character called Grozgerzasrogtiveslin Zwudizkatroltoskysitliev and another's bio saying 'Bob is a skeleton. He was created because we need another player to even out the HUNT roster. We ran out of ideas. Deal with it.'

[12] DUSK by New Blood Interactive is a retro-styled game that starts from where Blood and Quake left off but gradually transitions to surreal, twisted environments that play with what you're expecting from a classic FPS.

1993

In the early '90s, just as the FPS was rapidly evolving, videogames in general were going through a transitional period. Advances in technology made new gameplay avenues feasible and started games on the road towards 'realism'. As might have been expected, this shift in gaming content meant the wider world began to pay attention to what was happening in the medium.

Escape from Monster Manor (1993)



CD-ROM

As CD drives became cheaper, we began to see games using them for their storage space, leading to full-motion video titles like *Myst* and *The 7th Guest*. Other than being sold on CDs, the FPS genre initially ignored the new technology, largely because early CD drives were too slow to access data on the fly, leaving them relegated to playing music during gameplay. But, beginning with games like *CyClones* and *Terminator: SkyNET*, FPSs began to jump on the fashionable new FMV bandwagon by showing live-action segments between levels. A good example is *Dark Forces*, which in 1995 used hand-drawn cutscenes, while its 1997 sequel used FMV.

32- and 64-bit consoles

This year saw the roll-out of 32-bit games consoles, beginning with the Amiga CD32, Atari Jaguar and 3DO Interactive Multiplayer (which, unlike the others, was a set of specifications that allowed various companies to release their own 3DO hardware). Each console utilised CDs - the Jaguar via an add-on - and featured enough 'bits' that their FPSs began to feel more like real games and less like technical experiments.

Here 'bits' refers to the data throughput that the machine is capable of; unfortunately, the term is mostly nonsense in relation to consoles because each company only referenced the part of their machine's setup that sounded most impressive. For instance, Atari marketed the Jaguar as being 64-bit because it had two 32-bit processors.

Nonetheless, it's true that the larger, faster calculating capacity and greater memory of this generation of consoles meant that the limiting technology for their FPSs would generally not be internal, but in how the player interacted with them. Though analogue controllers have been around since at least 1976, and many consoles did feature a single analogue stick, it wasn't until the PlayStation's Dual Analogue Controller was released in 1997 that being able to move your viewpoint with one stick and look around with the other gradually became the default method of playing a console FPS.

US Congressional hearings

The growth of the games market, combined with advancing technology enabling the display

of realistic people, led to 1993's congressional hearings on video games, which cited the violence of *Mortal Kombat* (and inexplicably, the goofy *Night Trap*) as inappropriate for the children playing them. Unlike later attempts to ban violent games, the hearings were focused on getting the games industry to establish a ratings system which would prevent young players from purchasing these games.

It led to the formation of the American ESRB (Entertainment Software Ratings Board), which, along with the PEGI (Pan European Game Information) system and others around the world, still operates today. It's interesting to note that while people often include *DOOM* with the games covered by the hearings the game wasn't featured, though it would later fall under scrutiny following 1999's Columbine High School shootings.

"Advancing technology enabling the display of realistic people led to 1993's congressional hearings on video games."

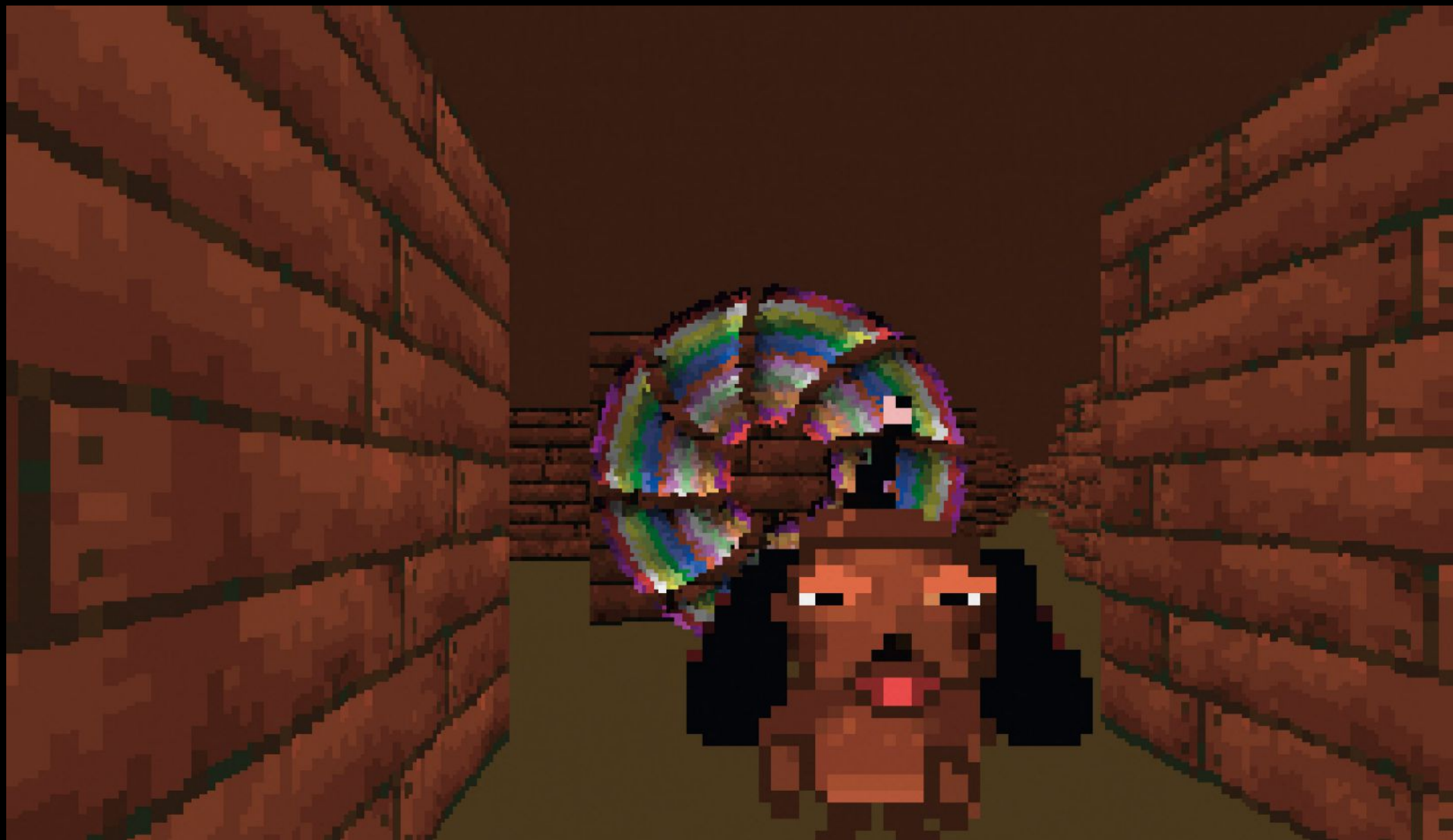
KEN'S LABYRINTH

Developers: Ken Silverman / Advanced Systems
Original platform: DOS

Ken Silverman is best known by FPS fans for creating the Build engine (as used by *Duke Nukem 3D*, *Blood*, et al.), but he produced several games before that. One was *Walken* (Walk + Ken), which transitioned into *Ken's Labyrinth* before being picked up by Epic MegaGames.

The game feels like an '80s Saturday morning cartoon, with cheery music, bright colours and chunky enemies (including the slightly disturbing, heavily muscled pink guys with what appear to be sharks for heads). Following the shareware model it's split across three episodes, with the middle featuring Sparky the dog (voiced by Epic's vice president Mark Rein), who follows you through levels accidentally blocking your shots in a manner not unlike 2000's *Daikatana*.

True to its name, *Labyrinth* features similar maze-like level design to *Wolfenstein*, but stands out for its range of interactive elements. These include fruit machines, walls that bounce shots



SCORE: 5150 | LIFE     WEAPON

TIME: 58/9  38   6  6  6

BOARD:10 End1    6  6  6

0103



JURASSIC PARK

Developer: Ocean Software
Original platform: Super Nintendo

As the smash-hit of 1993, *Jurassic Park* received a slew of videogame tie-ins, but we're focusing on the Super Nintendo version. The bulk of the game involves walking around an open-world Isla Nublar, viewing the action from a three-quarter perspective, but it swaps to first-person when you enter a building.

These sections are restricted by the console's lack of power, limiting the size of your view and needing you to get close to dinosaurs before they attack. You also turn slowly, which is a pain if you turn the wrong way and there's a dinosaur behind you (though stereo sound helps here). Despite all that, the FPS sections contain some interesting things, including elevators to travel between floors, dark areas requiring night-vision goggles, doors that swing open, computer terminals to access and secret areas. It even supports the SNES mouse.



↑ *The quirky Ken's Labyrinth*

back, spinning blades that hurt, vending machines to buy power-ups and holes that you need to lure enemies into falling through. Though individually simple, these provide a clear path to Ken's work on the similarly interactive Build engine.

Ken's Labyrinth is crude, but that's not surprising considering it was created by a 16-year-old and his 13-year-old friend (Andy Cotter - see Ken's interview). However, the game's imagination and kooky strangeness give it an undeniable charm.



↑ *Jurassic Park's first-person levels are a technical achievement*

Despite their limitations, *Jurassic Park's* FPS sections are surprisingly atmospheric and tense. Frankly, that they exist at all is notable, because movie tie-in games can't afford to miss their release windows, so tend not to take risks like this. In an interview for *SNES Force* magazine, Ocean's Gary Bracey said, "Steven Spielberg said he wanted a 'ground-breaking' game. We feel this has been achieved due to the development of the 3D technology in the interior sections." We'll

return to both *Jurassic Park* and Spielberg's influence on games through 1998's *Trespasser* and 1999's *Medal of Honor*.

"These sections are restricted by the console's lack of power, limiting the size of your view and needing you to get close to dinosaurs before they attack."

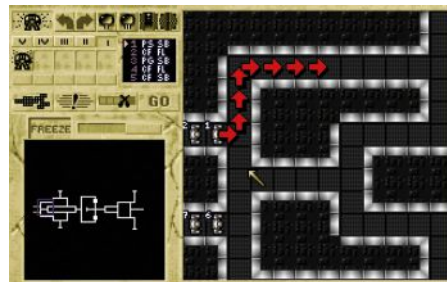
← *Though limited, Jurassic Park's FPS sections remain atmospheric*

SPACE HULK

Developer: Electronic Arts
Original platform: PC / Amiga

We're covering both the 1993 and 1995 *Space Hulk* games, to demonstrate how rapidly the FPS genre advanced in just two years. Both games are based on the boardgame set in Games Workshop's Warhammer 40,000 universe, pitting small units of heavily armed Terminators against hordes of deadly Genestealers. Unlike earlier videogame conversions of Games Workshop properties (such as Gremlin's *HeroQuest*), the *Space Hulk* games aimed to capture the experience of being a Terminator over providing a straight recreation of the boardgame.

The 1993 *Space Hulk* shows camera feeds from each of your squad members while providing direct control of one of them, forcing you to deal with a lot of information. Your Terminator moves on a grid, like a dungeon crawler but with direct aiming through the mouse. You also need to balance real-time moving and shooting with pausing to order your squad around, made harder because the game keeps the boardgame's stress-inducing timer (which depletes



↑ *The stress-inducing Space Hulk* while you're giving orders and only refills during gameplay).

The game faithfully nails the stress of playing the boardgame and it's cool to see Terminators and Genestealers up close in first-person, but the gunplay is weak and everything's too brightly lit. A lack of polish runs through the entire game, with spelling mistakes in mission briefings and completely inappropriate music in the menus. Still, the game demonstrated that there was definite potential in adapting the *Space Hulk* licence to videogames.

THE TERMINATOR: RAMPAGE

Developer: Bethesda Softworks
Original platform: PC

Following 1991's *The Terminator*, Bethesda released grid-based dungeon crawler *The Terminator 2029*, before returning to FPSs for the rest of their Terminator games. Released just before *DOOM*, *Rampage's* flat levels mean it feels closer to *Wolfenstein*, though it does add textured floors and ceilings, plus transparent glass.

The plot follows on from *Terminator 2029*, sending you back to an already overrun complex. There are 32 enormous floors to explore, moving through offices, labs and warehouses, though low ceilings and narrow corridors make them all claustrophobic.

The first 14 levels revolve around collecting the parts of a Phased Plasma Cannon, which is fun, if repetitive, until you realise there are another 18 levels. For an exploration-focused game, *Rampage* lacks the content necessary to make it compelling. The levels are huge mazes, providing plenty of

play duration but no variety or progression. For example, you face the same six enemies throughout, with T-800s that stand back up after being 'killed' offering the most interest. And though Bethesda quietly added more to your starting inventory in the CD version, there's still too little ammo early on, forcing you to revisit old levels (resources respawn but enemies don't). This is less of an issue later, as you rely on the infinite-ammo Plasma Cannon, making the other guns redundant.

Frankly, *Rampage* is most interesting as a baseline to show just how far ahead Bethesda would leap with their next Terminator game, 1995's *Future Shock*.

"The first 14 levels revolve around collecting the parts of a Phased Plasma Cannon, which is fun, if repetitive, until you realise there are another 18 levels."

SUBLEVEL 3: MAIN OFFICES

SCORE: 1125

AMMO: 647

SHEL: 46

SEAT: 74

BOMB: 77

HEAL: 24



X: 34 Y: 10

M-16 COMBAT RIFLE

HP

Never Stop Firing



Messages

Sunday, 0617 (6:17 AM)

MAP

SEARCH

REST

You see a dead Headless.
 You see a dead Headless.
 You see a dead Headless.
 Walther P4 Pistol put away.
 Survival Knife ready.
 You see a dead Headless.
 You see a dead Headless.
 You see a dead Headless.
 Walther P4 Magazine taken.

Untitled Game

Health  2.1 of 6

Power 

Survival Knife

Progress

You are 2.7m above ground. You have scored 1 of 41 points and recovered \$0.0K in treasure.

Weapon Proficiencies

Melee Combat	Expert
Colt .45 Pistol	Expert
Walther P4 Pistol	Beginner
M-16 Rifle	Expert

Inventory

Total Weight: 6.61 kg.

DROP

EXAMINE

Map
 Digital Watch (on wrist)
 Flashlight (on)
 ▶ Canvas Bag
 Survival Knife (in hand)
 ▶ Walther P4 Pistol
 Walther P4 Magazine (x8)
 Copy of Mein Kampf
 Walther P4 Magazine (x8)
 Walther P4 Magazine (x8)
 Walther P4 Magazine (x8)
 Walther P4 Magazine (x8)

PATHWAYS INTO DARKNESS

Developer: Bungie

Original platform: Mac

Before becoming the powerhouse developer of *Halo* and *Destiny*, Bungie started out as two guys working in a bedroom. Their 1992 game, *Minotaur: The Labyrinths of Crete*, struggled to find an audience due to being online only (how times have changed) so their next would be resolutely single-player.

Though developed further in *Marathon*, you can already see Bungie's DNA running through *Pathways*. There's a layered plot that requires players to actively get involved in discovering it - in this case by talking to corpses - plus unusual enemies requiring varied tactics to beat. Special mention has to go to the spectacularly disturbing legs-and-a-tongue Headless and their high-pitched screams when you stab them.

Bungie innovated in other ways too, such as forcing players to heal by sleeping, at the cost of running down the game's time limit, having an inventory that operates like a computer's file

system, and needing to backtrack through levels to progress. About the only area in which *Pathways* wildly diverges from the studio's future games is in its weakest element, the gunplay, which lacks the sharp, weighty punch of Bungie's later releases.

The slightly flat gunplay is a shame, as the game features a lot of combat, and while *Pathways* is long, it doesn't evolve much. Still, comparing the atmosphere, tension and intrigue that *Pathways into Darkness* generates with that in the similarly exploration-heavy *Terminator: Rampage* clearly illustrates why Bungie were a studio with big things ahead.

"Their 1992 game, *Minotaur: The Labyrinths of Crete*, struggled to find an audience due to being online only (how times have changed)."

SHADOWCASTER

Developer: Raven Software

Original platform: DOS

As part of his research when transitioning from the *Wolfenstein* to the *DOOM* engine, John Carmack created 'proto-DOOM' technology that included most of the latter game's features. This transitional engine was licensed and expanded on by Raven Software, and used to power *ShadowCaster*. The result is graphically impressive, featuring skyboxes, textured floors and ceilings, fog effects, different height walls, and water you can swim in, plus you can move back and forth between areas to solve puzzles.

Despite Raven's Steve Raffel claiming in *PC Zone* magazine that "our motto for the game was s.e.f - simple, easy, fun," *ShadowCaster* is much less accessible and forgiving than the studio's later fantasy games, *Heretic* and *HeXen*. For a start, its odd control scheme sits halfway between FPS and dungeon crawler, and you're immediately thrust into surprisingly complex melee combat that, alongside kicks and jumps, triggers different punches and chops depending on where you click. Gameplay revolves around unlocking and swapping



↑ The colourful *ShadowCaster*

between various animal forms, like a four-armed cat that can't swim, a rock-man and a hovering Dungeons & Dragons Beholder with magic powers.

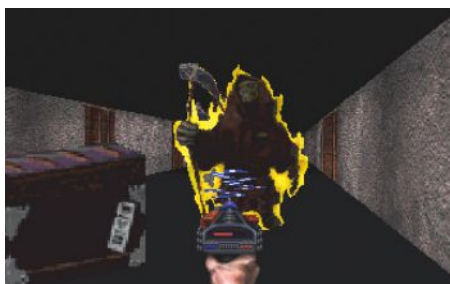
ShadowCaster's learn-or-die gameplay gives it a similar tension to From Software's *Dark Souls*, in that it offers little guidance and features enemies that are frequently deadly. I can imagine it appealing to those who enjoy the challenge of immersing themselves in a deliberately obtuse game and gradually learning to master its various systems.

ESCAPE FROM MONSTER MANOR

Developer: Studio 3DO
Original platform: 3DO

Escape from Monster Manor was born of necessity when the project Leo L Schwab was making for the 3DO stalled and he needed something to show. In the end, the entire game was built in just six months, which is something of a feat considering the 3DO was brand new, and makes *Monster Manor* the first 'Wolfenstein clone' to appear on consoles. The short timeframe also explains why the game is polished but lacking in content, with just 12 levels and only four enemy types.

Each level has you exploring a strictly grid-based environment, searching for a piece of a talisman and then the exit. Despite the auto-map, the maze-like levels are difficult to navigate, but most of the challenge comes from managing your limited ammo (if it runs out you can't attack) and keys (if they run out you have to restart the level). This scarcity gives the game a certain amount of tension, as does a bug which means one of



↑ Explore the *Monster Manor*

the enemy types can kill you in a single hit. A nice touch is the lack of HUD, with health and ammo shown via your character's hand and gun.

In his *YouTube* playthrough, Schwab describes the game as "Wolfenstein in a haunted house", which sums it up nicely. The 3DO would soon feature more demanding FPSs, but *Escape from Monster Manor* provided an early look at what the console was capable of.

BLAKE STONE: ALIENS OF GOLD

Developer: JAM Productions
Original platform: DOS

With id busy working on its next game, it made sense for Apogee to license out the *Wolfenstein* engine to other studios who wanted to create content, not underlying technology. One example is *Blake Stone: Aliens of Gold*, the first game from the three-person team at JAM Productions.

The gameplay remains fast-flowing, retaining *Wolfenstein's* instant acceleration and lack of momentum, but the team added new features, such as textured ceilings, food vending machines, and travelling back to earlier floors. These add a little verisimilitude to the experience, though it's a stretch to use the word 'realistic' when the game has you open a secret door in a lab to steal their 'loot', kill a monster called a Breather Beast and then eat a sandwich off the floor. Other fun touches include guards who play dead and scientists that may help you, plus the main villain is a balding guy in a suit and tie,



↑ Blake Stone's varied foes

which perfectly fits the 'James Bond in space' vibe.

Unfortunately, the game was released just one week before *DOOM*, whose advanced features rendered *Blake's* engine out-of-date and meant it was resoundingly ignored. But with cool music, a quick pace and lengthy play time, *Blake Stone* is a polished game for a team of just three people. It was followed by the sequel, *Blake Stone: Planet Strike*, a year later, but frankly it was already too late for the brand.

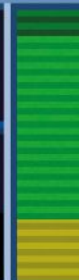
FLOOR: 1

ALIEN CONTROLLED QUARTERS

LIVES: 3



NO MESSAGES.
FOOD TOKENS: 3



71372

ACCESS CARDS



31

AMMO

35%

HEALTH

2 3 9

5 5 7

ARMS



0%

ARMOR

BULL	14	/	200
SHEL	31	/	50
ROCK	0	/	50
CELL	0	/	300

DOOM

Developer: id Software
 Original platform: PC

Flush with *Wolfenstein's* success, id began work on its next game, this time taking inspiration from demons that had overrun their *Dungeons & Dragons* campaign. With a title taken from Tom Cruise's line in *The Color of Money* and originally bearing the subtitle 'Evil Unleashed', id demonstrated their confidence in *DOOM* from the beginning, with a press release saying it would 'push back the boundaries of what was thought possible on a ... computer'. After four months of development they were offered the *Aliens* licence, but declined it to retain full creative control over their game.

Initial plans detailed in the *DOOM* bible by Tom Hall had the game featuring multiple characters, a deep story and more weapons (including the Unmaker, which would surface in *DOOM 64*). The team gradually stepped back from these aspects to focus purely on combat, contributing to Tom leaving id midway through the game's development. About the only



↑ Did *DOOM* begin the FPS genre's love affair with crates?

element of *DOOM's* more detailed backstory that survived is the 'UAC BASE TEI TENGA' writing on one of the game's monitor textures, from the originally proposed setting.

With a new engine that expanded on *Wolfenstein* in every area, *DOOM* broke away from 90-degree corners and flat environments to include height and more importantly, lighting. The added immersion triggered simulator sickness for some, but helped many more players suspend disbelief, transporting them into *DOOM's*

world of shadows and lurking monsters. Future games in the series would make the protagonist the 'Doom Slayer', but back then he was just a lone Marine - the Doomguy - which reinforced the feeling that it was 'you' trapped during an invasion from Hell. This 'isolated immersion' approach would reach its peak in 2004's *DOOM 3*.

DOOM was developed on cutting edge NeXT workstations, allowing the team to rapidly create the tools they needed, including the DoomEd level editor and



↑ Iconic weapons and enemies

an image capture tool called Fuzzy Pumper Palette Shop. The latter was used to digitise photographs of the game's monsters that were initially sculpted from clay, then when it was discovered these couldn't easily be reposed for animation, from steel and latex. Similarly, reference material helped create the game's weapons, with artists using toy guns and a real chainsaw called the Eager Beaver.

You can't discuss *DOOM* without mentioning multiplayer, because while games like *Bloodwych*

and *MIDI Maze* allowed multiple players to roam levels together, they were nothing like the blisteringly fast-paced sudden violence of the newly christened 'deathmatch'. Taking place in the relatively confined *DOOM* environments and rewarding only kills, deathmatch play favoured aggression over defence, making it ideal for fast, intense duels, and helping ensure the game still has an active community 28 years later.

DOOM would be converted to various consoles, with most compromising features in some way to get the technically demanding game running as smoothly as possible. Notable conversions include the Jaguar release, which was produced by id themselves, Sculptured Software making the Super Nintendo version in secret before sending it to id (who then published it), and even a Game Boy Advance release, which foreshadows the 'Will it run *DOOM*?' meme.

The game would also receive several expansions, including *Ultimate DOOM*'s fourth episode, *Thy Flesh Consumed*, *Final DOOM*'s *TNT: Evilution* and *The Plutonia Experiment*, *Hacx* (more on this later) and in 2019, *SIGIL*, from

John Romero. These were made possible because of the way the game separates its core executable from the relevant WAD (Where's All the Data?) file, which contains the maps, textures, sounds and so on to be loaded. Fans would go on to release an incredible amount of content for *DOOM*, including 'Death Star' levels that are rumoured to have inspired 1995's *Star Wars: Dark Forces*.

DOOM set the zeitgeist for this bold new genre, and defined what people expected from 'DOOM clones' for years to come. The game arrived at the perfect time, delivering fast first-person action that showcased what computers were capable of just as the hardware was moving from offices and campuses into everyone's homes. When Microsoft wanted to push Windows 95 as a gaming platform they ported *DOOM* to it and had Bill Gates advertise the game by appearing in a level wearing a trenchcoat and firing a shotgun. That the CEO of Microsoft was used to advertise a conversion of the game two years after its release demonstrates how important *DOOM* was - after all, how many games have an entire genre named after them?

ISLE OF THE DEAD

Developer: Rainmaker Software
Original platform: DOS

The flexibility of the FPS allows developers to fold elements from other genres into their games, such as using adventure tropes to provide context for the world or give players more to think about. *Isle of the Dead* does exactly that, melding together genres like one of its mad scientist's zombie creations.

Most of the gameplay consists of sub-*Wolfenstein* combat, with instant death traps or getting lost more of a threat than the enemies (who are huge and explode in gratuitous gore but are really only dangerous if they surround you). Approach something of interest, however, and the game swaps to a point-and-click screen, complete with an inventory of items and characters to talk to.

These sections are limited and rely on trial-and-error, but they're at least interesting and give the game most of its humour. The FPS gameplay, on the other hand, quickly grows repetitive, and its only saving



↑ *Cartoon gore in Isle of the Dead*

grace is that despite the crude graphics it manages to give the tropical island a sense of place.

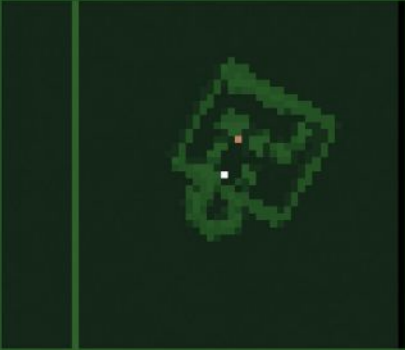
Computer Gaming World called *Isle of the Dead* the 32nd worst game of all time, while *Dragon* magazine scored it 0 of 5 stars, and yes, it is hard to recommend this game over any of the infinitely more polished FPSs available. But something about its 'defeat the mad scientist, rescue the zom-babe, escape the island' gonzo earnestness does give it a certain B-movie appeal.



.....N.....



PICK
ITEM



DOOR
OPEN

000 

WEAPON


F1 HELP

INVENTORY

FPS
088

BP SYS: 000
 BP DYS: 000
 PULSE : 000
 RNDS F: 000
 RNDS H: 000
 TARG E: 000

HEALTH



TOP
SECRET



THE POWER 3D ENGINE

Developer: Pie in The Sky

Software

Original platform: DOS

One of the joys of writing this book has been discovering little pieces of FPS history that I had absolutely no idea about, such as the POWER 3D engine and the games made with it.

Set up in 1987, Pie in The Sky Software produced programs such as a screensaver and a flight simulator until they saw *Wolfenstein 3D* and decided to write their own FPS engine. Their first game with this tech was 1993's *Lethal Tender*, which revolves around a bad guy making bombs from money, leading to the brilliant tagline 'Money is the root of all evil'.

The game innovated in several areas but needed twice as much development time and money as it received, meaning it beats *System Shock* to certain elements while simultaneously being terribly crude. For instance, you can pick up and drop items, have limited inventory space to manage, can always see a map, have multiple hit-locations and can pick up and read notes.

You can also destroy a generator to turn out the lights in a level, go outside, and walk back and forth between levels.

It really is impressive, but it's all undermined by the awful combat - with your character's slow turn rate making it hard to aim - and incredibly poor AI that doesn't react to a hail of bullets just missing them or to a friend being killed a foot away. And yet the sheer ambition and cheesy tone mean the game is always surprising or amusing. I love the health and safety notes you find alongside secret plans just lying on the floor, and the game's incredibly long and overly-detailed text intro.

Lethal Tender was followed by 1994's much improved, but still not great, *Terminal Terror*, which has a pseudo 'Die Hard 2, hostages in an airport' narrative, and the tagline 'Nick Hunter Kicks Back and Kicks Butt'. Gameplay is more fun and includes elements like talking to people, a Goo Gun that incapacitates enemies and a melee attack called the 'ninja kick'.

After this, the company swapped to focusing on selling their



↑ *Industrial Killers* was created to promote the engine's features

engine rather than making games with it, leading to the *3D Game Creation System* (which has the POWER 3D engine running underneath it). That was used for several games, including *3D Xmas Adventure: Santa's Rescue*, *Industrial Killers*, *Red Babe* and *Chub Gam 3D*. I must also mention 2001's *Pencil Whipped*, by Lonnie Flickinger, which was described on *OldManMurray.com* as "a link between genius and complete incompetence". Please do check out a video of it - I can't decide if the best/worst part is the enemies who smack you while

shouting 'Smack!' or the tiny enemies with the little-girl voices who make horrible choking sounds when killed. The game is simultaneously amazing and awful, incredibly ambitious and unarguably clunky - a mix which I think pretty much sums up the whole POWER 3D journey.

"It beats *System Shock* to certain elements while simultaneously being terribly crude."

INTERVIEW WITH KEN SILVERMAN



1996 saw the arrival of both id's *Quake* and 3D Realms' *Duke Nukem 3D*, with each contributing to a direction the FPS would take over the next few years. *Quake*'s technology showed what could be achieved with fully 3D, polygonal worlds, immediately creating a new benchmark for FPS engines. But while highly atmospheric, those worlds were clearly just spaces to fight in, and never quite felt like real locations, which is where *Duke Nukem 3D* came in. The game went out of its way

to present a seedy, '80s action-movie world, complete with real-life locations, including elements like bathrooms, CCTV and light switches.

Their different priorities were also reflected in each game's multiplayer. *Quake* provided the 'serious' deathmatches, with an extremely high skill ceiling for players seeking mastery, but *Duke Nukem 3D* was more 'fun', giving players the tools for comedy kills in levels full of shortcuts and secrets.

Duke Nukem 3D, *Blood*, *Shadow Warrior* and several other games were all powered by the Build engine, created by Ken Silverman, whose previous game, *Ken's Labyrinth*, we covered in 1993.

Were you into any particular games when you were younger, or was it all about the coding for you?

Ken: Of course I liked playing video games, but my parents were

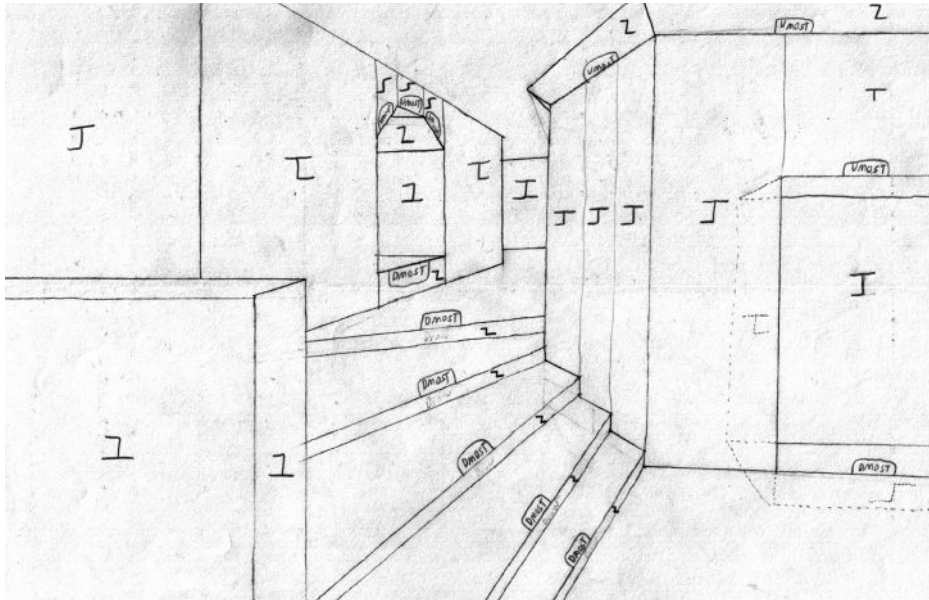
very reluctant to buy them. My favourite game back then was *Pole Position*¹. I thought the 3D view was the coolest thing ever. I didn't know much about 3D graphics, but that didn't stop me from trying - first in TI BASIC, and later on the PC/QuickBasic. This was years before *Ken's Labyrinth*. Sadly, I never got a demo past a static picture of a road with animating centre lines.

***Ken's Labyrinth* includes an array of gameplay elements not seen in other FPSs of the time. I'm interested in what inspired you to make that game so varied and interactive?**

At first, I was just seeing if I could copy the *Wolfenstein 3D* engine because I thought it was really cool. Once I got a basic raycaster working, I challenged my friend Andy Cotter (who I used to visit every week) to make an interesting map.

We never had a plan for the game. What did we know? I was 16. Andy was 3 years younger. We were just hacking stuff that looked cool for the purposes of impressing each other, and to a lesser extent, others. As in any project, we both had plenty of ideas, most of them impractical. The decision about what to work on was based on a simple unwritten formula to maximize coolness divided by effort. Wouldn't it be funny if there was a walking hole? Hmm ... that's not too hard to draw. What about a water fountain that gives health? Easy enough.

As far as interactivity goes, there was nothing hard about its implementation. I think a better question is why *Wolfenstein* did not have that. I'm sure id thought of those things. I imagine they were trying to stick to a formula by keeping the player focused on the action.



↑ A 1993 sketch of Ken's, looking at how to best remove hidden surfaces

Your personal website² lists Build engine games that you were involved with supporting, either in a major or minor way. Can you provide any more details on what that entailed? Were you working directly with the teams in question or going through Apogee/3D Realms?

In the beginning, George Broussard³ made a list of ideas and sent it to me. That didn't last long though. Once a few teams joined in, it was easier to just have them contact me directly. I spent most of my

time working with each team's head programmer.

I worked with four teams in person: *Duke Nukem 3D*, *Shadow Warrior*, *Blood* and *Powerslave*. I spent the most time with the *Duke* team because they worked in-house at the Garland (TX) office. The *Shadow Warrior* team moved to Garland for the last year of game development, while I visited the *Blood* team in Redmond (WA) three times. On my first trip to Redmond, I also visited the *Powerslave* team. As for *Capstone* and *Xatrix*⁴,

my interactions were limited to a few emails. I never actually met them in person.

When I was working remotely (which was the majority of the time), I would get a lot of phone calls. I would upload changes relevant to all teams using the company's BBS (Software Creations). If something was urgent, I would send files directly by modem.

One of the best features of *Duke Nukem 3D* was the interactive elements that made levels feel alive. Did you create things like the pool table and security cameras, or were you working on specific areas needed by the teams working with Build?

Those features are part of the game code, not the engine. I didn't have much time to work on gameplay code. I mostly kept busy with new features and bug fixes in the engine and tools.

Todd Replogle⁵ wrote the code for the pool table. If I had done it, I would have spent a lot more time getting the rigid body physics for the balls correct. The funny thing is, if I had done that, it would have been a big waste of time.

I can't remember anyone ever complaining that the balls in the pool table bounce randomly.

Todd wrote the security camera code, although I had to provide a support function in Build to capture a rendered scene to a texture. The only gameplay element in *Duke* that I wrote myself was the Duke Bots. It was an interesting programming challenge - how to navigate sectors without getting stuck. Also, I was curious to see what a 'perfect' computer player would be like if limited to the same controls as the player. Not everyone knew about this feature, since it had to be activated at the command line with a special option, for example: 'duke3d /l8 /a /q8'.

A bunch of things in *Duke* were inspired by things in my Build demo (KenBuild). Examples included subways, various door types (swinging, revolving, Star Trek), and water fountains.

"At first, I was just seeing if I could copy the *Wolfenstein 3D* engine because I thought it was really cool."



↑ Ken's Labyrinth demonstrated teenage Ken's game creation skills

Games are usually shipped when the development time runs out rather than when they're 'done'. Is this true with engines, too? Are there any features you've always thought could have been improved in Build or that you're particularly proud of?

Of course. There are always more ideas than time available to implement them. Whenever another company released a game, I found that my to-do list grew considerably. Some of the more interesting (and difficult) features on my Build to-do list

that never made it were:

True perspective for look up/down - 6 degrees of freedom.

Advanced lighting system with true dynamic shadows, colours, spotlights.

Native support for room over room.

All of these would have required a big rewrite to the engine - and also a higher-end system to run. Many years later, I wrote 'Build 2' with these features⁶.

For the original engine, I would say the two biggest things that separated it from *DOOM* were:

Editing in 3D mode - I don't believe this had been done before.

On-the-fly wall sorting (i.e. no BSP), allowing freedom of movement in x/y. This made swinging doors and subways possible.

A typical gamer would not notice these things. I suppose they would just think the artists, map designers, or game programmers were really dedicated or clever.

For gamers at that time, the FPS genre was defined by the 'battle' between the Build engine and id's work. Were you aware of the public reaction to your games, of other games and engines coming out, or how well your games were doing?

Duke was released in January 1996. Id released *Quake Test* in February 1996. The result was that Build suddenly looked obsolete. However, people still commended the gameplay of *Duke*. It sucks that everyone had to point out that the one thing

wrong with the game was its inferior technology.

Of course, I saw *Duke* being featured in various magazines in the mid '90s, and on occasion I would even receive a royalty payment that exhibited its popularity. Mostly, I just watched from the sidelines. A few years later, I put up a personal website and I started receiving a lot of emails - questions about Build technology, job offers, licence questions, people telling me I'm an inspiration (for birth control?), interview requests, etc.

Finally, I remember at the time that my friends and I were completely convinced that you'd be involved in the next generation of game engines after Build, but from our perspective you disappeared from the industry. I know that you went back and completed college and worked on Build2 as a hobby, but were you ever tempted to continue your career in the games industry?

After Build, I continued to dabble in new technology, such as voxels and compression, compilers. Meanwhile, the industry went in a different



↑ First used in Duke Nukem 3D, Build engine games had a distinctive style

direction. Even when it was fresh, my stuff looked old and blocky compared to modern games that used graphics acceleration. It's really a shame, because today you see a lot of new games based on voxels⁷.

As for employment at another game company, I never found the right opportunity. I wasn't interested in working on someone else's ideas, and nobody knew what to do with a voxel engine at the time. Keep in mind that this was years before *Minecraft*.

For a few years, I tried to form a team around Voxlap. I found another programmer in Tom Dobrowolski⁸. We made a few demos together but nothing that was good or polished enough to commercialize. I eventually lost interest and released the source code.

"It's really a shame, because today you see a lot of new games based on voxels."

Author's notes:

[1] Pole Position is a racing game that was released to arcades by Namco in 1982 then converted to various home platforms. Praised for its realism, it was 1983's top-grossing arcade game in America.

[2] Ken's website can be found at <http://advsys.net/ken/> and is well worth checking out if you want to dig more deeply into his games, engines and career.

[3] George Broussard is a games producer and designer, and was one of the creators of Duke Nukem. As mentioned in Scott Miller's interview, he co-founded 3D Realms & Apogee Software.

[4] Capstone were the developers of William Shatner's TekWar and the Witchaven games. Xatrix released the Redneck Rampage games before changing their name to Gray Matter Interactive, developers of Kingpin: Life of Crime.

[5] Todd Replogle is a programmer who worked on the first three Duke Nukem games. He retired from the games industry in 1997.

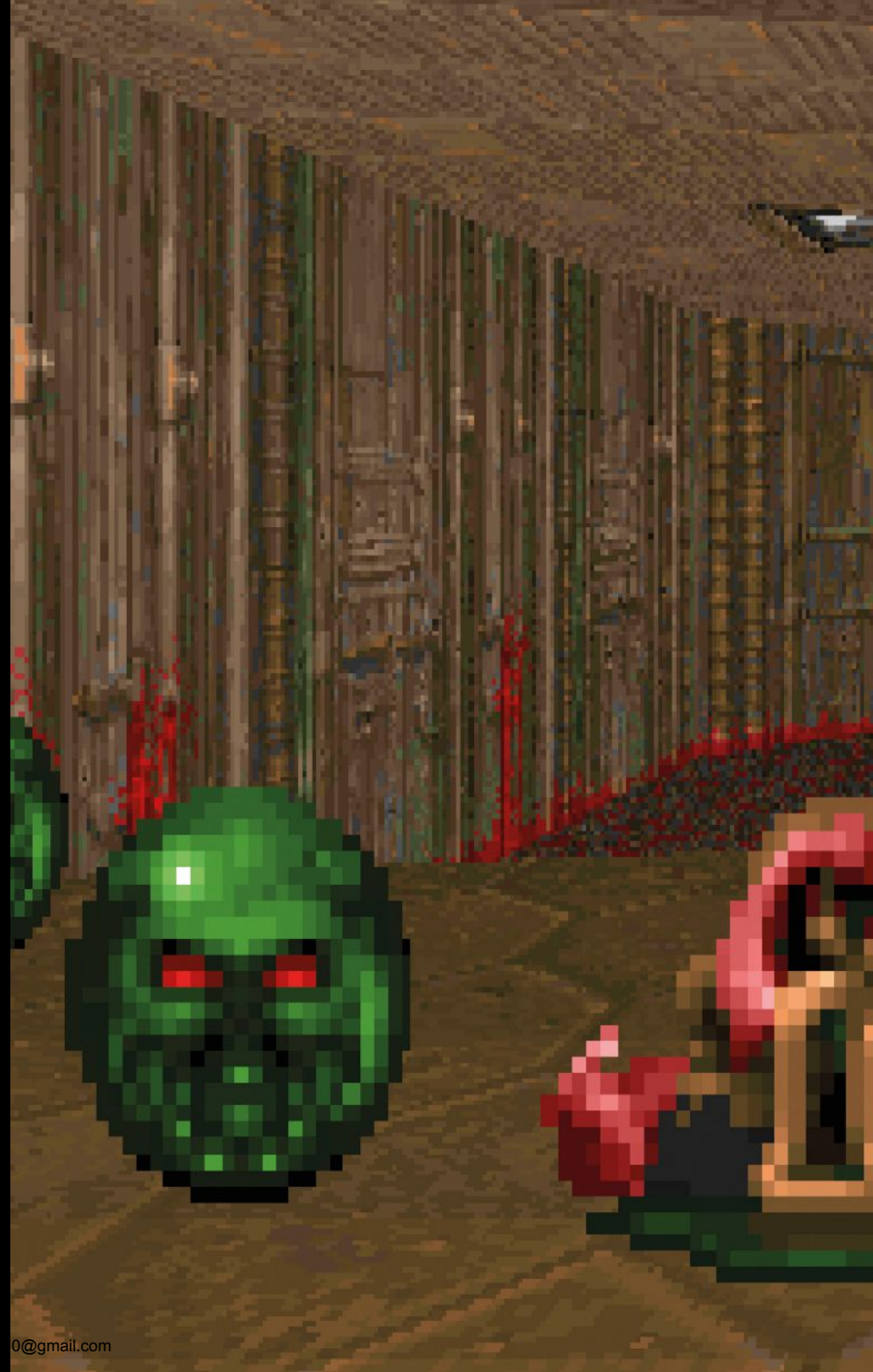
[6] Build2 is an engine Ken built over several years while helping out at a summer camp. Check out Ken's website for an impressive video of Build2, plus Polytex and Kenvex - earlier potential successors to the Build engine. Build2's features include dynamic lighting and shadows in fully 3D environments.

[7] Voxels are '3D pixels', used by games to create large spaces that can be deformed and destroyed more easily than with traditional polygons. Probably the most prominent games using voxels are Minecraft and Roblox; the 1998 FPSs Delta Force and Z.A.R. also took this approach.

[8] Voxlap was Ken's voxel engine, which allowed for large, open spaces that were generated by the computer. The game code and terrain generation aspects were programmed by Tom Dobrowolski, who was a student in Poland when he worked with Ken.

1994

In 1994, the big FPS engines were id's, with *Wolfenstein's* tech being replaced by the more powerful *DOOM* engine. But over the coming years, more and more FPS engines appeared, each with their individual strengths. Some would be used to power many games, while others saw only a single release before being retired. But what do we mean when we refer to 'engines'?





Reusable technology

To simplify, if you don't use an engine to make your game, then you have to reinvent the wheel for that project by creating everything you need from scratch (or sprucing up something you made for a previous project). With an engine, the development team only needs to create the bespoke features used by their particular game, with the engine handling all the low-level functionality. For instance, an engine might render what you see, play audio, deal with player inputs and saving/loading, handle AI and pathfinding, provide a physics simulation and so on.

Another advantage to using a pre-existing engine is that it might include tools for the developers to create content, allowing less-technically focused team members like artists and designers to get straight on with making the game rather than waiting while tools are built. In turn this frees programmers to focus on creating additional functionality that will be added to the engine for this particular game, such as Raven adding an inventory system to the *DOOM* engine for *Heretic*.

Sometimes these additions take the team's version of the engine so far from the original that it branches off into a whole new engine, such as Valve's Source, which can trace its roots all the way back to the *Quake* engine.

Advances in technology

Modern engines like Unity or Unreal encompass a vast array of developer tools, but in the period this book covers they tended to be focused on rendering environments with as much speed and fidelity as possible. They began as 2.5D engines - like *DOOM* and *Build* - with games taking place on a single plane, so even if you can change your height you never find areas on top of other areas. Then the engines moved into 3D, allowing whatever arbitrary spaces the team could imagine and giving us *Quake*'s verticality and *Descent*'s tunnels. Once all the main engines were dealing in 3D geometry, their improvements became more specialised, such as the Source engine's strong AI, or Unreal's coloured lighting.

Create or license

As you might imagine, the time and cost of developing an engine is significant, which is why so many developers license someone else's for their project. However, if a developer can afford to create their own engine there are advantages to doing so. Firstly, they own that engine and can use and grow it from game to game, whereas most licences only apply to the creation of a single project. Also, if their engine is good enough, the developer can license it out to others and recover some of its cost.

"Modern engines like Unity or Unreal encompass a vast array of developer tools, but in the period this book covers they tended to be focused on rendering environments with as much speed and fidelity as possible."

IRON ANGEL OF THE APOCALYPSE

Developer: Synergy Inc.

Original platform: 3DO

To cut to the chase, *Iron Angel* isn't a particularly good FPS, but it is a fascinating experience. You play as an incredibly '90s robot stalking through claustrophobic corridors while CP30's creepy uncle provides instructions. The gloomy atmosphere and ambiguous plot give the game an unsettling, Eastern European arthouse-film vibe. The draw distance contributes to this, because it's so short you can't assume a room is empty until you've checked the corners; combined with the tiny viewport, this means you never feel safe.

A lot of that atmosphere is lost when you actually engage in combat, with the low frame-rate meaning you only turn in fixed steps, so spend a lot of time simply trying to line up shots. Plus, while the low-poly enemies can definitely kill you, their 'dustbin on legs' aesthetic makes them hard to be scared of.

Iron Angel toys with RPG elements as you gradually



E11111S

030

02F





 84%	LEVEL	 0	 52.5					
	1:2	 95						
	SCORE	 0						
1175								
								



↑ Iron Angel's moody aesthetic

upgrade your radar, health and speed, but you're predominantly playing it for the careful exploration and ominous mood. If the game's atmosphere sucks you in, then you'll want to see it through, though true to form it finishes with a spectacularly clunky and aggravating boss fight, followed by an ambiguous shrug of an ending. It was followed by a sequel, *Iron Angel of the Apocalypse: The Return*, a year later, which was more polished and varied but sacrificed much of the original's strangeness.

NITEMARE 3D

Developer: Gray Design

Associates

Original platform: PC

At once clever and dumb, cute and brutal, *Nitemare 3D* is certainly unique. From 1990 to 1992, David P Gray released three adventures starring a character called Hugo, each packed with instant death traps. Presumably having seen the success of *Wolfenstein*, Gray's fourth game put Hugo into an FPS to again rescue his girlfriend Penelope, this time from the evil Dr. Hamerstein.

The 30 levels begin in a haunted house with the expected skeletons, vampires and witches, but quickly gets bored of that and takes you to 'the other side', where you fight robots and aliens. There's a fair amount of puzzle solving and some neat scripting, such as the power going out or monsters doing the *Thriller* dance, but none of this really matters because the game - despite looking like it's for kids - is insanely difficult.

Your bullets are slow and hard to aim, while enemy fire hits



↑ Nitemare 3D's Dr Hamerstein can quickly take you down

instantly, with 100% accuracy, and can kill you in a single shot. You can easily mess up puzzles, such as sliding a block into an unrecoverable position, and to beat the last level you must abuse one of the game's rules.

If you're looking for a hardcore challenge then by all means check *Nitemare 3D* out - you can still buy it directly from its creator. But for anyone who likes their games to be, y'know, fair, this really will be a nightmare.

"The 30 levels begin in a haunted house with the expected skeletons, vampires and witches, but quickly gets bored of that and takes you to 'the other side', where you fight robots and aliens."

← Nitemare 3D does its best to provide a varied environment

ALIEN VS. PREDATOR

Developers: Rebellion

Developments / Atari

Original platform: Jaguar

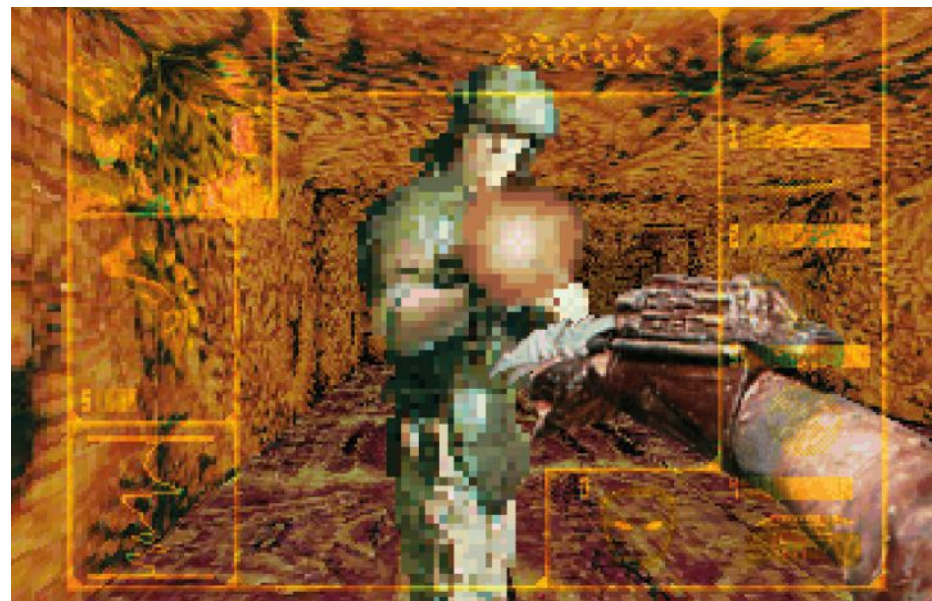
If you'll forgive the tangent, until researching this book I hadn't realised how thematically similar *AvP* and *System Shock* are to each other, with both presenting non-linear space stations under siege and using logs to provide backstory and objectives. The difference is that they come at the scenario from opposite ends, with *System Shock* full of 'stuff' while *AvP* strips everything back to the simplest 'you + environment + enemies' approach possible.

AvP allows you to play as three species, essentially presenting three games in one. The Marine campaign is the standout but also the most freeform and therefore difficult. Waking from cryogenic suspension (just as in *System Shock*), you can access every floor of the station, providing a huge area to explore. It's possible to run out of resources during play, giving a strong survival-horror feel, reinforced by your slow turn speed.

Where death as the Marine is game over (man!), the Alien is simply one drone among many, meaning as long as an egg is ready, dying simply respawns you there. This forces you to forego your deadly bitey-tongue attack in order to claw-tail-claw Marines, which cocoons them, at which point they gradually grow into an extra life. It's a clever approach, though the downside is if you respawn from an egg a long way back it's easier to just die again if you have a closer option.

Fittingly, the Predator campaign delivers a power fantasy, as you cut through enemies. You unlock new weapons with 'honourable kills', which equates to not being cloaked at the time, and can lose access to weapons if your score drops. While kills lack feedback - with attacks mostly a half-hearted swipe or poke and the enemy falling over - the iconic vision modes and cloaking are present, and hearing the movie sound effects aids immersion.

Each campaign uses the same levels, which are atmospheric, though it's a little odd to see HR Giger's organic textures applied to flat walls. The



↑ *Alien vs. Predator really stood out among the Jaguar's games*

environment is quite maze-like, with long corridors that lead to dead ends. The game's audio does a lot of work, with the ambient hums and lack of music providing an unsettling atmosphere. It's also disconcerting when you realise that, unlike in pretty much every other FPS, enemies don't make a noise when they detect you.

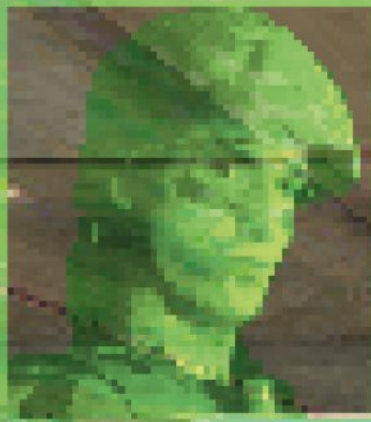
It's easy to see why *AvP* was one of the Jaguar's biggest hits, and I can remember being blown away by the high resolution

and detail in the environments and characters. Turns out the developers achieved this sense of realism by physically decorating ceramic tiles with drinking straws and suchlike, painting and then digitising them. The Alien and Predator characters were approached in the same way, with artists photographing commercially available model kits, and the Marine is one of the developers in costume. As in the game itself, it turns out you can go a long way with just a few carefully chosen elements.



SCORE :

0



1



SECURITE

00

3

4

4



LEVEL SCORE LIVES HEALTH AMMO

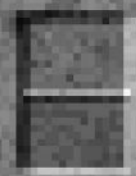
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DEPTH DWELLERS

Developer: TriSoft

Original platform: PC

One of the reasons FPSs were labelled 'DOOM-clones' was that many of them were released simply to fill the shooting-in-corridors market that had suddenly appeared. I can't cover them all but wanted to showcase *Depth Dwellers* as an example, though I could just as easily have featured *Quiver*, *Alien Cabal*, *HURL*, or many others.

Made by a husband-and-wife team, *Depth Dwellers* is a combination of slow exploration and brutal difficulty. There aren't many enemy types - all of whom shout 'Hey!' when they see you - but they take a lot of damage and pack a punch.

One thing that does set the game apart is that it supports anaglyph 3D glasses, which is a fun gimmick you'll try once. Other nice touches include being able to teleport prisoners to safety or let them get vaporised in firefights, and enemies seeing you through doorways and opening them to find you. Still, it's difficult to recommend the game over any of the infinitely



↑ *The DOOM-clone*, *Depth Dwellers*

more polished FPSs of the time, with samey and repetitive levels, some awful guns, and small keys that require careful searching.

But all of that must be balanced against the tiny size of the team, meaning the game didn't have to sell blockbuster numbers in order to be considered a success. This is still true of the modern indie scene, with niche games able to find audiences who like 'game X' and are looking for more.

SENSORY OVERLOAD

Developer: Reality Bytes

Original platform: Macintosh

Revolving around vicious terrorists taking over an office building, *Sensory Overload's* pitch is 'Die Hard with ninjas' (plus, like in *Die Hard*, picking up an enemy's walkie-talkie lets you hear them talking). As one in the eye to *System Shock* only featuring dead NPCs, you occasionally find still living characters, such as a guy behind a desk who's unaware the building is full of vicious terrorists, or one who says, 'I'll be fine', and promptly drops dead.

FPSs are defined by combat and exploration, two areas that *Sensory Overload* struggles with. It's cool that you can shoot with one hand and throw stuff with the other, but the samey enemies inflict cheap hits, damaging you with a one-frame attack 'animation'. And while the idea of exploring offices has potential, the levels are cramped and confusing. You'll need to enjoy mapping mazes as several are included, including a mass of identical rooms, each with four doors that you



↑ *The gloomy Sensory Overload*

need to try to see if they'll open. By far the best level is the Biochemical Storage Area, which uses leaking gas fumes to explain its impossible layout.

Some games end up forgotten because they were bad, but others are simply unlucky enough to be overshadowed. *Sensory Overload* wavers between the two, as being a Mac exclusive meant it was down to the game's few neat ideas to try and prevent it being swept aside by Bungie's imminent epic, *Marathon*.

SYSTEM SHOCK

Developer: Looking Glass

Technologies

Original platform: PC

I might have been spoiled by playing *System Shock 2* first, but I was surprised at how messy and experimental the original *System Shock* felt. Its predecessor, *Ultima Underworld*, required you to pay attention but was relatively straightforward to play, whereas - certainly until fan patches and 2015's remaster - simply interacting with *System Shock* was unarguably clunky.

Just look at the game's gloriously overcomplicated HUD, which encompasses inventory and energy management, mini-games, ammo selection and plenty more. Comparing the game to last year's *DOOM* showcases the sheer flexibility of approaches that first-person gaming allows.

Awkwardness aside, *System Shock* is surprisingly modern in other areas. Voice logs (introduced to move away from *Underworld*'s conversation trees) and environmental storytelling build an incredible atmosphere and sense of place, helped by the



↑ *System Shock* sold 170,000 copies but was not profitable

balance between player freedom and gated progress. There's also the first appearance of one of videogaming's great antagonists, SHODAN (Sentient Hyper Optimized Data Access Network). Voiced by game designer Teri Brosius, the malevolent AI is your gloating companion throughout the game, though here she's prone to laying out the plot and would be refined for the sequel.

For all its innovation and masterful atmosphere, *System Shock* seems a little lost between *Ultima Underworld* - which had

proved the possibilities of mixing FPSs and RPGs - and its sequel. *System Shock 2* is rightly hailed as a classic for many reasons, and perhaps one of them is that it toned down some of *System Shock*'s wildness.

"Just look at the game's gloriously overcomplicated HUD, which encompasses inventory and energy management, mini-games, ammo selection and plenty more."

ZERO TOLERANCE

Developer: Technopop

Original platform: Mega Drive

Though an obscure name, Technopop created some of the development tools used by Mega Drive developers. Perhaps this gave them an insight into getting the best from SEGA's hardware, because the studio delivered easily the most impressive FPS the console would receive.

Zero Tolerance takes place in large episodes, the settings ranging from a space station to corporate offices (where little animated TVs show the siege you're in on the news). Your goal is to hunt down every one of each level's enemies; while a mini-map helps, it only shows nearby threats. An interesting quirk is that enemies only take a couple of hits to kill but can inflict a lot of damage in return. This, plus generous auto-aim and the mini-map, can mean you end up fighting enemies at ranges you can barely see in the first-person view.

Weapons feel powerful, the sounds and music are great (including a female voice that announces everything you collect), downed

Time remaining: 6:43:12



This morning Gunther was killed by one of the mutants. I have no time to dwell on the death of my husband, unless I want soon to join him. I think I understand now what SHODAN is doing. After destroying a bank of security cameras, the elevators almost came back on line. [MORE]

SIDE + - FULL



HANDGUN

19



SHOTGUN

33



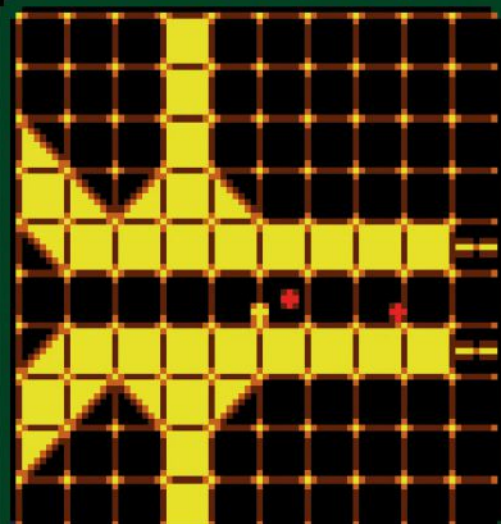
38



24



16705 MHz



U N

Maj. Gjoerup

00401-87H

ELECTRONICS

Hair: BRN Ht: 180

Eyes: BLU Wt: 79

Sex: M

DOB: 01-07-70

Base



↑ Zero Tolerance's varied levels

enemies bleed and twitch, and you can damage walls with gunfire. The game even supports two-player co-op by linking consoles via player two's joystick port, and amusingly, Technopop's website shows the connections needed if you want to make your own cable and give it a go.

Sure, *Bloodshot* provided a full-screen view and *Star Cruiser* was more ambitious, but the polish, feel and variety of *Zero Tolerance* make it the Mega Drive FPS that's the most fun to play.

OPERATION BODY COUNT

Developer: Capstone Software
Original platform: PC

While Capstone's name will never be associated with quality, the studio shipped an impressive number of games over a short period; in 1994 alone, they delivered both *Corridor 7: Alien Invasion* and *Operation Body Count*. As a *Wolfenstein* clone featuring colourful aliens, *Corridor 7* introduced the progression mechanic used by *Body Count*; you need to kill a certain number of enemies before you can move to the next level.

With 'militant terrorists' taking over the United Nations, you might think *Body Count* is aiming for a realistic world, but giant rats and slime monsters are just the start of this game's weirdness. All the sprites are too big compared to you. Guns point off-centre, forcing you to remember not to aim them at targets. You can't shoot through open doorways. Secrets are visible on the map. Booby traps sometimes prevent progress. They 'borrowed' a *DOOM* sprite for dead terrorists. Sometimes you have AI teammates,



↑ Operation Body Count's dead bodies are suspiciously like *DOOM*'s

but these struggle to move or fight, limiting them to extra lives.

But, as with all of Capstone's games, *Body Count* has tricks up its sleeve, such as flamethrowers setting levels on fire and rockets destroying walls. This perfectly demonstrates the 'Capstone dilemma': while incredibly unpolished, their games at least try to introduce something new or do things a little differently. But where Capstone's other games have

heart alongside their bugs and bizarre choices, *Body Count* only provides endless mazes.

"But, as with all of Capstone's games, Body Count has tricks up its sleeve, such as flamethrowers setting levels on fire and rockets destroying walls."

DOOM II

Developer: id Software

Original platform: PC

DOOM II was the first time an id FPS was specifically released through stores and not sold via the usual shareware model. The boxed product was a huge success, with stock running out much faster than anticipated and it went on to sell over 1.5 million copies, making it the best-selling PC game of 1994.

With no need to hook players with a free episode, you instead play through a single campaign, retaining the first game's text intermissions but dropping the world map. This streamlined approach also applies to the gameplay, because while *DOOM II* adds new enemies, it avoids bloating the first game's core pillars of movement and combat. With no reloading, jumping or inventory management, all that's left is *DOOM*'s matrix of weapons, enemies and environments. But the infinite way these could be combined meant there was no need to add extra complications to provide variety - *DOOM II* is the epitome of 'give players more of what they want'.



↑ *DOOM II* substantially increased the number of *DOOM*'s enemy types

The only new weapon is the super shotgun, which was designed to fill a gap in the original line-up (during *DOOM*'s development id had a rule that no weapon would negate another). Hence the new shotgun, which deals a lot more damage than the single-barrel version, but uses twice the ammo and is only really effective when dangerously close to targets.

Another noteworthy element is that rather than ending with a giant monster, *DOOM II* marks the first time you get a *Quake*-style

'puzzle boss' to beat, in the form of the Icon of Sin. Behind the boss' exposed brain is a secret John Romero head sprite (one of eight easter eggs hidden in the game), put there by id's artists as a joke, and the voice you hear as the level starts is Romero speaking backwards, saying you must kill him to win.

Continuing *DOOM*'s story, *DOOM II* presents interesting but extremely abstract levels set on Earth, with cities made up of big cubes pretending to be buildings. The Hell environment

is more successful, as it clearly allowed id's designers to have fun, occasionally leading to levels that are basically a giant level design experiment. In an interview for *Donanimgunlugu.com*, level designer Sandy Peterson talked about his level, The Chasm, being based on his dreams: "I had a nightmare in which I was moving through a network of walkways and narrow bridges over incredibly deep dark chasms."

Delivered in just eight months, in my opinion *DOOM II* is the 'purest' of id's shooters. It wasn't being built at the same time as its technology so didn't have to adapt its gameplay as its engine evolved, and coming before the grind to complete *Quake* meant it still had the old id atmosphere. With the studio's designers free to focus purely on gameplay over any other consideration and players used to combat in first-person, *DOOM II*'s levels are unabashedly daring and experimental.

"*DOOM II* marks the first time you get a *Quake* style 'puzzle boss' to beat, in the form of the Icon of Sin."



84

AMMO

13%

HEALTH

2 3 4

5 6 7

ARMS



0%

ARMOR

BULL	400	/	400
SHEL	84	/	100
ROKT	37	/	100
CELL	600	/	600



		49		[Wooden Beam]		188 200	1 50	3
						0 75	0 100	

THE FORTRESS OF DR RADIAKI

Developers: Maelstrom Software and Future Vision
Original platform: PC

With the rapid surge of FPSs hitting the market, studios needed some way for their game to stand out. Coded by a small team of ex-Wing Commander developers, *The Fortress of Dr Radiaki* used humour as its selling point, resulting in genuinely amusing mission updates and bizarre enemies (Fidel Castro, ninjas, melting robots and lederhosen-wearing babies).

But beyond the humour, the game is a bit of a mess, with balance issues, no ability to strafe, and a broken map. Levels are huge but repetitive mazes, which combined with extremely quick movement means it's easy to get lost and confused in the identical, twisting corridors. Finally, a lack of open space and clumsy controls make shooting tricky, pushing you towards the overpowered melee weapons. The game innovates by requiring you to manually reload guns, and clearly no-one told the game's composer it was a comedy so they delivered some excellent, atmospheric music.



↑ *The odd but dull Dr Radiaki*

Radiaki would be Maelstrom Software's only release, while Future Vision would go on to make 1996's notoriously gory adventure, *Harvester*. Far from a classic, *Radiaki* illustrates that while FPSs must have seemed easy to make - move, shoot, throw enemies in a level - they actually required huge amounts of polish and balance to successfully bring them to life. Elements like humour can help games gain marketing attention, but that doesn't matter if their core gameplay and level design don't deliver.

CYCLONES

Developer: Raven Software
Original platform: PC

After releasing *ShadowCaster*, Raven Software split into two teams, one working on the DOOM-powered *Heretic* and the other developing *CyClones*, which ran on the studio's own engine.

Taking a similar approach to 1990's *Corporation*, *CyClones* gives you separate control of movement and aiming, letting you independently move a crosshair to target enemies and click on objects. While this works in slower-paced titles, here manual aiming fails to mesh with the enemy or level design, and everything else is forced to revolve around this feature. For instance, strafing left and right while simultaneously trying to keep your crosshair on enemies is a pain, and items are placed awkwardly just to provide a reason to manually click on them.

Originally released on disk, a later CD version included FMV briefings so poorly acted that only a fraction of what was filmed ended up in the game. If you're a fan of brilliantly terrible over-acting then a



↑ *Manually aiming in CyClones*

little searching will find the footage online. FMV aside, the story of an alien invasion and *Cybernetic Clones* tries some interesting things, sets up varied level objectives, and even manages a couple of plot twists.

Trapped between the two, *CyClones* may have been more successful as either a straight shooter or a slower adventure. It has unusual features and interesting missions that promise so much more than its gameplay can deliver, forever reducing it to 'that game with the weird controls'.

SUPER 3D NOAH'S ARK

Developer: Wisdom Tree
Original platform: Super Nintendo

Starting from a failed *Hellraiser* FPS, developer Wisdom Tree pivoted towards the Christian market, licensed the *Wolfenstein* engine from id and created *Super 3D Noah's Ark*. They were unable to get permission to officially release the game as it broke Nintendo's rules against 'symbols that are related to any type of racial, religious, nationalistic, or ethnic group, such as crosses, pentagrams, God, Gods (Roman mythological gods are acceptable), Satan, hell, Buddha'.

The game is basically a reskin of *Wolfenstein 3D*, replacing the Nazis with animals that you shoot with food to put them to sleep (you can tell they're not dead because they emit ZZZ's). It also replaces the portraits of Hitler with pictures of Noah or sleep-walking ducks, and the bosses with animals named Melvin the Monkey and Burt the Bear. Amusingly, the game is just as brutal as *Wolfenstein*, with the animals able to kill you in a couple of hits.



↑ *Super 3D Noah's Ark* retains *Wolfenstein's* feel

Without an official release, the game was mostly distributed through the Christian bookstore market and wasn't a big seller, making it something of a collector's item. It was converted to PC a year later, and has since been rereleased as a cartridge, followed in 2015 by an updated Steam version, which has a 'very positive' rating. My favourite of the user reviews is by a player named Phange: "*This is the best Bible-based FPS since DOOM.*" Bravo, Phange, bravo.

"The game is basically a reskin of *Wolfenstein 3D*, replacing the Nazis with animals that you shoot with food to put them to sleep (you can tell they're not dead because they emit ZZZ's)."

MARATHON

Developer: Bungie
Original platform: Macintosh

It's interesting to note that when people talk about *Marathon* it's usually to discuss its lore, not how the game plays. Perhaps this is down to initially being released on Mac (though it's now available for free on several platforms) so most people learned about it in relation to Bungie's next series, *Halo*. Or it could be that despite the game having an impressive list of features - fun enemy designs, secondary weapon fire modes, dual-wielding, cool lighting - *Marathon's* gameplay isn't quite as tight as that in the studio's later releases.

Levels lean closer to *System Shock* than *DOOM*, but often cross from complex to confusing. Floaty movement combined with no jump button means you have to reach areas by running off ledges then turning round in mid-air. Still, odd physics aside, there's plenty of challenging combat against varied foes, which is made more difficult by the game only allowing you to save at fixed points in the sprawling levels.







↑ Marathon's moody lighting

While *Marathon's* multiplayer was as big on Mac as *DOOM* was on PC, the game's lore is its real legacy. It shares themes with *Halo*, such as fighting on giant structures in space, 'rampant' AIs, super-soldiers, alien master and slave races, and human colonies being wiped out. Beyond that, Bungie's fondness for making the player work to uncover the story is apparent, with key information hidden in secret areas, leaving it to you to explore this moody, atmospheric world and piece it all together.

RISE OF THE TRIAD: DARK WAR

Developers: Apogee Software
Original platform: PC

As it was initially intended to be *Wolfenstein 3D 2: Rise of the Triad*, it makes sense that this game still used the *Wolfenstein* engine, even though it had been rendered outdated by *DOOM's* release. To counteract this, the team added a ridiculous array of new features to the engine, to the extent that during combat it's easy to forget it's based on *Wolfenstein* at all.

It features the ability to jump, dodge, play dead and throw nets at you. You eat 'Priest Porridge', which can be cooked with fire-based weapons to provide more health. The game points out 'Ludicrous Gibs!' when an enemy explodes. Levels feature bounce pads, breakable windows, spinning blades and moving walls, plus you can smash the level decorations. Weapons include guns, 'Excalibat' and a magical staff, plus the heat-seeking missiles are attracted to torches on the walls. The enemies mix Nazi-lite troops, robots, and bullet-sponge



↑ Rise of the Triad stretches the Wolfenstein engine

monks. Power-ups include God Mode and Dog Mode (the best bit is the dog's paw coming up to press switches), plus 'power-downs' like the vomit-inducing Shrooms Mode.

As you can probably tell, *Rise of the Triad* is wildly eclectic, throwing everything it can at you with a glee not seen again until 1997's *Blood*. The final boss sums the game up nicely, formed as it is of giant male heads that lay eggs, because I mean, sure, why not?

"The game still used the *Wolfenstein* engine, even though it had been rendered outdated by *DOOM's* release. To counteract this, the team added a ridiculous array of new features to the engine."

← *Rise of the Triad* features plenty of gory humour

HERETIC

Developer: Raven Software
Original platform: PC

While many companies developed games with id's engines, one of the earliest adopters of the tech was Raven Software, who specialised in turning id's Satanic-styled games into out-and-out fantasies. Demonstrating the effect a theme can have on a game, it's interesting to see that even though *Heretic* plays extremely similarly to *DOOM*, the fantasy setting immediately made the game much less cool to some players, leading to *PC Zone* magazine labelling it 'DOOM in tights'.

It's certainly true that *Heretic* has an uneven tone, merging earnest lore about the coming of the Serpent Riders with difficulty levels called 'Yellowbellies-r-us' and 'Thou needeth a wet-nurse'. This irreverence may be id's influence; id, according to a *RavenGames.com* interview with *Heretic*'s level designer Michael Raymond-Judy, "had some pretty strong ideas about what they liked in games".



↑ *Heretic packs in a diverse range of weapons and enemies*

With *ShadowCaster* playing more like an RPG, and the upcoming *Hexen* focused on delivering a puzzle-based quest, *Heretic* is the closest of Raven's games to its *DOOM* ancestry. You move at rocket speed, alternating between enemy arenas and searching for that elusive last switch, meaning new additions like an inventory and being able to hover get lost in the familiar combat. Describing the game as 'medieval *DOOM*', John Romero told Raven to keep *Heretic*'s weapons as close to *DOOM*'s balance as possible,

meaning - fantasy theme aside - the game would be Raven's 'purest' shooter until 2000's *Soldier of Fortune*.

"The fantasy setting immediately made the game much less cool to some players, leading to *PC Zone* magazine labelling it 'DOOM in tights'."

CRIME CRACKERS

Developers: Media.Vision / Sony
Original platform: PlayStation

Crime Crackers is a Japanese PlayStation launch title, developed as a co-production between Media.Vision and Sony. Never released outside Japan, it's a game so obscure I can't find a translation and therefore have been forced to rely on websites for plot details. Apparently it revolves around a crew of bounty hunters including a talking rooster called Parrot, a dragon, a catgirl, and an AI named Potpourri Vamp, all fighting criminals from their ship, the Pink Dolphin.

The gameplay mixes dungeon crawler and FPS, with health and ammo you collect going into an inventory until you choose to use it. You move around as in an FPS, but combat brings up a crosshair that can be aimed independently, and you can 'defend' to reduce incoming damage, which adds a fun timing element. The final distinguishing feature is that you can swap the active character, affecting the bullets you fire and who takes incoming damage.



LIFE
100



ARMOR
100







↑ *The kooky Crime Crackers*

While charming, *Crime Crackers* reuses enemies and objectives too often across its long levels, and so grows repetitive. The game was reportedly developed in just four months, which is insanely short, providing a valid reason why its gameplay and level design are so limited.

Media.Vision developed a sequel with an advanced engine and more polish in 1997, but limitations aside, *Crime Crackers* stands as another example of how Japanese developers took the FPS template in unexpected directions.

BLOODSHOT

Developer: Domark
Original platform: Mega Drive / Mega CD

Bloodshot (a.k.a. *Battle Frenzy* due to German restrictions and an American comic) was released to stores in Europe only for SEGA's Mega Drive and its Mega CD add-on. Americans, meanwhile, could download the game through the subscription-based SEGA Channel online service.

Coded entirely by Jim Blackler, *Bloodshot* impresses on a technical level, managing to keep its action full-screen and even including two-player co-op and deathmatch play. You move through levels that, bar secret areas, are basically linear, until you destroy the end-of-level plasma node and need to get back to the start against an extremely tight time limit. Gameplay feels quite arcadey, including collecting weapons then discarding them when empty, earning bonus lives, and a 'continue' screen. Perhaps the game's most distinctive feature is its colourful art style, mixing influences from *2000 AD* and the Bitmap Brothers' artist Dan Malone to give the game a supremely '90s comic feel.



↑ *One of Bloodshot's stress-inducing, cramped levels*

In play, *Bloodshot* is claustrophobic and oppressive, making it suited for arcade-style short play sessions. Tight corridors, busy textures, a low framerate, shrieking alarm sounds, constantly flashing lights, 'sticky' walls and a lack of aiming crosshair all add up to an intense game for hardcore players looking for a challenge. The CD version is more polished, with redesigned levels, fixed graphical glitches, and a great soundtrack, but even so there are, if not better, then

at least less stressful FPSs available on the Mega Drive.

"Coded entirely by Jim Blackler, *Bloodshot* impresses on a technical level, managing to keep its action full-screen and even including two-player co-op and deathmatch play."

← *Bloodshot's comic-book aesthetic provides some great enemies*

INTERVIEW WITH JAMES HAMPTON



James 'Purple' Hampton was the producer on the Atari Jaguar's killer game *Alien vs. Predator*. The game's photo-realistic art style and unique campaigns for each of the Marines, Aliens and Predator were unprecedented among FPSs of the time, and it was thrown into even more stark relief when 1996's *Alien Trilogy* fell back on a more traditional single campaign, featuring lower-resolution graphics.

AvP was a joint creation between Atari in California and Rebellion in the UK, an approach which is relatively common in development now but was unusual at the time. It makes the fact that the game came together well enough to set the template for how *AvP*-based games still structure their campaigns more than 25 years later all the more impressive.

Photographing models and props was quite an unusual method of creating game assets, so whose idea was it to take that approach? Did you try more traditional computer art methods first, and if so, what caused you to swap over to the photographic approach?

James: Using photographs of models and props was the idea of the brilliant creative team at Rebellion. Being able to display photo-realistic textures in a game was one of the features Atari wanted to show off in the Jaguar and the artists Toby

Banfield and Stuart Wilson¹ delivered with their forward-thinking method of creating the distinctive look and feel.

The photographing-models approach also afforded the production schedule a bonus. Adapting the commercially available resin model kits for the Alien and Predator characters also helped with gaining approval from 20th Century Fox, as the models had already been cleared by their licensing department. And while Fox still held the team accountable for authentically animating the models the Rebellion artists had modified, having the main characters cleared was a great place to be in when we submitted the assets for approval.

"The photographing-models approach also afforded the production schedule a bonus."

It must have been difficult to design, create, balance and even fit all three campaigns into the game. Did you ever come under any pressure to cut content to release the game sooner or to make the team's life easier?

Yes, it was ambitious to deliver three kinds of experience in a single game cartridge, and this design goal was at the core of the 'make it or break it' moment that changed the outcome of the final game. By April of 1994, all of the original funds Atari had allocated in the initial development contract with Rebellion had been spent. And you could see all of that money on the screen. The *AvP* pre-alpha demo shown off at CES² in Vegas in January 1994 had generated a lot of positive buzz in the press and the pressure to get the game out the door was on!



↑ Each of AvP's campaigns casts you as a different character

However by March, a couple of months after CES, the programmers at Rebellion let me know that they weren't getting paid, and so I reached out to the President of Atari, Sam Tramiel³, and pitched him on the idea of bringing the AvP programming duo of Mike Beaton and Jane Whittaker⁴ to the Atari HQ in Sunnyvale California to work directly with the Jaguar hardware engineers, Atari level designers and on site audio department to get it all done in time for the holidays.

And this is when the breakthrough moment occurred. Sam Tramiel, a tough, brass-tacks kind of businessman, known for keeping a close eye on production costs, boldly makes the decision to go ahead and give the AvP development team the extra time and resources to make it the best game it could be. Instead of shipping it in its unfinished state in April (the game was a tech demo, without the ability to play as the Predator or the Alien; players would have been limited to a Marine shooting demo which



↑ AvP established the template for future games using these brands

used a random map generator and had none of the story or puzzle elements). Sam gave the team the resources (time and money) to pour everything we had into the game and release it in the fall of 1994. It changed everything, and saved the game.

Did you have any support from 20th Century Fox regarding movie elements, such as access to reference material? How was working with a movie company when getting approvals and sign-off? Did you have to alter anything before release?

Atari had secured a sub-licence to the Alien and Predator characters through Activision, who had published an *Alien Versus Predator* game on the Super Nintendo console⁵. I worked with Tom Sloper⁶ at Activision who helped us connect with the licensing team at 20th Century Fox.

20th Century Fox provided the ultimate reference material by making the movies in the first place! It was inspiring to work with the studio that had the vision to apply the genius



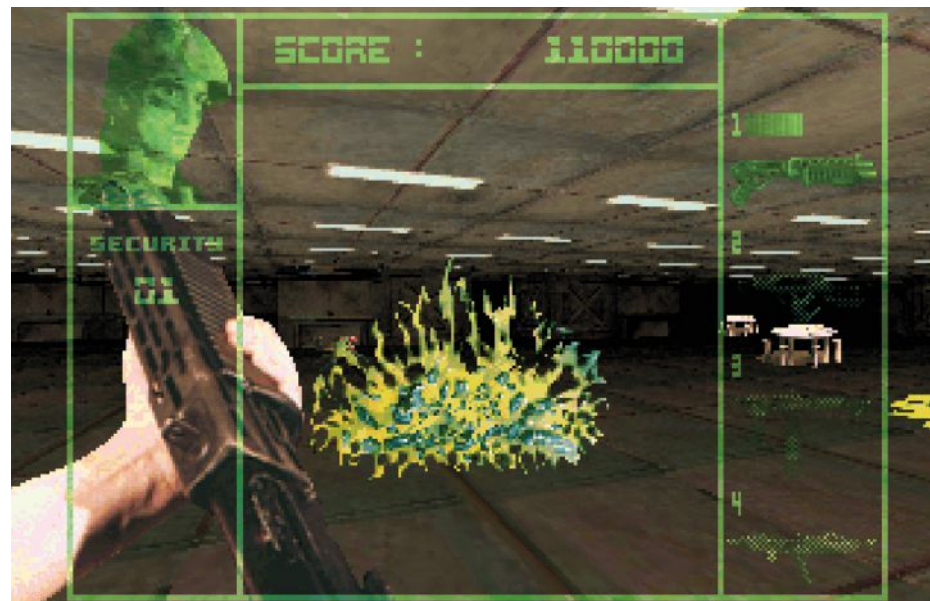
↑ Real-world reference material helped with approvals

of Ridley Scott and HR Giger to create the Alien universe. They had the foresight to grant Dark Horse Comics the rights to intertwine the Alien and Predator characters together and be open to Atari expanding it into the next generation of gaming.

As previously mentioned, using the resin model kits of the Alien and Predator characters gave us a head start in the approvals by 20th Century Fox. Fox still wanted to ensure that their characters looked their best and pushed the Rebellion

animators right up to the final deadline until the movements of the Alien were just right.

By August of 1994, AvP had grown by leaps and bounds, with the fully realized goal of offering three gameplay experiences in a single cartridge. The Atari level designers, audio department and Jaguar hardware engineers had successfully integrated with the Rebellion programmers, who spent the summer at Atari HQ in Sunnyvale to deliver the game we wanted to make.



↑ Destroying Aliens creates hazardous acid pools

However, the game still needed to get its final stamp of approval from 20th Century Fox before it could be released into manufacturing. Almost everything had been accepted except for the Alien 'run' animation sequence; Fox wanted to ensure that we 'got it right', and this pushed everyone in the production team to pull one last all nighter and we got that approval by the skin of our Xenomorph's teeth.

While there were a few weeks left in the schedule, the day before he was going to leave, we

learned that the account manager in the licensing department at 20th Century Fox was being sent overseas for an extended trip and wouldn't be back in the States until September. Waiting to get his sign off until September would mean the game wouldn't be released until next year. Atari rallied, starting at the top with Sam Tramiel, who called into 20th Century Fox and negotiated with them to have the licensing account manager come into the Fox offices to meet with me for a final approval meeting, in the morning of the



↑ AvP's digitised graphics do an excellent job of evoking its IP

day he was due to board his international flight out of LAX.

The AvP artists at Rebellion revised the Alien run animation again and again, offering several variants which could be presented to 20th Century Fox. The programmers compiled several builds throughout that night, then the Atari Quality Assurance team, who were also the game's level designers, stayed up testing the title until dawn. Just as the sun started to rise, an eeprom cart was loaded up, placed in my hands and as I

stepped outside to go to my car, Lance J Lewis⁷ (the namesake of the Colonial Marine character in the game) pulls up in his Jeep and tells me to hop in and he'll get me to San Jose airport in time. Speeding down the 101 in the open air charged me up enough to do a literal run to the airport gates. The staff held the door for me just long enough to get on. After an anxious crawl up the 405 and then onto Santa Monica Boulevard, I pulled into the Fox offices, got the approval and the game was on its way.



↑ Achieve honourable kills as the Predator

"The Atari level designers, audio department and Jaguar hardware engineers had successfully integrated with the Rebellion programmers, who spent the summer at Atari HQ in Sunnyvale to deliver the game we wanted to make."

How was working on the Jaguar in terms of the development kit and tools? Many consoles of the time struggled to provide smooth 3D worlds, so did you have to make any compromises or adjust your plans to get the game working?

The development efforts on Jaguar games across the board all had to contend with the aggressive timeline Atari had charted its course on. There was a strong desire to launch the console before new hardware could be released by Atari's competitors at SEGA, Nintendo and Sony. The



↑ Each species in AvP features unique weapons

result was that most Jaguar game-makers had to start building with a limited set of tools that were being developed along the way. Hardware and system software being updated regularly added extra layers to an already burdened production plan.

Atari pushed the developers to their limits, expecting them to create workarounds to get titles released. Bringing the AvP programmers from Oxford to work beside the Jaguar hardware engineers in Sunnyvale shortened the back and forth between

them, and they were able to solve numerous challenges such as how to compress the photo-realistic artwork to fit onto the cartridge memory.

Finally, were there any plans for sequels, and if so, what caused that to not happen?

Atari had a lot of interest in making a follow up title that could take advantage of the extra memory that the Jaguar CD drive offered. The Atari design team submitted a list to 20th Century Fox and Atari management



↑ Designer Sean Patten wearing the Colonial Marine outfit

outlining what we would do with the extra space. However, a CD version was not made as the development efforts for the Jaguar as a whole unravelled.

"The AvP artists at Rebellion revised the Alien run animation again and again, offering several variants which could be presented to 20th Century Fox."

Author's notes:

[1] Toby Banfield is still working in the games industry, on titles such as Until Dawn and Mafia. Stuart Wilson is the second of the two artists brought over from Rebellion; he has spent most of his career working on LEGO games at Traveller's Tales.

[2] The CES (Consumer Electronics Show) has been running in Las Vegas since 1967. It is where new technology and products are demonstrated.



↑ James poses with an Alien in this behind-the-scenes photo

Gaming spun off its own event, E3 (Electronic Entertainment Expo) in 1995, which has been joined by other shows around the world.

[3] Sam Tramiel was one of three sons of Jack Tramiel, who founded Atari in 1984. Sam was President at Atari during its Jaguar days but stepped down in 1995 after suffering a mild heart attack. His father returned to Atari, and where Sam had been trying to make the Jaguar a success, Jack quickly shut down game development.

He then sold the company to JTS Corporation, who sold it on to Hasbro Interactive in 1998, who were then sold to Infogrames in 2001.

[4] Mike Beaton would move out of games in 1997, with future work including research and recruitment. Jane Whittaker has been involved in many classic games over 30 years in the industry and is a consultant and BAFTA judge.

[5] The Alien vs. Predator game on the Super Nintendo is



↑ Concept artwork for the AvP box

a fairly limited side-scrolling beat-'em-up by the Japanese studio Jorudan from 1993. It has nothing to do with the 1994 Alien vs. Predator arcade game by Capcom, which is much more fun.

[6] Tom Sloper has been working in games since 1979, including at SEGA, Atari and Activision. These days he teaches gaming courses at the University of Southern California.

[7] Lance J Lewis was a Quality Assurance tester, writer, and

designer on Alien vs. Predator, apparently working three months on it without a single day off. His name was indeed used for the Marine character in the game. Interviewed on GoodDealGames.com, Lance said, "I think it was a nice way of someone saying 'thanks'. They asked if I wanted my name removed before we shipped, and I was like, are you kidding?!?"

1995

While the introduction of new storage media, platforms and online play all shook up videogames, by far the most seismic shift in how games were played was the transition from 2D sprite-based gaming to 3D polygonal worlds. The standard for cutting edge graphics was rewritten by this change, forcing developers to keep up or be left behind.



While games had made use of polygons for a long time (we've already covered the Freescape games, for example), they would become ubiquitous with the release of 3D cards, alongside consoles like the Sony PlayStation and arcade hardware such as Namco's System 22. It wasn't just that polygons presented a new flexibility in how players viewed the game world; in-game models built from polygons can be altered in real time in a way that sprites can't, so gameplay features like *Destruction Derby's* vehicle deformation become feasible.

However, they also introduced a new element to games that would take developers a long time to master: the camera. Prior to this, most game cameras entailed choosing which 'angle' to show the action from and creating sprites to match, such as the side-view of *Worms*, or the framed scenes of *The Dig*. But polygons allowed developers to create characters, objects and environments which could be viewed from any angle, and could even give players direct control of where the camera was looking.

Developers needed several years to work out the best practices

for using cameras, and in the meantime, they tried all sorts of approaches, such as the 'follow camera' used in *Tomb Raider* and *Mario64*. While the FPS genre was able to mostly ignore this period of camera trial-and-error, the fact that the camera was 'inside your head' meant players could get very close to objects, something that early polygon engines struggled with. This led to the 'edge of the screen distortion' often seen in PlayStation titles due to the hardware lacking the precision to smoothly move each polygon's vertices (corners), causing them to jump from A to B, combined with a lack of texture correction, making them waver when near the camera.

The decline of a genre

While adventures like *Full Throttle* and the FMV-powered *Phantasmagoria* were released this year, the point-and-click genre would quickly fade, leaving only niche and fan-made adventures being released until its recent crowdfunding-driven revival.

There are multiple reasons for the genre's decline, including shifts in audience demographics

and tastes, but the advances in technology that allowed the polygon revolution may also have been a factor. Until computers were capable of rendering environments in real-time, point-and-click adventures were the most immersive and cinematic way to be transported to another world (just as text adventures were until graphics became viable).

But the rise of first- and third-person cameras meant players could now explore environments that were larger and more reactive than the hand-drawn artwork of an adventure could afford to match. Plus, real-time action provided immediate thrills over the slower, often-obtuse puzzle solving of adventures.

"The rise of first- and third-person cameras meant players could now explore environments that were larger and more reactive than the hand-drawn artwork of an adventure could afford to match."

KILEAK: THE BLOOD

Developer: Genki

Original platform: PlayStation

Using the subtitle *The DNA Imperative* in America, *Kileak* was the latest in the mini-genre of 'robots in dark tunnels' FPSs from Japanese developers that came out around this period. (This time you're in a robot suit rather than actually being a robot, though this makes no difference in play.) We've already covered the 3DO's *Iron Angel of the Apocalypse*, but there was also the Saturn's *Robotica Cybernation Revolt*, *Kileak* and its sequel, *Epidemic* (all 1995), plus 1996 spin-off, *Brahma Force*. This sub-genre would quickly peter out, with robot games moving outside and scaling their action up, while FPSs would move away from these detached, ponderous experiences.

Indeed, *Kileak* tends to be quite sedate as you pootle down long corridors, flipping switches to solve puzzles. That is until you get into a fight. Combat is made challenging by a combination of your slow movement and the tight corridors making it difficult to dodge. At first, robots are the enemies,



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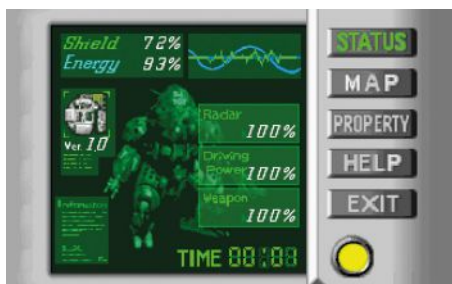
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↑ Kileak's metallic aesthetic

then you move on to disturbing monsters - all spider legs and flopping tentacles - but they all fire fast, accurate shots. Needing to play cautiously means fights usually boil down to you and the enemy shooting each other while you back away down a corridor, continuing to fire into the darkness until you hear them die.

In a nutshell, *Kileak* is very similar to *Iron Angel*, only more polished and less clunky, but also less weird and creepy.

BEHIND THE IRON GATE

Developer: *Ego*

Original platform: Amiga

As with the upcoming *Substation*, *Iron Gate* took the approach of dropping textures in favour of using Gouraud shading to help the ageing Amiga handle the complex calculations needed to run an FPS. Also like *Substation*, it's all very still and quiet, which along with the muted palette and use of odd props gives the game a hazy, funereal tone.

The game's manual has a long story about a prison for robots that you must sneak into and blow up, though the tone is perhaps slightly undermined by it calling them 'rouge machinery'.

As in *Corporation* and *CyClones*, you control an independent cursor that can be used to activate things or pick up items. The game provides multiple control options, but collecting things is awkward in every one of them. A separate cursor to shoot enemies is a valid gameplay choice, but having to manually collect stuff adds little, illustrating why most FPSs automate it.



↑ Navigating Behind the Iron Gate is tricky

Still, it's stylish, the weapons feel powerful and the music by Adam Skorupa - later of the *Witcher* games - is good. The chunky enemies look interesting, but they don't have any attack animations. You simply lose health whenever you're near one. All together, the fact that your health constantly degrades on its own, incredibly tight time limits to escape after you plant each bomb and the confusing, maze-like levels mean *Behind the Iron Gate* often crosses into being needlessly frustrating.

"As in *Corporation* and *CyClones*, you control an independent cursor that can be used to activate things or pick up items. The game provides multiple control options, but collecting things is awkward in every one of them."

STAR WARS: DARK FORCES

Developer: LucasArts
Original platform: PC

With fans making Death Star levels for *DOOM*, LucasArts decided that a Star Wars FPS was a good idea, and created the Jedi engine (also used in 1997's *Outlaws*). Initially casting the player as Luke Skywalker and following the events of the films, the game shifted to a brand-new character, Kyle Katarn, to allow more gameplay and story freedom.

While the Jedi engine has some impressive features, it's the team's handling of the Star Wars licence that is the game's secret weapon. The developers perfectly balance the introduction of new elements with a deep love for the established universe, helped by *Dark Forces* coming at a time when LucasArts were starting to expand on the movies through games like *X-Wing*, but weren't yet keeping tight control over what each game was adding to the lore. As a result, the team suffered little managerial interference. Indeed, in an interview for *GamesRadar.com*,



↑ Iconic enemies and environments in *Dark Forces*

project director Daron Stinnett reported that when George Lucas finally played *Dark Forces* he commented, "This is really violent!"

You can see the freedom the team had with the IP by the way the game brings in and then casually throws away so many elements of the setting. It features Jabba the Hutt, Darth Vader, Mon Mothma and Bobba Fett, and is done with stealing the Death Star plans by the end of the first level. While the music is new, the movie sounds and voice

work do a lot to pull you into the universe, and it's fun to hear Stormtroopers calling out "Blast him!" Bringing things full circle, anyone who's watched season two of Disney's *The Mandalorian* will have seen this game's Dark Troopers featuring in several episodes. Pretty cool considering they were created for *Dark Forces* because the team wanted tougher Imperial enemies to fight than just Stormtroopers.

Licence aside, what separates *Dark Forces* from *DOOM* is its

emphasis on objectives and puzzle solving. Levels rarely focus on killing everyone, instead revolving around gaining access to somewhere, usually by pressing switches in the correct order. This can lead to confused wandering, but unlike in games such as *HeXen*, the challenge is usually in understanding the level's layout rather than wondering what a button just did. There's also a fair amount of platform jumping, with environments often making use of the engine's verticality. Combined with needing to complete each level in a single go (you have lives but there's no save/load), the high falling damage makes these platform sections scarier than most enemies.

Force powers and lightsabers would be introduced by the game's sequel, *Jedi Knight*, but their omission here gives *Dark Forces* a focus on the human scale. Instead of Jedi temples, your adventure takes in a sewage plant, a smuggler's den, and any number of backwater Imperial planets. While later games are more bombastic, *Dark Forces* focuses on immersing you in the mundane, low-level shadows of the Star Wars universe.



JUMPING FLASH!

Developer: Exact / Ultra
Original platform: PlayStation

As an early PlayStation release, *Jumping Flash!* acts as a technical demonstration for the hardware. It's something of an outlier as an FPS because it focuses on first-person platforming over combat. Playing as the robot-rabbit 'Robbit', you explore floating islands and can usually see the entire level at once. Robbit can jump three times (even in mid-air) and the camera automatically looks straight down on the second jump so you can judge the landing. This has the side effect of delivering a tremendous feeling of vertigo when you leap from high points, and despite the game's cheerful atmosphere, things get tense when you need to land on a platform with only instant-death clouds below. Exact's previous game was a 1994 mech shooter, *Geograph Seal*, for the Sharp X68000 computer, which featured the same triple-jump and downward looking camera.

While platforming is the primary gameplay activity, *Jumping Flash!* does feature combat, but as you turn slowly and can't strafe you



↑ *Jumping Flash!*'s cheery world

have to dodge by jumping. This is made tricky in the game's more traditional FPS levels, which ask you to explore and fight your way through tunnels.

Jumping Flash! reviewed well, with the main criticisms being that it was too short and too easy. It was followed by sequels in 1996 and 1999, both of which attracted much the same complaints, but the series offers a refreshing change of environment, theme and gameplay over those of more traditional FPSs.

SUBSTATION

Developer: UDS
Original platform: Atari ST

Unique Development Sweden was a small studio that spanned out of the Atari ST demo scene and was still supporting the computer long after most companies had abandoned it. With a planned development of less than six months that stretched to over a year, *Substation* was released so late in the machine's life that the ST market had already crashed.

Like *Behind the Iron Gate*, the game's striking visuals are a result of using Gouraud shading instead of textures. This decision was made for technical reasons - the technique's computational savings help with framerate - but makes it difficult to navigate the levels. The environments are closer to those of *Wolfenstein* than *DOOM*, so everything is on a flat plane, without steps, slopes or landmarks to aid navigation. As a result, you're constantly referring to the mini-map, and getting lost really doesn't help, as there are time limits for each level of the hub-based environment.



↑ *The out of date* Substation

The story of saving an underwater base is told through moody text that hints at a dystopian, bureaucratic world. Not only do you have to pay for your own ammo and health during play, but at one point the game even deducts some of your credits for firing a weapon in a critical area. Despite an intriguing premise, and though made for valid reasons, *Substation* demonstrates why developers invest so much effort into filling their worlds with colour and detail instead of trapping you in the never-ending grey corridors of FPS purgatory.

CYBERMAGE: DARKLIGHT AWAKENING

Developer: Origin Systems
Original platform: PC

CyberMage was a bold attempt to splice FPS with RPG, and magic, cyberpunk, comics and superheroes. The vision of David W Bradley (creator of several *Wizardry* games), with Warren Spector as its producer, the game takes the same 'add more' approach as *System Shock*. But where that game foregrounded puzzles and exploration over combat, *CyberMage* is the other way around.

You battle an ... eclectic ... mix of foes, and just as in the modern DOOM games, only have a few seconds to claim resources from dead enemies. In this case, it's the magical gem in your head collecting their souls to gradually increase your stats.

The game cleverly reveals its lore through multiple methods, using comic panels, *Half-Life*'s mid-level monologuing NPCs, video recordings, news reports and chatty enemies to tell its story. There are vehicles you can drive; as in *Halo*, you can buy and sell from shops, manually enter codes, fight alongside friendly



↑ *The remarkable CyberMage*

characters, and traverse levels reminiscent of *Duke Nukem*'s canyons or *Kingpin*'s grimy streets.

CyberMage is a polished game that draws from a huge range of influences in an attempt to deliver a *Deus Ex*-style 'living world'. True, it suffers from overly complicated controls and can't deliver on the superhero fantasy (with spells simply acting as more guns in an already overstuffed armoury), but just look at the number of games I've mentioned above to see how ambitious *CyberMage* was.

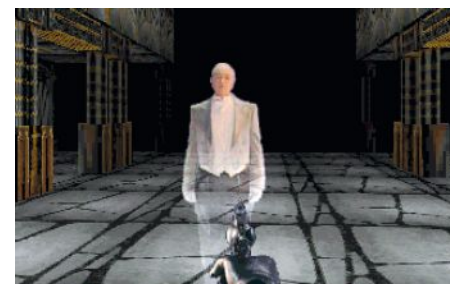
KILLING TIME

Developer: Studio 3DO
Original platform: 3DO

We're effectively covering two games here, as the 3DO version of *Killing Time* was followed a year later by a release for Windows and Macintosh that's more of a remake than a straight conversion. Both revolve around exploring an island to uncover what happened one night in 1932. The plot is gradually revealed by overlaying ghostly FMV actors onto the gameplay, and in a shock twist the acting is actually pretty good.

The 3DO version has some nice touches - like a ghost complaining the storeroom is full and being told to stash supplies all over the island - but on the whole it's just not that much fun to play. The levels are abstract mazes and there's nothing to do except fight, which is unfortunate because combat is fussy and awkward.

The PC version's levels are much improved and feel more like coherent places, plus the game has more weapons and new enemies, who actually react to being shot. However, its



↑ *Killing Time on the 3DO*

environments are cramped and claustrophobic because they haven't factored in that your field of view differs between an FPS and real-life, so doors and corridors need to be wider. Worse, the FMV sequences are incredibly low-resolution.

While the PC version butchers the cool FMV sequences, there's no doubt that this is the way to play *Killing Time*. Logicware's conversion/remake presents a sprawling, often surprising, kooky horror adventure that still holds up today.





EXP 175

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WITCHAVEN

Developer: Capstone
Original platform: PC

Despite the company tagline 'The Pinnacle of Entertainment Software', every FPS released by Capstone was ambitious but spectacularly unpolished (releasing four games in two years may have had some impact on their quality). We've covered their *Wolfenstein* engine games *Corridor 7* and *Operation Body Count*, leaving us the Build engine-powered *Witchaven* and *TekWar*.

Witchaven (why Witch-aven, not Witchhaven or Witch Haven?), is a dark fantasy FPS in the style of *HeXen*. Predominantly revolving around melee combat using weapons that break after a while, you also get an instant-hit bow and a variety of fireball-type spells that take too long to fire. Some of the other magic is fun, such as spells letting you fly, open a locked door without finding its key, or 'nuke' enemies (effectively *DOOM*'s BFG).

Oddities include arrow traps that don't hurt you, instant death pits beneath undetectable



↑ *Witchaven: fun, fascinating, flawed*

floor tiles, and a helmet pick-up that triggers 'hero time', giving a lite version of *DOOM*'s Berserk. The whole thing revolves around the witch, Illwhyryn, who's mentioned in the manual's story but then only reappears in the final level and dies in a couple of hits. Still, deciding not to make your end-of-game boss at all difficult to kill sums up Capstone's weirdness perfectly.

The game received a more polished but equally incoherent sequel a year later, which

included being able to enchant your weapons to hit enemies hard enough that their clothes fall off.

"Despite the company tagline 'The Pinnacle of Entertainment Software', every FPS released by Capstone was ambitious but spectacularly unpolished."

BRAM STOKER'S DRACULA

Developer: Psygnosis / TAG
Original platform: PC

Many of the games we'll cover have been forgotten for various reasons, but Psygnosis' *Dracula* is the most truly unloved game we've covered thus far, having received almost no fan discussions, *YouTube* videos or online reviews.

It's a shame the game is so ignored, because while it's short and repetitive, the credits imply it's the work of just a couple of people, which actually makes the game quite impressive. Of course, the paying public doesn't care if a game was created by a remarkably small team, only that it delivers, and in this regard *Dracula* is simply too limited to impress. I'd guess the small team was because Psygnosis attempted to cash in on the film by releasing *Dracula* games across nine platforms, with the PC version the only FPS.

The game gives you the same ability to point your weapon and pick things up with the mouse as *CyClones*, though it works



↑ Dracula: entertaining but limited

better here, and the ability to move in one direction while aiming elsewhere means that one-hit enemies can be taken out in a casual drive-by. Most of the game takes place in dungeons - complete with gates, pressure pads and teleporters - as you collect holy wafers and use them on Dracula's many, many coffins. A special mention goes to the inappropriate music, which strips any atmosphere from the game, including a cheery drum roll when changing area and a triumphant tooting each time you destroy a coffin or enemy.

WILLIAM SHATNER'S TEKWAR

Developer: Capstone Software
Original platform: PC

Released the same year as *Witchaven*, Capstone's next FPS licensed *TekWar*, William Shatner's sci-fi series, which spawned books, comics and a TV show. Shatner appears in the game as the head of the Cosmos Detective agency, usually to tell you off for killing people who are trying to murder you.

The game tries for a cyberpunk world where you travel via subway to hunt down TekLord drug dealers, but with no robots, cybernetics or *CyberMage*-style powers, only the city environment sells the theme. The levels try to replicate real places and are detailed, but ugly lighting and misaligned textures puncture their atmosphere. It also can't settle on a tone, with the hospital including an underwater trap room to drown you, exactly like hospitals don't.

Interesting elements include the *Mortal Kombat*-style digitised characters (albeit weirdly scaled, as in all of Capstone's



↑ TekWar never settles on a coherent tone

games), having to holster your gun around police and civilians, and an attempt at non-linear progression. There's also the 'matrix' level, which you fly through like *System Shock*'s cyberspace, except here the textures constantly flash, guaranteeing a migraine.

As with all of Capstone's games, *TekWar* is no classic, but once again you can't fault their attempt to deliver more than a generic *DOOM* clone. Who knows, had Capstone's developers received the time and money

needed to apply some polish we might be hailing *TekWar* and not *Deus Ex* for its vision of the future ...

"Shatner appears in the game as the head of the Cosmos Detective agency, usually to tell you off for killing people who are trying to murder you."



HOLY



970



HEXEN: BEYOND HERETIC

Developer: Raven Software
Original platform: PC

Where *Heretic* felt like an impressive *DOOM* mod, *HeXen* is more confident in being its own thing. It's still running on id's software but has dropped the jokey 'thou needeth a wetnurse' humour to fully embrace delivering a fantasy world. Of course, there are still hundreds of enemies to kill, and the underlying tech makes it easy to rush around at *DOOM*'s pace, but anyone trying to play that way will quickly grow frustrated.

As well as letting you play as different characters, *HeXen* brings in RPG-style puzzles and a need to thoroughly explore its environments. Each level presents a hub and various sub-levels to travel between, usually in a hunt for switches that change something elsewhere. While this makes the game feel like a coherent world, it can be frustrating to have to constantly trek back and forth, wondering what that last switch changed.



↑ *HeXen added multiple character classes with unique weapons*

Along with deathmatch, it supports co-op play, though this doesn't help as much as you'd think, as you all teleport together, meaning you can't split up to multitask puzzles.

As with *Heretic*, Raven added new engine features to support their vision, including breakable windows, lighting effects and better scripting (allowing multiple things to happen at once or audio to play at specific points). So, while *HeXen* can be a

challenging game in both its combat and puzzle solving, there's no arguing with its polish and sense of place.

"There are still hundreds of enemies to kill, and the underlying tech makes it easy to rush around at *DOOM*'s pace, but anyone trying to play that way will quickly grow frustrated."

PO'ED

Developer: Any Channel
Original platform: 3DO

The 3DO wouldn't receive a conversion of *DOOM* until 1995 and even then it was notoriously poor (though as it was converted in just 10 weeks it's a miracle it worked at all). This *DOOM*-shaped gap on the platform left space for 3DO developers to experiment with their FPSs, with *PO'ed* the punk game of the batch.

Developed by a team of 3D programmers, *PO'ed* delivered a fully 3D game with physics - albeit still using 2D sprite enemies - a year before *Quake* arrived. This focus on technology is counterbalanced by the developer's second creative direction, which appears to be cramming whatever stupid and funny ideas they could come up with into the game.

You're the cook on a military spaceship that's been overrun by aliens, so your first weapons are a frying pan and meat cleavers. Both do more damage if you're hurt because you're Pissed Off (hence the odd title). The rest of the weapons

continue this approach, in which each has something clever or fun about them, including missiles you can fly to the target and a drill that splatters the screen with gore. Starting the game with a comedy frying pan may not have impressed new players looking for powerful firepower, but over time the weapons become one of *PO'ed's* best aspects. They're huge on screen and each is great in some situations but terrible in others.

The complex levels make extensive use of wide-open spaces and height, so *PO'ed* feels a world apart from the grid-based mazes of the other 3DO FPSs. That said, while you can choose between walking and running, movement always feels slippery, and the loose camera makes platforming difficult. The sense of woozy movement is alleviated somewhat when you get the jetpack, which is when the game really comes alive, because unlike *Duke Nukem 3D's* 'forklift' controls, here the jetpack really feels like you're flying.

Enemies continue the anything-goes ethos by including giant mouths, walking butts that fart brown clouds, demons, robots,



↑ No game sums up the 3DO better than *PO'ed*

and women in bikinis because it was the '90s. Being hit triggers a red flash while shaking the camera, adding to the sense of disorientation, and you can trigger a backflip to spin around 180 degrees, but as the camera actually performs the full upside-down flip, this can make you even more confused as to where attacks are coming from. This perfectly demonstrates the developer's tendency to do something just because they can and it's funny or cool, not because it works well for

the player (as simply spinning the camera around would).

After the failure of the 3DO, the game was converted to the PlayStation, with each version having distinct pros and cons and going on to sell in roughly equal numbers. Developer Any Channel went on to turn the *PO'ed* engine into a product called Any World, but it was only used in one more game (SegaSoft's 1998 PC game *Vigilance*) before they split up.



↑ The eclectic *PO'ed*

"Enemies continue the anything-goes ethos by including giant mouths, walking butts that fart brown clouds, demons, robots, and women in bikinis because it was the '90s."





AKHAD



RECOVERED

DEFCON 5

Developer: Millennium

Interactive

Original platform: PlayStation

Despite being set on an invaded station, an atmospheric intro of shady businessmen discussing budget cuts immediately positions *Defcon 5* a long way from *DOOM*. Everything is peaceful as you automate a remote mining base's defences, when it suddenly comes under attack. You roam the base - either walking about or using a map to trigger FMV train rides - until the next wave of enemy ships approaches, then shoot these down with remote turrets until one gets through and spawns odd, three-legged robots within the base, which home in on you.

As directly shooting enemies is punished - the air in the room goes toxic - you're instead supposed to log into the VOS (Virtual Operating System) to flick between menu options and handle them without actually doing any fighting yourself, *Home Alone*-in-space-style. For instance, you might deploy droids on a map of the base or lock doors to trap enemies.



↑ FPS oddity *Defcon 5*

It's tricky to sum up *Defcon 5* because it plays differently to other FPSs and is full of contradictions. There are so many systems at work that it can be stressful to juggle them, but on the other hand, if you get too efficient then it's frequently boring while you wait for new enemies. It's also an FPS where you're punished for shooting. Basically, *Defcon 5* combines an FPS, an RTS, and a 'how many things can you juggle at once?' puzzle.

SPACE HULK: VENGEANCE OF THE BLOOD ANGELS

Developers: Key Game

Original platform: 3DO

The second adaption of Games Workshop's *Space Hulk* boardgame takes a similar hybrid approach to that of the 1993 version, but succeeds in better evoking Warhammer 40,000's gothic atmosphere. *Vengeance of the Blood Angels* sacrifices the multiple camera views from your squad but you can still issue orders, and the time limit remains, only replenishing during real-time gameplay.

Stomping through the dark, cramped environments listening to radio chatter is evocative and tense, particularly when your Marines call to warn of an approaching enemy. Speaking of which, the Genestealers are properly terrifying this time, swapping from sprites to full-screen FMV as they lunge at your face. You need good timing to parry their attacks and then punch them, otherwise one hit will kill you.

But while you can now move freely - rather than in fixed 90-degree turns - and everything is much



↑ Exploring the *Space Hulk*

more polished, this version suffers from the same lacklustre gunfire as its predecessor. Another weakness is that you can feel the boardgame's dice rolls operating behind the scenes, meaning sometimes your shots kill enemies but not always.

How you get on with the game will depend on your patience for slow, tactical shooters. Everything takes a long time, and one mistake can end your mission, but if you're looking for a test of your skills then this is the version of *Space Hulk* to try.

THE TERMINATOR: FUTURE SHOCK

Developer: Bethesda Softworks
Original platform: PC

By this time, Bethesda's Terminator games included an open-world FPS, a grid-based dungeon crawler and a *DOOM* clone that wasn't much fun. Powered by Bethesda's own XnGine, *Future Shock* crushed all those under the steel tracks of technology.

Set in the distant future of 2015, *Future Shock* features open levels to explore, and you can enter almost every building to get supplies. However, unlike 1991's *The Terminator*, the game successfully balances player freedom with clear goals. It almost feels like a prototype for *Fallout 3* - just without the gallows humour - which makes sense, as it was the second project for Todd Howard (after *The Elder Scrolls: Arena*), director of *Fallout 3* and 4.

These days the game is mostly remembered for its striking technology and for featuring keyboard + mouse controls a year before *Quake* popularised this control scheme. But while the engine is indeed impressive,



↑ *Future Shock: the best of Bethesda's Terminator games?*

it's also notable how well the developers handle the Terminator licence. Alongside neat elements like Skynet using time-travel tricks against you, the team mixes iconic enemies (T-800s are authentically difficult to kill) with brand new robots to fight. In an interview for *Wired.com*, Howard said, "*Future Shock* was really great because the licence for the Terminator movies was in this weird limbo, so there was no one to tell us yes or no, no one to check in with, and we were able to do whatever we wanted."

"These days the game is mostly remembered for its striking technology and for featuring keyboard + mouse controls a year before Quake popularised this control scheme."

ALIEN BREED 3D

Developer: Team17 Software
Original platform: Amiga / CD32

With *DOOM* showing what modern PC gaming was capable of, it was inevitable that developers working with other platforms would try to emulate its success. But while there are some impressive FPSs on Commodore's hardware, *Alien Breed 3D* is forced to make a major compromise simply to achieve its goal of being an FPS on the Amiga.

The problem is a resolution so low it's difficult to distinguish environmental details and even enemies at any distance, making the game tiring on the eyes after a while. Levels are cramped but varied, and the engine has some nice features, such as water and different height floors and ceilings, plus it of course features textured environments instead of *Behind the Iron Gate's* Gouraud shading.

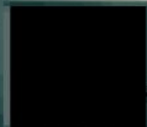
It's odd that the game doesn't retain much DNA from earlier *Alien Breed* titles. Instead of fighting hordes of *Aliens*-inspired aliens on abandoned



Health 100%



Health 100%





↑ Amiga FPS Alien Breed 3D

spaceships, you're now basically fighting the enemies from *DOOM*. Though pure speculation, it's almost as if Team17 took an unrelated FPS and applied the name of their existing IP to it in order to boost sales.

Followed by the sequel *Killing Grounds* in 1996, *Alien Breed 3D* received high review scores from the Amiga press at the time, which I think reflects just how desperate players were to play the hot new genre on whatever hardware they had, despite the necessary compromises.

IN PURSUIT OF GREED

Developer: Mind Shear Software
Original platform: PC

Before setting out on their own, id's staff worked for Softdisk during the day while creating their own projects at night. According to John Carmack, Softdisk weren't pleased with the success of their personal project *Commander Keen*, and so id passed them the 'Wolfenstein 1.5' engine as a way of severing ties between the companies. This is the engine used by Raven for *ShadowCaster*, to which Mind Shear added features like transparency, and sloping floors and ceilings. Development issues pushed the game's release back, so when it finally arrived, its out-of-date engine, odd gameplay and pixelated graphics meant poor reviews.

In Pursuit of Greed's (a.k.a. *Assassins*) levels send you back and forth, collecting randomly respawning items and fighting respawning enemies, giving the game a deathmatch feel. Rather than finding the exit, you need to find specific objects to progress, but can also collect and use inventory items. Other innovations



↑ *In Pursuit of Greed* is effectively a single player deathmatch

include being able to jump, the 'A.S.S. Cam' rear view, and the game allowing you to choose a character like the Cyborg, Dominatrix, Lizard Man, or 'Mooman' (presumably because 'minotaur' wasn't cool enough). As you'd expect, various actions trigger your character's noises, which - brilliantly - include a range of quizzical moos when playing as the Mooman.

But despite the Mooman's moos, *In Pursuit of Greed* demonstrates that simply having access to an id engine didn't automatically

guarantee your game would be a success.

"Choose a character like the Cyborg, Dominatrix, Lizard Man, or 'Mooman' (presumably because 'minotaur' wasn't cool enough)."

WRATH OF EARTH

Developer: Addix Software

Development

Original platform: PC

Wrath of Earth originated from a reverse-engineered *Wolfenstein* engine with graphical and gameplay improvements, like angled walls, sky textures, lighting, an inventory, NPCs to talk to and environmental conditions such as radiation. Initially the game had AI troops under your control and a separate engine for its exterior sections, but both were dropped to focus on the core action.



↑ *Wrath of Earth* may be obtuse but it's still a hidden gem

Even so, the game packs a lot of elements into the FPS template. *Wrath of Earth* is a puzzle-based FPS, so combines exploration and combat with simply working out what you have to do to proceed. The game leans into the fantasy of wearing a heavily-armed mech suit, with both authentically stumpy movement and surprisingly detailed controls. There are multiple HUD states to switch between and manipulate, though you spend most of your time in attack mode. Another nice touch is that your suit only recharges energy when in brightly lit areas, adding something else

to worry about when you head into dark tunnels.

With game budgets growing, *Wrath of Earth* feels like the work of a small, passionate team, with as an example the game's musician, Allister Brimble, having his mother voice the female character. That small scale 'why not?' ethos resulted in a game that is simultaneously out of touch with the year's big releases and crammed with a ridiculous array of features and ideas. Published by Transend - a

company that specialised in magazine cover disks - *Wrath of Earth* suffered from a lack of support and failed to make an impression, leading to the game's rights being sold to Softkey. But while it takes some massaging to get it working these days, and features some extremely challenging puzzles, the game's depth and atmosphere make it highly recommended for fans of *Marathon*, *Strife* and *System Shock*.



↑ Characters occasionally appear

"Another nice touch is that your suit only recharges energy when in brightly lit areas, adding something else to worry about when you head into dark tunnels."



INTERVIEW WITH JOHN ROMERO



John Romero is synonymous with the birth and subsequent explosion of the FPS genre, but with a career beginning in the '80s and still going strong, John's influence extends beyond the obvious id games. Here we discuss his involvement in areas from Raven Software's early games to the graphics standards that would help drive the 3D shooters of the '90s.

When id started, the studio was small enough that people performed multiple roles, but I believe you were predominantly a coder? Did that remain true as id evolved, as it seems like you shifted from coding to design?

John: I first started as a programmer and needed to learn how to code before I could really make games, so my earliest games were replications of arcade things that I'd seen already. I had to get good at that before actually getting good at design. But at the same time many of the games were original designs, and that was a really great way to kind of get used to [the process of] 'I'm not using anyone else's ideas, what is this going to turn out to be like?'

So that was evolving into a designer, and then when Tom Hall came into the group it was great. To be someone who could just sit there designing all day long and not have to code

- which is what Tom got to do - was a really cool thing because our game designs would be better if someone was sitting there creating design. And Tom, he was an assembly language programmer on the Apple II as well. All of us programmed in assembly on the Apple II for a long time, so we were fluent in programming. There was nothing that couldn't be programmed; it was all about what our ideas were.

When Tom could sit and think about the design, we could actually make games that were far better than us trying to design but also write assembly language all day, which was way more detail-oriented. So, your head's full of variables and cycle-counts and optimisations, all this stuff, and it's like, 'oh there's a little bit of space left over for design'. Having somebody like Tom just be able to design all day is great - I didn't have to worry about design anymore.

But when we started getting to the point where we were making levels and Tom needed help finishing them, then I went back to starting to do level design, and so I did a lot more design with *DOOM*.

Where did the idea for the Icon of Sin end boss in *DOOM II* come from? It's the first time we see id changing from big enemies that you fight to the sort of 'puzzle boss' that would resurface in *Quake*.

I came up with the idea for that because we introduced the Cyberdemon, and then the Spiderdemon, at the end of *DOOM* in episode three, and then when we were doing *DOOM II*, we didn't have time to create another gigantic boss. For a start, the process that we used was to create a physical thing, and then scan it and rotate it and animate it, and it was really labour-intensive.



↑ DOOM's evocative environments were a revelation

So, I thought, 'how about the level itself is kind of like a boss?' So I got something that looks like it's a creature that you've encountered when you come into a final room, and it sends minions out to try and destroy you. So yeah, that was mainly because we didn't have the resources and time to create another giant character like the Cyberdemon. And then after that with *Quake*, well, there's a thing that doesn't move that you have to defeat, and you have to figure it out.

You've mentioned being incredibly busy during the production of DOOM II, helping with other games and ports, strategy guides and the like, so I was wondering why id didn't just expand to help out?

Well, John [Carmack] wanted to remain small and I wanted to get more people in to help with all the extra stuff that we were doing.

In 1994 we were making *DOOM II*, and I was making *Heretic* with Raven. After creating the masters for *DOOM II* to get

pressed and put into stores, I was approached by the founders of DWANGO¹. They came to New York to the Doomsday event - the launch event for *DOOM II* - from Texas to give me their disk. I checked it out and was like, 'this needs to happen, this is amazing'. So, I told Jay [Wilbur], the biz guy, I said, "I'm going to help these guys to make this thing happen." So, at night I worked with DWANGO's founder and lead programmer, and basically redid DWANGO so it would work with our game.

Then 1995 was basically *Quake*. That was working on *Quake*, plus *HeXen*, plus *Master Levels of DOOM* [and] *The Ultimate Doom*. Mid-1995 maybe was *Final DOOM*. So yeah, there was a lot of stuff. And the dev team for *Quake* was only ten people. We had about three other people - a secretary, biz guy and a marketing guy. We needed more people. We could absolutely have afforded a hundred people if we'd wanted but we kept it really small, which I think was to our detriment because we had built IP that was super-valuable, and we could've had merch sales like crazy. We weren't selling anything

that was connected with our characters [although] we could've just gone *Minecraft* crazy, but we didn't because we stayed too small.

"We could absolutely have afforded a hundred people if we'd wanted but we kept it really small, which I think was to our detriment because we had built IP that was super-valuable."

I'm curious how the released version of *HeXen II* differs from the original planned third game in the trilogy, *Hecatombe*? Did you and Raven have a full design worked out before you left id?

None of those games had design docs. *Heretic* and *HeXen* were basically me telling [Raven] 'this is how I want the game to be created'. Then, as they're doing it, I'm clarifying. So, the *Hecatombe* idea was not what happened in *HeXen II*; I had the initial idea and they started working on it, but I left way before they could finish the game. It was a really cool design, but not even close to what *HeXen II* became. [laughs]



↑ John's head was hidden behind DOOM II's end-game boss

What happened was they got purchased by Activision. After Activision bought them, [they] decided that those two different names were two different games and that they are their own product lines, instead of being sequels in a trilogy. The third one was going to be even more involved; it was like an evolution of *HeXen* into the next stage that I think would've been really cool. It just wasn't done - the company got bought and everything changed.

Most of the conversation around *Daikatana* talks about the production issues resulting from working with an inexperienced team, but I was curious whether the publisher Eidos ever got involved?

They basically left us alone. We'd been in the business for a long time by that point. By that time I'd been making games for 18 years already. We, the three main creatives, had been doing this since 1980, basically, so they trusted us. And so we started making really ambitious stuff.



↑ Heretic kept its fantasy theme at an irreverent distance ...

They got involved in 1999, I think, just because insane stuff was happening with the company because of bad co-founders. Eidos had one of their own people in the London office come to kind of watch over the studio. Which I thought was great because he needed to see for himself what the lunatic co-founders were doing.

There weren't any milestones for delivery to them. The way that the deal was set up was not like a traditional publisher deal where you have milestones and

you're in constant contact with the publisher and that kind of thing. I had negotiated a deal with them where they're just paying our expenses every month for as long as it takes to get these games made.

"We, the three main creatives, had been doing this since 1980, basically, so they trusted us. And so we started making really ambitious stuff."



↑ ... whereas HeXen embraced it, delivering a compelling world

Use of 3D graphics hardware was accelerating during the period covered by this book. Was id approached by the hardware companies producing the new technology? Did they ask you for any advice?

We were involved with Rendition, NVIDIA and Intergraph, basically when everyone was starting to make video cards. This was way before they came out, probably the last half of 1995, I'd say. We were helping to define the APIs² that game developers would use to talk to those cards

because they were asking us 'what do you guys expect?'

We were basically like, "Here's a display list. If you can just execute this display list that we're constructing, then you can figure out how you do your microcode or whatever on your card. This is how we want to talk to it, if you could do it that way, that'd be great because that's how we assemble it on our side." The less refactoring of data to get it into the card, the more native it is to us, the faster we can



↑ Few games have an atmosphere as thick as Quake's

get graphics onto the screen. This was years before Monster 3D came out, or any of the 3dfx cards or anything.

We were involved in lots of stuff. Logitech would come over and I would help work with them on peripheral stuff. Like how they would make a mouse for gamers. How they would make devices that could circle-strafe around enemies with the joystick. Things that were important to shooters. It's funny, because the amount of stuff that we were involved in -

haptic feedback chairs, systems and stuff back in 1994, 1995 - because of the fact that we were involved in all that, we've become expert witnesses giving testimony in lawsuits. And so I get contacted all the time because I saw all these things before other companies claim they invented them, when they didn't, and I can tell you they didn't because I had actually seen that these guys had done this already. [laughs]



↑ Quake stitched together military and eldritch themes

You recently released an extra episode for DOOM called SIGIL. What were your goals with that? Was there anything in particular you were aiming to explore or focus on?

I came up with the idea to make SIGIL, probably at the beginning of 2018, because after December 2017, I [realised] 'oh, next year is the 25th anniversary of DOOM'. So, it was going [to] be a big milestone. It would be cool to celebrate it by releasing a whole new episode for DOOM, which I've

never done, you know? So then I thought about it. Like, ok, design time, what am I going to do? What is the goal of it? [I] thought, well, I need to have it take place after *Thy Flesh Consumed*, the fourth episode [of DOOM, but] before DOOM II; it needs to happen sometime in there. So, I needed to look at what happens in E4M8, you know, when you're exiting the game. My thought was that I can say something happened at the very end, which you don't get to see because you're already jumped into the exit. What happened



↑ Daikatana became infamous for its development issues

milliseconds after you jumped into the exit was that the exit was trapped with a sigil by Baphomet; anyone trying to leave is going to get pulled into the darker abyss of Hell. Now you're going to have to really work to get out.

Then I thought, ok, I'm going to do an episode. I need it to be as if it was created back then so it has to be able to run in original source ports like *Vanilla DOOM*, *Chocolate DOOM* and all that. That was the design constraint - it needed

to use all the same textures, all the same monsters. Nothing extra except I added a sky and a SIGIL exit texture. In the original DOOM we had this sprite called the Evil Eye and it was only used in maybe one or two places in the entire game. I thought, because it's so distinctive and it doesn't look like anything else, it would be a good thing to use as a signal or for opening up something in the game. I decided to call it the Eye of Baphomet, and it's watching you.



↑ SIGIL brought a distinct aesthetic to DOOM

I was really limited by the stuff I programmed into the game in 1993, which ended up being maybe four 'gunshot triggers'. I don't really see that many gunshot triggers in *DOOM* levels, you know? People are always opening doors or walking over triggers but not shooting a wall to make it open up or whatever. And the other distinctive thing about SIGIL was the cracks I had [added to *DOOM*'s E1M8 level when I revisited it in 2016]. I decided that I wanted to have that through all of SIGIL so that it was like this new

signature Hellcrack motif. So, now that's identified as a SIGIL thing, and with the Evil Eye it makes two things that are unique to my SIGIL stuff.

And then with deathmatch, that was the other thing that I did, that unbelievably another group³ was doing for the first time that same year that I was developing it, and their WAD came out before mine did. Basically, when you go into deathmatch the level is different. Even though you're trying to, say, play

an E1M1 deathmatch, you're in a completely different level. I was consistent through the entire episode by making every single level have a deathmatch level for it. And because the single-player levels are also really fun to play in deathmatch, I wanted to make sure that I could have a part of the single-player level be accessible by the deathmatch level. So, when you're in the deathmatch level, you and say one other person, there are two switches that are kind of far apart from each other. And if you both flip those switches at the same time, you'll open teleporters into the single-player level which has been walled off in that whole gigantic level. So you can run around in there and jump between deathmatch and the single-player through teleporters at will. And this was built into *DOOM* from day one, but no-one ever used it.

"I came up with the idea to make SIGIL, probably at the beginning of 2018, because after December 2017, I [realised] 'oh, next year is the 25th anniversary of DOOM'."

Author's notes:

[1] DWANGO, standing for Dial-up Wide-Area Network Game Operation, was an early paid multiplayer matchmaking service that first supported *DOOM* before adding other FPSs.

[2] An Application Programming Interface is a set of 'rules' that dictate how software communicates, in this case with your computer's hardware. APIs mean the game doesn't have to understand exactly how to talk to every possible hardware setup in everyone's computer - it just passes instructions on.

[3] John is referring to Mockingbird Software's Norse themed REKKR total conversion for *DOOM*.

1996

Thus far, most of the FPSs we've covered have focused on delivering a single-player experience first, followed by additional multiplayer maps and modes. With the internet gradually becoming easier and cheaper to access, we now begin to see multiplayer becoming more and more important for FPSs, culminating in the era of online-only games.





Unless we're looking at a predominantly multiplayer game like *Unreal Tournament* or *Quake III*, a side effect of giving an overview of a game's development, gameplay, graphics and so on is that the text will tend to highlight the single-player experience. This is because most of the unique content in an FPS is introduced to players through the single-player campaign and then reused and remixed to provide multiplayer gameplay. So let's briefly focus on multiplayer.

From playing with friends ...

In 1993 *DOOM* brought 'deathmatch' (possibly coined, and definitely popularised, by John Romero) to the mainstream. Players could fight each other directly, providing endless variety through unpredictable opponents that no AI could match, along with the rush of proving that your skills were superior to someone else's.

Initially players connected through a Local Area Network or via modems using protocols like IPX (Internetwork Packet Exchange). A side effect of *DOOM*'s initial handling of network play was that it

broadcast data to every machine on a network, whether they were playing or not, slowing that network and leading to companies and universities banning multiplayer.

... to playing with anyone

Quake advanced deathmatch play with 1996's *Quakeworld*, an update to the game initially created by John Carmack then supported by others. *Quakeworld* improved *Quake*'s deathmatch experience because the original code only worked well for low-latency connections, which most players at the time couldn't guarantee.

Another innovation came from outside id, with the formation of Spy Software and QuakeSpy. Included with *Quakeworld*, QuakeSpy allowed players to search for *Quake* servers to join rather than needing to know the specific address of a game, and meant that anyone could find a game, even if their friends weren't online. QuakeSpy would evolve into GameSpy as it began supporting more and more networked games, before finally shutting down in 2014.

Being able to set up a dedicated server to run each match also helped avoid the problem of giving one of the players the advantage of enjoying effectively zero latency (which would happen on a peer-to-peer setup where the computer running the match was also playing).

Alternative options

Alongside pure deathmatch, other potential game modes include co-operative play, with players taking on a campaign together, and team play, such as capture-the-flag. Each appeals to a different subset of players; for example, people who know they don't have incredible coordination can play a supporting role, while some of the sting of being beaten in straight competition can be removed by team play.

This latter point is why multiplayer modes with a more relaxed tone remain popular, as they introduce additional elements preventing gameplay from simply revolving around who has the best reactions, hand-eye skills and tactical knowledge. For example, 1997's *PainKeep Quake* mod introduced bear traps to drop, cans of beans that

provide a health boost but make you fart randomly, and a Gravity Well that sucks players in. Though less of a 'pure' deathmatch experience, these keep the gameplay accessible to less hardcore players.

An iconic example of this approach is David 'Zoid' Kirsch's Capture the Flag mod for *Quake*. Less confident players could contribute to their team's success by guarding their flag, while the introduction of the grappling hook allowed skilled players to pull off clever tricks and daring escapes. Capture the Flag was extremely popular and was followed by versions for *Quake II* and *Quake III: Arena*.

"In 1993 DOOM brought 'deathmatch' (possibly coined, and definitely popularised, by John Romero) to the mainstream."

YOU GOT THE NAILGUN, 19 SHELLS, 21 NAILS
BLOVELY WAS GIBBED BY MRBUNWAH'S ROCKET
TAZERFACE ATE 2 LOADS OF DASTARDLY DAPPER DAN'S BUCKSHOT
DASTARDLY DAPPER DAN RIDES TAZERFACE'S ROCKET



160



W

[N |] E

S



04028

88%

COMM

STAT

WEAPON STATUS

LASER

100%

FULLY OPERATIONAL

A.S.F. DRONE

VIEW MAP



ALIEN TRILOGY

Developer: Probe Entertainment

Original platform: PlayStation

The key to making games based on an IP isn't slavish accuracy, it's 'authenticity' - providing an experience that shows a love for that IP. *Alien Trilogy* is a good example of getting this right, mashing together events from the first three *Alien* films in a way that could have upset fans but actually comes across as an alternate reality where they overlap.

Alien Trilogy's levels can be confusing, but they're fantastically lit and generate a strong atmosphere, helped by sounds from the movies and great music. It avoids feeling like a theme park, though fans will recognise a 'greatest hits' of carefully recreated environments from the films.

But while the Xenomorph and human enemies look good at a distance, they become badly pixelated up close. Also, though this is a tough game, it tends to wear you down, as opposed to the *Aliens* actually being deadly - they move fast and are tricky to kill but their attacks don't do much



↑ *Alien Trilogy feels authentic*

damage. Similarly, the Queens are tough but nowhere near as dangerous as they should be, while Face Huggers scurry about like rats with their 'hugs' just getting in the way of the screen for a couple of seconds.

Despite its *Aliens* ironically lacking teeth and the game failing to impress graphically when compared to this year's big releases, *Alien Trilogy* nonetheless delivers a tense and atmospheric experience with some great moments for movie fans.

TERRA NOVA: STRIKE FORCE CENTAURI

Developer: Looking Glass Technologies

Original platform: PC

One of Looking Glass' mostly forgotten games, *Terra Nova* provides you with battle armour, a jetpack and *System Shock's* customisable HUD. You usually have troops under your command, and despite being in a fancy suit, you'll need them: it doesn't take many shots to kill you. Flanking and distraction are key, with the freedom to plan mission approaches the game's strongest area.

During development, *Terra Nova* shifted from delivering a simulation towards more accessible action, stretching its development time enough that it already looked old-fashioned on release. Looking Glass attempted to counteract this with *Wing Commander*-esque FMV sequences. Unfortunately, the FMV was produced in-house rather than outsourced, adding cost and hampering development. In an interview on *RockPaperShotgun.com*, lead designer Dorian Hart said, "I weep when I think how much more polished and fun the

game could have been if the team had spent all the hours we spent worrying about and working on the FMV and instead spent it on anything else."

Terra Nova ended up a slightly awkward beast, providing tactical options but often without giving the time to use them during play. And, yes, the FMV is undeniably clunky, though Looking Glass' trademark world-building is there if you look for it. It's obvious why the game's muddled complexity made finding an audience difficult, but *Terra Nova* is still an entertaining curio for fans of the studio.

"During development Terra Nova shifted from delivering a simulation towards more accessible action, stretching its development time enough that it already looked old-fashioned on release."

CYBERDILLO

Developer: Pixel Technologies
Original platform: 3DO

PO'ed, *Killing Time* and *Iron Angel* illustrate the varied approaches to FPSs released for the 3DO, but *Cyberdillo* proves that you can take things too far. The only release by Pixel Technologies, in it you play an armadillo who's run over by a car then given cybernetic implants - specifically an arm that shoots plungers.

Levels are cramped and wildly abstract (to complete one you need to collect dog butts that are locked in cages). You move extremely quickly but the small rooms are full of hazards that deplete your health in seconds if touched. Slopes affect your movement, pinball bumpers bounce shots, traffic lights hurt if red, laxatives kill you if you don't find a toilet - the game is not short on dangers.

It's also crammed full of low-res, arbitrary sprites - for example, the aerosol is an enemy but the shoes boost health - making it difficult to know what to shoot. Every surface is covered in bright, detailed

textures, making it visually noisy, which combined with the bouncy physics quickly induces nausea.

Cyberdillo has some clever technology and potentially fun features but wraps them in a crude, clumsy game. I guess kids might find the toilet jokes amusing but even they recognise a bad game when they see one. For goodness sake don't play this, but you could search *YouTube* for the *Making of Cyberdillo* video if you want to see what the developers thought was funny.

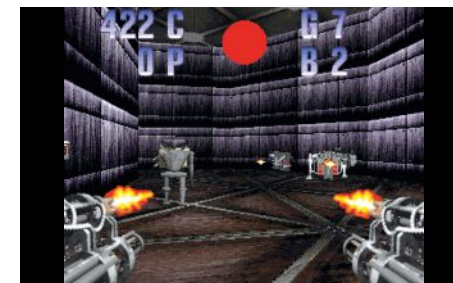
"Levels are cramped and wildly abstract (to complete one you need to collect dog butts that are locked in cages). You move extremely quickly but the small rooms are full of hazards that deplete your health in seconds if touched."

NEMAC IV

Developer: ZenTek
Original platform: Amiga

Controlling an FIKM-7 robot means you could classify *Nemac IV* as a mech game, but along with environments that make it hard to judge scale, your movement is much less ponderous than in games like *Kileak*. Playing as a robot does give you excellent stompy-foot sounds, and instead of collecting weapons as you progress you have access to them all from the start. You can also fire multiple guns at once - though you need to manage ammo - which is great fun and I'm surprised more FPSs don't adopt this idea.

There are a lot of enemies, making it difficult to avoid damage, which, coupled with your very low health pool and fast movement, make you feel even less like a mech. The entire game is set indoors, as you descend into the *Nemac IV* complex to shut down a computer, and with each greyish level taking place on a single plane it quickly becomes repetitive. Difficulty aside, long play sessions kind of blur the game into a zen, robots-shooting-robots, meditative experience.



↑ *Quad-weapons in Nemac IV*

Nemac IV was delivered in two versions: a free release and a paid-for Director's Cut with added cutscenes, which is an unusual sales tactic. But while it has some interesting ideas, like many of the other Amiga FPSs, *Nemac IV* functions as much as a technical proof of concept as a satisfying shooter, with gameplay roughly on par with the by this time four-year-old *Wolfenstein 3D*.





HEALTH
190

AMMO
141

INV
100%

DUKE NUKEM 3D

Developer: 3D Realms
Original platform: PC

In 1994, Scott Miller had published *Wolfenstein 3D* under his Apogee label, but decided he needed a new brand for the emerging future in 3D games. He set up 3D Realms and used the money flowing in from his share of id's success to fund several FPSs. Along with *Duke Nukem 3D*, these included *Shadow Warrior*, *Descent*, *Blood*, and a game called *Ruins*, many of which ran on Ken Silverman's Build engine. Rising development costs meant 3D Realms would sell off most of these projects to other publishers (with *Ruins* being released as *PowerSlave*), retaining just *Shadow Warrior* and *Duke Nukem 3D*.

Built on a character introduced in Apogee's best-selling 1991 platform game, if you wanted to sum it up *Duke Nukem 3D* in a single word, I think it would be 'personality'. The game's levels not only effectively sell that they're a bar, a prison, or a film studio, but that this all takes place in a porn-, money- and gun-fixated world where it makes sense that

Duke Nukem is a beefcake cliché movie hero. Love him or hate him, Duke Nukem is probably the first FPS protagonist that actually comes across as more than a simple blank slate. A lot of this comes from his voice lines, delivered by Jon St. John deliberately imitating Clint Eastwood's *Dirty Harry*.

Arriving the same year as *Quake*, id and 3D Realms' games each brought something new to the FPS genre. *Quake* is discussed shortly, but *Duke Nukem* showed us that we could fight through realistic environments as well as abstract dungeons (compare *Duke's* cities to *DOOM II's* from just a couple of years earlier). It wasn't just that objects were interactive, but that you could ride the subway, watch a movie, or knock holes in walls, approaching levels with the freedom of deathmatch play. Speaking of multiplayer, here again the game delivered an alternative to *Quake* with a pace closer to *DOOM* and more slapstick combat, plus toys that provided fun alternatives to one-on-one shotgun duels.

The game's massive success - it had sold around 3.5 million copies by 2009 - led to a string



↑ *Duke Nukem 3D presents an action-movie world*

of expansions, each delivering more levels, weapons and enemies. These included a collaboration with Penthouse Magazine and an episode in which you fight through Washington DC to rescue the President. Naturally the game was ported to the consoles of the day, complete with inevitable censorship on the Nintendo 64.

Following *Duke's* success, 3D Realms would begin work on *Duke Nukem Forever*, a game infamous for finally being released 14

years after being announced. Scott Miller has talked about the delays being caused by perfectionism and the project's team being too small, meaning they could never keep up with the constantly advancing state of FPS design. But sequel woes aside, *Duke Nukem 3D* will be remembered as the game that offered an anarchic, fun alternative to *Quake's* gothic angst and for showing that FPSs could take place in relatively realistic environments.

STRIFE

Developer: Rogue Entertainment
Original platform: PC

Created by Rogue Entertainment (who would later go on to make expansions for *Quake* and *Quake II*), *Strife* was originally going to be published by id but the deal fell through due to internal politics. Even so, the two companies worked closely, with designer Tim Willits working on first *Strife*, then *Quake*.

Strife's world is a mix of fantasy and sci-fi, presenting guns and robots alongside medieval villages. As well as building on the freedom of games like *CyberMage*, *Strife* includes elements pointing to future immersive sims like *Deus Ex*. For instance, characters don't always attack, and trying to fight everyone gets you killed. There are stealth elements, but - again similarly to *Deus Ex* - you tend to shift back and forth between that and combat. As well as revisiting levels, you can buy from shops and upgrade stats, but the biggest RPG influence is being able to talk to characters (with many lines voiced). You can even choose how



↑ *Forgotten gem Strife*

to respond, though some options - like 'do you want to join the resistance?' - end the game if you choose wrongly.

One of the last titles to use the *DOOM* engine, *Strife* was released between *Duke Nukem 3D* and *Quake* and so was roundly ignored despite offering something unusual for an FPS. It didn't deserve to be forgotten, and with a remake available on PC and Nintendo Switch, *Strife* is still worth checking out.

THE TERMINATOR: SKYNET

Developer: Bethesda Softworks
Original platform: PC

Following just a year behind *Future Shock*, *SkyNET* was Bethesda's final Terminator game. Originally planned as an expansion but changed to a full release, *SkyNET* still feels somewhat like an add-on. It has half as many levels as *Future Shock* and a much higher difficulty (presumably tailored for players who've finished the original levels), and introduces some improvements to the engine. The most notable of these is that it runs at a higher resolution than *Future Shock* and, handily, will let you load the older game in that new resolution. It also adds deathmatch play (*Future Shock* was single-player only), providing quite a few multiplayer options including time of day and how many drivable vehicles to include. It even allows players to control quiet, vulnerable humans or the tough but loud Terminators.

Another big difference is that *SkyNET* drops *Future Shock*'s hand-drawn level briefings and

jumps on the '90s FMV bandwagon. As expected, the acting is awful and the women wear tank tops while the men are fully dressed, but on the plus side the characters are so badass they wear sunglasses in a windowless underground bunker.

SkyNET isn't better or worse than *Future Shock*, just different. It's fine that *SkyNET*'s levels are less freeform and have lost their 'explore the wasteland' appeal, but they're also occasionally buggy and can be frustrating. In the end, *SkyNET* feels stuck mid-way between full sequel and quick expansion.

"Originally planned as an expansion but changed to a full release, *SkyNET* still feels somewhat like an add-on. It has half as many levels as *Future Shock* and a much higher difficulty."



RADIATION

SAFE



ARMOR



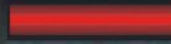
HQ, come in. I'm
inside the complex.



19



HEALTH





90
168
35
0

90
168
35
0

9 00 90

QUAKE

Developer: id Software

Original platform: PC

Id's early games specifically revolved around the technology John Carmack developed for each project, an approach Carmack later admitted he may have taken too far with *Quake*. Attempting to pioneer a full 3D engine and a true multiplayer game at the same time, the technology went through so many iterations and took so long to finalise that the team was already burned out before they'd had a chance to create any real gameplay. They'd made plenty of objects, textures and test maps but nothing you could really enjoy. This led to the decision to make a 'straightforward' FPS with what they already had rather than launch into a testing period for experimental new ideas - such as the mooted third-person combat - that might or might not work out.

Named after a Dungeons & Dragons character from id's campaigns, *Quake* was originally intended to be a fantasy game. The eventual use of HP Lovecraft's Cthulhu Mythos and a dimension-hopping story came about from trying to

make use of the assets they'd already created in the 12 months it took Carmack to build the technology. The team then had seven months to create the single-player campaign, with John Romero in charge of how the episodes would transition through medieval castles, to metallic and then arcane themes.

Making another FPS may have been the safe option for the team, but there's no denying how effectively they took to building levels in 3D space. Most of the single-player levels loop their paths around to bring you back to earlier areas from a new angle while forcing you to look up and about as you fight. The gameplay may not have advanced far beyond *DOOM*'s 'kill enemies, find keys', but the environments successfully delivered an evocative and otherworldly atmosphere.

While the single-player has plenty of fans, *Quake*'s legacy is its deathmatch play. Designed as multiplayer from the start, making *Quake* a client/server game was ground-breaking as it allowed anyone to set up a server and then have players simply join and leave it. This led to websites that listed these servers, which in



↑ Final boss Shub-Niggurath required mild puzzle solving

turn fed into the formation of clans and communities. Needing to look around these 3D levels popularised mouse-look as the default FPS control scheme, giving *Quake* a steep learning curve but a high skill ceiling for players who could master it. As a result, *Quake* was one of the first eSports, featuring in competitive events such as 1997's Red Annihilation tournament, where Dennis Fong won John Carmack's Ferrari.

The crunch to get the game out made staff physically ill and

stripped id of the music, games and fun that had characterised the making of *Wolfenstein 3D* and *DOOM*. In the months following *Quake*'s release, around half of its developers quit the company. New staff would be hired and the studio would continue to make great games, but *Quake* was very much the end of the original id Software.

"The crunch to get the game out made staff physically ill."

EXHUMED

Developer: Lobotomy Software
Original platform: PC

Initially advertised as *Ruins*, the game's name changed to the punchier *PowerSlave* when the project left 3D Realms, with the team apparently unaware of the Iron Maiden album of the same name (despite both having Egyptian themes). Complicating things further, the game's European publisher released it as *Exhumed* and in Japan it was called *1999 Pharaoh's Resurrection*.

The Build engine-powered PC version of *Exhumed* is a perfectly solid shooter, but both the PlayStation and Saturn versions are superior, with each boasting excellent lighting, a dynamic camera, and 3D environments. Also, while the PC version is linear, the console games combine the hub-based progression of *HeXen* with 'Metroidvania' design (from *Metroid* + *Castlevania*, with both series defined by gated exploration). This means you gradually unlock new powers - such as longer jumps - then revisit levels to access new areas.

Impressively, *Exhumed* managed to combine serviceable first-person platforming with great combat by featuring generous auto-aim and one of the longest jump distances in an FPS. Fortunately it's easy to try *Exhumed* for yourself, thanks to a recent remaster by Nightdive Studios that mixes the PlayStation and Saturn versions of the game.

Exhumed was created by Lobotomy, a studio formed by ex-Nintendo staff. Best known for their technical prowess, Lobotomy were also responsible for the console conversions of *Duke Nukem 3D* and *Quake*. Sadly, while creating a bespoke version of *Exhumed* for every platform meant each would receive a great game, the high cost of this development approach combined with average sales meant the studio soon closed.

"The Build engine-powered PC version of *Exhumed* is a perfectly solid shooter, but both the PlayStation and Saturn versions are superior."

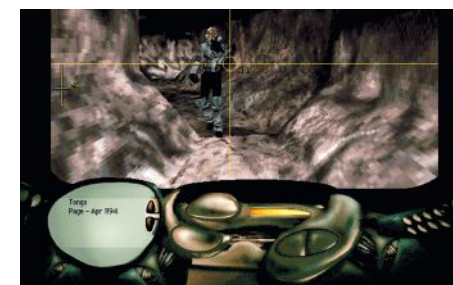
AZRAEL'S TEAR

Developer: Intelligent Games
Original platform: PC

Azrael's Tear is as much first-person adventure as FPS, but I wanted to include it because few people have played it and it demonstrates how evocative first-person exploration can be despite technical limitations.

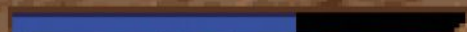
The game's setting is ambiguous, because it's set in 2012 and yet you play a 'Raptor', a high-tech thief with a gun strapped to your arm. Your most important asset is the Raptor's signature MS-2 helmet, which provides your HUD but also constantly presents detailed information, makes guesses, and even identifies secret doors. Despite all this sci-fi gadgetry, *Azrael's Tear* takes place in a Dark Ages-style world of orreries and temples, all in a rotting, confusing, underground complex.

The game sets its tone early when you find the body of a drowned girl and her ghost stands up and proceeds to talk to you. The other characters are similarly unnerving, and though there isn't much combat, you need to be ready, as enemies can be deadly.



↑ *The immersive Azrael's Tear*

The environment and characters are all polygonal, though the game was released just before 3D accelerators appeared and so is rendered in software, giving everything harsh, jagged edges. Combined with challenging puzzles, sudden deaths and an unusual control scheme (that you can't adjust) means that in many respects *Azrael's Tear* hasn't aged well. However, there are still few games that so effectively capture such a bleakly atmospheric and vividly realised world.



ERADICATOR

Developer: Accolade
Original platform: PC

A *Marble Madness*-esque game with a frog radically shifted into the FPS *Eradicator* when Accolade bought a failing studio and wanted access to the burgeoning genre. The resulting game has a slightly confused tone, asking you to explore the dark, biomechanical enemy-infested Citadel accompanied by moody audio, which is undercut by an over-the-top intro which proclaims 'everyone is dying!' in a spectacularly goofy manner. In the end *Eradicator* comes across like *Duke Nukem 3D*'s Lunar Apocalypse episode, only without the boobs.

In the first of a series of nice touches, you pick from several characters with different stats and voice lines, each of whom has a unique first level showing how they infiltrate the Citadel. Other fun features include shoot-'em-up-style floating orbs that fire when you do, picture-in-picture cameras, remote control of characters, and enemies who repair systems you've destroyed. The gameplay is as much a mashup as the tone,

asking you to spend equal time solving puzzles, platforming and fighting enemies, all in atmospherically lit but too-dark environments.

With Accolade unwilling or unable to spend the marketing money needed to generate excitement, *Eradicator* simply disappeared. Harsh as it sounds, you can see why the publisher may have made this decision, because despite cool ideas, *Eradicator* lacks the technical prowess or scope to stand out when compared to *Duke Nukem 3D* or *Quake*. Nonetheless, if you like puzzling and platforming mixed with exploration, then *Eradicator* is something of a lost gem.

"In the first of a series of nice touches, you pick from several characters with different stats and voice lines, each of whom has a unique first level showing how they infiltrate the Citadel."

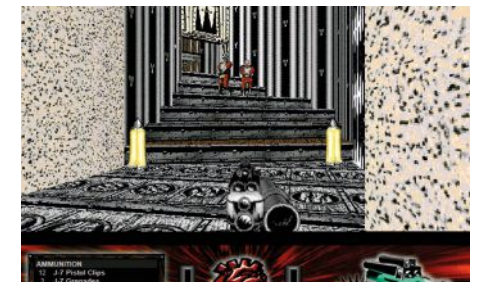
ZPC

Developer: Zombie
Original platform: Macintosh / Windows

Created and directed by artist Aidan Hughes (most famous for the album covers of German industrial band *KMFDM*), the title stands for 'Zero Population Count'. Starting as a *Duke Nukem*-style game set in the present, *ZPC* was supposed to be part one of a 300-year epic trilogy and was described by its developers as 'an underground comic come to life'.

Everything about *ZPC* is incredibly stylised, with abstract levels that are as much living propaganda posters as actual environments. The predominantly black and red textures are seemingly placed at random, often with the same texture used for walls and doors so you can't tell which is which, and sometimes slowly scrolling for no reason.

After a wordless intro which shows your space coffin crashing on a planet, your John-Wick's-dad character embarks on a Holy Quest. The bad guys are the 'Black Brethren', who banished you - 'Arman, a 4th generation Psionic War Messiah' - and now you're



↑ *The strange, unsettling ZPC*

back for revenge. Honestly, none of that matters, because levels have no obvious objectives or means of progression - you simply walk through a comic artist's fever dream, killing everyone and picking up the 'Nectar' they leave behind.

Powered by Bungie's *Marathon* engine, *ZPC* was the first release from Zombie. The studio would continue releasing titles until 2014, of which the Spec Ops games are the best known, but none of their future releases would be anywhere as remotely weird as this.

REX BLADE: THE APOCALYPSE

Developer: Xtreme Games
Original platform: PC

After the failure of the first *Rex Blade* game, *The Battle Begins*, it was combined with the unreleased second and third entries - *The Battle Rages On* and *The Final Encounter* - as *The Apocalypse* (and later as *Domination*). Each episode has 'part human, part Cyborg' Rex travelling to a different world, including Sexterra where he fights Nymphoborgs, with the game sternly warning 'there will be no interfacing!'

Each game is riddled with bugs and odd, annoying decisions. While a lack of polish can be forgiven, *Rex Blade's* gameplay consists entirely of looking for hidden switches, each of which does something unknown somewhere in the level and you have some amount of time to do something about it.

The series' main innovation was that you can access terminals to type DOS commands. These bring up text hints from the developers, plus clones of arcade games, but almost all of

this is hidden; the passwords are the answers to real-world questions. For example, the first level has 'What was the name of the starship that Captain Kirk commanded immediately after the five year mission? Hint: NCC...-A'. There are no in-game clues to these; you're forced to go away and look them up.

The publisher claimed that, "*Rex Blade meshes a first-person 3D shooter with strategy, education, and thought provoking level design*", but none of its elements cohere, leaving a disjointed mess.

"The series' main innovation was that you can access terminals to type DOS commands. These bring up text hints from the developers, plus clones of arcade games, but almost all of this is hidden; the passwords are the answers to real-world questions."

DISRUPTOR

Developer: Insomniac Games
Original platform: PlayStation

Insomniac are best known for the *Spyro*, *Ratchet and Clank*, and recent PlayStation *Spiderman* games, but the studio's first release was the FPS *Disruptor*. The project began as *Disruptor 7* for the 3DO, chosen because its development kits were cheap. With Universal onboard as publisher and the 3DO struggling, the almost complete game was swapped to the PlayStation. Some final development trivia: Mark Cerny, lead system architect of the PlayStation 4 and 5, worked on *Disruptor*, including making some of its levels.

Insomniac have always been known for their imaginative weapons, and that's reflected in *Disruptor's* 'Psionics', forcing players to juggle mind powers and traditional guns to balance ammo. Levels are created from polygons, and utilise large, open environments plus fog colours like pink, yellow and purple to provide a classic sci-fi atmosphere. Enemies are sprites rendered from polygonal models and require an interesting variety of tactics to beat.



↑ Classic sci-fi from *Disruptor*

Disruptor includes FMV cutscenes, which are as cheap - they only had a single day to record them - and cheesy as you'd expect. Even so they have some fun elements, such as lines like, 'Vacation authorization comes strictly from the President', someone in a furry costume as a briefly glimpsed monster, and a ridiculous mid-game plot twist.

Disruptor shipped around 200,000 copies, but Insomniac wanted to move onto more mass-market games and wouldn't return to FPSs until 2006's *Resistance*.

SYSTEM

CPU:500 TF
MEM:3024 GB
CRYPTO:L3
PUR:3422 K3
DNA:

BIOSTATS

ORGANICS:834
ENDOSHEL:520 ML
NANITES:22 ML

NETWARE

INFOCOMPASS

WEAPON

AMMO

APRS:659
PLASMA:3000 K3
GRENADES:10
MORTARS:10
ROCKETS:10
INFEL:10 ML





Inventory and HUD interface:

- Inventory Bar:** A row of seven slots containing icons for a hand, a knife (1), a spear (1), a bow (1), an arrow (27), a spearhead (1), and an empty slot.
- Navigation:** A central set of directional buttons (up, down, left, right) and a central 'USE' button.
- Function Keys:** A grid of buttons labeled F1 through F9 with icons for 'USE', 'LOAD', 'SAVE', 'NEW', and 'QUIT'.
- HUD Elements:** A 'HEALTH' gauge with a red bar, a 'VITALS' gauge with a green bar, and a green wireframe character model on the right.
- Other Controls:** A 'FACE INTERACT' section with left and right arrow buttons, a 'MAP' button, a 'COMBAT' button, and a 'LIGHT' button.

DEUS

Developer: Silmarils
Original platform: PC

Deus is the sequel to 1994's survival simulator, *Robinson's Requiem*, and straightaway it really nails that iconic mid-90s 'outside environment' look: all sharp edges, steep slopes that fade into fog, and stretched green-brown textures.

You play as Trepliev1, sent to kill members of a terrorist organisation. As you're a bounty hunter, it's a bit weird that you parachute onto a hostile planet with no weapons and have to take them from people one step at a time. Punch a guy, get a knife, stab a guy, get a spear, and so on, eventually progressing to guns.

You can play a simplified 'action mode', but the real game is in 'simulation mode', in which you can die from any of 22 causes including hypothermia, gangrene and accidentally taking cyanide pills. You can of course starve, dehydrate, and get tired but that's child's play. When you get hurt you need to use a healing screen to work out what the problem is and then solve



↑ *Can you survive Deus?*

it, injecting yourself with various things, disinfecting and bandaging injuries and even amputating limbs. Along with the brilliant/ridiculous health mechanic, there is a huge range of clothes that you need to wear to ensure you don't get too hot, too cold, too irradiated, or too insane.

Deus is a fascinating game that requires patience and perseverance to get anywhere, and if it was released now I could see it being popular with the hardcore survival game audience.

XS

Developer: SCi
Original platform: PC

XS was a multiplayer arena shooter released three years before *Unreal Tournament* and *Quake III*. Perhaps worried that the internet wasn't quite ready for this, the game's marketing focused heavily on its AI opponents, with adverts colourfully claiming, "These guys are so good at tracking you down, you'll think you've got a homing device shoved up your ass."

That about sums up the game's 2000 AD-inspired tone, which ends with you winning the arena's prize money and then being murdered. Someone clearly put a lot of effort into the game's 60 characters, with each receiving a detailed psychological breakdown. The cast includes homages to the Terminator (Johnny Terminus), Boba Fett (Blade), and an ABC Warrior (Joey Smallchange).

The gameplay is deathmatch against up to four humans and four bots, but the 20 levels are designed for way more players than that, leading to long silences. They attempted to



↑ *XS: nice lore, slow combat*

solve this by letting you equip a radar, but doing so strips all the tension out of suddenly running into an opponent. A bigger problem is that combat is so sluggish that it takes ages for anyone to die. You just fire and fire and fire, with both you and your opponent yelling pain noises all the while.

Despite the love that's gone into developing its grim, stylish world, *XS* is too slow - both in movement and how long it takes to kill - to convince as a multiplayer experience.

← *Even simple navigation is a challenge in Deus*

CONGO THE MOVIE: THE LOST CITY OF ZINJ

Developer: Jumpin' Jack Software
Original platform: Saturn

Following the success of *Jurassic Park*, Paramount adapted Michael Crichton's book *Congo*, in turn leading to this game based on the movie. While the film simply references an initial jungle expedition failing, the game makes you the last survivor of that expedition trying to escape. The story is told through surprisingly polished FMV sequences, and is notable for the main character being African-American.

While later levels move indoors to more traditional FPS corridors, you begin in a jungle that cleverly plays to the Saturn's strengths by using a lot of sprites to form the environment. Other nice touches include earthquakes that make the floor ripple, a mini-map that tracks where you've been, and enemies whose poison affects the screen or your controls.

Congo is a seriously challenging game, with numerous fast-moving swarms of enemies emerging from nowhere, limited peripheral

vision, and the game deleting your save when you run out of lives. The combination of not being able to see very far and sudden enemy attacks make *Congo* quite stressful to play, fitting its lost-in-the-jungle theme by keeping you on the back foot and ensuring you don't feel like a powerful hero.

Congo is technically impressive, tense and atmospheric. Frankly it deserved better than to be forgotten but that's the gamble of tying yourself to a licence - if it doesn't take off it can drag your game down with it.

"Congo is a seriously challenging game, with numerous fast-moving swarms of enemies emerging from nowhere, limited peripheral vision, and the game deleting your save when you run out of lives."

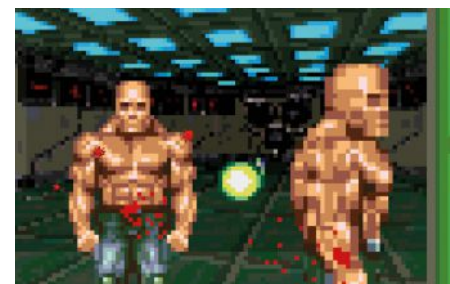
GLOOM DELUXE

Developer: Black Magic Software
Original platform: Amiga

First released in 1995 and followed by this updated 'deluxe' version, *Gloom*'s approach to the goal of releasing a credible FPS on the Amiga was to take a *Wolfenstein*-esque experience and strip it back even further. The end result is a game with only one weapon, few enemy types and relatively small, completely flat levels that involve nothing more than killing anyone between you and the exit.

But this focuses everything *Gloom* has on its combat, and it's here that it outshines the other Amiga FPS contenders. Infinite ammo, cramped environments and dumb AI results in levels full of enemy hordes that comically explode into body parts which rain down with suitably squishy sounds. The rest of the game doesn't take itself too seriously either, with enemies called Aggro Skinheads, baby-milk bottles as health pickups, and one level boasting 'the wheel of death'.

It's not perfect by any means, as even though you power up your



↑ Colourful violence in Gloom

single weapon over time, it doesn't change enough to make that interesting, plus the gun's fat bullets struggle to get down the game's narrow corridors. Still, repetition and limitations aside, I'd take *Gloom*'s stripped-back gameplay over the more technically impressive but less fun to play Amiga FPSs like *Alien Breed 3D*.

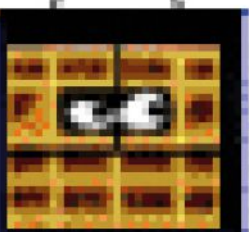
As an aside, *Gloom 3* was released in 1997 but that was a strange, scrappy game made by a different developer. And nope, there is no *Gloom 2*.





202
ZORCH

126%
HEALTH



192%
ARMOR



Chex®

CHEX QUEST

Developer: Digital Café

Original platform: PC

Chex is an American breakfast cereal introduced in 1937. Wanting to reinvigorate its brand, General Mills commissioned Digital Café to produce a Chex videogame, but the limited development budget meant that rather than create one from scratch they licensed the by now out-of-date *DOOM* engine from id (specifically 1995's *The Ultimate Doom*). This makes *Chex Quest* a *DOOM* total-conversion as it replaces the enemies, textures, levels, sounds, etc., but retains its gameplay. In turn this leads to people who play *Chex Quest* going 'wait, this is actually quite good', which makes perfect sense when you consider that they're basically playing *DOOM*.

You play as Chex Man from Chex Squadron, battling aliens called Flemoids across five levels (though as it's a conversion, you can force it to load normal *DOOM* levels). As it's a family-friendly game, you have Zorchers instead of guns, and 'kill' Flemoids by teleporting them away. For all its bright



↑ Zorch Flemoids in Chex Quest

colours, the veneer overlaying *DOOM* is thin, leading to surreal situations in which you hear the hooting of a Flemoid in a dark room and instinctively rev up the chainsaw, sorry, spork.

The promotion was a huge success for General Mills, who gave away 5.7 million CDs and backed it up with TV advertising, tripling sales of the cereal and winning several marketing awards. The game has a cult following to this day, leading to two sequels and an HD remaster on Steam.

ASSASSIN 2015

Developer: BlueSky Software

Original platform: PC

One of the more unusual titles covered here, *Assassin 2015* combines FPS sections with *Dragon's Lair*-style memory tests, all connected by cutscenes. You play the eponymous assassin Jack Butcher, and after killing your target in the game's intro, you're accosted by a guard. The game begins with the guard standing in front of you. Nothing happens, but if you don't shoot within five seconds, a cutscene plays of him killing you and you're unceremoniously dumped to the main menu. Fire a bullet, the guard dies, and you move on to the FPS sections.

These also take some getting used to, as they rely on generous auto-aim, with enemies darting around and often through you, forcing you into cover to wait while your shield regenerates. You only have one gun for the whole game - though can charge up an instant-kill shot - but while it overheats, there's no ammo to worry about. Throughout, you're guided by the voice of your handler, and if



↑ Reaction test Assassin 2015

you don't quickly do what she wants then you die, either in a cutscene or from hordes of enemies.

Assassin 2015 can be finished in less than an hour and relies on exacting trial-and-error gameplay for its challenge, meaning it struggles to convince as an FPS or as an interactive movie. But despite that, the game is an absolutely fascinating experiment, presenting a brave, if flawed, attempt to bring cinematic flair to the FPSs genre.

← Each *DOOM* element has an analogue in Chex Quest

INTERVIEW WITH DAVID DOAK



In addition to his meme-generating appearance in *GoldenEye 007* as Dr. Doak, David Doak's career has resulted in several classic FPSs. Now a lecturer at Norwich University of the Arts, I spoke to David about the games he's been involved with, life at Rare and moving on to set up a new studio (an experience David has recently revisited with the newly announced *TimeSplitters 4*).

Did you play a lot of games when you were younger, and did you always think, 'I'm going to work in the games industry', or was it something that you fell into?

David: The local shop, whoever owned it, for some reason when arcades were starting out, put a *Space Invaders* [machine in]. And then over the years it changed and there was a *Galaxian* machine, there was a *Missile Command* machine, or whatever. They had a storeroom at the back, which was just a dark, smelly space with about five machines in it. It's really funny you just asked me that, because that's something that no-one's ever really asked before. My exposure to stuff was initially those kinds of arcade machines. Also, our local leisure centre used to have a bunch of machines, and if my cousins were going to go and do sports, like go and play five-a-side, I'd grab a lift to go play ... [laughs]

I think we had an old TV *Pong* machine when they first came out, and then [the] Spectrum was the 'in' for me. I was at secondary school. Bizarrely, I've got one computing qualification: an O-Level in Computer Studies. That's my only computing qualification! [laughs] I always thought that the programming side was beyond me, and never seriously thought that I'd be writing games.

You were hired by Rare because you had experience with the workstations they were using, but how did the transition from that to *GoldenEye* come about?

It wasn't a formal computing qualification, but the back end of my PhD and postdoc, basically as a kind of side-line to my work, I was like the wrangler for a whole bunch of SGI machines¹. *Edge* magazine always had Rare [job] adverts, and it had this advert that specifically mentioned 'graphics

system administrator'. I applied thinking it was just not going to happen, and then retroactively piecing it together from the other side, when they advertised they thought 'we'll never find anyone'. And you know, I rocked up and basically was the one person that had applied, probably wasn't an idiot, and knew my stuff. So I started doing that, and really within about three months I'd had enough of it, because first of all it was just like 'oh my God, I'm getting to see all these games being made and talking to people who are making them', but I wasn't making them. I was the guy who fixed the machines.

And then both Martin Hollis, who was in charge of the *GoldenEye* team, and also was involved in the Silicon Graphics network, and Simon Farmer, who was production manager at Rare, they both said, "What do you want to do to not leave?" And I said, "Well I'm doing the systems



↑ David programmed Bond's multi-functional watch

stuff, but I'm sitting around lots of time not doing anything. Maybe I could be involved in one of the games." And Martin said, "Why don't you move over to the GoldenEye block?"

The watch², that was one of my first things to do. It was like finding me things that were safe, that I wouldn't break. At the time, there was no source control³ or anything. It was essentially two people writing the code, Martin and Mark⁴, and they used to manually merge every couple of months. They

delineated what they were working on - Mark was game code and Martin was lower-level stuff like the movement and the head tracking - but there wasn't really any space there for some amateur to be clumping around breaking stuff.

It's amazing now looking back. [Mark] wrote the most wonderful scripting language for the AI and stuff in the game, and basically everything ran off it. I started getting involved with tweaking bits of that or doing some scripting, and that was



↑ Fighting multiple guards is a bad idea in GoldenEye

what I did for the rest of the game. It was great fun because it was very agile. We used to joke you could think of something in the morning, and by going-home time - which was midnight - [laughs] you could have implemented something.

"I think we had an old TV Pong machine when they first came out, and then [the] Spectrum was the 'in' for me."

By GoldenEye's release we'd had five years of mainstream FPSs, so there was already a set of 'rules'. GoldenEye basically ignored all of them. Was that a deliberate rejection?

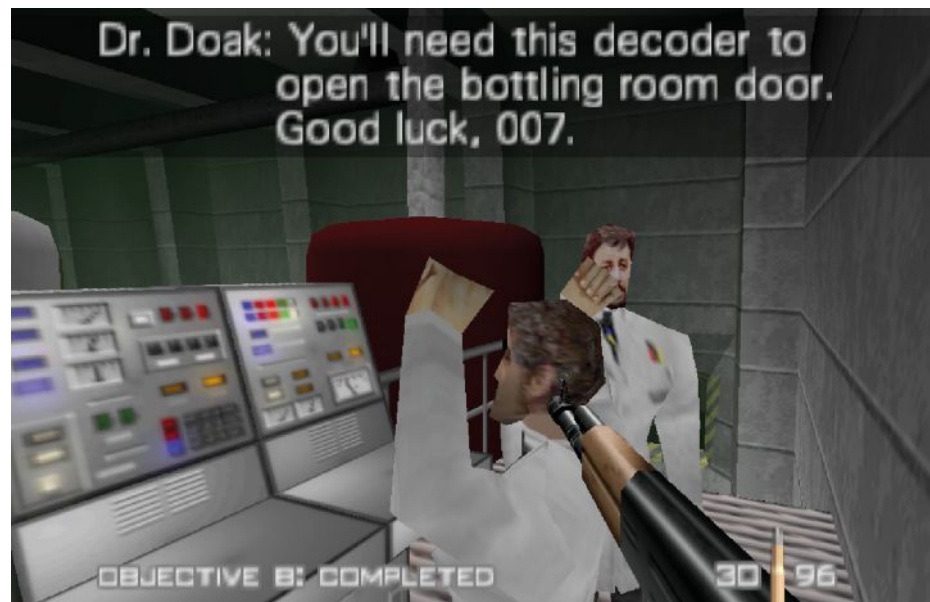
I wasn't there for the initial design of GoldenEye ... I think there's probably two really important things: one is that [GoldenEye] was going to be Virtua Cop, so a lot of the systems in it, like the non-combat AI, the guy who runs ... You have a tableau in front of you, and some things happen in

that tableau which are not directly player-facing combat, and that provides the space and the rhythm for you to do aiming and shooting. There's that rail shooter stuff. [Secondly,] this is a story from a film which is somehow going to be represented. There was no plan about how we were going to do that at all. There was a list of levels, but there wasn't any real idea of what would happen in those levels. And gadgets - that's another thing. I guess I'd say the gadgets come from the Bond world, the story comes from the fact that it's based on the film, a bunch of other things like mechanics come from the history of it being a *Virtua Cop*-style shooter. There wasn't really anything that we considered to be a direct competitor to us. I think we always had this 'we don't want it to be boring, so each level should try to play differently in some way' approach. Like the train, for instance, is just an attempt to make a completely scripted linear shooter level.

The N64 controller was obviously a landmark, with the analogue stick, but it is a very hard design choice to know how you're going to map [controls] onto

that thing. The method that came up in *GoldenEye*, the floating reticle and the aim control where you're just moving the reticle around, is because it's trying to be like a light gun; that's the source of that. And we had a thing as well from Nintendo, where [they] were really concerned because there was no real history of people playing FPSs in Japan, so they [said], "It will make people sick because of the camera movement", and also, "It needs to be that you can drive like a tank." If you play *GoldenEye* on easy difficulty, it's pretty much possible to play it one-handed because you can just drive [Bond] around. There's forward, backwards and turns, so you're driving around like a tank, and the auto-aim deals with the problem of shooting things. So that was another design constraint.

I remember when we finished, when we started doing *Perfect Dark*, I spent a few weeks almost doing a kind of rinse on *GoldenEye* and writing down what things worked in the AI, what things didn't. And I've got some flowcharts and some notes ... It's like a state machine diagram, but it never existed when we were making it! [laughs]



↑ *GoldenEye*'s scientists include a virtual Dr. Doak

Lots of making-ofs cover how *GoldenEye* was delayed for various reasons, but there's no mention of any pressure from Rare's management to get it out. Did anyone ever say 'just ship the game'?

Nobody ever said 'just ship it'. I think that's one thing about Rare; that company had an incredibly rigorous standard about what we shipped. We had various dates which were supposed to be dates it would be done by, but nobody was ever going to compromise to hit those

dates. That said, when I say we were not under any pressure, the team ... we killed ourselves. [laughs]

One of the things I read about *Perfect Dark* was that it was very much a process of 'what can we add to *GoldenEye*?' Was there pressure to beat your previous success?

We were in a very fortunate position, because we turned out to be the goose that laid the golden egg. I know people often ask now 'why didn't they do



↑ GoldenEye's sci-fi follow up, Perfect Dark

another Bond game?' That was really down to the team's appetite at the time for doing another Bond game. I think by the end of *GoldenEye*, there was frustration ... It was like, 'we don't want to do another Soviet-era, military, grey-brown shooter'. So sci-fi was the obvious extension of a shooting style, and I guess also the female character will be a bit of, 'well yes, let's do something different, let's do something creative, let's try and break out of the stereotypes'. I think we were

always just very pragmatic about what we did. There weren't ever really any high ideals about things. It was about making something that was entertaining.

"I know people often ask now 'why didn't they do another Bond game?' That was really down to the team's appetite at the time for doing another Bond game."



↑ TimeSplitters 2 references GoldenEye's dam

You started *Perfect Dark* and then you left to set up *Free Radical*. I'm curious about the timing, because obviously it was in the middle of a project.

The *GoldenEye* team's relationship with Rare self-destructed over that period. A big driver for it was money, I think, ultimately. We killed ourselves making that game. Even with bonuses on *GoldenEye*, people ended up pretty much getting paid what they would have if they'd been paid an hourly rate for the work they

did, because we worked so much overtime. The other thing was secrecy. [Rare] was like 'work on your bit, and don't come looking over here to see what we're doing'. We'd outgrown [Rare] really. It didn't have a structure that would accommodate where we wanted to go personally.

Martin and I ... There were some discussions about trying to set something up, but then Martin got this Nintendo job⁵. I was just going to leave and work out what I was going to do later, and then Steve Ellis said 'okay,



↑ 2008's Haze was Free Radical's follow-up to TimeSplitters

well you're leaving, we should do something.' And if it hadn't been for Steve, I'd probably be sitting in my underpants to this day, because he's incredibly driven.

While a fun game, TimeSplitters kind of feels like a practise run for TimeSplitters 2. Was there a pressure to get it out for the PlayStation 2's launch?

The game that we pitched to Eidos was *Second Sight*, so that's what we were supposed to be doing, and it was actually

going to be first-person, I think at the time⁶. The PlayStation 2 launch date slipped and I remember Steve saying 'we could make something for launch if we weren't making this thing!' [laughs] We basically said we could make a multiplayer FPS for launch. Maybe no-one else is making one. So we had a thing called MPG - Multi-Player Game. *TimeSplitters 1* wasn't phenomenally successful, but it was successful, and it was the only PlayStation 2 launch game developed in Europe.



↑ A sequel to TimeSplitters: Future Perfect (above) was announced in 2021

TimeSplitters controls very much like GoldenEye - the same handling, the same aiming. Did you kind of inherit that, or did you think this was clearly the best way to make a first-person shooter?

It probably just shows how obstinate we were, but that weird thing of splitting the look rotation to cross the sticks is completely [a] *GoldenEye* legacy. But because there weren't very many FPSs on console, people's minds were still malleable as to how

control schemes should work. We kept it for all the *TimeSplitters* games, although we made it so you could switch it all off by 2 and 3, I think.

In some ways it's a shame, because at that stage you wouldn't get immediately branded as wrong if you did it differently. Whereas now, if a button does a similar thing, a game will tend to map it to the default that's on the biggest game in that space, because otherwise people get cross.

"It probably just shows how obstinate we were, but that weird thing of splitting the look rotation to cross the sticks is completely [a] GoldenEye legacy. But because there weren't very many FPSs on console, people's minds were still malleable as to how control schemes should work."

I'm curious about why TimeSplitters 2 starts with a dam that's pretty similar to GoldenEye's first level.

We started making 2 immediately we finished making the first one. So it was 'let's make the AI better, let's make the animation system better, let's do some cut scenes'. The animators, like James⁷, had been crying out to do better animations. And 'let's make the story part of it, not some half-assed add on'.

And then the dam - the way we used to design was we just asked the artist what they wanted to make. Rob Steptoe⁸ was one of the artists who hadn't had

anything to do with Rare, and he said 'I'd love to make a dam like in GoldenEye'. And interestingly, it felt right to put it at the front. I think part of it was also that our brand went back to GoldenEye, so we just made it explicit that it does. It's a weird choice, but I've always thought it was a good choice, because it always made people happy.

I find the FPS gamer memes around GoldenEye's Dr. Doak fascinating. Did you have any idea that he would still be in the gaming consciousness 24 years later?

There were other things in the game where people had [references to themselves in there]. Like Brett's⁹ got BJ initials on some of the stuff, Karl's¹⁰ name is in there on a whole bunch of textures. Yes, and people's faces were in there. It's just become a thing, and it's great - it's a source of much joy to me now! I get people saying 'oh, I've shot you so many times!' Because that's the thing, he comes up and gives you the door decoder, and you go 'well I'm just going to shoot you in the head!' [laughs].

Author's notes:

[1] Silicon Graphics machines were extremely expensive and powerful computers focused on the calculations needed to render 3D images. The company teamed up with Nintendo to incorporate their technology into a vastly cheaper home console, with the result being the Nintendo 64. While powerful, the machine was limited in the sizes of textures it could display, leading to the N64's typically sharp edges and detailed shapes all having blurred textures.

[2] Bond's wristwatch acted as an in-world pause menu and interface to review objectives, select gadgets, and so on.

[3] Source control software deals with issues like two people working on the same file, and whose version of that file is 'correct' when there are conflicts. The more people working on a game, the more critical source control becomes, helping to ensure only one person is editing a specific file at a time or reconciling when multiple changes have been made at once.

[4] Mark Edmonds left Rare in 2008 and is still working in the games industry, currently at Smilegate Barcelona.

[5] After leaving Rare, Martin Hollis went on to work for Nintendo on the development of the Gamecube.

[6] Second Sight (2004) was a third-person stealth shooter with a main character possessing psychic powers.

[7] James Cunliffe would go on to work on many of Traveller's Tales' LEGO games.

[8] Rob Steptoe worked at Free Radical and transitioned to Crytek UK when they took over the studio. Going full circle, he's now working at the new Free Radical on the TimeSplitters reboot.

[9] Brett Jones left Rare in 2002 and continues to work as a freelancer.

[10] Karl Hilton made the transition from game art to the business side of the industry, and is studios director at Lockwood Publishing, creators of Avakin Life.

1997

Once *Quake*'s complex, beautifully lit, multi-level spaces ushered in the era of 3D FPSs, 2.5D engines suddenly looked out of date. Developers and publishers quickly shifted over to releasing 3D games, fuelling a boom in the 3D accelerators that could help computers run these technically demanding games.





By 1997, the 3dfx Voodoo 3D card had already been released, followed by NVIDIA's RIVA 128. Then there was the 3dfx Voodoo2, the NVIDIA GeForce, the ATI Radeon series and so on. In short, the video card wars were underway, presenting gamers with a bewildering array of price and performance options.

Fundamentally, they all boiled down to a piece of hardware that could be added to PCs to handle the complex calculations required to display 3D graphics, leaving the CPU free to focus on the rest of the game (player input, AI, game logic and so on).

Introducing APIs

The situation was complicated by each company's hardware requiring specific code for games to use them, leading to situations like id's John Carmack producing a version of *Quake* for the Rendition Vérité chip used by Creative Labs' 3D Blaster card.

As you can imagine, working in this fragmented way was inefficient for developers, who either had to gamble on a subset of the market or undertake a lot of work to cover all the bases.

As a result, things began to shift towards APIs (Application Programming Interfaces) like DirectX and OpenGL, allowing games to target these generic systems knowing that the API would in turn handle the instructions for the hardware in each PC.

The first major use of this was *GLQuake*, which helped sell cards using 3dfx's Voodoo chips, as they best supported OpenGL at the time. While *GLQuake* wasn't perfect, the jump from software to hardware rendering was striking, introducing transparent water, filtered textures and best of all, 640 × 480 resolution.

The gaming arms race

Before things standardised, a slew of companies competed for position in this new market, with ATI alone releasing the 3D Rage, the Rage 2, then the 3D Rage Pro, each offering better performance at a higher price. This left a gap for companies like Matrox to release cheaper options such as the Mystique, meaning gamers had to research the features, performance and price of an entirely new branch of PC hardware.

It's worth remembering that all of this was driven by gaming, with almost no home consumers using these cards for their alternate functionality of editing videos or creating 3D graphics (plus we're only looking at home options, with businesses having access to a whole other range of graphics cards). No, in the home, graphics cards were firmly aimed at gamers, with game developers and hardware manufacturers trading back and forth, each driving the other to offer better, faster, more, and as a result the games of this era began shifting from providing relatively impressionistic experiences to striving to replicate reality.

"The video card wars were underway, presenting gamers with a bewildering array of price and performance options."

REBEL MOON RISING

Developer: Fenris Wolf

Original platform: PC

Rebel Moon Rising is the sequel to 1995's *Rebel Moon*, a game released exclusively by Creative Labs to show off its 3D hardware. Continuing that technical demonstration theme, *Rising's* environments were more or less monochrome to help the coloured lighting effects produced by its gunfire stand out. While this does add atmosphere to firefights, it also makes the levels feel cold and drab; even later, more colourful, alien environments have a muted tone. It's also weird that the clinical, science-fiction tone is undercut by killed enemies instantly turning into piles of clattering bones.

While it offers varied missions, there are often long stretches when nothing happens, and almost every level ends with searching for the final objective. Even the game's final battle ends with a technically difficult, but not very exciting, fight followed by a silent hunt for the last switch. Still, the game can present exciting scenes when it

SHIELD ENERGY



3:45

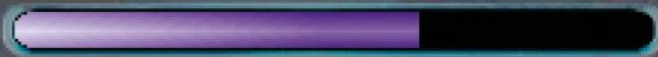
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KILLS





↑ RM Rising *requires patience*

wants to, with pitched battles between AI troops delivering a cacophony of blaster fire. Oddly, the game supports IBM VoiceType, allowing you to speak commands, which is a fun gimmick.

Because the first game had such a limited release, almost no-one knew about *Rebel Moon Rising* when it arrived, and even including the shareware version with Monolith's *Blood* didn't help. Due to poor sales a third game in the series, *Rebel Moon Revolution*, was cancelled, as was a PlayStation conversion.

REALMS OF THE HAUNTING

Developer: Gremlin Interactive
Original platform: PC

Building on the engine from Gremlin's distinctly odd 1996 first-person point-and-click adventure, *Normality*, *Realms of the Haunting* adds combat while simplifying the range of interactions available to you. The result is an FPS in which you click to pick up objects and interact with scenery as much as shoot. Combat is clearly not the game's focus; your best weapons recharge over time meaning that fights boil down to dodging the odd, unthreatening enemies as you cycle through them.

Evolving the approach of having a protagonist with a name and personality - rather than just 'you' - the story revolves around the permanently perplexed Adam Randall, a somewhat frustrating character who refuses to ask the obvious questions. Fortunately, Adam is overshadowed by everyone else in the game, including the psychic/love-interest/sidekick Rebecca, creepy priest Claude, and most of all, the demon

Belial (played by David Learner from 1990's TV show *Nightmare*).

The game references British folklore in a similar manner to Revolution's *Broken Sword*, tying in a range of influences including the tale of the Devil dropping a rock at Helston (Hell's Stone) in Cornwall. Gremlin filmed 25 hours of FMV footage to tell the game's story, editing it down to the two hours which appear in the game.

You begin in a spooky mansion, but the game swiftly abandons this for dungeons and *Myst*-like weirdness, which is a shame because the house is by far the most evocative location to explore. Still, the game's dimension-hopping keeps you on your toes, casually sending you to ancient Egypt then immediately discarding that to move on to a surprisingly sunny Hell, a hedge maze in Heaven, and the Tree of Life. Honestly, it's difficult to describe *Realms of the Haunting* without sounding like a drunken madman.

While the game scores points for its atmosphere and ambition, it's hampered by blatantly unfair puzzles, such as when you find two swords and taking one makes it impossible for you to win (though you don't know this yet) while the other is correct. Other examples include needing to wear a metal armband to cross a squeaking floor, and combining snow with flint and steel to make amber.

Yes, *Realms* suffers from nonsensical puzzles and flat combat, but I think it's nevertheless an incredible game: the product of a time when someone with a singular idea could get it greenlit by a studio, as opposed to now, when really only indie developers can take this sort of leap. Made by a small, passionate team, *Realms* demonstrates the creativity that this sort of freedom can deliver, but also illustrates why modern games go through a process of working out if they might sell before being created. As you might expect, the story-heavy, cross-genre *Realms* was swallowed by *Quake* and its full 3D combat, with poor sales ending work on a proposed sequel.

TUROK: DINOSAUR HUNTER

Developer: Iguana Entertainment
Original platform: Nintendo 64

When given the *Turok* comic licence and tasked with making a game for the upcoming N64, Iguana ruled out a side-scrolling game in favour of an FPS. In an interview on *IGN.com*, Iguana's David Dienstbier said the N64 let them "... deliver this kind of game taken to the very next level of realism and intensity." Indeed, it's difficult to get across how impressive a showcase *Turok* was for Nintendo's console, presenting open spaces that overcame heavy fogging with lens flare, rippling water, cloud layers, excellent music, and enemies spurting blood particles from their necks.

Speaking of enemies, the comic gave the game a lot to play with, including humans, dinosaurs, dinosaurs with guns, and aliens, plus moments like traversing a temple to fight a Humvee that's trying to run you over. With motion capture still relatively rare at the time, *Acclaim* used its \$10 million mocap studio to give *Turok*'s

human enemies eerily lifelike movement, though the dinosaurs were all hand animated because tests mocapping ostriches and emus didn't work out(!)

The game's huge success, alongside the publisher's financial struggles, meant a sequel was inevitable, with *Business Week* asking, "Can dinosaurs save *Acclaim*?" *Turok 2: Seeds of Evil* added a stronger story and supported the N64's expansion pack, though like *Perfect Dark*, it pushed the hardware too far, causing the framerate to suffer. It also introduced *Turok*'s most infamous weapon, the Cerebral Bore, with its gruesome dentist-drill sounds.

While *Turok 2* included multiplayer, *Quake III* and *Unreal Tournament* had proved that people would buy games with no single-player campaign, so the next *Turok* was the multiplayer-focused *Rage Wars*. Though the game included co-op play against AI bots, this contained a bug, which meant you needed to send your cart to *Acclaim* to be replaced with a patched version. While *Rage Wars* includes a lot of content, the movement and aiming lack



↑ *Turok* features some excellent weapons

GoldenEye's polish, meaning it's fun but nowhere near taking the N64's multiplayer crown.

Next would be 2000's *Shadow of Oblivion*, where you can see the franchise struggling to adapt to FPS trends, with levels now featuring realistic environments, à la *Half-Life* (including a lab complex overtaken by aliens). In a nice touch, you revisit some environments from the first *Turok* game. While *Oblivion* adds more story elements, two playable characters and boob

physics, it only has five quite linear levels, making it a short experience.

The final *Turok* game we'll cover is 2002's *Evolution*, a prequel to the original trilogy and the first to be developed specifically for hardware other than the N64. The game was rushed out by the struggling publisher, so while *Evolution* was technically competent it's all a bit muted and drab. It didn't review or sell well, and a proposed sequel was cancelled when *Acclaim* finally went bust.





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ARMOR

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83

HEALTH

2:	58	5:	4	8:	0
3:	44	6:	50	9:	0
4:	45	7:	0	0:	0

4

AMMO

43



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BLOOD

Developer: Monolith Productions
Original platform: PC

Blood was the first game from Monolith, a studio that had split off from Strategic Simulations, Inc. because a group of developers wanted to combine RPGs with FPSs, an idea that SSI management turned down along with declining to license the *Ultima Underworld* engine.

Originally a serious horror game referencing Lovecraft's Mythos, George Broussard asked for the experience to be made more camp, so *Blood* transitioned into a black comedy paying homage to a huge number of classic horror films. You play as the freshly resurrected Caleb, seeking revenge against your old cult. While the cutscenes are spectacularly dated, Stephan Weyte's voice acting is as fantastic as ever, delivering Caleb's lines with a delicious whisper.

The game makes use of the Build engine to deliver detailed environments full of interactive and destroyable objects, with the cleverly faked train level and a working carnival among its



↑ Despite the comical tone, *Blood* can still deliver scares

standouts. Key to *Blood*'s success is that on top of gross-out horror, it delivers punchy, challenging combat, with weapons sporting dual fire modes to provide a huge range of tactics. Of course, it also features buckets of gore, but it's all so ridiculously over the top that it's comical rather than sadistic.

Finally, the game's Bloodbath deathmatches are as fast-paced and chaotic as you'd expect. Matches occasionally let you finish off a downed enemy,

Mortal Kombat-style, and include messages about giving 'anal madness' to your opponents - which pretty effectively sums up *Blood*'s tone.

"George Broussard asked for the experience to be made more camp, so *Blood* transitioned into a black comedy paying homage to a huge number of classic horror films."

DOOM 64

Developer: Midway
Original platform: Nintendo 64

With industry veterans Midway doing a good job with *DOOM*'s PlayStation conversion, id basically gave them free rein on the N64 version. The end result feels like an alternate-universe *DOOM 3*, complete with massive weapons, redesigned enemies, extensive coloured lighting and a focus on puzzles.

The brand-new levels are even more abstract than the original *DOOM*'s, featuring lots of moving elements, dart traps next seen in *Quake*, and *Duke Nukem 3D*-style security cameras. Along with the game cheerfully teleporting monsters in front of you, other *DOOM 64* oddities include it featuring lots of 'platforming' sections which draw attention to the lack of a jump button by requiring you to fling yourself across gaps, plus low walls that seem to mock you with the fact that you can't simply step over them.

Due to tight deadlines and the tighter memory constraints of the N64 cartridge there were some sacrifices, such as the lack of

← *Dark Carnival* is perhaps *Blood*'s best level



↑ DOOM 64's colourful levels

multiplayer and some enemy types, though the game does include a new boss in the Mother Demon.

Doom 64's focus on puzzles demands patience because levels have long sections that you complete, push a button and ... nothing. You then walk around, trying to remember which doors were already open or if something has changed. Still, with the recent rerelease allowing anyone to access this once rare game, id fans can finally play *Doom's* slick but surprisingly nerdy offshoot.

OUTLAWS

Developer: LucasArts
Original platform: PC

Wholeheartedly embracing its Wild West theme, *Outlaws* tells a classic revenge story that takes in dusty towns, forts, canyons and of course a steam train. Levels are bookended by animated cutscenes using LucasArts' INSANE (INteractive Streaming ANimation Engine) system, also used in *Full Throttle*. It even includes famous actors such as John de Lancie, who steals the show as the wonderfully creepy Dr. Death.

Built on *Dark Forces'* Jedi engine, *Outlaws* adds interesting elements such as having to manually reload bullets one-by-one, and includes one of gaming's earliest sniper scopes, though here it only magnifies part of the screen. It can be a tough game, with enemies able to kill you in one hit, meaning you're forced to play carefully. You also need to be prepared to search, as keys are well hidden, though this may mean you turn up some of the many easter eggs, including Indiana Jones and Sam & Max references. Finally, anyone who talks about *Outlaws*



↑ Outlaws' theme makes for evocative levels

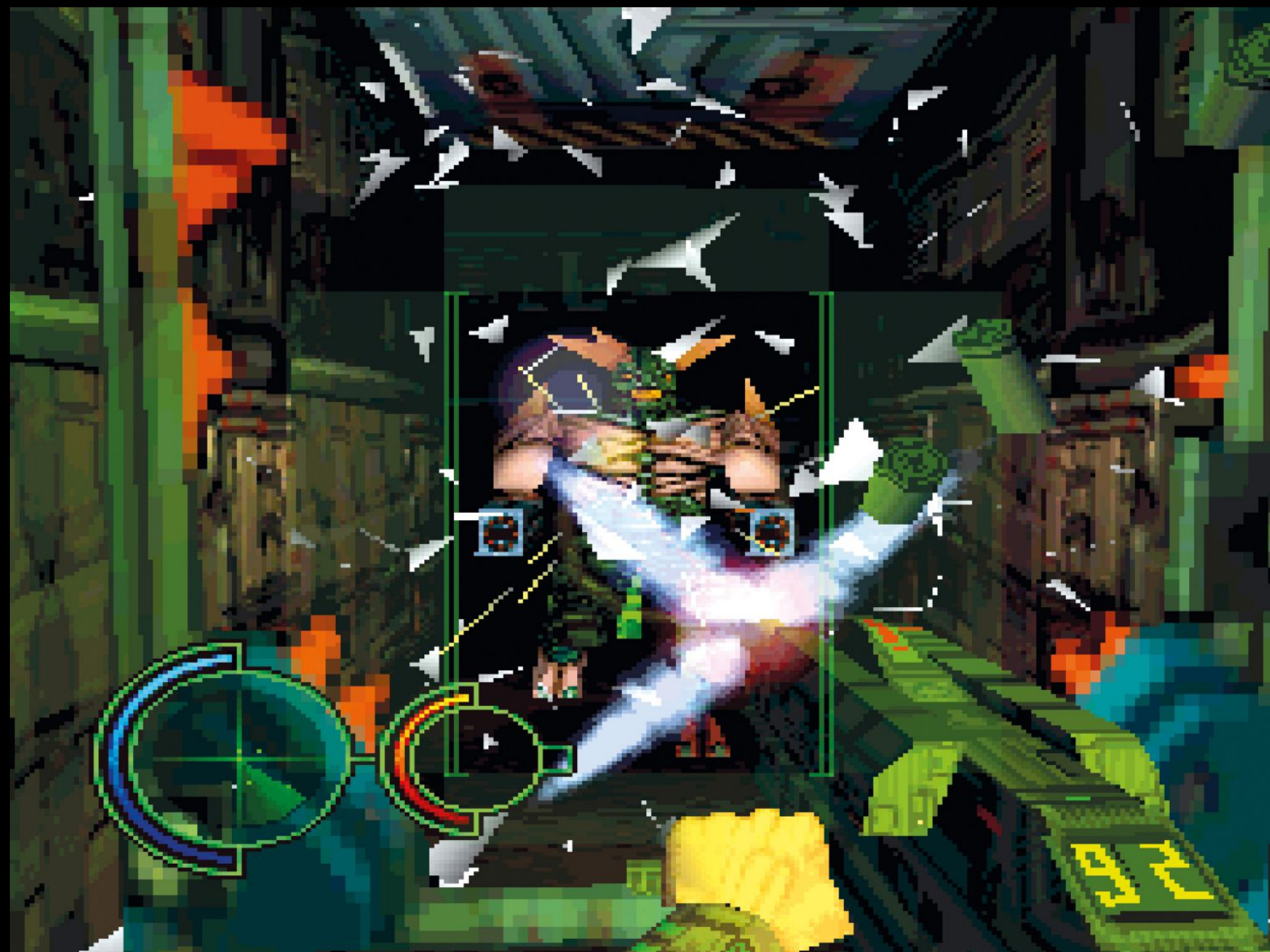
invariably mentions its orchestral soundtrack, which delivers a love letter to classic Western themes.

Despite receiving a free expansion, *Outlaws* was never converted to other platforms or given a sequel. It's not surprising that the game is mostly forgotten considering it was released alongside *Quake* and *Duke Nukem 3D*, and its flat, sparse levels force the player's imagination to do a lot of the work. Nonetheless, *Outlaws* is still recommended to anyone

looking for something other than space marines, cyborgs and wizards in an FPS.

"Built on *Dark Forces'* Jedi engine, *Outlaws* adds interesting elements such as having to manually reload bullets one-by-one, and includes one of gaming's earliest sniper scopes."





REDNECK RAMPAGE

Developer: Xatrix Entertainment
Original platform: PC

When people remember *Redneck Rampage*, it's usually for its scatological humour and hillbillies-versus-aliens theme, both of which help set the game apart from contemporaries. There was even the Cuss Pack, which required people to pay with a credit card to ensure they were old enough to add strong language to the voice lines.

Running on the Build engine, the game includes unique elements, like a tornado that fires you through the air and a working bowling alley. But while levels present detailed - and somehow desolate-feeling - environments, they also feature odd choices, like crawling into a dog kennel and somehow knowing to push the 'use' button to descend into an underground tunnel.

A bigger problem is the weirdly inconsistent combat, which is broken in all sorts of ways. There are only a few enemy types and they absorb a lot of damage, though you're never sure how much. Sometimes they'll snipe you from miles away. Dogs take



↑ *The inconsistent* Redneck Rampage

multiple point-blank shotgun blasts to kill. Ammo is limited, so you're stuck with just two weapons. Somehow *Redneck Rampage* manages to combine repetitive combat with maddening inconsistency.

Still, the game has fans, with Steam user 'Panc' saying, "*When people talk about games as Art - this is it.*" *Redneck Rampage* was successful enough for expansions, spin-offs and a sequel, which is the one to play as it adds varied enemies and addresses the lack of ammo.

LIFEFORCE TENKA

Developer: Psygnosis
Original platform: PlayStation

Known as *Codename Tenka* outside Europe and largely forgotten everywhere, *Tenka* mixes up-to-date 3D environments and enemies with cramped, tunnel-based gameplay closer to that of the early, experimental console shooters like *Kileak*.

The Dual Analog controller didn't bring 'standard' FPS controls to the PlayStation until April 1997, so with *Tenka* released just a month later it's still played using the older controller's D-pad. This is inevitably somewhat cumbersome, though helped by a laser sight and a dynamic crosshair that highlights anything you're pointing the gun at, so you know when you're on target. Another novelty is that you keep the same gun - the 'Self-Generating Polymorphic Armoury' - for the whole game, gradually upgrading it by adding new modes like rockets and lasers.

The game tells its disquieting story of corporations and reanimated soldiers through conversations between you and

the mysterious Zenith. Her voice is very SHODAN but yours is pretty cheesy, and while there are hints at an interesting universe, the game resolves with one of the lamest endings in gaming history.

Tenka also replicates the disquieting atmosphere of the early console FPSs, with lonely environments and creepy 'bionoid' enemies that mix *Quake II*'s cyborgs with fleshy monsters (including a skittering head straight out of *The Thing*). The methodical gameplay reinforces the horror atmosphere, with claustrophobic corridors, enemies able to kill you in a few hits, and the slightly clumsy digital aiming all forcing you to play slowly and cautiously.

"Tenka mixes up-to date 3D environments and enemies with cramped, tunnel-based gameplay closer to that of the early, experimental console shooters like Kileak."

FORBES CORPORATE WARRIOR

Developer: Byron Preiss
Multimedia Company
Original platform: PC

Released by Simon and Schuster, a publisher whose games are all over the quality scale (e.g. 2000's *Panty Raider*), *Forbes Corporate Warrior* attempts to bring the world of business to the FPS.

Donning a virtual-reality helmet in your grungy office, you 'battle competing companies and capture market share in a graphically displayed real-time environment reminiscent of 20th century video games'. This boils down to an FPS combined with complicated and poorly explained business-related systems, such as changing weapons based on supply and demand.

Represented by abstract shapes, enemy corporations include the Carpetbaggers and Martini Men, with weapons given similarly colourful names, such as the Price Pounder and Distribution Disruptor. Every action - including moving and shooting - costs cash, and it's possible to meet an enemy so powerful it



↑ *The overcomplicated Forbes Corporate Warrior*

kills you in a couple of seconds, to win levels by hiding and waiting, or to enter levels with almost no cash, immediately run out and trigger game over.

The whole experience is undermined by a lack of quality in the game's execution, from the easiest difficulty level being called 'Duck Walk' to the game's tagline of 'In this world, cash is ammunition and amount of cash is your health'. In the end, *Forbes Corporate Warrior* is neither a compelling business simulation or a

competent FPS, but you do have to respect a game that includes a key to 'increase Thrifty orientation'.

"Donning a virtual-reality helmet in your grungy office, you 'battle competing companies and capture market share in a graphically displayed real-time environment reminiscent of 20th century video games'."

GOLDENEYE 007

Developer: Rare
Original platform: Nintendo 64

The most impressive thing about *GoldenEye* is how casually it reinvents so many elements of the FPS genre, demonstrating that not only could FPSs work on consoles, but also that things could be done differently. For instance, the game showed how an analogue controller enabled sniping, letting you smoothly track and pick off distant guards in the large, open environments. It allows stealthy approaches, features dual-wielding weapons, has no mid-level health recovery, and higher difficulties mean more objectives to complete. Finally, it revolutionised enemy AI, because despite them occasionally standing by as they or their friends are killed, guards can dodge or run for alarms, making them way more dynamic than in most FPSs of the time.

But it's a miracle *GoldenEye* came out at all, let alone in so confident a form. The majority of the team had never worked on a game, so it's no surprise that they missed the movie's release date, set for just eight months





after development began. Instead the game came out after two and a half years, just as the next Bond film was released. It's worth mentioning the behind-the-scenes support the inexperienced team must have had to not find their hugely delayed game simply canned. At one point Nintendo stopped funding the game because it was taking too long; Rare's management didn't tell the team, and paid for work to continue.

GoldenEye was initially going to be a *Virtua Cop*-style on-rails shooter with FPS elements. Exactly how you interacted with the game needed to remain flexible because the team didn't have access to a development kit for the first year or know what the N64 controller would be like. The final game still has several light gun game elements, such as being able to independently aim around the screen, shoot weapons from hands, and destroy cameras and alarms.

The game roughly follows the film's events and locations, expanding on short scenes such as the Statue Park. As they were new to building 3D environments, the team took an unorthodox

approach to level design, using set references to build the environments, then deciding where gameplay would take place. This means some areas have no relevance to the action, making the locations seem more like real places than levels. The best example is the small island with buildings on that you can see but never get to during the Dam level. On the other hand, it's clear that levels like the green, foggy tunnel representing Cuba are a struggle for the hardware.

Originally the game had enemies spurting gouts of blood when shot, but the team decided to change this before showing it to the notoriously family-friendly Nintendo. Even so, the film studio wasn't happy with the number of people Bond kills in the game, with Nintendo suggesting that at the end all the 'dead' characters shook hands to show they were okay. As a compromise, the game includes a credits sequence showing the various in-game characters as if they were actors in a film.

One of the main keys to *GoldenEye*'s success was its split-screen multiplayer, but this was a last-minute addition

to the game and only started just a few months before release. This is why there are no multiplayer-only animations, such as moving while crouched: the team could only use what they already had. Multiplayer presented a different gameplay style to the reigning champions, *DOOM* and *Quake*, partially because it featured tricks like planting mines, but also due to the fact that you're sitting side-by-side with the other players and can see their screen (and they yours), giving every group their own 'house rules' for playing.

As a licensed game released spectacularly far behind its film, there were low expectations for *GoldenEye*'s success. However, it would sell out over both Christmas 1997 and 1998, and would sell more copies over Christmas 1999 than the previous two holidays combined, eventually reaching around eight million copies sold.

However, despite the team visiting the in-production *Tomorrow Never Dies* they didn't follow *GoldenEye* with another Bond game. Ironically this may be because *GoldenEye*'s success made the Bond licence too



↑ *GoldenEye*'s diverse locales

expensive. Instead EA began releasing Bond games, of which we'll cover several later, but none would have *GoldenEye*'s impact. The game would eventually be remastered for the Nintendo Wii, followed by an Xbox Live Arcade version that was never released, but has since leaked onto the internet.

"Originally the game had enemies spurting gouts of blood when shot."

HEXEN II

Developer: Raven Software
Original platform: PC

With the original plan of *Heretic - HeXen - Hecatombs* dropped by Activision, we come to *HeXen II* as the confusingly named third game in the *Serpent Riders* trilogy. Powered by a modified *Quake* engine, the game blends satisfyingly weighty combat and light RPG elements with *HeXen's* emphasis on puzzling and backtracking.

Though constrained by the technology of the time, Raven did an impressive job of evoking the atmosphere of a medieval world overrun by evil. Messages and secrets tell the stories of the bodies you find, and as the game rarely repopulates areas, there are long, lonely sections with just you and the wind.

While it obviously includes deathmatch play, the puzzle-centric gameplay also makes for a great co-op experience, allowing players to split up for efficiency, but also because more people means more chances of someone remembering where you need to go next.



↑ Explore and fight in HeXen II

Unconfirmed rumours suggest the game was rushed out to ensure it was released before *Quake II* (also published by Activision), which would explain the lack of polish, such as a shortage of ammo, extremely obtuse puzzles, and a fair number of bugs. But if you're patient, or happy to use the occasional cheat, then in my opinion *HeXen II* is the best of Raven's fantasy FPSs. Deeper and more evocative than *Heretic* while avoiding *HeXen's* sometimes frustrating puzzles, *HeXen II* provides an epic, suitably challenging quest.

SHADOW WARRIOR

Developer: 3D Realms
Original platform: PC

Right from the beginning, 3D Realms had a plan for its Build engine games, with *Duke Nukem 3D* bringing interaction and recognisable environments to the FPS, *Blood* adding ridiculous gore, and *Shadow Warrior* introducing ... comedy racism? It's true that many '90s FPSs have aged in their subject matter but *Shadow Warrior* always walked a dubious line. Examples include you being a Ninja (Japanese) called Lo Wang (Chinese), a level called Hara-Kiri Harbor and non-Asian actor John William Galt providing Lo Wang's heavily accented voice. You might argue that they're aiming for tongue-in-cheek comedy, but then your character shouts 'just like Hiroshima!' when he sets off a nuke.

Beyond all that, *Shadow Warrior* effectively combined *Blood's* graphic violence with *Duke's* urban environments, while expanding on both games' weapons and gadgets. Some of the new weapons include grenade launchers and homing missiles, plus sticking your fingers in the skull of an enemy to cause



↑ The dubious Shadow Warrior

it to shoot fireballs, while new gadgets include letting you drive vehicles and man turrets.

I'm not sure if *Shadow Warrior* is actually more difficult than the other Build engine games but it feels like it, often throwing hordes of fast, hard-hitting enemies at you. Along with polished level design, the speed and heft of the combat is probably why - politics and humour aside - *Shadow Warrior* was so popular. It received two expansions, a 'Classic Redux' rerelease in 2013, and even two novels.



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CHASM: THE RIFT

Developer: Action Forms

Original platform: PC

Developed by Action Forms (who would go on to create the first three Carnivores games) and published by GT Interactive (who had recently lost id's games to Activision), *Chasm* is effectively diet-*Quake*. The similarities are uncanny: you travel through unexplained teleporters, need grenades to kill zombies, fight bosses using puzzles instead of bullets and end the game by teleporting inside a giant tentacle monster. It even has a similarly grungy palette and an angry face on the HUD.

The game revolves around Timestrikers - not 2000's TimeSplitters - who're invading different eras, giving a good excuse to send your marine through varied episodes. Mission objectives are delivered via impressively wonky dialogue, but generally you're killing everything and getting lost in the maze-like levels. Easily the game's most impressive feature is its dismemberment system, allowing you to blast limbs and heads from enemies



↑ *Chasm's dismemberment system is frequently comical*

three years before *Soldier of Fortune* popularised it. However, in general the gameplay is frustrating, and despite nice lighting, the 2.5D engine was out of date, combining polygonal enemies and weapons with environments that are closer to those of *DOOM* than *Quake*.

Chasm was competing directly with *Quake II* and *Jedi Knight* but needed to have been launched a year earlier to stand a chance in the market. The game can be a pain to get running these days

and is probably too obscure to attract a modern remake, meaning *Chasm* may remain forever in *Quake's* shadow.

"Chasm was competing directly with Quake II and Jedi Knight but needed to have been launched a year earlier to stand a chance in the market."

HACX

Developer: Banjo Software

Original platform: PC

Hacx revolves around hacking a database called GENIE, though 'hacking' in this case means gunning down an army of cannibal zombies. With levels attempting to replicate reality across a mix of corporate and city environments plus the abstract 'c-space', at times *Hacx* feels like a Build engine game. It also presents an interesting mix of robots and strange, fleshy mutants, with each replicating one of the *DOOM* archetypes.

Originally a *DOOM* mod, the team paid id for the rights to sell *Hacx* as a standalone product but then had to rush the game out as *Quake's* release was making *DOOM's* technology look outdated. As a result *Hacx* was buggy and unfinished, and was not a sales success. The team began work on *Hacx2 3D* using the *Quake* engine, but with development only taking place in people's spare time, it took long enough that they shifted to *Quake II*, and then, unable to secure a publishing deal, the team drifted apart. Even though it wasn't a big

← *Chasm's levels echo Quake's military theme*



↑ Hacx: *Cyberpunk DOOM*

seller and didn't review particularly well, I wanted to cover Hacx because the game perfectly illustrates that sales figures aren't the only way to judge success. Members of the team who worked on Hacx would go on to work at Valve, id, Epic and Microsoft, so while I'm not saying they specifically used Hacx to land their roles, this sort of project has always been a great way to attract attention.

STAR WARS JEDI KNIGHT: DARK FORCES 2

Developer: LucasArts
Original platform: PC

I could talk about *Jedi Knight's* new Sith engine, its multiplayer duels, its FMV cutscenes or its quirky villains, but what's most interesting about the game is how wildly it differs from the original *Dark Forces*. Where that game could be described as 'Star Wars *DOOM*', *Jedi Knight* focuses on the Force, delivering a superhero fantasy when compared to *Dark Forces*, which often left you feeling outgunned. Here you get to mow down literally hundreds of Stormtroopers and defeat several apparently powerful dark Jedi in duels, despite your character having only just picked up a lightsaber. If anything, the game's vertigo-inducing environments are the real threat, with gravity much more likely to kill you than enemies.

The RPG element of selecting your Force powers allows you to try different approaches and even replay the game as a light- or dark-side Jedi. Wielding a lightsaber works surprisingly well in both the first and



↑ *Jedi Knight* immerses you in the Star Wars universe

third person, but despite all its combat, *Jedi Knight* is a game of exploration and puzzle solving (and height), constantly requiring you to work out where you're trying to get to, then how you'll do so.

The game received rave reviews, spawning an expansion and a sequel. *Jedi Knight* feels like a prototype for the Star Wars games that would follow, stepping away from the murky underworld gunplay of *Dark Forces* to establish a bombastic template of focusing

on the Force, lightsabers, Jedi and Sith.

"Wielding a lightsaber works surprisingly well in both the first and third person, but despite all its combat, *Jedi Knight* is a game of exploration and puzzle solving (and height), constantly requiring you to work out where you're trying to get to, then how you'll do so."





QUAKE II

Developer: id Software

Original platform: PC

Having suffered through the difficult process of delivering a true 3D engine for *Quake*, id followed it up with a sequel just 18 months later. Abandoning the setting from the first game in favour of outright science fiction, *Quake II* was originally planned as a brand-new IP, with proposed titles including *Wor*.

Once you know the game was supposed to establish a new brand, the differences between *Quake* and *Quake II* make more sense. It's a slower paced, less linear game that tries to immerse you in the experience of being a future soldier trapped behind enemy lines, with id referencing the 1961 movie *The Guns of Navarone*. It's also interesting how many elements of Tom Hall's discarded *DOOM* bible make it into *Quake II*, such as a deeper emphasis on telling a story and a usable inventory.

Whether to focus on the single-player campaign or to (just) hit the lucrative Christmas market, *Quake II* did not ship with dedicated multiplayer levels.



↑ *If you've played Quake II you know how this screenshot sounds!*

This would be resolved with patches, eventually leading to classic mods like Capture the Flag and its grappling hook.

Supporting 3D cards from the beginning, *Quake II* utilised a clever system of keeping its rendering software separate from game logic, meaning its graphics could be improved by other people over time without messing with the base game. The ultimate upshot of this approach is that *Quake II* is still receiving new graphic renderers 21 years after release.

"Abandoning the setting from the first game in favour of outright science fiction, *Quake II* was originally planned as a brand-new IP, with proposed titles including *Wor*."

LAST RITES

Developer: Ocean Software

Original platform: PC

Bearing in mind it arrived a year after *Quake*, the use of sprites in *Last Rites* raises eyebrows until you realise it allows the game to throw hordes of enemies against you. Interestingly, environments and turrets are polygonal, and weapons are too, when in the world, but become sprites in your hands. Either way, the game's art style makes it look like a lost Amiga classic, and its fantastic soundtrack evokes an ominous atmosphere.

Some missions have you accompanied by an AI squad that skitters about, but you can't give them orders and they tend to get killed or stuck. Most of your enemies are zombies (including ones who throw hammers or rats), though giant insects and skull-faced demons appear later. A great touch is that sometimes you'll blast a zombie in half and leave a pair of legs running around.

Sounds great, but sadly the game is crippled by its terrible level design. The environments



↑ Last Rites' zombie hordes

are mazes of identical corridors and doors, which aren't helped by the fundamental error of making your radar and even your torch drain energy and then shut down for the rest of the level. Id Software's Jay Wilbur said, "*Level design is where the rubber hits the road,*" meaning it doesn't matter how cool your game's elements are if your levels can't present them in an engaging, satisfying way. *Last Rites* has nice ideas and cracking music, but its weak levels undermine it all.

ATLANTIS - THE LAST RESORT

Developer: ADS / Philips Interactive Media
Original platform: CD-i

With a focus on multimedia, Philips' CD-i platform wasn't a big success as a games console. Most of its releases revolved around full-motion video or adapting boardgames, but in 1996 CD-i development tool programmer Paul Clarke created an FPS engine for the console. He extracted textures and sprites from *DOOM* and used a PC level editor to make a demo running in his engine, impressing his bosses sufficiently that a development team was assembled.

First came 1996's *RAM Raid*, which had you moving through 'hyper-reality' levels, shooting at robots in order to take on the 'RAM' boss. This worked with Philips' CD-Online internet service, allowing players to upload their scores onto competitive leaderboards.

It was followed by 1997's *Atlantis*, a single-player game offering '20 levels of mindless blasting!!' The environments were *Wolfenstein*-like grid-based



↑ Atlantis is an interesting footnote in gaming history

mazes covering four episodes, each with its own enemies and twists (like needing to top up your oxygen in underwater levels). Apparently uniquely for CD-i games, you can eject the game's CD and play your own music, and it even supported the console's 'Peacekeeper' lightgun.

By the time *Atlantis* was released, the CD-i was already effectively dead, leaving the game a little-known footnote. But while it may seem archaic to offer 2.5D mazes and sprites in the same year as *GoldenEye* and

Quake II, getting an FPS running on the CD-i in any form was an impressive technical achievement.

"By the time Atlantis was released, the CD-i was already effectively dead, leaving the game a little-known footnote."

430

110

075

040



Team member 3 is wounded.

You got an Uzi clip.





MARS

Developer: Engine Technology

Original platform: PC

Mars was developed in Taiwan and only released there (or possibly never released - sources differ - though a couple of Taiwanese publishers are mentioned). Also known as *Mars 3D* and *The Ultimate Fighter*, the game was fan-translated into English in 2013, then improved and made available as a free download in 2018.

Even taking into account translations, the game's story is very strange. You play a new member of the resistance, Jet Hunter, fighting against aliens that look exactly like Predators, or perhaps it's against an evil organisation called New Hope, (it's not particularly clear), who are based in the human capital, Skynet City. Your quest is to avenge your parents, who were 'murdered by the authorities for no reasons'. Despite ostensibly playing a good guy, every level you finish is burned to the ground, presumably killing many innocents.



↑ Budget increases made 'B-movie' FPSs like Mars rare

Alongside lifting movie references, *Mars* 'borrows' a lot of content from other FPSs. You'll constantly see textures and hear sounds you recognise, use tweaked weapons and play modified maps, making the whole experience quite surreal. The game's 2.5D engine is actually new, and while it features graphical glitches, it also incorporates jumping and ducking, fog, breakable glass, NPCs and swimming. There are some unusual weapons, including homing missile launchers, very buggy grenades, bouncing and

homing blades fired from your wrist, and one that makes enemies fight for you. There's even *Duke Nukem's* jetpack. Levels mostly revolve around science labs/military bases, all of which include plenty of secrets, and there's even a brief foray back in time to 1999. Your enemies are as varied as everything else, including humans (who say 'kiss my ass' when you kill them), bitey fish, spiders, robots and turrets.

Mars is short, and with a maximum of 500 health, quite



↑ The déjà vu-provoking Mars



easy. But while it delivers some old-school fun it's just as interesting to play just to spot where each of its many elements has been taken from.

"Mars 'borrows' a lot of content from other FPSs. You'll constantly see textures and hear sounds you recognise, use tweaked weapons and play modified maps, making the whole experience quite surreal."

← 'Borrowed' elements aside, Mars is still good fun

INTERVIEW WITH RANDY PITCHFORD



One of the founders of Gearbox Entertainment, Randy Pitchford has had a long career working on classic FPS titles, with hits including *Duke Nukem 3D*, the *Half-Life* expansions *Opposing Force* and *Blue Shift*, and the *Brothers in Arms* and *Borderlands* series. Randy took time out from working on the *Borderlands* movie to answer some questions about the early stages of his career.

What sort of games were you into when you were young, and did any specific examples inspire you?

Randy: I think the game that influenced me most early on was a text adventure called *Colossal Cave*¹ that I played on a CP/M based computer my dad had built for me. He taught me how to use a hex editor and I was able to see the text strings in the code, which started to give me insight into how the game was made. Later, I was able to get a copy of a Scott Adams adaptation of the game written in the BASIC programming language for the TRS-80. BASIC is an interpreted language, which means that if you can run the program, you had the source code. I spent a lot of time in that code and began to adapt the ideas I learned into my own text adventure games. I would then upload them to the bulletin board system my dad ran out of the work shed behind our house that he'd converted into a computer lab.

Besides *Colossal Cave*, I think *Hack* and *NetHack* are the games that I probably spent more time playing than any others in my entire life. I still fire up a *Hack* variant from time to time and am still addicted to that whole style of gameplay loop. *Hack*, of course, spawned *Rogue*² and deserves to be credited with the modern 'Rogue-like' genre. It deserves way more credit than it receives, as it's mostly forgotten and unknown by the newer gamers of today.

Your first credited game was *Duke Nukem 3D*. How did you land your role at 3D Realms?

I knew some of the Apogee and 3D Realms guys from modem gaming on Compuserve³ and was beta testing some of their earlier games. I started sharing demos and stuff I had made with some of them, so they knew I could code and could use tools to make stuff. I was living in Hollywood at the time and a new trade

show was starting, called E3. The Apogee/3D Realms guys were going to come out to the show so we planned to meet up. George Broussard took everyone to a night club and that night when I got home to my apartment, I stayed up all night recreating the club in an early version of Ken Silverman's Build engine level design tool I had gotten a copy of. I brought it to the show floor the next day and loaded it up on the demo PC at the Apogee booth to show the guys.

A couple of weeks later I told them I was ready to make the move to full time game development and they gave me an offer to become a level designer with the company, almost certainly because of that map I made. I had actually sent out some demos and resumes to a bunch of different companies at that time and got a bunch of offers. I was most seriously considering Apogee/3D Realms and LucasArts (which was interested



↑ Duke Nukem 3D's levels replicated real locations

in making a first-person shooter with the Star Wars brand - a game that eventually came out and was called *Dark Forces*). I took the gig at Apogee/3D Realms because I liked the attitude of the team and they offered me participation in royalty profits from the game sales.

"A couple of weeks later I told them I was ready to make the move to full time game development."

There's very little info online about Prax War, the cancelled FPS that was worked on by Rebel Boat Rocker. Can you remember any details about the game?

Billy Zelsnack⁴ was a genius coder who I worked with at Apogee/3D Realms. Before 3D Realms, he had written some 3D engine software for Tim Sweeney at Epic Games. Billy once told me that he 'taught Tim how to do 3D'. He also wrote a dynamic lighting engine for a 3D software rasterizing engine that inspired John Carmack's



↑ And its levels are packed with interactive elements and secrets

implementation in *Quake* (which is why Billy is credited with a Special Thanks in the original credits for that game).

Billy was fired from Apogee/3D Realms in 1996 and they called him a rebel and a boat rocker. Billy used that idea to name his own new company. I joined Billy along with some of my other friends in the industry in 1997 and we began to build a company around his technology and game concept. Harry Miller (who later became one of the founders of Devolver Digital⁵) worked with

me to get a publishing deal done with Electronic Arts for *Prax War* and we were off to the races.

From a design perspective, the game had a lot in common with what later appeared in *Halo* - although we did not know that *Halo* existed at the time. Billy created a really incredible engine that would enable us to make more massive and open worlds than what we were doing with the Build and *Quake* and *Unreal* engines that were the state of the art at the time.



↑ Half-Life's first expansion was Gearbox's *Opposing Force*

Additionally, he had some cool algorithms that allowed for impressive animation and physics solving, which we used to do scripted sequences for characters and to do vehicles in the engine that you could arbitrarily jump in and out of.

One of our first team members at Rebel Boat Rucker, Doug Wood⁶, left the company to help found Valve Software and he took the scripted sequences concept there with him - that became a big deal for *Half-Life*'s immersion and sense of place.

Prax War was cancelled by Electronic Arts after 18 months of development, so it never came to market.

After you and some other Rebel Boat Rucker staff formed Gearbox you worked with Valve on Half-Life expansion packs. How did that relationship come about?

After Prax War was cancelled, I asked some of my co-workers and some other folks I knew in town to help me start Gearbox. At the very beginning, I had everyone come over to my house



↑ Half-Life's events are followed from a soldier's perspective

and we would sit around my dining room table and ideate. At first, I offered the name 'Skinner Box' after BF Skinner's famous experiment, but that was a little too nerdy. Caught up in the 'box' idea, I stumbled upon 'Gearbox', because I liked how a gearbox involved engineering and design all working together in a ballet of technology that could be perceived as art.

After our experience on Prax War we established some criteria early on: we didn't want to create our own engine and

we didn't want to create an original intellectual property concept, instead focusing on company- and game-building, leaving technology and IP as future goals. *Half-Life* had just come out a month or two earlier, so we very quickly identified it as a possible game to get involved with that had technology we already understood and an IP and game design we loved and could excel with. The most incredible thing then happened when, the evening after we had decided that *Half-Life* would be our #1 target for



↑ Gearbox's next Half-Life expansion was Blue Shift

a business partnership, Gabe Newell called me. He had heard about what happened to Prax War and he knew we had some talent.

I told Gabe I had the perfect idea to expand on *Half-Life* and wanted to go up to pitch it to him and the Valve guys. We were broke, but Gabe agreed to take care of my flight and hotel room, so I flew up there and pitched him *Opposing Force*. He loved the pitch, but at the time Valve did not own the *Half-Life* IP. Their publisher, Sierra On-Line, owned everything. So I suggested

I drive down the street to Sierra and pitch them, which I did. [They] loved the pitch and we worked out a deal. By April, we had the business deal closed and our first advance on royalties, and by May I was on the floor of E3 demonstrating to the *Half-Life*-hungry videogame press a couple of maps I had built featuring new enemies and weapons built by Stephen Bahl⁷.

We had a very fast development schedule, shipping *Opposing Force* in October of that year. By the time we shipped, there



↑ This cast you as a 'Barney' security guard at Black Mesa

were a dozen of us, and we were just working all of the time. Valve didn't have any creative direction for us, except near the end when we got some notes from a few of them: they wanted to redo a bunch of the story and the introduction (which we couldn't take because of time and budget - so we just followed through with our own plan).

"I told Gabe I had the perfect idea to expand on *Half-Life*."

In a 2017 interview with IGN you mentioned a 'parallel' Duke Nukem project that Gearbox were working on, which only got as far as pre-production. Can you share any more info on 'Duke Nukem Begins'?

There was a moment when Take-Two/2K Games had the rights to publish *Duke Nukem Forever*, but they were concerned that it was never going to happen. In that moment, 3D Realms was happy to make a few dollars on the side by licensing out the rights to parallel Duke Nukem video games.



↑ Brothers in Arms mixed action and tactics

It was [then] that everyone came together to do a deal that enabled Gearbox to make an original, parallel Duke Nukem video game.

In some ways, it had some primordial DNA that wound up in *Borderlands*, in that it was a four-player action shooter that incorporated some growth and progression elements. We also created a really fun story that was basically the origin story for Duke. It would be fun to revisit that project, but I don't think its budget can

easily be rationalized right now for the kind of game it is. The game would need to be evolved and we need to be able to follow through with some of our other plans to revitalise the Duke Nukem brand. We're working on it.

"That was a very high-tension time because we had already gone through a couple of rounds of contract discussion with Activision."

What was the impetus behind Gearbox shifting from presumably profitable expansions and conversions to taking the risk of developing your own IP with the Brothers in Arms series?

To get to *Brothers in Arms* we have to go back to when I was still working at 3D Realms. A co-worker, Brian Martel⁸, and I used to talk about how first-person shooters were narrow in the sense that the world was typically frozen until the player character walked in and woke up all the monsters. There was never any sense of teamwork in the early FPS games, either. We talked about how it would be cool to be a first-person soldier in a war, fighting alongside other soldiers.

As we got going with Gearbox and were at the point where we had the capability, credibility, and confidence to do an original game of our own, I developed a concept treatment for *Wargame*, which was the earliest codename for what became *Brothers in Arms*. I pitched a bunch of publishers and got the most interest from Activision. Ultimately, another party came in later with a bigger and better offer for us and we had

to step away from the deal with Activision⁹. That was a very high-tension time because we had already gone through a couple of rounds of contract discussions with Activision; they were already very deeply engaged with the game.

Fortunately for Activision, they were quickly able to build a relationship with the team that had just made *Medal of Honor: Allied Assault*, and the relationship between Activision and Infinity Ward that created *Call of Duty* spawned from all of that. As it happened, as a customer I really, really loved the *Call of Duty* games, which prioritized high-adrenaline scripted action and were very different than the approach we took with *Brothers in Arms*, which prioritized authenticity, tactics, and the brotherhood between soldiers.

In your 'The Artist's Dilemma' talk for Michigan State University, you dug into the creative process in detail. How hands-on do you get to be with day-to-day development compared to handling business aspects?

I love making games. I do not at all love the corporate and



↑ The Borderlands series blends FPS and RPG elements

business stuff. If I could wave a magic wand, I would be spending 100% of my time in the creative process. I've had to learn business and corporate management in order to build the company we've built and to keep the autonomy and agility that we know is necessary to succeed over time in this business.

But every day there are more people joining us who share the vision of the Gearbox Entertainment Company, to entertain the world, and some of them are great at the business

and corporate stuff and that is making it easier and easier for me to stay close to the creative process. Ultimately, it's a team effort and there is a lot of talent at Gearbox. Today, I'm proud to be just a small cog in an awesome machine of incredible people doing incredible things.

Author's notes:

[1] Colossal Cave Adventure was created in 1975 by Will Crowther, and allowed players to explore a cave network using

text. The game is credited with many videogame 'firsts'.

[2] As Randy mentioned, developed in 1980 by Michael Toy, Ken Arnold and Glenn Wichman, Rogue spawned the entire 'Rogue-like' genre.

[3] Founded in 1969, Compuserve was one of the pioneers of the internet era, and by the '90s was running thousands of online forums for a tech-savvy audience.

[4] In 1997 Billy Zelsnack and his brother Jason were working on Bombshell for 3D Realms (a game starring the character who would eventually appear in 2018's Ion Fury). They left to found Rebel Boat Rocker, then moved to Australia to work on web games when that closed.

[5] Devolver Digital are a publisher perhaps best known for Hotline Miami. Their first release was 2009's HD remake of Serious Sam: The First Encounter, and in 2020 they acquired Serious Sam's developers, Croteam.

[6] Prior to working at Rebel Boat Rocker and Valve, Doug Wood worked on Duke Nukem

3D and Shadow Warrior. He was an animator at Valve until retiring in 2016.

[7] Following three years in the United States Army, Stephen Bahl co-founded Gearbox and is still there over 22 years later, listing his job title as 'Co-Founder/Chief Financial Officer/Caveman Artist'.

[8] Following his work at MicroProse and 3D Realms, Brian Martel was at Gearbox for 16 years. He still works in the industry as a consultant.

[9] The Brothers in Arms series would eventually be published by Ubisoft, with Gameloft handling many of the mobile versions. The first game in the series, Road to Hill 30, was released in 2005, and as Randy mentioned came at squad combat from the opposite direction to Call of Duty. Rather than simply fighting alongside friendly troops as semi-scripted battles raged around you, Brothers in Arms required players to order allies to move, shoot and flank enemies, combining FPS and real-time tactics.

1998

With the benefit of hindsight, 1998 has been hailed as one gaming's great years, with several classic franchises being born. Obviously the biggest FPS of the year was the ground-breaking *Half-Life*, but *Unreal*, *Thief*, *Rainbow Six* and *Delta Force* each brought its own perspective on directions the rapidly expanding genre could take.





Although experimentation was still going on, game developers had become more comfortable with 3D environments and cameras, leading to releases like *Grim Fandango*, *The Legend of Zelda: Ocarina of Time*, *Gran Turismo* and *Metal Gear Solid* (alongside this year's truly great FPSs). Excellent 2D games continued coming out too - including *Starcraft* and *Baldur's Gate* - but in general, games were moving towards the freedom and flexibility offered by polygons.

SEGA exits hardware

A casualty of this was the 2D-focused SEGA Saturn, which was performing so poorly that only 12 games were released for it in North America during 1998 (compared to 119 in 1996). SEGA cut its losses with the console and moved on to its successor, the Dreamcast, which arrived in November 1998 in Japan and reached the rest of the world during 1999. With multiplayer gaming still transitioning from sharing a couch to online play, the Dreamcast included four controller ports and was the first console to ship with a modem included. Its controller also featured an analogue stick, with console FPSs gradually

standardising their control schemes after the varied approaches of early efforts.

Unfortunately, the Dreamcast would also struggle, due to factors including Sony's heavy marketing of the upcoming PlayStation 2 and SEGA having burned a lot of goodwill by rushing out several poorly considered consoles. The Dreamcast was discontinued in 2001, with SEGA shifting to a software-only strategy.

Games begin to mature

Returning to the FPS, two trends emerged in 1998, each presenting a different approach to the genre's move beyond its roots (fast-paced combat against demons and monsters in fantastical locations). Firstly, *Half-Life* presented a cinematic story alongside its gameplay, bringing in characters and dialogue, a plot that asked questions, and environmental storytelling techniques to provide context for its action. Meanwhile, games like *Medal of Honor*, *Rainbow Six* and *Delta Force* moved away from presenting the player as an all-conquering army to bring the 'military fantasy' to life.

This doesn't mean that their gunplay was necessarily more realistic than in shooters like *Quake*, but referencing real-world locations and weapons alongside historical events can allow a game to appeal to an audience who might avoid fantasy or sci-fi themes. By making combat deadly (no health pickups here), these games also brought tactical planning and caution to the table, again presenting audiences with something new from the FPS.

In the wider industry, the growing maturity of gaming as a medium meant that 1998 featured the first BAFTA Interactive Entertainment Awards, the Academy of Interactive Arts & Sciences' first Interactive Achievement Awards, and E3's first Game Critics Awards.

However, featuring mature themes alongside increasingly realistic graphics meant FPSs were attracting controversy for their violent gameplay. The highest-profile examples all feature attorney Jack Thompson, who filed several lawsuits against games, calling them 'murder simulators'. He specifically targeted FPSs, writing an

article with professor Eugene F Provenzo, saying, "*First-person shooter video games are bad for our children, teaching them to act aggressively and providing them with efficient killing skills.*" Thompson would eventually be disbarred in 2009 for professional misconduct, but even so FPSs and violent videogames in general would continue to be blamed in cases of American gun crime.

Half-Life and modding

Fans had been modding FPSs since *Wolfenstein 3D*, but 1998's *Half-Life* - perhaps in concert with the ease of finding out about new content through the many FPS websites of the time - would inspire a raft of new mods. These include *Counter-Strike*, *Defense of the Ancients* and *Garry's Mod*, but fans from the time will also remember impressive 'total conversions' like Neil Manke's horror themed *They Hunger*.

"Two trends emerged in 1998, each presenting a different approach to the genre's move beyond its roots."



TARGET DESTROYED (12 LEFT)
TARGET DESTROYED (11 LEFT)



Z.A.R.

Developer: Maddox Games

Original platform: PC

Z.A.R. (Zones for Artificial Resources) uses voxel landscapes in the same way as Novalogic's *Delta Force* or Looking Glass' *Terra Nova*. This means large, undulating environments that explosions can deform, with different planets bringing their own twists, such as rock-spewing volcanoes or pools of water and acid.

There are no instant-hit weapons in the game, so combat revolves around leading targets, adding a great sense of reward when you nail a flying robot that's been strafing you. Speaking of which, the only way to recover health is to take it from dead enemies, made more dangerous by anything you destroy exploding into pieces that inflict damage as they rain down.

Created by Maddox Games - best known for flight-sim *IL-2 Sturmovik* - Z.A.R. is unknown in most of the world but was apparently very popular in Russia. Indeed, its 16-player deathmatch won Z.A.R. Russia's 'best multiplayer game of 1998',

leading to it hosting its First National Championship the same year. The game was followed by a mission pack in 1999, then rereleased by Nightdive Studios in 2015.

Z.A.R. suffers from some oddities, including your ability to jump long distances conflicting with harsh falling damage, a sometimes unhelpful map, and punishing difficulty on anything above 'easy'. It's also fairly limited, as whatever the mission, gameplay basically boils down to hunting and killing everything. But all that aside, Z.A.R.'s bite-size levels make it fantastic for a quick blast of action.

"There are no instant-hit weapons in the game, so combat revolves around leading targets, adding a great sense of reward when you nail a flying robot that's been strafing you."

STAR TREK VOYAGER: KLINGON HONOR GUARD

Developer: MicroProse Software

Original platform: PC

That *Honor Guard* uses the *Unreal* engine is obvious not only from the game's distinctive look but also its AI behaviour. Enemies dodge aside or play dead, like *Unreal*'s Skaarj, and friendly Klingons use the same AI, so go charging off to murder everyone they can find.

Levels are long, and due to the predominantly brown palette, can be confusing. The standout section explores a spaceship hull, with enemies being blasted away into space, and in a neat touch, if this happens to you, weapon recoil can be used to push yourself back. Combat also features Star Trek's 'swooshy doors' that close the instant you step back, forcing you to aggressively push into each new room rather than fighting from the doorway.

Honor Guard wholeheartedly embraces the 'you are a Klingon warrior' angle, with melee weapons doing as much damage as ranged ones and actor Tony Todd reprising his role as



↑ *Heghlu'meH QaQ jajvam*

Worf's brother, Kurn. As a result, the game still feels like an authentic Star Trek experience despite the fact that all you're doing is fighting. It was a bold choice to make the Klingons the playable faction in the first Star Trek FPS, with no Federation involvement at all and enemies including the relatively obscure Andorians, Nausicaans and Letheans. It wouldn't be until 2000's *Elite Force* that a Star Trek FPS gave players the expected 'Federation versus big-name enemies' experience.

UNREAL

Developers: Digital Extremes / Epic MegaGames

Original platform: PC

Following a similar trajectory to those of Apogee/3D Realms and id, Epic found success with shareware games before moving into the first-person genre. *Unreal* began as experiments by James Schmalz to create an experience like Bullfrog's *Magic Carpet*, which generated excitement at Epic. The experiment lost its cavern roof and dragons, evolving into an FPS with rejected names including Sin and Dark Earth before settling on the deliberately grand *Unreal*.

Epic needed to expand to fulfil their vision, so they recruited online, targeting people like Steve Polge, who had developed AI opponents for *Quake* called Reaper Bots. The virtual team was scattered across the world, with a core group in Canada labelled Digital Extremes (still going strong with their game *Warframe*). Epic signed *Unreal* with publisher GT Interactive, who at the time were synonymous with the FPS, releasing the game alongside *DOOM*, *Quake* and *Duke Nukem 3D*.

Unreal takes you to Na Pali, an intriguing fantasy world oppressed by high-tech aliens, with your character simply trying to escape. Despite all the combat, most of your time is spent wandering huge, lonely environments, giving the game an adventuring feel. In an interview on *Gamespot.com* programmer Tim Sweeney said "Artistically, we looked at *Myst* and *Riven* and wanted to go for that quality of art and variety in the levels."

Indeed, the first thing everyone noticed about *Unreal* was its incredible graphics, which included coloured lights, atmospheric mist, mirrors, outdoor environments, transparent water, and 16-bit colour. *Unreal* is only the second time I can remember the entire development team I was on gathering around a screen to marvel at a ground-breaking new game, all wondering how we were going to compete (the first time was on seeing *Mario 64*, by the way). These graphics were matched with great audio and solid combat against smart opponents. In fact, *Unreal*'s only real weakness is that despite featuring quite a few enemy types, the game is so long



↑ *Unreal* features both sci-fi and fantasy environments

that combat grows repetitive because each appears so often.

Unreal would finally be released after more than a year of delays, mostly brought on by struggling to coordinate a team working across the globe and the same difficulties in building your technology and game side-by-side as experienced by *Quake*. The game was a huge success, selling over 1.5 million copies by 2002 and receiving rave reviews. It was quickly followed by an expansion that resolved the original's cliffhanger

ending, then a later direct sequel in *Unreal 2: The Awakening* (released in 2003 by Legend Entertainment, a small studio that was closed down by Atari just one game later).

In the meantime, the franchise took a different direction, with 1999's *Unreal Tournament* only tangentially related to the original. Nowadays the name Unreal is mainly used to refer to Epic's technology base - one of the two largest available for creating games - with the planet Na Pali more or less forgotten.

67

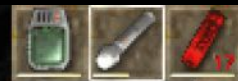


+96

142  



102



+100

35 12345



NAM

Developer: TNT Team

Original platform: PC

It's clear that *NAM* began as a total conversion of *Duke Nukem 3D*, not just in items like the portable medkit or textures from *Duke* appearing on some of the buildings, but in the feel of the movement and combat. The involvement of former US Marine Dan Snyder suggests *NAM* was aiming for realism, but in some respects - such as shooting a tank to death with a shotgun, complete with blood spraying from it - the game is no more realistic than *Wolfenstein 3D*. The box proclaims *NAM* is the first game 'to realistically bring the true experience of the Vietnam War to life', which might be pushing it a little.

Still, it features airstrikes, radio chatter, friendly troops that heal or talk to you (with their mouths opening and closing while they're doing so) and a rip-off of the Rolling Stones' *Paint it Black* on the sound-track. Despite the blocky levels and random deaths, you can tell *NAM* is desperately trying to deliver a big-budget experience at a fraction of the cost.



↑ *NAM's fairly effective jungle*

Reviews were not kind to *NAM*, pointing out that what might be fine for a free total conversion was several years too late as a boxed product. It was followed in 1999 by the sequel, *WW2 GI*, which pushed the level and mission design in new directions and again delivers some surprising moments, but by that time 2.5D games had been left even further behind by 3D worlds.

TOM CLANCY'S RAINBOW SIX

Developer: Red Storm

Entertainment

Original platform: PC

David Smith's interview covered the founding of Red Storm with Tom Clancy, but the new studio was actually run by ex-Royal Navy submarine captain Doug Littlejohns. In an interview on *Eurogamer.net*, Littlejohns summed up Red Storm's ethos with, "I'm not into spending Tom's money on mindless violence," and so the studio looked to apply its expertise to a more tactical take on the FPS. Initial ideas included a game based on the FBI or a project called *Jackbooted Thugs*, but they settled on hostage rescues by a multinational anti-terrorist organisation (the name *Rainbow Six* coming from South Africa's 'Rainbow Nation' and the US Navy's captain rank being 'level six').

As a new studio, the team was learning on the fly, its failure to create up-front designs resulting in a year of overtime. However, the finished game was an immediate classic, bringing a strong focus on tactics to

the FPS. As a single bullet could kill you, gameplay was slow-paced and cautious, with extensive planning before each level. You choose your team, what they're equipped with, how they'll split up and their paths through the level. Planning often takes longer than playing a level but provides immense satisfaction when everything is executed perfectly.

Away from the campaign, the game's team-based multiplayer proved extremely popular, with instant kills providing a tension-filled alternative to *Quake*. New modes and maps were added in subsequent games in the series, eventually culminating in 2015's multiplayer-only *Rainbow Six: Siege*.

Rainbow Six's focus on planning and caution might suggest the game would have limited appeal, but it was a big hit and spawned a series still going strong today. Red Storm was purchased by Ubisoft in 2000, providing additional development resources to update the game's engine and release the first game in the studio's other major franchise, *Ghost Recon*.



↑ Pre-mission planning is essential in Rainbow Six

To date there have been eight unique Rainbow Six titles, plus expansions, console and mobile conversions, and spin-offs. The games have become less planning-focused and more immediate over time, introducing health bars, cinematic plots and more enemies to gun down. Notable releases include the South Korean-only *Take-Down* (featuring a unique story), Rebellion's PlayStation exclusive *Lone Wolf* (no AI teammates) and arguably the series' highlight, the pair of *Rainbow Six: Vegas* games. Another game of note is *Rainbow Six*

Patriots, which was announced in 2011 with a morally ambiguous tone, but the project ran into development difficulties and was eventually cancelled.

There was clearly something in the air during 1998, because in the same manner as *Half-Life* and *Thief*, *Rainbow Six* helped revolutionise the FPS. While the first game in the series is pretty bare-bones, it laid the foundation for over 20 years of creeping through corridors knowing that a single bullet can take you down.

SHOGO: MOBILE ARMOR DIVISION

Developer: Monolith Productions
Original platform: PC

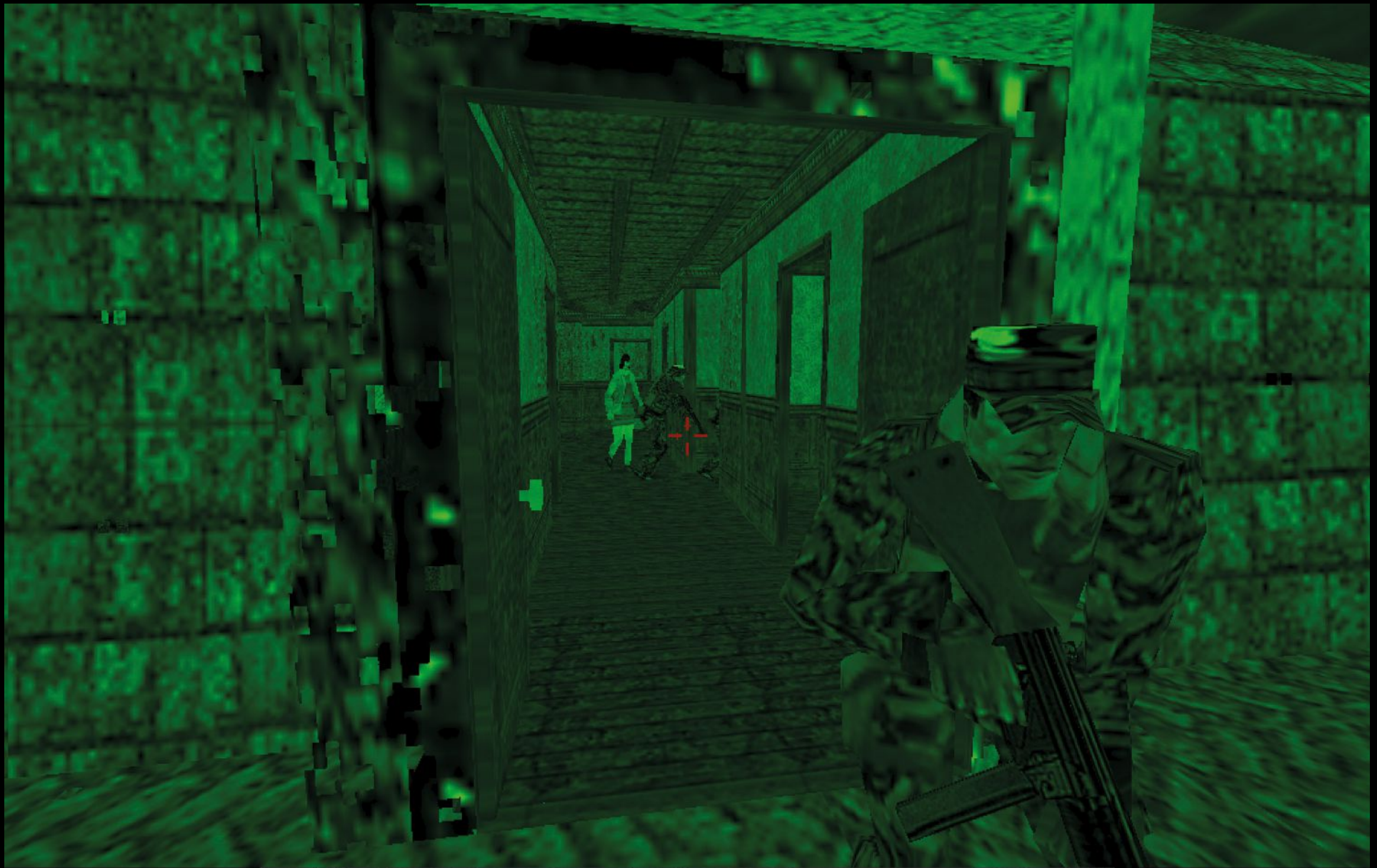
Shogo was the first game to use Monolith's new LithTech engine, with *Blood II* following immediately after. One of the new breed of FPSs using in-engine cutscenes to tell its story, *Shogo's* most notable feature is its anime styling. While the odd mix of realistic and anime texturing isn't completely successful, it does at least carry its theme through to the plot, which is as over the top and melodramatic as many animes, and even has the requisite singing intro.

The game alternates between on-foot and giant-mech gameplay but both are first-person and the only difference is that the mechs can transform. One of the game's innovations is that you can score critical hits on enemies (fun) but they can do it to you too (instant game over). Combined with enemies that are capable of shooting you before they're even visible on screen and you have a game that is challenging for all the wrong reasons.



↑ The unpolished Shogo

Selling just 20,000 copies over Christmas 1998, the game's lack of final polish can be blamed on a massively ambitious design. When discussing *Shogo* on *Gamasutra.com*, designer Craig Hubbard said, "... as a game, it is a grim reminder of the perils of wild optimism and unchecked ambition." *Shogo* has imagination and style to spare and presents a unique setting and story, but due to random critical hits and cheating AI, the combat just isn't much fun.



	<p>17 RDS</p> <p>4 CLP</p>	 <p>HK MP5SD5 Flashbang</p> <p>HK .45 MARK23-SD Heartbeat Sensor</p>	 <p>Yacoby Camo Light-HK M</p> <p>BLUE ENGAGE NORMAL HOLD</p>	 <p>Maldini Camo Light</p>	<p>Engaging</p> <p>Escorting</p> <p>Escorting</p>
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M4 Assault Rifle, Burst

21

30



H14

Carrying: Nothing

WP2: CP ALPHA (132m)



BITMAP BOOKS
Insurrection

DELTA FORCE

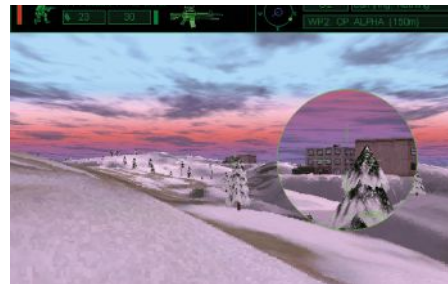
Developer: NovaLogic
Original platform: PC

NovaLogic's catalogue included simulations like *Comanche*, *F-22* and *Armored Fist*, so it made sense that they'd apply the same focus on realism to *Delta Force*. The game's open environments are powered by voxels with polygonal objects on top, giving the ground a fuzzy look but allowing for enormous levels.

Long-range, sniping-heavy combat, combined with both you and enemies able to kill each other with a single shot and no mid-level checkpoints, all mean *Delta Force* is a game to play carefully, using the terrain to your advantage.

That said, managing to sneak up on someone with a knife in your hand is always fun, particularly in multiplayer duels (though oddly there is no stab animation, so enemies simply drop dead when you get near).

Nine *Delta Force* titles were released between 1998 and 2009, ending when NovaLogic was acquired by THQ Nordic. Each



↑ See the world in *Delta Force*

title in the series became graphically richer and more detailed, but also increasingly moved towards 'Hollywood realism', with hordes of enemies to gun down and single hits no longer spelling game over. Notable releases include 2002's PlayStation game *Urban Warfare*, which played like *GoldenEye*, and 2003's *Black Hawk Down*, which covered the events of the Battle of Mogadishu. Finally, NovaLogic would also release *Joint Operations* in 2004, which was a class-based multiplayer FPS for up to 150 players.

EXTREME PAINTBRAWL

Developer: Creative Carnage
Original platform: PC

Extreme Paintbrawl's box proclaims it's 'the ultimate combat experience', following with 'the 1st non-violent 3D shooter', which is debatable - we've already covered *Super 3D Noah's Ark* for example - but does explain the gap in the market that the publisher was aiming for.

Modern 'boxed product' games can take years to make, though I've seen licensed titles developed in as few as six months. Creative Carnage were given just two weeks to release *Extreme Paintbrawl*. As a result it's no wonder it's generally considered one of the worst games ever made, with *Gamespot.com* giving it 1.7 out of 10 and saying, "it's as much out of touch with reality as it is out of step with the gaming world".

Running on the normally reliable Build engine, the ridiculously short development period even undermined the game's core shooting; I've only been paintballing a couple of times, but I've never seen paintballs



↑ *Paintbrawl 1* (top) and *4* (bottom)

banana off at angles as acute as the ones in this game.

Presumably you don't have to sell many copies to make a profit on a two-week development cycle, as the game was followed-up in 1999 by a new developer, with the cover pointing out it's the 'sequel to the #1 best selling paintball game'. A third game arrived in 2000, now from Activision, and a final entry was released in 2002, adding multiplayer via Gamespy.

1998

TRESPASSER: THE LOST WORLD - JURASSIC PARK

Developer: DreamWorks

Interactive

Original platform: PC

Created by former Looking Glass staff with the support of DreamWorks, *Trespasser* is a direct sequel to the second Jurassic Park movie, *The Lost World*. Featuring the voices of Richard Attenborough and Minnie Driver, you can feel 'cinematic DNA' running through the game, with cutscenes rapidly setting the scene alongside strong environmental storytelling.

Trespasser took the unusual approach of giving your character a body and placing the camera inside their head, meaning you can look down to see your arm and ample chest (complete with health displayed via a heart-shaped tattoo). The idea behind giving you an arm to control was to let you directly manipulate objects, but the physics simulation simply wasn't robust enough, leading to endlessly fighting against your own limb.



↑ *Unruly aiming makes each Trespasser fight a challenge*

The giant environments and physics puzzles - six years before *Half-Life 2* - are cool, but for everything good there's something 'off'. It strips you of your weapons every level, jumping is arbitrary, aiming is impossible, and the endless velociraptors are clearly struggling against their AI.

Suffering from an over-ambitious design, no management oversight and an inexperienced team, *Trespasser* was originally due at the end of 1997, was delayed by a year and still feels rushed.

It only sold around 50,000 copies and generated negative reviews but has gained a cult following, with a community producing patches, tools, and guides to keep this unique game running on modern systems.

"Trespasser took the unusual approach of giving your character a body and placing the camera inside their head, meaning you can look down to see your arm and ample chest."

SIN

Developer: Ritual Entertainment

Original platform: PC

Ritual began *SiN* after completing *Quake* add-on *Scourge of Armagon*. Beginning on the *Quake* technology then moving over to *Quake II*, *SiN* was originally set to launch spring 1998, but Ritual didn't get the new engine until December 1997. In addition, changes required to transition the game to *Quake II* meant a lot of work had to be thrown away, with most levels started from scratch.

SiN strives to bring its world to life, beginning with a bank robbery that demonstrates the game's innovations, including hostages, usable computers, primary and secondary objectives, and manning a helicopter turret. Later levels are missing some of that interactivity and polish but do provide choices that alter future paths, stealth sections, and alarms that characters will run to.

Protagonist John Blade talks throughout all this, bantering and delivering Duke Nukem-style quips. Slightly less cool is the game's handling of femme fatale



1 500
ITEMS AMMO



100 43
HEALTH ARMOR



191

0

498



↑ SiN's varied gameplay

Elexis Sinclaire. Pretty much every time Blade refers to her, he calls Elexis a bitch, but then to be fair he often tells guards he's going to make them his bitch so I guess the guy just likes bitches.

SiN suffered from bugs, which may have hampered its success, as would the release of *Half-Life* just weeks later. The *Wages of SiN* expansion followed in 1999, then *SiN Episodes: Emergence* in 2006. Planned as the first of nine episodes, *Emergence* was the only one to be released.

BLOOD II: THE CHOSEN

Developer: Monolith Productions
Original platform: PC

This was not the best year for Monolith, with both *Shogo* and *Blood II* suffering development woes. While Monolith also made the original *Blood*, publisher GT Interactive now owned the rights and wanted a sequel, giving Monolith just 11 months to create it. The game failed to hit its deadline, suffering the same design problems as *Shogo*, plus 'feature creep', in which the original plan is bloated by constantly adding new ideas.

Jumping ahead to 2028, *Blood II* trades cultists and funfairs for soldiers and subways. While Caleb is still fun and elements of the original's black humour are present, they don't carry through to the gameplay - *Blood's* flare gun caused enemies to burst into flames and run around shrieking; here the flare just sticks to them, inflicting damage over time.

Blood II is clearly not ready for release, forcing you through the same poorly balanced maps



↑ Like Shogo, Blood II needed more development time

several times and displaying obvious bugs. While the campaign offers a lengthy play time, some might argue that the downside is this means longer spent playing *Blood II*.

The *Nightmare Levels* expansion pack resolved some unexplained elements from the original game's ending and is notable for Monolith using development money from it to pay for patches to the base game (as GT Interactive wasn't interested in paying them to patch it).

A second expansion called *Revelations* was in development by Tequila Software but was cancelled due to poor sales of the base game.

"While the campaign offers a lengthy play time, some might argue that the downside is this means longer spent playing *Blood II*."

← Blood II is much less tongue-in-cheek than its predecessor

HALF-LIFE

Developer: Valve

Original platform: PC

As Valve's first game, *Half-Life* was intended to require just a year to deliver a straightforward total conversion of *Quake* (replacing its enemies, weapons and textures but using the engine as-is). Using id's technology was important because Valve recognised they weren't large enough to innovate in gameplay while also building their own underlying tech. Still, they expanded on the engine in major ways, such as improving its animation and AI systems, pushing it as far as possible to compete with id's *Quake II*, even though that technology was a generation newer.

Initially named *Quiver*, the game referenced Steven King's story *The Mist*, in which an event at a secret base unleashes monsters and traps people in a contained environment. *Half-Life* was signed by Sierra On-Line, known for their point-and-click adventures but looking to release an FPS.

Then Valve decided the game wasn't fun enough, scrapped it and restarted with a development approach formed around 'cabals'. These small sub-teams each ensured that content and mechanics were delivering enough value to the player for their development cost or else were cut from the game. As part of the cabal process, Valve established rules around pacing, acknowledging the player's actions and teaching through play, applying these with a rigor that led to an extremely polished campaign.

Valve shut down a second, unannounced game called *Prospero* and moved everyone onto *Half-Life*, but even so, the rework added another year of development. This was presumably only possible because Valve's founders Gabe Newell and Mike Harrington had both made a lot of money while at Microsoft, giving the studio a financial safety net to take a risk like delaying the game. Credit must also go to Sierra for allowing an unproven team to push their release back; just look at other similarly ambitious projects in this book for examples of this failing to pay off.



↑ *Half-Life's enemies featured clever AI tricks*

Half-Life's gradually revealed story was key to its success, but though it seems like an obvious idea with hindsight, it wasn't always so clear. Speaking to *Gamespot.com*, Gabe Newell said, "We'd occasionally get people who would say things like: 'Stories? Who needs them? I just want a rocket launcher that fires faster.'" Novelist Marc Laidlaw joined the team to help flesh the plot out, using touches like having characters acknowledge you, bringing them to life while rapidly filling you in on who 'you' are in this game.

Which brings us to Gordon Freeman, theoretical physicist and apparently badass soldier. Unlike other named protagonists of the time, Gordon never speaks, with information delivered by scientists, security guards, enemies and later, the 'G-Man' all talking to you. It's interesting to debate whether Gordon is such a blank slate to simply keep him out of your way or because thematically he has no say in the game's events - in their drive to deliver a cinematic experience Valve leads you through a more-







↑ Every Half-Life fan should play the Black Mesa remake

or-less linear adventure, with even the final, end of game decision basically fake.

Gordon's journey takes him through the Black Mesa Research Facility, with evocative level design making it feel like a real place despite the game presenting some seriously unlikely architecture for gameplay purposes. The seamless transitions between levels help, as do details like broken down or abandoned areas, colour coded paths and brief excursions outside. It all culminates

in one of the most interesting endings in an FPS, with effectively nothing resolved and a whole new setup for the second game, with only a few threads to tie the stories together.

Half-Life would win more than 50 awards, sell over 9 million copies, and spawn an incredible number of mods, including the more-than-a-decade-in-the-making *Black Mesa*. The original game was followed by expansions created by Gearbox Software: First 1999's *Opposing Force*, then 2001's *Blue Shift* and

Decay (an expansion for the PlayStation 2 conversion that added co-op play featuring two female characters).

Half-Life's success would lead to incredible things for Valve, but never again would they be able to work in isolation on something and then simply deliver it to unsuspecting players. From now on fans would pore over every rumour or scrap of information, desperate to know what was coming next and when. While *SiN* also delivered a story, *Quake II* featured seamless level changes and *Unreal* brought a singular world, *Half-Life* combined all these alongside its own innovations in pacing, character and combat. It redefined the FPS, and the sequel would do the same six years later.

"Half-Life would win more than 50 awards, sell over 9 million copies, and spawn an incredible number of mods, including the more-than-a-decade-in-the-making Black Mesa."

CARNIVORES

Developer: Action Forms

Original platform: PC

As it has no threats, we've skipped 1997's *Deer Hunter*, but despite being another hunting game, *Carnivore's* deadly dinosaurs mean it plays like an FPS.

Created by Action Forms (1997's *Chasm: The Rift*), *Carnivores* is a compact game, with only a few environments, weapons and targets to choose from. Nonetheless the atmospheric audio provides immersion, and *Carnivore's* huge, frequently terrifying dinosaurs put *Trespasser's* to shame. Weapons and environments are reminiscent of the first *Turok* game, particularly when exploring the unexplained temples. These come with evocative names, like the Pyramids of Shmu-Hadron, and feature disquieting, disembodied voices. The loose story revolves around DinoHunt Corp buying a planet and opening it as a safari for rich patrons. No saving the day or uncovering a mystery here - you're just some rich guy who wants to shoot dinosaurs.

← Carnivore's crossbow allows for stealthy kills



↑ Hunt dinosaurs in Carnivores

Carnivores was followed by a slightly more polished sequel a year later, *Ice Age* in 1999 and *Cityscape* in 2002, with the last made by Sunstorm Interactive, creators of *Deer Hunter*. *Cityscape* is the most interesting of the series, as it plays most like a traditional FPS, with objectives, co-op and deathmatch, plus the ability to play as dinosaurs. From the second game onwards, fans began to expand the games with new dinosaurs, weapons, and environments, including the inevitable *Jurassic Park* mods.

SOUTH PARK

Developer: Iguana Entertainment
Original platform: Nintendo 64

Developed by Iguana, *South Park* – the first licensed South Park game to be released, so no subtitle – runs on the *Turok* engine. This provides the slightly surreal experience of hearing Cartman talking about his ass accompanied by *Turok*'s distance fog, distinctive full-screen flash when you collect something, and graphic effects when you dive into water.

Despite running on the *Turok* engine, *South Park* plays more like *Serious Sam*, requiring you to circle strafe while managing endless hordes of enemies. While you can swap between the main characters and levels are introduced by Chef, the game doesn't make spectacular use of its licence. Featuring only a few enemies, it's forced to repeat them throughout long, linear levels, meaning it's all perfectly serviceable but doesn't provide many laughs or surprises. It would take 2014's *Stick of Truth* for a South Park game to truly match the show's tone.



↑ The 'perfectly serviceable' South Park

There are some nice touches, including interesting weapons, needing to hunt down each level's 'tank' enemies, and the well-developed multiplayer mode featuring plenty of iconic maps and characters from the show. But, developed on a tight deadline, the focus was clearly on getting the game out on-time and on-budget so a lack of polish was inevitable. Initially released on N64, the game was ported to PC and PlayStation, with the PlayStation version featuring downgraded visuals and the


PC suffering balance issues. None were particularly well reviewed.

"Despite running on the *Turok* engine *South Park* plays more like *Serious Sam*, requiring you to circle strafe while managing endless hordes of enemies."

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Sword



THIEF: THE DARK PROJECT

Developer: Looking Glass
Original platform: PC

Proposed sword-fighting-versus-zombies game Better Red than Undead evolved into sword-fighting-against-evil-King-Arthur game, Dark Camelot. Shifting away from combat and towards stealth, the game finally became *The Dark Project* (gaining 'Thief' because it clearly spelled out what the game was about).

The first game is notable for how few levels involve breaking into people's homes, with missions instead revolving around mines, prisons, haunted cathedrals and lost cities. It also veers towards being a straight horror game, with zombies, giant spiders, ghosts, and - creepiest of all - prancing insect creatures with high-pitched voices. All of these can be avoided, dealt with using a range of tools or, if you're desperate, fighting them in hand-to-hand combat. As expected given the game's original goals, melee combat is quite developed, allowing for slashes, overhead blows and

blocking. Still, fights manage to be deadly while also veering towards slapstick flailing, so stealthy play is strongly encouraged. Powered by the Dark Engine, the environments are large but slightly bare, leaving player imagination to fill in details. That said, they make excellent use of vertical space, with jumping and climbing as key elements.

Though many FPSs have great sounds, few make them as gameplay-critical as *Thief*. The best example is floor materials alerting guards if you move quickly, though speaking of guards, the way they let you know their location and status by what they're saying is genius. Their rambling conversations and occasionally comic voice acting also help break up the game's tension, while the invention of the term 'taffer' will go down in gaming history.

Looking Glass' immersive sims rely on many systems working together, with gameplay possibilities emerging from the ways they interact. These elements only came together three months before *Thief* was due to ship, so the team worked

enormous amounts of overtime to get it ready for the Christmas deadline.

The sequel *Thief 2: The Metal Age* arrived in 2000, with a focus on thievery instead of tomb-raiding reflecting increased confidence that the core sneaking gameplay was strong enough to carry a game on its own. Alongside new tools and improvements, the game introduced Mechanist robots, who with their distorted voices giving praise to their maker are clearly the forerunners of *Dishonored's* Clockwork Soldiers.

Though the sequel sold even better than the original, the failure of other Looking Glass projects and publisher Eidos' own financial difficulties meant the end of the studio. Some of the team moved to Ion Storm where they worked on 2004's *Thief: Deadly Shadows*, which used the same Unreal technology as *Deus Ex: Invisible War* and was similarly divisive. However, it included Shalebridge Cradle, arguably the best level in any Thief game and a masterpiece of level design. The final game in the series, *Thief* (originally *Thi4f*), was released by Eidos Montreal in 2014. This proved



↑ Thief rewards careful play

unpopular with fans of the original game but nonetheless presented some fine levels, including an asylum and a corpse processing factory.

"Rambling conversations and occasionally comic voice acting also help break up the game's tension, while the invention of the term 'taffer' will go down in gaming history."

STARSIEGE: TRIBES

Developer: Dynamix

Original platform: PC

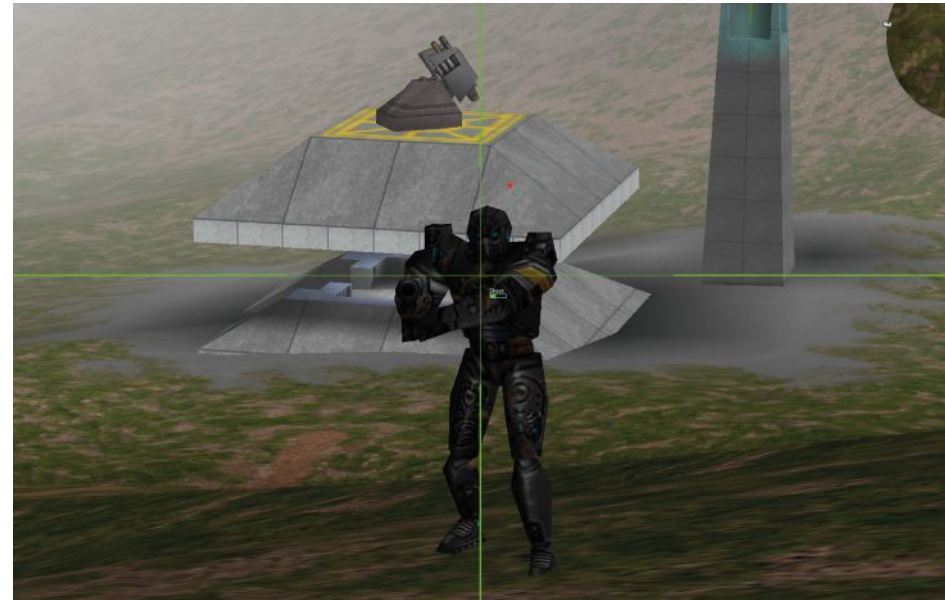
Quake III and *Unreal Tournament* (1999) weren't the first online-only FPSs, with *Tribes* already providing 32-player battles across large, open arenas. *Tribes'* levels focused on rolling valleys with occasional bridges and bases, meaning combat tended to be long-range, with leading shots to hit distant targets a key skill. It also allowed players to seamlessly walk from interior environments out into huge spaces, something that was pretty mind-blowing in a world of enclosed FPS levels.

Taking place in the universe introduced by 1994's mech game, *Metaltech: EarthSiege*, *Tribes* evolved by looking to set itself apart from *Quake*. Seeing Dennis Fong 'rocket jumping' in 1997's Red Annihilation tournament inspired the developers to add vertical gameplay through jet packs. The result is that using a combination of the game's physics, timed jumps and their jetpack, players can perform incredible leaps, covering vast sections of maps in a few

bounds. This can give high-level capture-the-flag battles a strange rhythm of players swooping in to grab the flag then being chased, with everyone trying to bring them down in the brief period before they cross the map and score. This 'skiing' technique was so popular that Dynamix made it even easier to perform in *Tribes'* sequels.

Other innovations include players choosing roles, with each of the three making a big difference to how the game plays, not just in terms of weapons carried but in how you get about the maps. For example, the heaviest class relies on the game's player-controlled aircraft - something else new to multiplayer FPSs - to cross large distances, while the lighter class can just bound through the air.

Tribes 2 arrived in 2001, then, with Dynamix gone, Irrational Games released the third game, *Tribes: Vengeance*. Using the Unreal engine, it's notable for a surprisingly deep story and for finally including a single-player campaign. There was also 2002's *Tribes: Aerial Assault* for PlayStation 2 and 2013's *Tribes: Ascend*.



↑ *Tribes requires teamwork and precision aiming*

Its long-range, role-based, teamwork-focused combat meant *Tribes* presented an extremely steep learning curve to new players, with lone wolves easily dominated by coordinated teams. This wasn't helped by the inclusion of just a few tutorial levels - a planned single-player expansion, *Tribes Extreme*, was cancelled - leaving inexperienced players to struggle until they adapted to the game's many esoteric concepts. Still, *Tribes* gathered a passionate fanbase of clans, helped by the game allowing

players to record and upload their games.

Alongside the similarly groundbreaking *Battlefield 1942*, I would argue that *Tribes'* slightly slower-paced, outdoor-focused gameplay sits it closer to the modern 'battle royale' genre than to contemporaries like *Quake* and *Unreal*. In their review of the game *The Cincinnati Enquirer* said, "Only time will tell if the consumer values such multiplayer-only experiences," confirming how ahead of its time *Tribes* was.



Bitmap Books connected to the game.
Bitmap Books joined team Diamond Sword.
Station Access On
Resupply Complete
Station Access Off

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- (B) Home
- (B) Home
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ALIEN ANARCHY

Developer: Perceptum Informática
Original platform: PC

Alien Anarchy, a.k.a. *The be-careful-how-you-type-it-into-Google Varginha Incident* was the first FPS developed in Brazil. Including the people behind the audio, the packaging and the manual, the entire team numbered just six, which unsurprisingly means *Alien Anarchy* looks, sounds and plays like a game from 1992, not 1998.

The game is based on a 1996 real-world incident in which several people from Varginha, Brazil, reported seeing creatures and a UFO. Apparently the Brazilian military captured the aliens, which explains the thousands of soldiers you gun down here. The plot has you meeting the peaceful aliens before they're captured by the military, then an alien who got away inexplicably takes its clothes off and gives you a mission to rescue its buddies.

Other than soldiers, you fight men in black, a second species of aliens, and 'goatsuckers' - another Brazilian legend, here represented as screaming,



↑ *Alien Anarchy's large but flatly lit environments*

leaping, rat-things. You're forced to play the entire game extremely carefully because while your gunfire can stunlock a single enemy (at least until it gets bored and wanders off), the large groups the game likes to throw at you can cut you down in seconds.

Selling just over 20,000 copies, *Alien Anarchy's* gameplay and graphics were clearly years out of date, but there's something strangely fascinating about the whole thing. It's like it's a game made by people who've heard

of FPSs but never played one. Almost as if it was a game from another world ...

"The game is based on a 1996 real-world incident in which several people from Varginha, Brazil, reported seeing creatures and a UFO. Apparently the Brazilian military captured the aliens, which explains the thousands of soldiers you gun down."

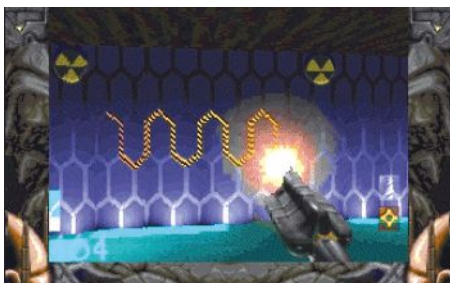
GENETIC SPECIES

Developer: Marble Eyes Dev.
Original platform: Amiga

Despite Commodore going bankrupt in 1994, Amiga games were still being released for hardcore fans, often made by those same fans. Created by members of the Amiga demo scene and featuring 'borrowed' enemies including Bandai Namco's Gundam and BattleTech's Mad Cat, *Genetic Species* is a prime example.

Though it only features single-plane levels with right-angled walls, it feels wrong to call *Genetic Species* a *Wolfenstein* clone because it adds so many elements to that game's template. Examples include destroyable doors, enemies running away, lighting changes and self-destruct sequences.

The game's big feature is swapping into enemy bodies, in a similar vein to Andrew Braybrook's 1985 classic, *Paradroid*. This is fun but disorientating, particularly with some enemies needing several hits - swapping back and forth between their view and yours - to take them over. The puzzle element this introduces



↑ *The unique Genetic Species*

is the game's strongest asset, with scientists, officers and engineers to take over in order to gain access to specific areas.

Featuring mournful, *Blade Runner*-style ambient music, *Genetic Species* is reminiscent of eerie, dreamlike games like *Iron Angel* and *Kileak*. While it reviewed highly, the Amiga was basically dead by this point and so the game sold terribly, not helped by the Amiga conversion of *Quake* obscuring *Genetic Species'* release. The game was *Marble Eyes'* only release.

DUST

Developer: Optimus-Nexus

Original platform: PC

As you'd expect for a Polish only release, *Dust* (a.k.a. *Pył*) is pretty obscure, with few sites covering the game online. But thanks to 'robertmo' we have a fan patch allowing it to be played in English, which is great because this strange, fearsomely difficult game deserves more attention. The closest reference I can think of is the similarly obscure *Azrael's Tear*, with both games revolving around pulling levers and hearing something go 'clunk' in the distance.

You're trying to escape a backwater moon populated by a variety of characters, some of whom attack on sight, while others go about their business. For the most part you wander around claustrophobic corridors, though there are visits to the surface, with gameplay revolving around puzzles, shooting out lights and conserving your resources. At one point you rescue a woman, Karla (named after a character from Douglas Copeland's book, *Microserfs*) from some light bondage and

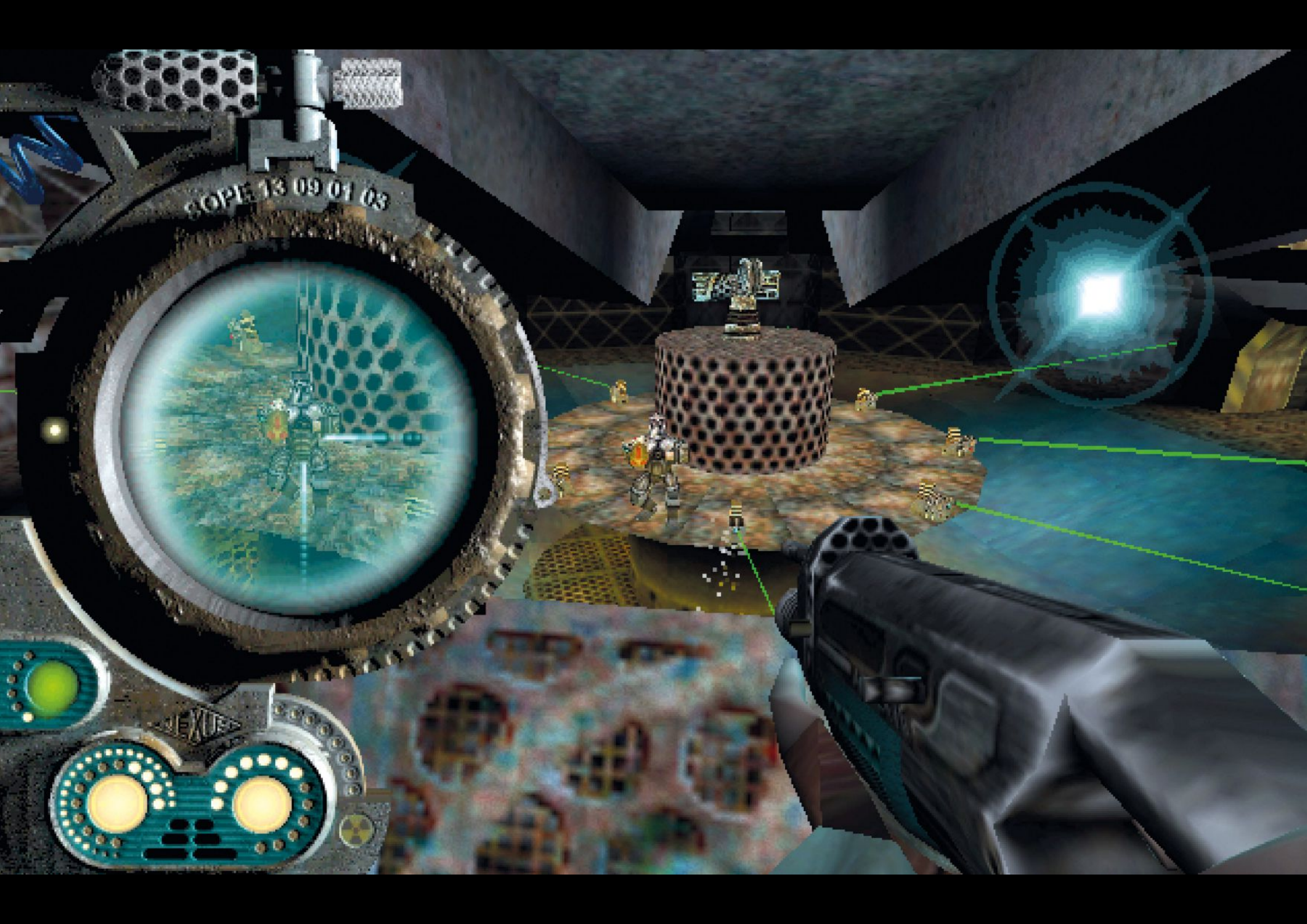


↑ *Dust shares a 'use darkness, avoid combat' ethos with Thief*

later she fights alongside you. The game, engine and development tools were made by a team of just four while their publisher was being taken over, so features were cut and the game rushed out, with the publisher shut down soon afterwards. *Dust's* unique codebase means you'll probably have to run it in software, with the game's publisher betting everything on Voodoo graphics hardware and excluding support for everything else. It still runs pretty poorly on today's PCs, but fans of creepy,

otherworldly exploration should check it out.

"*Dust* (a.k.a. *Pył*) is pretty obscure, with few sites covering the game online. But thanks to 'robertmo' we have a fan patch allowing it to be played in English, which is great because this strange, fearsomely difficult game deserves more attention."



INTERVIEW WITH KEN LEVINE



Now creative director at Ghost Story Games, Ken Levine is best known as the visionary behind 2007's massively successful *BioShock*. But before that, Ken was involved in the making of the ground-breaking *Thief: The Dark Project* and *System Shock 2*. So this interview focuses on Ken's early career, including digging into the original plan for *Shock* alongside *SWAT 4*, the game that bridged the gap between *System Shock 2* and *BioShock*.

Can you take us through how you joined Looking Glass Studios?

Ken: I had started my creative career as a screenwriter. Even when I was in college I got an agent because I was writing and putting on plays in college, and so I thought I was going to be a writer. I ended up doing one movie for Paramount which never got made, but they paid me. And then I couldn't get another job and I spent my twenties thinking I had struck out as a creative, and it was very difficult because I convinced myself I had a real creative spark.

But all the time I was playing games. I played games constantly, I stayed up every night, like four in the morning, playing games. I was a computer consultant at the time - that's how I made money. I was aware of Looking Glass, I remember reading articles about them and I knew who Doug Church¹ was, I knew who Warren Spector was.

I saw an ad in *Next Gen*² magazine for a game designer at Looking Glass. I was like 'can I do that?' I applied for the job and I got it - I'm not sure why I got it, but I got the job. They ended up putting me in a room with Doug Church, who I was kind of in awe of, and we started working on the thing that became *Thief*.

***Thief* evolved through several earlier iterations. What was behind that process?**

The head of Looking Glass had this calendar he put up for the team, which was 'these are the games you're going to do', but they weren't [fully fleshed out]. They were like, RPG, one game, action RPG was another game, and a flight-sim was another. I don't think the RPG ever happened, but the flight-sim became *Flight Unlimited*; the action RPG is what Doug and I were working on.

Doug may have been thinking about it beforehand, but one of the very early ideas that we came onto was that it'd be a first-person sword fighting simulator. We played around with that a lot, but I think Doug was rightly sceptical of our ability to make that interesting, and I think it's still a hard problem. Really, until VR came along - I think you get some decent games with that, but it still has that haptic feedback problem.

We kept coming up with ideas. There was a magic game called *Dark Elves Must Die*. We played around with drawing magical symbols in the sky - you'd actually use your mouse to have your hand draw out symbols and those would turn into spells. That was a game about, you know, the dark elves were given a bad rap because they weren't actually bad, but the world was very set against them. We liked flipping those ideas on their head. *Dark Camelot* was



↑ Thief made waiting and watching AI characters exciting

about Mordred and Morgana being the good guys. Better Red than Undead was fairly satirical but dealt with the Cold War and zombies, so it was a little silly. We played around with a kung-fu game called Split Knuckle.

I sat there and basically wrote up concept docs day after day, and we'd talk about them for a while and then eventually Doug was just like 'no, this isn't going to work', and he'd toss it. I have developed a reputation for throwing a lot

of things out, and I learned that from Doug. And it was very, very hard at the time because I would put my heart into each one of these. I'd get concept art made, I'd write back stories, I'd write these five-to-ten-page documents about the thing and then they'd get tossed ... but he was right. We were looking for a better idea.

And then one day Paul Neurath³ said 'what about a game about a thief?' This role of a thief is very rarely covered. They're in RPGs but they serve as support

characters. I liked that idea right away, so I went to work on thinking about what the world would be like. The notion of stealth obviously became central. Doug and I, throughout all these things, had this idea that wouldn't it be really interesting to have ... because AIs in shooters at the time were just 'see you and attack you'. We thought about this whole sort of 'gradient of awareness'. The phrase we kept using was 'hey, is somebody there?' And then we started talking about 'active stealth' - how do you make it so you're not just sitting around waiting, because that's boring? That's where the idea of things like moss arrows, and water arrows that put out the lights [came from], so you could be doing things that change the stealth environment. And somebody else came up with the amount of shadow on the ground and the darkness meter, so we just came up with all these tools to make stealth interesting.

"My biggest contribution was the background and the story, and the setting of the world."

What was your role on *Thief* once the project was underway?

I think my biggest contribution was the background and the story, and the setting of the world. I was like 'let's make this an antihero', you know, not a hero. He's a thief, right? So how do you make that feel right? I went back to film noir. I'm a big film buff, so the notion of a character who lives on the edge of society, breaking into people's houses and stealing their shit, and you know ... The classic film noir story is a guy's just scraping by and then a beautiful woman comes into his office and gives him what seems to be a relatively banal mission but it actually has much larger consequences. So Viktoria comes in and she's working for the Pan, Dionysus-like figure of the story. This god of nature who was at war with the other religion, the Hammers. I liked this notion of you getting caught in that struggle and it all being [told from the point of view of] Garrett, so he has his own voiceover, and it's a very film noir-style voiceover, the private detective, the Sam Spade-like figure.

But definitely an antihero, and that actually caused some challenges in the studio because I liked the idea that he wasn't a hero, and that wasn't a very common thing in games at the time. I think there was understandably some concern - would the player want to play a character when they might not always agree with the actions they were taking? For instance, I wrote a design for a mission where local merchants are being squeezed by this mob boss, so they hire you to murder him. And that seemed to be a step too far for some people at the studio because, 'well, you're a murderer'. I'm like, 'well, we're already going into these houses and killing people and taking their money', but the notion of specifically being hired to commit a murder, even if it was a mob boss, was a bridge too far. I stopped working on the game to go off and do *System Shock 2*, and I haven't played it in a long time, so I don't remember if that mission stayed. Maybe it didn't make the cut. But yeah, I went and started Irrational with two partners and did *System Shock 2*. I didn't stay until shipping, [but] the game had a lot of innovation and I

really admire what they did. It's a really interesting game and it remains fairly unique, aesthetically and gameplay-wise.

"We didn't have any money. We were broke and I was terrified, I thought I was going to have to go back to computer consulting and my creative career was over."

Before it became *System Shock 2*, the project was originally going to be a *Heart of Darkness*-inspired game. SHODAN aside, how different was that original plan from the final *System Shock 2*?

The design came out of a limitation. A lot of good designs come out of limitations. Less so now because the engines are so powerful, but back then, the Dark engine, which is the engine that was used in-house at Looking Glass, was really interesting and enabled games like *Thief* and *System Shock*. It had that stealth system built in, which was really great. [But] it was not a fast engine, and so we knew that we couldn't make a competitive shooter.

We didn't have the rights to [*System Shock*] in the beginning. I remember it was the summer of 1997. We had started our company and our first project kind of evaporated due to some changes at the company we were working for, and we were scrambling⁴. We didn't have any money. We were broke and I was terrified, I thought I was going to have to go back to computer consulting and my creative career was over.

We got a call from Paul - he had a need and he knew we knew the engine, me, and my two partners, Jon Chey and Rob Fermier⁵. They were programmers; they'd worked on *Thief*, on the engine. He said 'well, pitch a game to us', and I came to Looking Glass, a) because I saw the ad, but also b) it was my first choice of a company to work at because *Ultima Underworld* and *System Shock* were transformative games for me. So we always knew we wanted to do *System Shock*.

We looked at the engine, we looked at what we wanted to do. We knew the engine wouldn't make a great high-speed shooter. So we said 'what if we made a hybrid of an RPG and a shooter?' It was really a conservative kind of thinking which was 'we

can't make a great shooter with this engine so let's hedge our bets by adding other elements, so people don't notice how slow the shooting is'. I went off and thought of a story, which we pitched. I loved *Apocalypse Now* and *Heart of Darkness* and I just thought that was a natural quest. A dark quest. You go to meet this person and this person is not who you think he is and you have to assassinate him, but you go through this crazy, insane world that reflects the mood of the character.

So we had this story, it was called *Shock* originally. It really was a spiritual successor at first, in a lot of ways. We pitched all these elements ... something about going on a spaceship and you have to find this military leader who's gone rogue. You go through this whole crazy world and he's this very large presence, and you encounter him ... and I think that's also where I drew the idea of the 'big personality' at the centre of the game, the big antagonist personality. Andrew Ryan and SHODAN are big personalities that you deal with. Villains are the best characters, and a great heroic story requires a great villain,



↑ Do you kill or knock out Thief's hapless civilians?

a villain who is not just evil, one that you can understand. Looking Glass liked it, but they didn't have the money to fund it, so they agreed to fund us on just enough oxygen to survive to build this prototype. The demo we built was a few rooms long, completely hacked, completely ugly, but somehow caught the spirit of it. I wish we had a video of it. Maybe I'm remembering it more fondly than it actually deserves, but there was something in there that felt like something Irrational Games would come to be known for. And

it was just through a labour of love, and desperation, that the three of us were doing to keep this company going.

Then Paul Neurath arranged meetings to find a publisher because the publisher would fund it and Looking Glass would be the contractor and we'd be the subcontractors. We met with EA and Microsoft and probably Eidos, because they had a relationship with them for *Thief*. EA ended up buying it and, fortunately, they also had the rights to *System Shock*.



↑ Explore, hack, research and fight through System Shock 2

They said 'well, you guys can do it as a *System Shock* game'. That was, for me ... boy, at that point in my career, never having shipped a game before. You know, 'here, you get to do the sequel to one of your favourite games of all time ...' I felt I had an opportunity, and I wasn't going to blow it.

"The demo we built was a few rooms long, completely hacked, completely ugly."

System Shock 2 is rightly hailed as a classic now, but at the time it struggled to sell. Did that affect your approach to BioShock?

I remember when I encountered [the original] *System Shock*. It had a very strange cover. The artist who did it is great, Rob Waters⁶, he later became our concept artist, designed the Little Sisters and the Splicers, but something about that cover I didn't quite understand. I looked at it and I looked at the back; I was like 'what the



↑ Attracting attention is a bad idea in System Shock 2

hell is this game?' and I put it down, even though I loved Looking Glass. Finally I bought it when they added the CD version with the audio logs, and I'm glad I waited, because those audio logs obviously had a big impact on me for what I could do as a writer. But I wanted [BioShock] to be a game that was accessible to people, and I thought the story and the world was a way to draw people in who wouldn't actually be drawn into a first-person shooter. And I'm glad we made the choices we did, because I think finding

a big audience allowed other designers some of the freedom to say 'we can tell different kinds of stories'. More [of a] broad range of stories than maybe shooters had done before.

Looking back through your list of credits, SWAT 4 seems to be the only strictly real-world game that you've done. Is that because an element of fantasy gives you more tools?

It doesn't matter what your aesthetic is as long as it's consistent, but I don't think I



↑ 'Ghosts' and logs gradually reveal the Von Braun's fate

have a lot of interest in making super real-world games. If you look at SWAT 3 and SWAT 4 ... SWAT 3's a great game and we modelled our game heavily on [it], but visually we tried to push. We had a visual motif: this is a world of darkness; this team has to enter these broken, dark places and they have to try and bring some order to the chaos of it. And that's why the places you went to in SWAT 4 were quite depressing. There's a scene in a hospital where some terrorist or something, I don't remember the details, took over the hospital

and you go and you try to clear them out. But there was a birthday party and you saw these deflated balloons and a cake that's partially eaten. And the notion of having your birthday in this hospital bed was so depressing, but I wanted to tell that story.

I didn't work much on that game; I was working on Freedom Force and Tribes, mostly. I think that's where Nate Wells⁷, the art director on that, really bought into that because he was great with real world stuff.



↑ Environments in 2005's SWAT 4 help tell its story

He conceived the original visual design of the Big Daddy, and the Big Daddy's a believable piece of engineering because Nate had that great eye for believable stuff. But I think combining that real-world outlook with storytelling was something we did in SWAT 4. We took that into BioShock and had the freedom to really run. And that's why BioShock is so well remembered for its aesthetic, because it tries to tell a human story, but at this superhuman scale, you know?

I remember the first E3 we showed [BioShock] at. We had never had a game that people responded to before. People who loved System Shock loved it. And that's why we sold BioShock [to a publisher], because the junior executives at companies loved it. [But] the senior executives looked at the sales numbers and we kept getting rejections. We tried to sell it [to] ten different people and only 2K bid originally. But I was really committed to making something that could meet an audience. My dream was, if I could sell

a million copies of a game my life would be complete. And when it started selling a million, two million, three million, four million, ten million ... I'm still shocked and flabbergasted and appreciative, and mostly it allows us to continue to work. That's the best part of it. People continue to invest in us; we continue to do our weird shit that's not quite like anybody else's. And that's all I ever wanted, is to be able to keep making the weird shit.

Author's notes:

[1] After Looking Glass, Doug Church worked at Eidos, EA and Valve, and is listed as a creative consultant on OtherSide Entertainment's System Shock 3.

[2] As the magazines read by those inside the games industry, America's Next Generation and the UK's Edge used to feature job adverts from games companies.

[3] Paul Neurath was a founder and CEO of Looking Glass. Since then, he has worked at Floodgate Entertainment, then Zynga, and now OtherSide Entertainment.

[4] Irrational were working on the single-player side of 1998's

tactical shooter, FireTeam, but it was decided by the publisher that the game would be multiplayer only.

[5] Both Jon Chey and Rob Fermier would leave Irrational Games after completing System Shock 2. Chey worked on BioShock at 2K Australia before founding Blue Manchu, creators of Void Bastards. Fermier worked on the Age of Empires and Orcs Must Die! series, then founded C Prompt Games.

[6] Robb Waters remained at Irrational until 2014, then moved to Nightdive Studios. He was a concept artist on 2018's Underworld Ascendant and is working on Nightdive's System Shock remake.

[7] Nate Wells provided art (and frequently voices) for most of Irrational Games/ 2K Boston's projects, and has since worked on titles like The Last of Us and What Remains of Edith Finch.

1999

It surprised id when fans started modding *Wolfenstein 3D*, even though it was compressed using a unique format. The studio decided that if people were going to mod their games they would make that as easy as possible, an approach then adopted by other developers, leading to fans not only making content but the tools to create it.





Creating worlds

Which brings us to level editors, the software used to build the environments in most of the games we've covered. Each editor has its own advantages and quirks, but all were specifically designed around one of the approaches to videogame geometry that games utilise. Let's look at a few examples to hopefully clarify what this means:

2.5D games such as *DOOM* had editors that tended to use a top-down view because you're effectively building 2D maps then specifying details like how tall you want the walls to be. Some editors, like those working with the Build engine, would then let you enter a 3D view of your level to specify the textures for each surface, adjust lighting, and so on.

Games like *Turok* built their environments from pre-created blocks of geometry. This technique is fast and flexible, but it means the engine doesn't have any 'clues' as to what it can skip drawing, requiring fog to cull anything outside a certain distance. *TimeSplitters* even made level

creation accessible to players, by letting them place pre-created rooms on a grid.

Id's approach to creating 3D geometry was to build levels from various blocks that you positioned to enclose the play space. Before a map could be played it had to be run through compilers that calculated the lighting in the environment and worked out what geometry could be seen from any position in the level. Once it knew this, the engine didn't have to bother calculating anything during play, giving *Quake*-engineed games their blistering speed at the cost of requiring enclosed environments.

Unreal took the opposite approach by having you 'carve out' its levels from a solid block. This made use of the brain-bending power of computers by allowing you to carve from things you've already carved, adding geometry back into the world. The Unreal engine was also notable for not requiring a lengthy compilation process, calculating its geometry in real time.

Detail versus time

In my opinion the period 1993-1998 can be considered the golden era for level designers, because the technology of the time was perfectly balanced between realism and suggestion. During this period level designers had enough fidelity to create interesting, evocative environments, but graphics weren't so detailed that it was no longer feasible for a lone individual to create levels in a reasonable timeframe. By the 2000s, increases in scripting complexity and graphical power meant commercial level design had instead become about creating 'block-outs' of the environment before artists and others stepped in to help flesh this out with high detail geometry, lighting, textures and audio.

"In my opinion the period 1993-1998 can be considered the golden era for level designers, because the technology of the time was perfectly balanced between realism and suggestion."

REDLINE: GANG WARFARE 2066

Developer: Beyond Games

Original platform: PC

Running on Beyond Games' own Daedalus engine, *Redline* seamlessly blends vehicular combat with FPS gunplay by allowing you to zoom around in a car, jump out and shoot someone, then get into their car and drive over their body. Whereas games like *Halo* separate detailed on-foot areas from larger, graphically simpler vehicle sections, all of *Redline*'s levels seem to be built for vehicles, meaning its environments tend to be large but empty.

Set in a post-apocalypse world of big shoulder pads, you join 'The Company' and fight gangs such as the cannibal-mutant Sixers, technology-obsessed Lepers, and religious-fanatic Templars. All this is relayed through your handler, who spouts colourful lines like '... corporate Yanks who wouldn't piss down our throats if our lungs were on fire'.

Originally developed for the PC and Jaguar, the game was a sequel to 1993's *BattleWheels* for the Atari Lynx. The latter platform was dropped when Atari collapsed





50
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72
101



↑ Redline's cartoonish anarchy

and the game's title switched to *Redline*. Continuing its run of bad luck, the game was released just before publisher Accolade was purchased by Infogrames and so received very little support. With no modding tools released, *Redline* remains an isolated curio.

Whereas most games quietly fade dead bodies away to maintain performance, *Redline* draws your attention by having them explode in huge gouts of blood, and I think that brash, messy, but amusing explosion of colour pretty neatly sums up this game.

REQUIEM: AVENGING ANGEL

Developer: Cyclone Studios

Original platform: PC

Running on Cyclone's proprietary 'Emotive Animation Technology' engine, *Requiem* has you playing as the angel Malachi, escaping from the realm of Chaos to an oppressed city in a quest to prevent Armageddon. Alongside your 'secular weapons' you gain - with absolutely no fanfare - various angelic powers, such as being able to turn enemies into salt. While powers like healing, slow-motion and super-speed are useful, the others are basically additional weapons, forcing you to swap back-and-forth rather than using them side-by-side.

While obviously Christian-themed, I never really got a clear handle on *Requiem's* attitude towards religion, with Malachi happy to blaspheme and raise people from the dead, and the game sprinkled with not-very-subtle religious elements like crucified characters. Nonetheless, *Requiem* delivers an unsettling tone through the oddly angled walls, incredibly high ceilings and twisting corridors of its environments.



↑ Combine angelic powers with guns in Requiem

It's all subtly wrong, almost like Lovecraft's 'city built for non-humans', and at no point is it believable that people actually live or work there.

For every misstep or oddity, *Requiem* presents a cool idea, often years before other games would make them mainstream: it has *Max Payne's* slow-motion gunfights, *Half-Life's* seamless level loads, *Jedi Knight's* Force powers and *Half-Life 2's* oppressive military regime. But despite all its neat elements there's something slightly off

about the game - a lack of polish, unbalanced combat and empty levels - that give it a sense of unfulfilled potential.

"For every misstep or oddity, Requiem presents a cool idea, often years before other games would make them mainstream."

TEAM FORTRESS

Developers: TF Software / Valve

Original platform: PC

Team Fortress began as a *Quake* mod in 1996, was remade as *Team Fortress Classic* in 1999 and followed by *Team Fortress 2* in 2007. We're predominantly going to focus on the first two.

Team Fortress came about because a group of friends wanted team-based play in *Quake*. They were inspired by the *DOOM* map 'Fortress' (hence the name), created by Ben Fletcher, which had teams competing to push buttons in each other's base to win the match. Finding that *Quake* lacked what they wanted they decided to use the game's flexible moddability to make it themselves. With role-based gameplay inspired by *Dungeons & Dragons* character classes and *HeXen*'s heroes, *Team Fortress*' first release included five of its eventual nine roles.

The mod's success meant it began to be expanded, adding the iconic 2Fort map and new classes, until eventually TF Software consisted of around 20 people. Under a deal struck by Sierra, the developers were

working on a sequel named *Team Fortress Classic* alongside Valve when the studio outright hired the team (as they would do with the makers of *Counter-Strike* and *Portal*). Initial plans had been to move *Team Fortress* across to the *Quake II* engine, but that changed to *Half-Life*'s GoldSrc engine. In an interview on *PlanetFortress.com*, TF Software's Ian Caughley said, "TF2 was just going to be a freeware port of TF1 to *Quake II* but we decided it deserved more."

Valve's goal was to use *Team Fortress Classic* to advertise *Half-Life*'s SDK (Software Development Kit), so the game was released for free, hopefully attracting mod creators to their platform. It was also supposed to create excitement for the upcoming *Team Fortress 2*, but that would be heavily delayed.

Two teams, 32 players and nine classes added up to complicated, frequently chaotic gameplay, but this was part of *Team Fortress*' appeal, providing a whole other layer of skills to master beyond running and gunning. The game forces you to work as a team because lone-wolf players are easily crushed by well-organised



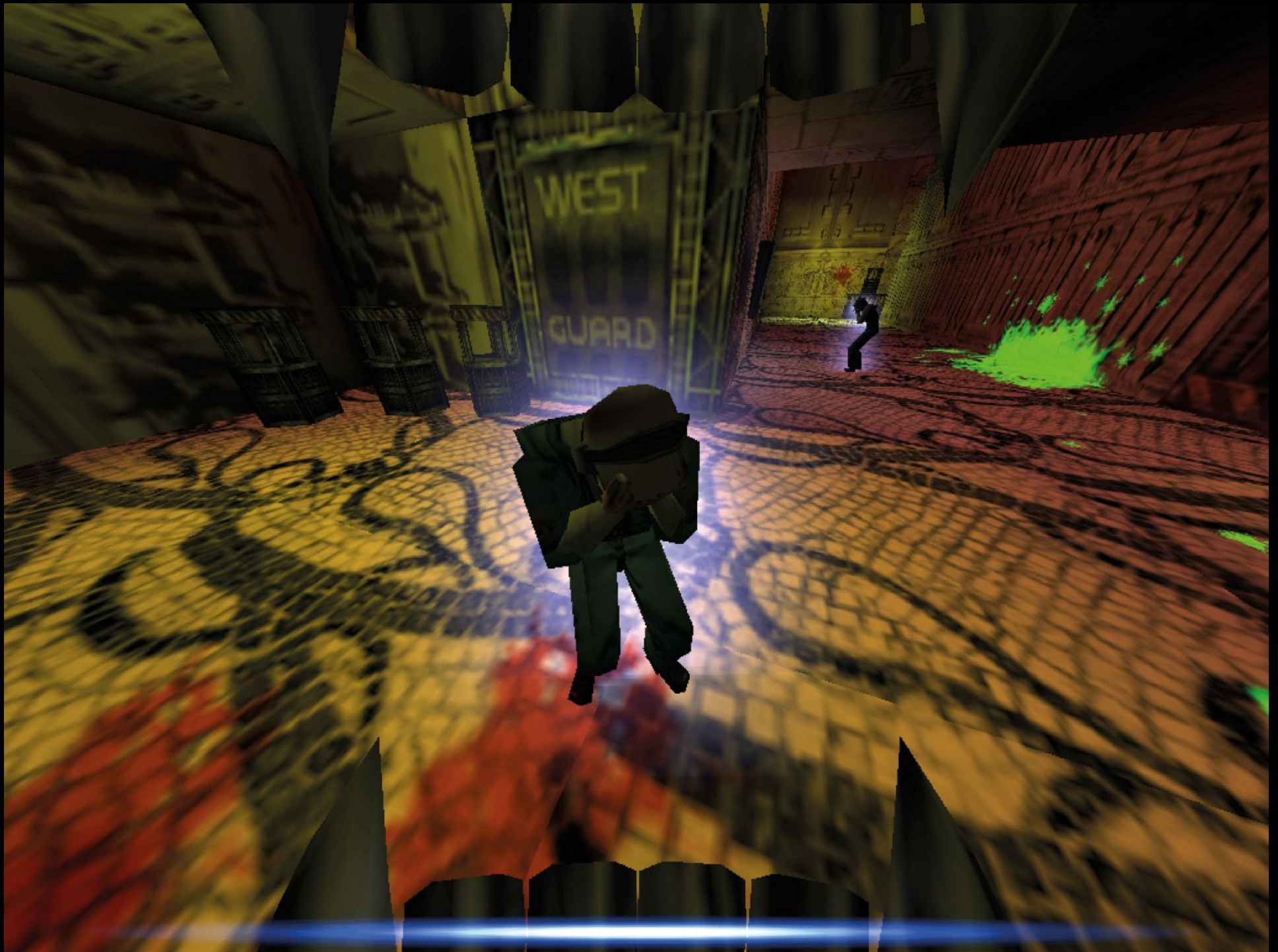
↑ Support classes like medics are crucial in *Team Fortress*

opponents. The different roles are the key to this: scout, sniper, soldier, demoman, medic, heavy weapons guy, pyro, spy, engineer - each designed to be the best at something but weak in other areas. As you might expect, balancing the endless permutations of the classes in both offence and defence was an ongoing nightmare, but despite this, *Team Fortress* offered a team and objective-based play experience unlike any other.

Which brings us to the current iteration, *Team Fortress 2*.

This was initially announced as the military-focused *Team Fortress 2: Brotherhood of Arms*, with changes including AI players, an officer class, suppressing fire and limited lives per map. *Brotherhood* was due in 2000 but vanished until 2007, when it was finally included as part of Valve's *Orange Box* bundle. The new version sported a brand-new art style that made more of the classes as characters in their own right, and is still running today.





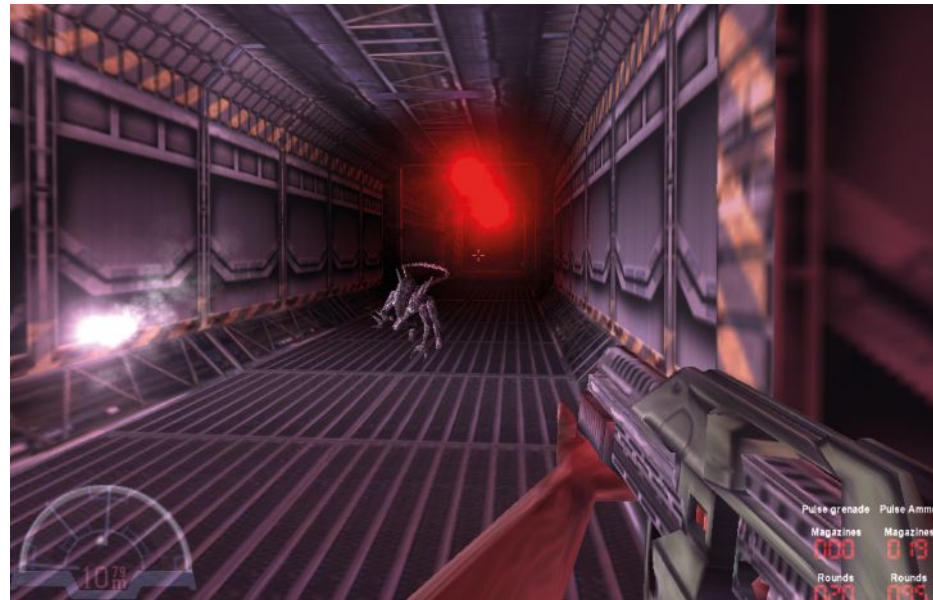
ALIENS VERSUS PREDATOR

Developer: Rebellion
Original platform: PC

Having already teamed with Atari for 1994's *Alien (no S) vs. Predator*, this is the second of Rebellion's three AvP games (with 2010's *Aliens vs. Predator* the third entry). Once again, the game offers three campaigns, with the Alien, Predator and Marine each providing a different ratio of survival-, exploration- and combat-focused gameplay. In all cases, the sprawling, twisted levels give the game a nightmarish quality, with the action switching back and forth between creeping around and abrupt bouts of extremely fast-paced combat.

The engine is notable for its dynamic lighting, meaning levels could be pitch-black and rely on Marines deploying flares or using grainy night-vision. Similarly, the Predator has to make effective use of its various vision modes, while the Alien must master the ability to cling to any surface.

Allowing you to mix species meant multiplayer battles could



↑ AvP's incredible lighting system provides tension

be chaotic, but also incredibly atmospheric if you organised yourselves. Many an evening was spent with a team of Marines hunting/being hunted by a lone Predator.

The announced PlayStation conversion was cancelled, but an expansion pack adding the much-requested ability to save mid-mission was released. With the team feeling that the professional actors they'd used to deliver the in-level video messages were too calm in their delivery, they used the update

to replace these by filming themselves in the roles over a weekend in their office. The results are ... enthusiastic.

"The engine is notable for its dynamic lighting, meaning levels could be pitch-black and rely on Marines deploying flares or using grainy night-vision."

COUNTER-STRIKE

Developers: Valve / various
Original platform: PC

In terms of up-front development cost versus profit, *Counter-Strike* has to be the most successful FPS of all time. True, *DOOM* established the genre, and *GoldenEye*, *Half-Life* and *Halo* all pushed the FPS in new directions, but those were made by entire development teams at substantial cost.

Conservative estimates put the combined sales of the Counter-Strike series at way over 61 million (and that's not including any free copies downloaded), and it's still being played as a global esport 22 years later. All this from a game born as a *Half-Life* mod, created by just two people.

Minh Le was involved in the Navy SEALs mod for *Quake*, plus *Quake II's Action Quake 2*, but wanted to create his own, more realistic mod. Work began January 1999, with Le teaming up with Jess Cliffe and various map and texture creators to release 17 beta versions of *Counter-Strike*; v1.0 went live a year later. In April 2000, Valve acquired the

mod and its developers, releasing the game to retail as a standalone package that didn't require *Half-Life*. The mod would continue receiving updates, each adding weapons, maps, improvements and fixes (the initial release suffered badly from cheating) until the final version, 1.6, was released in 1999.

In 2004, *Counter-Strike: Condition Zero* was released, including single-player content for the first time. It suffered a muted reaction from the press, with complaints that Valve were selling content that would have been free in the past. Due to politics between Valve and their publishers the game had a long, difficult development, with Rogue, Gearbox and Ritual all working on it before Turtle Rock's version was finally released. That same year *Counter-Strike: Source* appeared, which as the name suggests was running on Valve's Source engine. It featured updated graphics and other changes, but the game's community was still in love with version 1.6, creating a schism between old and new players.

It wasn't until 2012's *Counter-Strike: Global Offensive* that

the community moved forward as one, with almost everyone adopting this new version. *Global Offensive* is still running today, with 11 million players a month and Valve sponsoring tournaments with prizes in the millions.

Alongside various console conversions, *Counter-Strike* would receive several Asian spin-offs. *Counter-Strike: Neo* appeared in Japanese arcades in 2004, and there's a fascinating feature on *GameDeveloper.com* on the changes made by Namco to ensure the game appealed to Japanese players. The free-to-play *Counter-Strike: Online* followed in 2008, featuring 50 maps and 20 modes, then *Online 2* and *Counter-Strike: Nexon Studio* (renamed from *Nexon Zombies*) in 2014. With zombie combos, flaming swords, football and sexy police women, it's fair to say these versions take the game in their own directions.

Throughout its many versions, *Counter-Strike* has always been a game of knowledge and nerve, prizing tactics alongside reaction speed. Yes, those elements are key to all deathmatch play, but *Counter-Strike*'s notoriously recoil-

affected guns mean it blends moments of stillness with *Call of Duty*-style madcap action. Despite the original goal of making a realistic mod, it's not really a simulation - in real life, swapping from a gun to a knife doesn't make you run faster - but the blend of arcade movement and realistic-feeling recoil is one of the keys to *Counter-Strike*'s success.

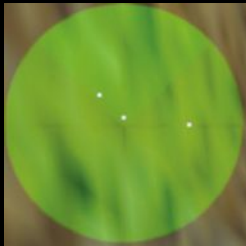
Another element of tension not present in vanilla deathmatch is dying and being forced to sit and watch the rest of the match. Each individual round only lasts a couple of minutes but the sting of being killed is painful enough. It also gives matches a seesaw tension missing in other multiplayer games, with killing an enemy increasing your team's influence over the battle while simultaneously depleting your opponent's. Cleverly, the game avoids the 'death spiral' problem with its instant-win bomb and hostage objectives; even as a team is whittled down to nothing there's always a chance they can snatch victory.

So, how to sum up *Counter-Strike*? Despite its many versions, it's still broadly the game it was in 1999. Of course



↑ CS Zero (top) and Source (bottom)

it has benefitted from being one of the first mods for *Half-Life* and from some extremely savvy management since then, but something about the blend of gameplay and theme has captured imaginations for over 20 years. Who knows what will happen to the series in the future - we've already seen that Valve can struggle to move players on to a new version - but it's difficult to imagine *Counter-Strike* vanishing any time soon.



The bomb has been planted!



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KINGPIN: LIFE OF CRIME

Developer: Xatrik Entertainment
Original platform: PC

After Xatrik (*Redneck Rampage*) shipped the *Reckoning* expansion pack for *Quake II*, they pitched a remake of *Wolfenstein 3D* to id, who declined. So the studio created their own IP, with the initial idea of a game set in 1930s Chicago evolving into an Art Deco world, with *Pulp Fiction* a noted inspiration.

The game used the by then two-year-old *Quake II* engine, making improvements to characters and lighting. It's helped by art direction from Viktor Antonov, (who would later present similarly stylish environments in *Half-Life 2* and *Dishonored*). Indeed, while the combat is good - it's powered by *Quake II*, after all - you're playing *Kingpin* for its grimy, incredibly swearsy atmosphere. Exploring detailed environments while Cypress Hill's music plays is a unique experience compared to the themes offered by most FPSs of the time.

With *Kingpin* releasing after April 1999's Columbine High School shootings, its violence attracted political attention, with two



↑ Kingpin's distinctive look

Congressman asking for the game to be cancelled and it even being debated in the Senate. In the end several major American retailers refused to stock the game.

Kingpin shipped with bugs, as publisher Interplay needed to release in a specific financial quarter; Xatrik team member Greg Goodrich said the game was 'abandoned'. Xatrik closed on the day the game shipped, with members of the company forming Gray Matter Interactive, and, ironically, going on to make *Return to Castle Wolfenstein*.

← Kingpin's grimy, swearsy, noir theme set it apart

HIDDEN & DANGEROUS

Developer: Illusion Softworks
Original platform: PC

Developed by Illusion Softworks (the *Mafia* and *Vietcong* games), *Hidden & Dangerous* revolves around the World War 2 exploits of the SAS. The action is a little clunky, with neither first- nor third-person views quite ideal, but the levels are large and relatively freeform, providing a string of objectives then leaving you to select your troops and get on with it.

Not until 2000's *Project I.G.I.* would another game be this comically difficult. German soldiers take several hits to put down but are able to kill you with a single shot, even when hundreds of metres away. Admittedly this is part of the game's appeal, encouraging you to seek out clever approaches and ways to tip the odds in your favour. The difficulty is exacerbated if you play in single-player because your AI team-mates are what's known in the trade as idiots, so to get the best from the game, you need to play in co-op, in which the instant-kill gameplay makes for a spectacularly tense time.



↑ Challenging WWII action

Hidden & Dangerous was a success, achieving sales of a million by 2007, predominantly in Europe. An expansion pack was released, titled *Fight for Freedom* in the UK and *Devil's Bridge* in the US. There were also Dreamcast and PlayStation ports of the game, and a Deluxe edition was released for free to promote the sequel. *Hidden & Dangerous 2* duly arrived in 2003, offering a deeper, more varied, and polished experience.

SYSTEM SHOCK 2

Developers: Irrational Games / Looking Glass Studios
Original platform: PC

As discussed in Ken Levine's interview, *System Shock 2* was a collaboration between Irrational Games and Looking Glass, with the latter providing support, including QA and audio.

The earliest work on the game would be under the title Junction Point (as a quick aside, this is what Warren Spector would go on to call his post-Ion Storm studio). Again as discussed in Ken's interview, the initial plan was to make a game about assassinating an insane starship captain, but when publisher Electronic Arts agreed to take on the game they suggested making it an official sequel to *System Shock*. So, while the gameplay remained much the same, the setting became the TriOptimum Corporation's starship, the Von Braun. EA only gave the team 18 months to create the game (it slipped by just two months), meaning they were reliant on Looking Glass' still-in-development Dark Engine to



↑ *The Von Braun's cargo hold is a dark, multi-level maze*

get it done in time, giving the final game a similar movement and combat feel to those of *Thief*.

System Shock 2 begins by replicating the character creation process from GDW's sci-fi pen-and-paper RPG *Traveller*, asking you to select from several tours of duty, each providing benefits. The plot then follows on from the events of the first game, though by starting you with amnesia it takes a while to reveal just how much. In an *Edge-Online.com* interview, Ken Levine summed

up the original *System Shock's* appeal: "*The feeling of a mystery, of unravelling it - not in an adventure game way, but in the context of an action game. You arrive and ... what happened?*" And though the sequel improves on every aspect of the original game, it maintains this core focus, spelling out its central story - including one of the great plot twists in gaming history - but asking you to add context through exploration.

Snippets of the original *System Shock 2* design were posted on

SShock2.com, listing the game's precepts as 'pacing, persistence of world, character growth, persistence of storyline, techno-horror tone, desperate gunplay and isolation'. Despite the game's rushed development, the team successfully used these to create an atmospheric world of constant, cloying dread, utilising ambient sounds, the ghosts of dead crew, and enemies lurching out of the darkness wailing 'kill me!' to keep you on edge. Those enemies are where the game displays its techno-horror tone, with each requiring different tactics to beat while all being equally creepy. Cyborg Midwives remind you 'little ones need lots of meat to grow big and strong', while screaming psychic monkeys zap you with their mind powers, and Protocol Droids apologise as they explode in your face. In an interview on *Gamespot.com*, Levine talked about the game's monsters being "*almost pathetic and sad*", which is aided by you being horribly aware that most of the things you're fighting were part of the original ship's crew before events unravelled.

There are lots of ways to customise your character, but it generally boils down to



>A hybrid.

+




Health: 47
Ammo: 26

Slug 4

SELECTED WEAPON: MAUSER RIFLE

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↑ System Shock 2 is a classic

being able to fight or to use psionic powers, with everyone needing to be able to hack. Having two such fundamentally different approaches alongside various smaller options means System Shock 2 is quite replayable for a more-or-less linear game. No matter which approach you take, a big part of the game is managing your gear and inventory: you never seem to have enough space or nanites, weapons need constant maintenance, and you regularly have to decide what might be useful now or in the future.

But while it provides plenty of flexibility, that freedom allows new players to get into an underpowered 'death spiral', wasting yet more of their resources trying to recover from it, eventually dooming them to a forced restart.

The game's other weaknesses are its research, which is a drag and would be improved in the BioShock games, and the quality dropping towards the end, with annoying backtracking, an organic environment beyond the capabilities of the game's engine, and a rushed denouement. That said, the vast majority of the game offers an exceptionally confident and coherent hybrid of exploration and horror.

But while System Shock 2 received rave reviews it was not a big seller, only gaining its classic status over time. Its relative failure meant that Looking Glass, already in trouble from the loss of partner Viacom, would continue to struggle until its closure in 2000. Irrational Games, meanwhile, would be acquired by Take-Two Interactive and become synonymous with the BioShock series.

MORTYR 2093-1944

Developer: Mirage Media

Original platform: PC

Playing as Sebastian Mortyr, you're sent back in time to stop the Nazis from winning World War 2, but while the game begins in 1944, it transitions to the future (which may or may not be the past from your point of view), turning up the colours and introducing robots.

Mortyr is the chilled, Sunday afternoon version of Wolfenstein, presenting gorgeous but mostly empty environments for you to wander through while enemies line up to be shot and quietly die. Disturbingly, at one point you find Hitler ranting in an empty room and no matter how much you shoot him he gets back up and keeps shouting at no-one.

This Polish game had a complicated route to market. Original publisher Interactive Magic sold their label to Ubisoft, which cancelled the project. Various publishers picked it up for different regions, but several big chains refused to sell it. Ostensibly that was due to the game's Nazi content, but Best Buy confirmed



↑ Mortyr's WWII time period

that Mortyr launching into a crowded market was part of the problem.

This makes sense, because while Mortyr is a perfectly competent FPS, in the face of competition like Medal of Honor it's easy to see why it received average reviews and was ignored by players. A sequel was released in 2004, followed by two games that were labelled Battlestrike: Force of Resistance and Operation Thunderstorm in most markets, but branded as Mortyr games in Poland.

← Mortyr: evocative environments but oddly polite combat

NERF ARENA

Developer: Visionary Media

Original platform: PC

Taking the concept of licensing someone else's engine to the limit, the *Unreal* engine-powered *Nerf Arena* (a.k.a. *Nerf Arena Blast*) not only uses *Unreal Tournament's* weapons, it was cheekily released a little earlier than that game. Created by the short-lived Visionary Media, *Nerf Arena* offered a kid-friendly, non-violent alternative to multiplayer shooters like *Quake III* and, yes, *Unreal Tournament*.

There are three modes: Pointblast is deathmatch, Ballblast is goal scoring, and Speedblast is races. The expansive levels are colourful and full of little bonus tricks, with each providing the sort of gameshow arena it would be amazing to actually go paintballing in (space station, neon colosseum, underwater cavern). 'Killing' opponents causes them to drop tokens you can collect for bonus points, with the tokens dropped by match leaders worth more.

As you'd expect, weapons are themed around Nerf guns, but fundamentally, they're remixes of *Unreal Tournament's* arsenal. The Sidewinder, for example, combines the Ripper and Redeemer, with primary-fire shots bouncing off walls and its secondary a remote-controlled missile. This is where the game's commitment to the Nerf brand wavers, with the Triple Strike's shots dealing splash damage, the Ballzooka firing 'goo' and the Whomper unleashing a BFG-style energy ball.

While it's easy to mock the game's rad style and thematic limitations, it nonetheless has its fans, with *NerfArena.com* listing over 500 fan-made levels. It lacks the depth and 'sharpness' of *Unreal Tournament* but *Nerf Arena* offers a colourful, cheerful alternative.

"Created by the short-lived Visionary Media, Nerf Arena offered a kid-friendly, non-violent alternative to multiplayer shooters like Quake III and, yes, Unreal Tournament."

OUTTRIGGER

Developer: SEGA

Original platform: Arcade

Outtrigger was an arcade game by SEGA's AM2 team for its NAOMI hardware (used for games like *The House of the Dead 2*) and converted to the Dreamcast in 2001. It seems to be a training simulator for Inter Force, who 'assault and suppress all kinds of terrorism' and 'rescue all kinds of innocent people' because you basically just deathmatch and don't do any suppressing or rescuing during the game.

With no gore, *Outtrigger* presents a much brighter, breezier tone than most FPSs of the time. Reflecting its arcade roots, gameplay is frantic but straightforward, with enemies running madly about - and frequently right through you - as you desperately fire.

Levels include an art museum and a library, all with music sounding exactly as funky as you'd expect from a SEGA arcade game. The game's tiny arenas mean the action is unrelenting, and the gameplay encourages movement over camping by awarding a point for a kill plus a bonus if you can collect the coin dropped



↑ *Outtrigger's* arcade-style HUD

by the dead player. Outside of deathmatch, *Outtrigger's* single-player depth is limited, consisting of blasting enemies as they spawn in, sometimes alongside an AI team-mate, and collecting the health and time-extension pickups they drop.

Released at the end of the Dreamcast's life, the conversion is technically impressive, running at 60 frames per second in four-player split-screen. While its joypad controls take some getting used to, the Dreamcast's mouse is supported.

00:36

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YOU PICKED UP THE SIDEWINDER



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56



MEDAL OF HONOR

Developer: DreamWorks Interactive
Original platform: PlayStation

Medal of Honor came about because Steven Spielberg wanted to combine his son's love of *GoldenEye 007* with a desire to give teens a way to learn about World War 2 through videogames. As a result the game features detailed briefings, with Spielberg recruiting *Saving Private Ryan's* military advisor to help with historical accuracy.

While far from realistic, *Medal of Honor* does have a careful, measured pace, forcing you to stop to bring up an aiming crosshair and featuring sections where you're in disguise and must show guards your papers. Technical limitations meant every level was set at night because the darkness limited the game's draw distance and therefore helped the framerate (though as a side effect, this does give the game a sneaking-through-enemy-territory-after-dark thrill). Returning to the subject of realism, while *Medal of Honor* originally featured gruesome, bloody deaths for



↑ *Darkness provides Medal of Honor with a tense feel*

enemies, these were toned down following the Columbine High School shootings.

Medal of Honor was DreamWorks Interactive's most successful game, with 16 sequels and expansions arriving by 2020 and the franchise generating over a billion dollars. However, the interactive studio's losses to date caused DreamWorks to sell the studio and brand to EA, who ended up reaping the benefits. *Medal of Honor's* success would also lead to the creation of *Call of Duty*, as several of

2002's *Medal of Honour: Allied Assault* developers took an offer from Activision to set up their own studio, Infinity Ward, and begin a new game going under the codename 'MOH killer'.

"*Medal of Honor* was DreamWorks Interactive's most successful game, with 16 sequels and expansions."

THE WHEEL OF TIME

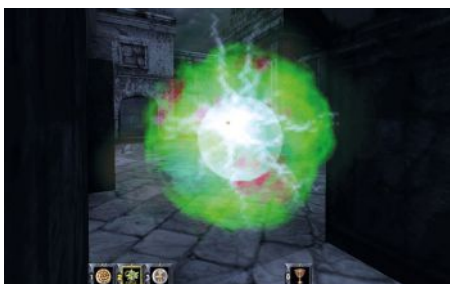
Developer: Legend Entertainment
Original platform: PC

Based on the fantasy series by Robert Jordan, *Wheel of Time* was created by Legend Entertainment, best known for adventures like *Callahan's Crosstime Saloon*. The game is powered by the Unreal engine, with its licensing fees helping Epic continue to work on the as-yet-unreleased *Unreal*. In a post on his blog, Legend's Glen Dahlgren talks about *Wheel of Time* being inspired by *DOOM* and *Magic: The Gathering*, but the game that was eventually released was just a shadow of the original plan, with the entire development a nightmare of no time, no staff and no budget.

Single and multiplayer gameplay revolves around 40 'weaves' (spells) - including direct attacks, alongside more esoteric effects like teleportation or picking up enemies. With no actual weapons, these weaves are what makes the game interesting.

While fans might love Jordan's books, this was evidently not enough to propel the game to success. Buried by bigger names, *Wheel of Time* sold just 30,000

← *Medal of Honor features a diverse range of environments*



↑ *The sprawling Wheel of Time*

copies in the US during 1999. Legend would go on to make *Unreal 2* in 2003 before being closed by Atari.

Wheel of Time is worth playing even if you're not familiar with the books, presenting huge environments to explore, an hour of cutscenes and even elements of tower defence gameplay. True, the sedate pace requires patience, but if you're willing to take your time and sink into its atmosphere, then an epic quest awaits.

CODENAME EAGLE

Developer: Refraction Games
Original platform: PC

Their first and only (kind of) release, *Codename Eagle* uses Refraction Games' own Refractor engine, and while the shooting is good, the engine's standout feature is that it allows you to drive ground vehicles, aircraft and boats, jumping in and out to repair and refuel them.

The game presents a 1927 where World War 1 never happened, revolving around a goofy story of Russian traitor General Popov, memory loss, secret princesses and your character, Agent Red of Shadow Command. The game's almost hand-painted, saturated textures give it a gloomy feel, somehow making it seem like a lost Amiga title.

The single-player campaign presents a range of objectives, ostensibly leaving you to accomplish them however you like, though it's pretty obvious how the game expects you to play each level. Still, it presents some fun moments, including bombing bridges, blowing up chemical factories, shooting down zeppelins, and



↑ *The foundations for Battlefield 1942 are clear in Codename Eagle*

even occasional instant-death platforming.

Multiplayer operates as a proto-*Battlefield 1942*, with teams using vehicles to traverse the large maps in order to steal each other's flags. The cartoony physics makes for properly slapstick action, with tumbling vehicles, players abruptly getting run over, and pilots stepping out of aircraft at the last second.

Hampered by an initially buggy release and poor reviews,

Codename Eagle only sold around 20,000 copies. But clearly DICE saw the potential behind the game's multiplayer mayhem, purchasing Refraction Games and going on to create 2002's *Battlefield 1942*.

"The game presents a 1927 where World War 1 never happened, revolving around a goofy story of Russian traitor General Popov."



- 1 Element
- 2 Red
- 3 Blue
- 4 Report
- 5 Area Cleared
- 6 Compromised
- 7 Compliance

Tab Cancel

THRASHER: "Drop to your knees. Keep your hands up! Do it now!"
HORTON: "Let's go, Go, GO!"
LERNER: "Move, man! Move!"
THRASHER: "Drop your weapon! DO IT! Get down on your knees! DO IT NOW!"
HORTON: "Blue to Lead. Suspect compliant."



SWAT 3: CLOSE QUARTERS BATTLE

Developer: Sierra-On-Line
Original platform: PC

Sierra's Police Quest series began as point-and-click adventures before transitioning into the SWAT games. The first was 1995's FMV 'training simulator', *SWAT*, followed by *SWAT 2*'s isometric real-time tactics, which sold well despite mixed reviews. *SWAT 3* moved the series into first-person, while retaining the focus on police assaults rather than military action.

Whereas the similarly realism-focused *Rainbow Six* was a game of upfront planning, *SWAT* only allows you to make vague pre-mission plans, with gameplay revolving around reacting to events as they unfold. This works because the placement of suspects and hostages is randomised, sometimes leading to anti-climaxes or brutally difficult setups, but guaranteeing you can never relax. Creeping around mundane settings like people's houses accompanied by evocative music really ratchets up the tension, particularly as you



↑ *SWAT 3* presents detailed, realistic locations

know everything can explode into shouting and gunfire in an instant. Demanding patience and practice, *SWAT* is a game for people who like to replay levels in the drive for perfection, desperately trying to avoid mistakes and defy random chance.

The game received an expansion, adding more missions and reinstating the multiplayer that was cut from the original release to ensure it hit its deadline. Announced in 2002, the sequel, *SWAT: Urban Justice* should have followed, but

suffered development delays and was cancelled. Argonaut's *SWAT: Global Strike Team* was released on PlayStation and Xbox in 2003, and was followed by 2005's *SWAT 4*, developed by Irrational Games.

"Demanding patience and practice, *SWAT* is a game for people who like to replay levels in the drive for perfection."

UNREAL TOURNAMENT

Developer: Epic Games / Digital Extremes
Original platform: PC

With the original *Unreal* focused on single-player gameplay, the plan was to release a multiplayer expansion, but this grew into a standalone title when the raft of improvements being made caused the new and old code to become incompatible. The new game (originally called *Unreal: Tournament Edition*) was released just 10 days before *Quake III*.

While *Tournament* has only loose ties to *Unreal*, it does feature some familiar names and revamped weapons, plus more obscure easter eggs for dedicated fans, such as the blue team's logo originally appearing on *Unreal*'s Vortex Rikers spaceship. Similarly, though *Tournament*'s levels match *Unreal*'s general tone, their scattershot environments give the impression that there was no 'world bible' to adhere to. That said, the game includes some stone-cold classic levels, such as Morpheus' low-gravity skyscrapers, and *Tournament*'s most iconic map, Facing

← *Cramped environments are unbearably tense in SWAT 3*



↑ Unreal Tournament has modes and maps for everyone

Worlds (complete with planets rotating in the background, which originally spun past more quickly, but made players sick).

Where *Quake III* was laser-focused on delivering pure deathmatch, rightly or wrongly *Tournament* always had a reputation for being a little more relaxed. Perhaps this was a result of how many elements the game crammed in, including 11 weapons with two fire modes each, a range of Mutators to modify game rules, several game modes including the standout

Assault, and the Translocator's teleporting antics. Or perhaps it came from including maps that prioritised them as much as gameplay. In *Tournament's* post-mortem on *Gamasutra.com*, Epic's Brandon Reinhart reflected on why they took this approach: "Including maps that were designed for their look and feel increases the game's interest to average players who aren't skilled enough at the game to benefit from hardcore designs." Saying *Quake III* was the more serious of the games could imply that *Tournament* was



↑ UT's fast, up-close action



somehow the lesser, but there's no doubt that *Tournament* had the precision, speed and depth to deliver its fair share of multiplayer action - it was just happy to let less skilled players have fun, too.

Four bonus packs were released post-launch, each adding more maps, characters and Mutators, before this was all rolled into the *Game of the Year Edition*. This also included several popular mods, though not the *Counter-Strike*-like, *Tactical Ops*, which took too long to

arrange and so was released by Infogrames as standalone title *Tactical Ops: Assault on Terror*. Alongside the Mac version, the game was converted to PlayStation 2 and Dreamcast, both supporting mouse and keyboard play and each losing some of the original maps and gaining exclusives.

The game was followed by *Unreal Tournament 2003* and *2004*, then *Unreal Tournament III* in 2007. Between 2014 and 2017 Epic worked on an Unreal engine 4-powered reboot of the game, simply titled *Unreal Tournament*, which was being developed alongside the fan community. Work on this stalled due to difficulties managing this collaborative approach and was halted in 2018, with staff funnelled onto the hugely popular *Fortnite*.

"Where *Quake III* was laser-focused on delivering pure deathmatch, rightly or wrongly *Tournament* always had a reputation for being a little more relaxed."



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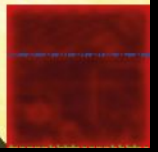
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QUAKE III: ARENA

Developer: id Software

Original platform: PC

Following *Quake II*'s release, John Carmack presented the idea of a multiplayer FPS in which players raided each other's homeworlds via gates. In a call-back to *Quake*'s Cthulhu Mythos, the goal was to fight for the glory of your Elder God.

With the final stripped-back game's ties to previous *Quake* titles amounting to just a couple of recurring characters and single-player limited to practice against AI bots, it was down to *Quake III*'s multiplayer combat to carry the entire experience. Fortunately, id's deathmatch heritage meant they delivered a murderously fast game that was perfect for eSports; *Quake III* tournaments were run for years.

Although it may seem simple, there are extremely clever touches at the heart of the gameplay. For example, maps use bounce pads and teleporters to move you to other places, avoiding slow moments: climbing ladders; waiting for elevators to arrive or doors to open.

The game also has a masterful weapon balance, with each limited through ammo usage, range, travel time of shots, firing speed or simply rarity in levels.

While *Unreal Tournament* still supported software rendering, *Quake III* required an OpenGL graphics card. This provided graphical enhancements like shader-based textures, but ironically, most of this was irrelevant to its hardcore audience, who just wanted to see their enemies as clearly as possible. Nonetheless, the engine's power would see it become id's most licensed technology.

In 2000, the *Team Arena* expansion brought new weapons, powerups and teamplay options to the predominantly deathmatch-focused original game. The expansion didn't do as well as id had hoped, because it was effectively a mod you had to pay for, while *Quake III*'s open architecture meant there were plenty of free options available.

The Dreamcast conversion features mouse and keyboard support and new maps. PC players could also download these, allowing them to play alongside console gamers and making this one of the first cross-platform



↑ Open maps revolve around *Quake III*'s railgun

games. Bullfrog converted the game to PlayStation 2 as *Quake III Revolution*, which featured split-screen but no online play, and 2010 saw an Xbox 360 version. That year also delivered *Quake Live* (originally called *Quake Zero*), providing a free-to-play experience playable in a web browser. This tried to monetise by including adverts in levels, but the game's speed meant no-one really saw them, forcing a shift to a more successful subscription model. Finally, we have 2017's *Quake Champions*, a slightly more character-focused

evolution of the core *Quake III* gameplay, made in conjunction with Saber Interactive.

The accepted narrative is that *Quake III* and *Unreal Tournament* were multiplayer rivals, but the games have different priorities. *Quake III*'s focus is on a small, highly polished set of gameplay options, making it ideal for dedicated players who want to get really, really good. While this may have limited the size of audience it could appeal to, *Quake III* is still being played by an active community 22 years later.

ARMORINES: PROJECT S.W.A.R.M.

Developer: Acclaim Studios
Original platform: Nintendo 64

Released on the N64 and Game Boy Color in 1999 and PlayStation in 2000, *Armorines* runs on the *Turok 2* engine, which is fitting because it's based on the *Armorines* comic from *Turok's* creators, Valiant.

Presumably Acclaim wanted to cash in on 1997's *Starship Troopers*, because the game revolves around shooting giant alien insects (imaginatively called 'the Bugs'). Indeed while it's named after the *Armorines* - who were 'created to cheat death and stare it in the face' - the real stars are the Bugs, who are pretty creepy, particularly when they cluster around you, filling the screen with flailing legs. Unfortunately, the small insects scurry up and stand below the camera, forcing you to look down to shoot them (tricky with the controls). The same thing happens with spindly enemies forcing you to look up to hit them, though at least here the auto-aim helps, making these the lesser of two weevils.



↑ *Armorines* at least looks cool

The whole experience feels quite barebones, with death or completing a level instantly dumping you to a loading screen, while the long, mission-based levels lack checkpoints and don't provide a map.

A sequel was announced before the first game was even released, but then cancelled when it underperformed. Almost all of the really niche games we've covered turn out to have a dedicated group of fans still carrying the torch, but not *Armorines* - it really is a forgotten game.

SAINTS OF VIRTUE

Developer: Shine Studios
Original platform: PC

Shine Studios wanted to bring gaming to a Christian audience, saying, "... *games captivate this computer-savvy generation with evil and violence in mind-numbing reality.*" Made by just two people plus a theological consultant over 11 months, *Saints of Virtue* was Shine's only release. Without money to pay for a modern engine they were forced to use the out-of-date AckNex 3 (later called 3D Gamestudio), which mixed sprites with simple 3D environments.

Donning the Armor of God - including The Shoes of the Gospel - the game is set in The Kingdom of the Heart, where you battle enemies like Self-glorification and Arrogance. These are represented by disturbing faces that float towards you while firing, but poor collision detection makes it difficult to avoid damage, so combat isn't the game's strong point.

Instead, it keeps you playing with its strange, creepy atmosphere. The huge levels don't repopulate enemies, so most of your time is spent walking through endless



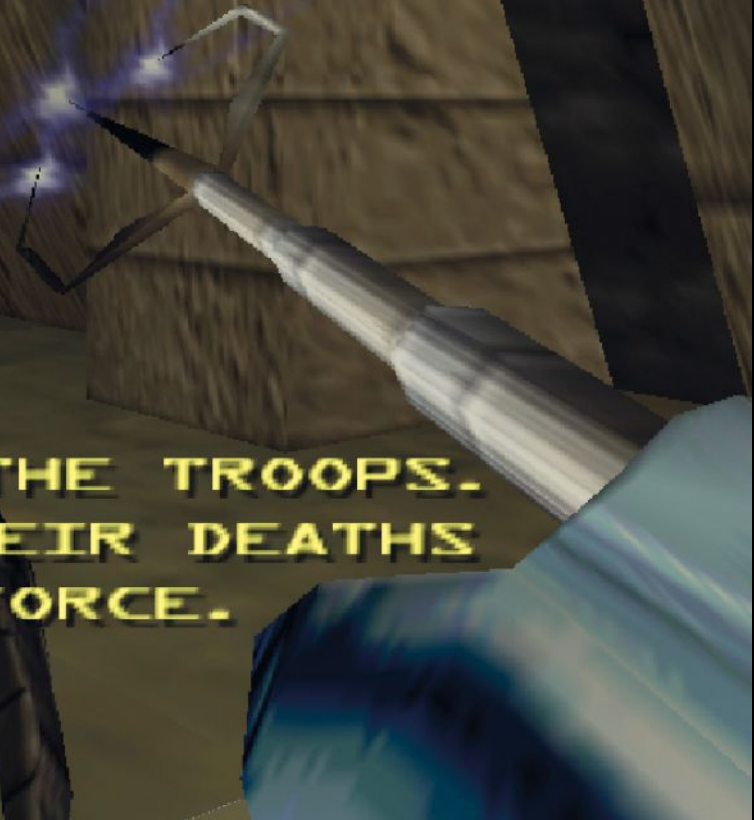
↑ *The creepy Saints of Virtue*

grey corridors with an ominous soundtrack worthy of Nine Inch Nails whispering in your ears. The four sprawling episodes - such as The Labyrinths of Legalism - include puzzles like rooms that spin you around (forcing you to throw objects for guidance), endless platforms and cyclical mazes.

Featuring repetitive textures and even more repetitive gameplay, *Saints of Virtue* should be a disaster, but there's something about its odd, depressing world that remains unnerving.



THEY'VE MASSACRED THE TROOPS.
YOU MUST AVENGE THEIR DEATHS
WITH LETHAL FORCE.



INTERVIEW WITH WARREN SPECTOR



Frankly, if you're reading this book then you probably already know who Warren Spector is. Across a career spanning 39 years, Warren has been involved in several classic games, and has maintained a singular creative vision focusing on player choice and the consequences of your actions. While a lot of this interview covers the ground-breaking *Deus Ex*, we begin with the games that led Warren to that point ...

I read that you originally planned to become a film critic, so I was wondering why you made the move from films to games, and then from pen-and-paper RPGs to videogames?

Warren: I've never actually stopped being a film critic and historian, actually. I just stopped publishing (and I've even done a little of that, with more to come ...). I made the move to games for a couple of reasons.

Firstly, I was an obsessive D&D and all-round tabletop gamer. I probably spent more time playing games than I did working on my never-completed PhD! The second reason was probably more important though. As a graduate student at the University of Texas I had been teaching film classes for a few years - history, theory, criticism, production ... you name it. One day I got a call from the chairman of the department

telling me I had been teaching too long and he had to give my class to another grad student.

To make a long story short, I found myself without any way to pay my rent. Luckily, I got a call from a friend who was working at Steve Jackson Games asking me if I was interested in a job. I jumped at the chance and spent the next five or six years working on tabletop games at SJG and at TSR in Wisconsin¹.

I made the move into video games for two reasons as well. First was that I was playing computer games as obsessively as I had once played tabletop games and they seemed like the future to me. Second, I really didn't like Wisconsin winters (and my wife liked them even less!). And just like before, out of the blue, I got really lucky. A guy I'd worked with at Steve Jackson Games called me up and asked if I'd be interested in a job at Origin². I'd been on some

panels with Richard Garriott³ at science fiction conventions and loved his design philosophy and the games that came out of that. I was in. Got a job at Origin and I was a video game developer. I learned tonnes from Richard, Chris Roberts, Paul Neurath⁴ and others there. It was great.

***Ultima Underworld* simulates pen-and-paper RPGs by giving you exploration, choices, conversations and so on, but also relies on core first-person shooter skills needed for the player to move around and fight. Did the team have a potential audience in mind?**

One of the things I loved about *Underworld* was the way it made players feel like they were playing a D&D game ... that they were interacting with the game world the way they wanted to, not the way the designers wanted them to.



↑ Ultima Underworld trusted players with freedom

I'd gotten a taste of what I call 'shared authorship' working with Richard Garriott on *Ultima VI* - that game gave players freedom to explore not just a world, but their feelings about that world. *Underworld* took that a step further in terms of player freedom. The team that made that game, up at Blue Sky Productions (later Looking Glass Technologies) was way ahead of its time in getting players off the rails most other games kept them on. Great team. A bunch of kids right out of school who didn't know what they couldn't

or shouldn't do - they just did it. They get too little credit for advancing the state of the art.

But to answer your question, finally, I don't think anyone involved in *Ultima Underworld* gave a second's thought about the audience. Back then you could make games for yourself and hope enough other people wanted the same thing as you. Frankly, I've tried to maintain that attitude throughout my career. I'm not a fan of audience research, data or analytics. Even with all of that



↑ David W Bradley's remarkable CyberMage

stuff, most games fail. I think I can do just as well as the data folks just trusting my gut. Or maybe I'm just an egomaniac.

CyberMage: Darklight Awakening is a fascinating game, both for its comics + magic + cyberpunk theme, and the way it crams in so many gameplay elements. Did the game take any lessons from System Shock?

CyberMage was kind of an odd game for me to work on. It was dropped in my lap by Electronic Arts. The game was being made by

David W Bradley, best known for a bunch of Wizardry games. He was kind of a one-man-band. To this day I have no idea how he managed to do so much, basically by himself. There were certainly some similarities between *CyberMage* and *System Shock*, but I think they were mostly superficial. I don't remember any sharing of information or anything. Frankly, I did almost nothing on *Cybermage*. Like I said, David was a one-man-band. Maybe the hardest-working person I've ever seen in the game business.



↑ *Deus Ex provides a surprising array of enemies*

Alongside in-universe lore, *Deus Ex* talks about genuine issues that are going on in the real world. Was this just a side effect of needing to sell the game's conspiracy theories to the player, or was there an element of trying to show something about our world?

From day one I wanted *Deus Ex* to be about something, not just a way to waste a few hours. I've always felt that games could be one of the most powerful tools for getting people to think about things in the real world

and decide for themselves how they felt about those things.

One way to think about it is that movies and books TELL you things. The author or director says 'here's a thing and here's what I think about it'. They make statements. Games are different. Designers can say 'here's a thing; what do YOU think about it?' Games can ask questions and let players answer them through their play choices. That was part of the reason to make *Deus Ex* at all - to get players thinking about the state



↑ *Many situations are best solved with conversation*

of the world and the possible ramifications of choices being made in the real world.

As far as the conspiracies go, that stems from my lack of interest in trying to convince people to be interested in something; I'd rather find things they already know and care about. Looking around in 1997, you couldn't help but notice conspiracy theories everywhere. And bioengineering was becoming a thing. And the internet ... Luckily, I had a team

that saw the same things I did - especially my leads Harvey Smith, Chris Norden, Jay Lee and lead writer Sheldon Pacotti - maybe especially Sheldon⁵. They totally bought into the real-world setting and took it places even I didn't imagine we'd go.

"From day one I wanted *Deus Ex* to be about something, not just a way to waste a few hours."



↑ When stealth fails it can be a good idea to run ...

Even given *Deus Ex's* length, you apparently cut some planned content. Can you remember any of the sections you cut and why those were chosen?

Yeah, *DX* was a big game. Amazingly, it was made by a team of about 30 people ... only three programmers ... I mean, looking back on it, it seems almost miraculous that such a small team was able to make such a big game!

As for cut elements, there were a bunch. I mean, there was going to be a war between the

Russo-Mexican alliance and the US with a big battle in Texas (where I live). There was going to be a daring escape from a prison camp involving thousands of people. There was going to be a mission set in the White House involving the President's daughter. I mean, we had all sorts of crazy ideas. Okay, maybe it was just me. The team talked me out of that craziness. There was no way we could recreate a war or a mass escape from prison. Plus, they just didn't fit in with the evolving plot.



↑ ... though *Deus Ex* does provide heavy firepower

The White House thing was pretty funny actually. I got a bunch of maps of the White House and adjusted them so they were the same size and could be laid over one another. I figured that would give us the most accurate picture of how the place was laid out. (As an aside, we used actual maps and photographs of actual places in building maps for *Deus Ex* - the Statue of Liberty, the Paris Catacombs ... I even got 'maps' of Area 51!) Anyway, laying those maps together, there were some differences

and even a room or two with no doors in or out. (I assumed these were secret places but I was probably fooling myself!) Anyway, there was one point when rumours started about the Secret Service descending on Ion Storm and that's why we cut the White House mission, but it really isn't true. It just didn't fit, and we didn't have the personnel to do everything we wanted.



↑ Deus Ex's plot takes you all over the world

I read that you had a list of 10 commandments for the team on Deus Ex, with one being 'never judge your player' and another 'playstyle matters'. Can you remember the rest, and why they were important?

Well, 'never judge your player' and 'playstyle matters' came later - additions to and clarifications of the 'commandments' from Deus Ex.

I thought it would be worthwhile to clarify some things I had said over and over, so 'never

judge your player - they'll judge themselves' became one of my rallying cries. The whole point of Deus Ex (all the games I've worked on, really) was to let players determine how to play, make their own choices, deal with the consequences of their choices and then recover from those consequences when they didn't like the outcome! It wasn't about developers slapping players on the wrist for not playing the way we wanted them to.

'Playstyle matters' came about because on Epic Mickey⁶ I

drafted a long version of what summed up our approach to gameplay. No one read it. I wrote a shorter version and an even shorter version ... No one read those either. So eventually I boiled it down to two words - playstyle matters - and posted them all over the office walls in gigantic letters. The team weren't crazy about that - they all felt like they knew it already, which I guess they did, but I wanted to make sure!

As far as the Deus Ex commandments went, here they are:

- Always show the goal
- Problems not puzzles
- No forced failure
- It's the people, stupid
- Players do; NPCs watch
- Have you patted your player on the back today?
- Games get harder as players get smarter
- Think 3D
- Are you connected?

Later on, lead designer Harvey Smith added a few clarifications and expansions based on the overall game goals we were all committed to, which I thought were great. They were added to the list:

- Problems will have multiple solutions
- Locations will be reachable in several ways
- Gameplay will rely on a variety of "tools" rather than just one
- Combat will require more thought than "what's the biggest gun in my inventory?"
- Geometry should contribute to gameplay
- The overall mood and tone will be clear and consistent

Have you played any of the modern Deus Ex games, and if so, were there any new elements you wish you'd thought of, or included in the original game?

I have played the Eidos Montreal games. I wouldn't say there were elements of them that I wish I'd thought of or wish I could have included in the original game. I mean, it would have been nice to be able to achieve the level of graphical fidelity the new games can reach. If we'd tried that, the game wouldn't have had a simulation as deep as we were able to achieve (and believe me, the simulation in DX wasn't as deep as players probably think it was - there was lots of smoke and mirrors going on). And we probably would



↑ Eidos' Deus Ex games built on the first game's themes

have run at two frames a second. Heck our framerate wasn't great even without trying for great graphics. Luckily, *DX* was all about the gameplay and not about the killer graphics (though Jay Lee and the art team did as good a job as it was possible to do back then, so no criticism there from me).

Anyway, I really liked *Human Revolution*. I mean, there are things I would have done differently if I were bringing *Deus Ex* up to date. And there were a few things that

frustrated me. But the important thing is that when I finished, I felt like I'd had a '*Deus Ex* experience'. I'd been given the freedom to solve problems the way I wanted to. My choices seemed to make a difference in how the game played out. Some pretty deep ideas were explored. The game even sounded like *Deus Ex*. So overall I think those guys did a great job.

It's funny, I think people expect me to dislike or feel resentful about new folks taking my baby away from me. Actually,

the opposite is true. Not many people get to work with a team that makes something so resonant that it's still relevant 20 years later. And not many people get to work on something that's bigger than they are, that has a life of its own. I'm humbled by that, and happy *DX* lives on, even if it's without me.

Author's notes:

[1] Steve Jackson Games are best known for the *Munchkin* games, the GURPS RPG system, and 1984's *TOON: The Cartoon Roleplaying Game*, which was the first full RPG Warren worked on. TSR (Tactical Studies Rules) are, of course, the company behind *Dungeons & Dragons*.

[2] *Origin* was founded by Richard Garriot in 1983 and acquired by Electronic Arts in 1992. The studio is responsible for a string of ground-breaking RPGs, but is perhaps best known for 1997's *Ultima Online*, the game that brought MMORPGs to the world's attention.

[3] Richard Garriot (a.k.a. Lord British) is the creator of the *Ultima* series, plus castle owner and modern-day explorer.

[4] Chris Roberts is best known for the *Wing Commander* games, and more recently for *Star Citizen*. Paul Neurath was creative director at Looking Glass Studios and was part of the team on 2018's *Underworld Ascendant*.

[5] To quickly cover everyone that Warren mentioned: Harvey Smith's career includes many classic games, including Arkane's *Dishonored*. There's an excellent interview with Chris Norden and David Lightbown on Gamasutra.com that covers many behind-the-scenes technical aspects of the *Deus Ex* codebase. Jay Lee has been a visual effects artist for studios including Monolith, Zipper Interactive and Riot Games. Sheldon Pacotti wrote the dialogue in *Deus Ex* and was still involved in the most recent games.

[6] Created at Warren's post-*Ion Storm* studio, *Junction Point*, Epic Mickey and its sequel blended third-person action, player choices and deep dives into Disney's lore.

2000

While shareware and demos helped, for the most part, early games simply appeared on store shelves when released. But the period we're covering brought a gradual shift towards being able to track - and get excited by - a project's progress. Games had always benefitted from marketing, but now the internet brought access to their creators.



The Operative: No One Lives Forever (2000)



News sources

You'll have seen quotes from various gaming magazines throughout this book, with publications doing their best to tell players about new games through previews, interviews, guides and reviews. But while magazines have always been great at delivering in-depth content, printing times meant they were quickly eclipsed by the internet for learning about upcoming releases.

And while the best magazines made readers feel like they were part of a club, the internet also allowed dedicated gaming communities to form. We're still some way from Twitch and 'let's play' videos on YouTube, so communities would use forums and IRC (Internet Relay Chat) to discuss games and life in general. As an aside, it's worth noting that the period we're covering was a slightly more innocent time, before these communities began dissecting games to death (often before said game has even been released).

.plan updates

One way of tracking an upcoming game's progress that seems

peculiarly specific to FPSs and this time period was the use of .plan updates. The Unix operating system allowed users to enter text into a .plan file that others could read via the 'finger' command, an idea that the developers of many of the FPSs we've covered adopted to talk about what they were working on.

As well as promotional messages or letting players know when a game had been updated, .plans were also used for the sort of posts that would be on Twitter and the like these days, alongside subtle and not-so-subtle digs at other developers or studios. The preeminent FPS news site *BluesNews.com* (still running 22 years later) allows you to read old .plan updates from a variety of FPS developers. There's id Software's Paul Jaquays announcing his resignation from the studio, Monolith programmer Mike Dussault discussing the terrain functionality in the LithTech 2 engine and, as mentioned in his interview, Randy Pitchford using a .plan post to discuss the closure of Rebel Boat Rocker.

Unfiltered views

As opposed to the occasional edited interview in a magazine, this was, for the first time, giving players 'raw' access to the developers of the games they were playing. Nowadays it's hard to imagine the PR teams at publishers allowing developers to casually announce major features of their games in this way, and perhaps their comments had to be approved for release even back then (though some of the posts suggest perhaps not). But while press releases and traditional marketing activities were still taking place, .plan updates provided smaller, more intimate looks into the minds of the developers behind the games.

"While the best magazines made readers feel like they were part of a club, the internet also allowed gaming communities to begin to form."

SOLDIER OF FORTUNE

Developer: Raven Software

Original platform: PC

After years of hey-nony-nonying through fantasy games, Raven were given the licence to military magazine *Soldier of Fortune*. You play as the game's consultant, moustachioed veteran John Mullins, working for 'The Shop' (located in a shop). While the licence might suggest a hardcore tone, the resulting experience is less realistic than games like *Rainbow Six*. For example, at one point someone escapes on the roof of a subway train so you leap on top of another and follow him.

Running on the *Quake II* engine, the big new addition is the Ghoul system, which lets you shoot individual limbs off enemies, with post-mission screens proudly displaying how many throat, head and 'nether region' shots you made. It may have been eclipsed by gorier games, but Ghoul was controversially violent back in 2000 and is still capable of presenting disturbing deaths. As a result, Raven implemented various options to tone down the violence, including releasing *Soldier of Fortune: Tactical Non-Violent Version*.







↑ *The gory Soldier of Fortune*

While it features light puzzling, *Soldier of Fortune's* focus is on slick, satisfying combat and mowing down enemies with one of the best shotguns in the genre. Converted to PlayStation 2 and Dreamcast, the game was followed by the *Quake III*-powered, more 'realistic' sequel *Double Helix* in 2002 and the poorly received *Payback* (by a different developer) in 2007. There was also 2010's South Korean *Soldier of Fortune Online* but that closed after 18 months.

PERFECT DARK

Developer: Rare

Original platform: Nintendo 64

Despite *GoldenEye's* success, various factors contributed to Rare not producing another Bond game, including the cost of the newly resurgent licence and the team - having spent three years working in 007's universe - wanting more creative options for their next game. Instead work began on a science-fiction FPS with a new IP. The project was originally called *Covert Operations*, then *Alien Intelligence* and finally *Perfect Dark* (with the name chosen by simply combining words from a list).

After *GoldenEye's* protracted development, *Perfect Dark* was meant to be a relatively quick release but ended up taking three years. Despite the odd working practices mentioned by David Doak in his interview, it's to Rare's credit that - as with *GoldenEye* - they pushed back the original release date so the team could keep working on their ambitious game. The delays were caused by members of the team leaving (with several setting up Free Radical Design and making *TimeSplitters*). Plus, although *Perfect Dark*



↑ *When stealth breaks down in Perfect Dark ...*

reuses *GoldenEye's* engine, sections had to be rewritten and expanded as more and more ideas were brought to the game.

Perfect Dark stretched the N64 so far that players needed to buy the RAM Expansion Pak to get more than basic multiplayer, and even then the game suffered from an uneven framerate. But the additions piled onto the engine help explain why the hardware struggled and the release slipped. These include more detailed environments with sharper textures, glowing lights you can

shoot out, fully voiced dialogue (with Rare's staff voicing characters), split-screen play (including co-op alongside an AI partner or with the other player controlling the enemies) and an upgraded version of *GoldenEye's* facial scanning setup for putting real people's faces on characters. Originally, this included the ability to scan your own face into the game through the Game Boy camera, but Nintendo asked for it to be removed in case people abused it by putting other people's faces on characters and then shooting them.

← *Perfect Dark's environments are diverse and detailed*



↑ Joanna Dark shares Bond's love of gadgets

Besides the technical additions, the sci-fi setting allowed a wide range of imaginative weapons, with each including secondary fire modes, such as the FarSight's ability to see and shoot through walls or the deployable Laptop Gun. The game was also notable for introducing female protagonist Joanna Dark; concept artist Brett Jones said in a *Eurogamer.net* interview "... that was the idea behind Joanna Dark, to make a female James Bond character who had all of his skills and resources, but was female and very capable."

In the end, despite the added cost of the Expansion Pak, the wobbly framerate and the delays, *Perfect Dark* emerged as another knockout Rare FPS, receiving review scores higher than *GoldenEye* and selling well. Released late in the N64's life and without the brand recognition of the Bond licence, *Perfect Dark* doesn't have the same 'this game changed the genre' legacy as *GoldenEye*, but then very few games do.

DAIKATANA

Developer: Ion Storm
Original platform: PC

After leaving id, John Romero helped found Ion Storm and, needing to rapidly hire staff, he turned to fan-community modders. Convoluted internal politics would lead to a group of staff quitting to make *KISS: Psycho Circus*, which together with the game upgrading engine from *Quake* to *Quake II*, contributed to *Daikatana* being delayed by more than two years.

The situation wasn't helped by the infamous 'John Romero's about to make you his bitch' advert put out by Ion Storm's Mike Wilson, because *Daikatana* was originally due to arrive in 1997. While the attitude might have been funny had *Daikatana* released on time, it would alienate gamers waiting years for the much-hyped game.

Reviews criticised the game's first episode, which features tight corridors and your own weapons constantly hurting you, but later environments are more successful. Each episode features unique weapons and enemies, and along with AI



↑ Time travel in Daikatana

sidekicks, cinematic cutscenes and light RPG mechanics there's no faulting *Daikatana's* ambition.

In a retrospective on *Rome.ro*, John Romero called *Daikatana's* development 'a three-year-long nightmare'. Ignoring the obviously unfinished buddy AI, it's a perfectly serviceable game, presenting huge amounts of content and an unusual story. But *Daikatana* could simply never hope to stand up to three years of hype, the very public difficulties of its creation, and that advert.



0 ARMOR +100 HEALTH 0 AMMO 0 LEVEL



NSF Terrorist



AMMO
N/A
N/A
CLIPS



 1	 2	 3	 4	 5	 6	 7	 8	 9	 10
10MM AMMO PISTOL	CHARGER PRD	MEDKIT	CROWBAR	COUNT: 2 FLARE	BINOC	TRD. DART CROSSBOW	GAS GREN	KNIFE	KEY RING

DEUS EX

Developer: Ion Storm

Original platform: PC

In 1994, Warren Spector was unable to get the game *Troubleshooter* off the ground, a project he described as: "Underworld-style, first-person action. But this is no fantasy. It's today. The real world. No monsters. No magic." Years later that idea would evolve into *Shooter: Majestic Revelations*, which in turn became *Deus Ex*.

A 500-page design laid out a world where real-life conspiracy theories were true, allowing the plot to involve the Illuminati, aliens, AI, nanotechnology and man-made plagues. In the end, that plan was cut to 270 pages, though working on such a groundbreaking, ambitious game remained a challenge. In an interview on *PCGamer.com* the game's lead designer Harvey Smith said, "Three different factions were at odds, and that often involved trying to convince Warren that we were making one kind of game and not another."

Deus Ex is arguably the king of the 'immersive simulation'



↑ *Deus Ex* rewards stealth but doesn't often require it

sub-genre, a term which sums up the two things the game is trying to provide: you immerse yourself in the game's lore, uncovering secrets and drawing your own conclusions, all while figuring out the rules and limits of the game's simulation; you do this by, for example, optimising your character into a killing machine or stacking boxes to try and make a new path. The characters in *Deus Ex* might have something to say about your approach, but the game itself doesn't care - it simply presents and reacts.

Of course, this openness means there are plenty of ways to abuse that simulation, with sticking LAMs (Light Attack Munitions) to walls to escape levels the classic example. But freedom also means the game can be surprisingly obtuse, providing skills and augmentations that are comparatively useless and assuming you'll keep up with a labyrinthine plot. But perhaps the trickiest element is that you're expected to blend back and forth between stealth and combat; attempting to use just

one of these approaches for the whole game presents a stiff challenge. It's ironic that despite its incredible freedom to approach situations however you want, if you don't play *Deus Ex* 'correctly' you can make life very difficult for yourself.

Winning stacks of awards and selling over a million copies, *Deus Ex* would be followed by the divisive sequel *Invisible War* in 2003, before Square Enix took over and created *Human Revolution* and *Mankind Divided* in 2011 and 2016 respectively. The original game was also released on PlayStation 2, and though technology limitations mean reduced textures and subdivided levels, it's nonetheless an excellent conversion.

It's easy to see why some people bounce off *Deus Ex*. In its depth, politics, world-building and potential for roleplaying the game gives back what you put in. When people talk about it as the 'best game ever', we tend to gloss over the fact that to get the best out of *Deus Ex* you must be willing to make an effort and meet its demands. But, in return, it will provide an experience unlike anything else.

← *Deus Ex's* twists mean allies can become enemies

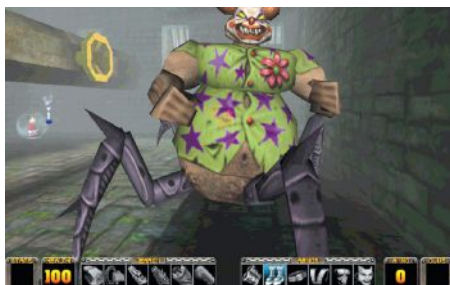
KISS PSYCHO CIRCUS: THE NIGHTMARE CHILD

Developer: Third Law Interactive
Original platform: PC

The '90s saw several rock bands featuring in their own, generally surreal, videogames - *Psycho Circus* joins Aerosmith's *Revolution X*, *Queen: The eYe*, and Iron Maiden's *Ed Hunter*. But for a game based on KISS there's surprisingly little of the band or their music here, with the player a member of a tribute act engaged in some mystical dressing up.

Created by the short-lived Third Law Interactive, *Psycho Circus* was only partially successful in its attempt to deliver the horde-blasting action of 2001's *Serious Sam* or 2004's *Painkiller*. This gameplay style relies on open, flowing arenas, but *Psycho Circus'* levels are often cramped, meaning the Gauntlet-style spawners rapidly fill corridors until you literally can't advance.

While the levels aren't suited to the gameplay, their camp, nightmare-carnival tone is fun, as are the varied enemies and weapons. From Fat Ladies throwing



↑ *Psycho Circus'* fun enemies

their organs (which then chase you), to the fire-vomiting dragon weapon, the glam-rock imagination on display is the best reason to check out the game.

Psycho Circus didn't resonate with either FPS players or KISS fans, selling just 42,000 copies in the U.S. by 2001. As I don't know much about the band it's difficult to say how much a dedicated fan will get out of the game, but purely from an FPS point of view *Psycho Circus* is an odd beast, albeit one with style and imagination to spare.

STAR TREK: VOYAGER - ELITE FORCE

Developer: Raven Software
Original platform: PC

Elite Force was part of Activision's initial wave of releases after they secured the Star Trek licence in 1998. Created by Raven using the *Quake III* engine, the game does a spectacular job of making you feel like you're taking part in a big-budget episode of the series, with the show's cast members delivering a script written by Michael Chang Gummelt. What's remarkable is that he was a programmer on the game who wrote the dialogue in his spare time.

But it's not just the voices and iconic sounds which deliver the fantasy - you also get to walk the corridors of Voyager, something the game's expansion pack added even more of. Featuring fan favourites like the Borg and the option to play as male or female, the resulting game is relatively short and linear but extremely polished and cinematic. It also features a 32-player 'HoloMatch', which plays exactly like *Quake III*, though being fragged by a bunny-



↑ *Elite Force* on PS2 (Top) and PC

hopping Borg Queen adds a touch of surrealism.

Elite Force was converted to the PlayStation 2 by Majesco and followed by a graphic novel and the previously mentioned expansion pack, then 2003's *Star Trek: Elite Force II*, developed by Ritual Entertainment. This would be the last Star Trek game from Activision, with the publisher and the show's owner Viacom suing each other over whose fault it was the games had met with relatively limited sales success.



200

200

224



CATECHUMEN

Developer: N'Lightning Software Development
Original platform: PC

Catechumen (pronounced kat-e-kyoo-muhn, apparently) came about because media publicity around violence in FPSs meant N'Lightning was able to raise \$800,000 to make a non-violent, Christian FPS.

Powered by the obscure Genesis3D engine, *Catechumen* has you fighting Roman guards, demonic imps, lions, and Satan himself. You're given 'spiritual swords' by oddly buff angels, but to maintain the non-violent stance you never actually stab anyone with them. Instead, each maps to an FPS staple like a grenade launcher, and you need to pick up extra swords to top up your ammo.

Despite its budget, *Catechumen* feels like a fan project, with empty rooms, guards voiced by the developers and simple, easily abused AI. It has interesting elements, like box-pushing puzzles and 'killing' a guard causing them to pray while 'Hallelujah' plays, but never really does anything substantial with its Christian theme.

It was followed in 2001 by *Ominous Horizons: A Paladin's Calling*, which cost \$1.6 million to develop and has similar but more polished gameplay. You teleport around the world to recover the pages of the Gutenberg Bible, and where *Catechumen* was really only a novelty for its theme, *Ominous Horizons* is more successful as a game.

Earnest but crude, these games limited their appeal to a relatively niche audience of Christian gamers. As a result, their combined sales were just over 100,000 copies, which isn't enough for budgets of this size and led to N'Lightning closing.

"Powered by the obscure Genesis3D engine, *Catechumen* has you fighting Roman guards, demonic imps, lions, and Satan himself."

ALIEN: RESURRECTION

Developer: Argonaut Software
Original platform: PlayStation

Originally due alongside the film, *Alien: Resurrection* eventually appeared three years later as a PlayStation exclusive just a month before the PlayStation 2's release. The lengthy development was due to the game shifting from a top-down shooter in the style of Gremlin's *Loaded* to third-person, and then finally to first-person. The last genre was chosen because it didn't tie up the console's power displaying your character, leaving it free to deliver atmospheric environments and pouncing aliens.

Any discussion of *Resurrection* mentions its controls; *Gamespot.com*'s review specifically complained about being forced to use the left analogue stick to move and the right to aim. While it's easy to mock this with hindsight, there is clearly something off about the game's controls, with *Eurogamer.net* saying "a horrible, inconsistent and very inaccurate control system" and *Allgame.com* "a control scheme so horrible that it kills any enjoyment you'll have".



↑ *The unbalanced Resurrection*

What the game does nail is its atmosphere, using sound, music, excellent lighting and a useless but stress-inducing motion-tracker to keep you on the edge of your seat. But despite being a technical showcase, *Resurrection* harks back to the earliest games in this book by showing what can happen if a team forgets to check their game's difficulty level with some actual players. True, you need the aliens to be deadly to give the game its incredibly tense atmosphere, but *Resurrection* is frequently so absurdly unfair it's comical rather than scary.

007: THE WORLD IS NOT ENOUGH

Developer: Eurocom Developments
Original platform: Nintendo 64

Once Electronic Arts took over the Bond licence they released a string of games, with some first- and others third-person. Based on the 1999 movie, *TWINE* is one of the more successful offerings, helped by being heavily inspired by *GoldenEye*. For example, *TWINE* takes a similar approach by expanding on its film's events, providing more mission objectives on higher difficulties, having no in-level health recovery, and even featuring similar manual aiming alongside generous auto-aim. Unlike *GoldenEye*, the game includes speech, though doesn't feature any of the film's cast except, weirdly, John Cleese.

Other than some weak AI, *TWINE* delivers a polished experience of varied levels and cool gadgets (such as your watch being equipped with a taser, darts, a laser and a grapple, for example). Its instant-game-over-if-shot civilians are a neat touch, as are the evolving mid-level objectives.



↑ *TWINE* builds on *GoldenEye*

Although *TWINE* was also released on PlayStation, that's a slightly different game. Made by Black Ops Entertainment, that version uses the *Medal of Honor* engine, doesn't include multiplayer and features fewer, smaller levels. On the other hand, by using clips from the film, it perhaps does a better job of retelling its story, and has a minigame where you gamble for money, which is a very Bond thing to do. A planned PlayStation 2 release of *TWINE* was cancelled and instead morphed into 2001's original Bond title, *Agent Under Fire*.

TIMESPLITTERS

Developer: Free Radical Design
Original platform: PlayStation 2

Newly formed by ex-Rare staff, Free Radical's first game was supposed to be *Second Sight* (initially itself an FPS but changed to third-person) for Sony's upcoming PlayStation 2. A delay in the console's release gave them the opportunity to rush a game out as a launch title, and so the predominantly multiplayer-focused *TimeSplitters* was born.

Using a time travel plot to provide variety in environments and enemies, the first game in the series provided a relatively short campaign, featuring basic level objectives and no story, both of which would be improved in the sequels. The real draw comes after the campaign, with a huge variety of content available if you're willing to tinker with split-screen multiplayer match settings or try and complete the game's ridiculous challenges. Another great feature is the MapMaker, which allows you to connect preset rooms to make multiplayer levels, an approach which avoids the off-putting learning process of most content creation tools.



↑ *The irreverent* *TimeSplitters*

The team's *GoldenEye* and *Perfect Dark* heritage is visible in details like the health and armour displays, the way you turn and aim with your weapon, and the process of unlocking cheats through gameplay performance. Even levels like the tomb feel like lost *GoldenEye* environments.

Managing to get the game out as a launch title was an achievement, but the first *TimeSplitters* feels like a warm-up to the series, with 2002's sequel where the team really nailed the formula.



19

34

AUTO

Picked up the AK-47 Assault Rifle!
Picked up 7.62x39 FMJ (20)
Picked up 7.62x39 FMJ (20)



17/20

THE OPERATIVE: NO ONE LIVES FOREVER

Developer: Monolith Productions
Original platform: PC

After the twin debacles of *Shogo* and *Blood II*, Monolith bounced back spectacularly with a game that would vie with 2005's *F.E.A.R.* as one of the studio's best. The team talked openly in interviews about the mistakes they'd made on *Shogo* and their 'overpowering need to prove ourselves'. The result was *No One Lives Forever*.

Starring rookie agent Cate Archer (voiced by Kit Harris in the first game and Jen Taylor - *Halo's* Cortana - in the sequel), the game is a pastiche of '60s spy movies, though it includes enough of a sense of threat to avoid being an outright parody. Fully embracing its spy theme, the game hops all over the world and even visits space, providing gameplay variety through scuba-diving, vehicle sections and skydiving without a parachute. Finally, the obligatory spy gadgets are fun, including sleeping gas perfume, exploding lipstick, 'body dissolving powder' and a robot poodle that attracts guard dogs.

No One Lives Forever was the first game to use the upgraded LithTech 2.5 engine, which featured greatly improved AI, better animations, character and environment damage, and dynamic music. The game was originally announced with male spy character, Adam Church, but naturally the press kept comparing the game to the Bond franchise. In an interview on *Stomped.com*, lead designer Craig Hubbard said, "*Changing the protagonist to a woman not only separated us from Bond, it also presented more interesting dramatic possibilities. It seemed likely that a female operative in the '60s would have endured a great deal of scrutiny and even outright hostility from the good old boys who'd inherited the world's secret services after WWII.*" And while the camera and her outfits do sexualise Cate it's clear that she's in charge of this game, with occasional dialogue choices letting you highlight the constant low-level chauvinism she faces.

Alongside some rambling level design, the game's biggest weakness - and one acknowledged by the developers - is poorly implemented stealth, something



↑ NOLF has fun playing with spy movie tropes

the 2002 sequel greatly improved. That said, the sequel has its own issues, losing a lot of its pace by constantly forcing you to search dead bodies for ammo, proving that id were right to leave that idea out of *Wolfenstein 3D* eight years before.

Alongside its sequel, *No One Lives Forever* received a PlayStation 2 conversion which included flashback levels from Cate's past as a cat-burglar, and a spin-off game in 2003. Unfortunately, complicated

legal rights issues between the various IP holders mean further games in the series are unlikely; a real shame, as *No One Lives Forever* stands out in the genre. It absolutely nails its spy theme, has punchy combat and features a strong female lead, but perhaps its greatest strength is its sense of humour. Funny details like over-the-top henchmen, long, rambling conversations between guards and the sequel's mime enemies all helped set the game apart from the straight-faced FPSs of the time.

GUNMAN CHRONICLES

Developer: Rewolf Entertainment
Original platform: PC

Half-Life's success and the moddability it inherited from *Quake* meant it was used as a basis for hundreds of fan-made projects. *Gunman Chronicles* is notable amongst these because it was published as a commercial release. Starting as a *Quake* mod, then moving to *Quake II* and finally *Half-Life*, Sierra saw *Chronicles* at 1999's *Half-Life* Mod Expo and offered to publish it as a standalone boxed product.

Unlike *Half-Life's* in-gameplay-scripting-only approach, *Chronicles* uses cutscenes to tell its story of space cowboys, dinosaurs and *Gears of War*-esque aliens. It even fits in a sarcastic female AI who talks to you as you play, *Portal*- and *Halo*-style. The game's roots as a mod are clear, with *Half-Life's* sound effects and AI tactics featuring prominently, plus sequences involving enemies fighting and giant monsters stomping on/eating people that are reminiscent of Black Mesa.

Perhaps the game's best feature is how customisable its guns are



↑ *Chronicles* is full of surprises

- there aren't that many, but each has multiple forms or are very adjustable. For example, you can choose when the rocket launcher will fire, how its missiles fly, when they explode and what their payload contains.

The end result is a mix of obvious *Half-Life* elements and unpolished features that would reappear in later FPSs, all mixed in a strange and unique setting. It doesn't last long and fails to really build on its mechanics, but *Gunman Chronicles* is an interesting curio that's worth checking out.

PROJECT I.G.I.

Developer: Innerloop Studios
Original platform: PC

Called *Project I.G.I.: I'm Going In* in the US, the game runs on the engine Innerloop developed for its *Joint Strike Fighter* flight-sim, meaning you get large, open environments but little close detail.

You're ex-SAS operative David Jones, with missions relayed by your handler, Anya, but there's little interaction between them beyond each briefing. The lack of narrative polish reflects *I.G.I.'s* focus on presenting you with an environment and leaving you to it. Though quite stripped back, the game could almost be considered a barebones immersive sim.

Respawning enemies are a pain, with troops unerringly homing in on you the instant an alarm sounds. This effectively forces you to play it stealthily, adding tension to the time it takes to hack computers. Also, because a random guard can headshot you from miles away, you need to learn exactly where each enemy is and who you can shoot without a security camera



↑ *The fastidious* *I.G.I.*

noticing. Combine this with long missions featuring no checkpoints or saves and *I.G.I.* is a slow, patient game of memorisation.

I.G.I. was followed by a sequel with the awkward title *I.G.I.-2: Covert Strike* in 2003, which added multiplayer and the ability to save your game. Interestingly, because it revolved around missions set in China, the game was banned there because it 'hurt China's national dignity and interests'.





WEAPON



BULLET



CONDITION



Fine

RESIDENT EVIL: SURVIVOR

Developer: TOSE

Original platform: PlayStation

Survivor is a spin-off from 1996's *Resident Evil*, but while it follows the events of the first couple of games in the series it abandons most of their 'survival horror' staples. Environments are 3D rather than prerendered and, despite being broken up by the iconic 'opening door' sequences, are quite impressive for the time. Meanwhile, the puzzles have been made much simpler - often providing you with necessary objects before you realise you need them - and you have infinite ammo for your main weapon, removing the need to conserve it. One nice touch is that while this is a short game, there are multiple branching paths taking you through different environments while battling entirely different enemies. It also includes plenty of references for fans, including iconic enemies such as walking plants, giant spiders and those jumpy, licky bastards.

You play an amnesiac crash survivor progressing through



↑ *Survivor's alternate routes make it replayable*

both a city overrun by zombies and a brilliantly over-the-top plot about stealing children's brains. There are plenty of colourful characters and the sort of bizarre plot-twists that Japanese PlayStation titles seemed to specialise in, though you'll need to have played at least the first *Resident Evil* to have any idea what's going on. In keeping with *Resident Evil*'s 'tank controls' you turn slowly and must stop moving to aim, though the game's measured pace means this never becomes a problem (the Japanese and

European versions of the game were compatible with Namco's G-Con light gun but this functionality was removed for the American release, apparently because of the earlier Columbine shooting).

"You play an amnesiac crash survivor progressing through both a city overrun by zombies and a brilliantly over-the-top plot about stealing children's brains."

A Windows version was only released in China and Taiwan in 2002, with a fan patch later making this playable in English. *Survivor* was followed by the faster, more arcade-like *Resident Evil Survivor 2 - Code: Veronica* in 2001, which added co-op play. This would in turn be followed by *Dino Stalker*, a spin-off of the *Dino Crisis* series, and finally *Resident Evil: Dead Aim* in 2003.

Despite the shift from third- to first-person view, the combination of *Survivor*'s slow movement, low-poly environments and over-earnest horror certainly make it feel like an early *Resident Evil* title, making this something of a time machine capable of instantly transporting you back to the year 2000.

← *Survivor's shambling zombies match the game's pace*

INTERVIEW WITH JOHN HOWARD



Over his 20-year career, John Howard has worked at Microsoft, Radical (makers of the Prototype games) and Amazon, but our talk focused on the biggest - in both sales and cultural impact - game John has worked on, Bungie's *Halo: Combat Evolved*.

How did you get your start in the industry and then go on to join Bungie?

John: I think the game that convinced me to make games for

a living is [one] most people haven't heard of - it's a thing called *Red Planet*. So, there's FASA Interactive/Virtual World, and they built location-based entertainment, these eight-person simulation cockpits that were locally networked together. They originally built it to play *BattleTech*¹, and they created a second game for it called *Red Planet*, essentially a hovercraft racing and combat game through the canals of Mars.

The company that made *Red Planet* was based in Chicago, where I was living at the time, and it cost \$8 for 10 minutes - that was what a round of it would cost - but if you worked for the company you got to play for free. I found out through a friend of a friend that the company needed to redo their website, and so I just found the phone number and started calling and pestering them until I got an interview and

a job, and ended up working on a really terrible early version of *Shadowrun*² that never saw the light of day.

That coincided with FASA Interactive getting purchased by Microsoft, which was sort of the first studio they bought pre-Xbox, because they wanted to get into first-party development. So, I started at Microsoft and did *Crimson Skies*³, and right after that Microsoft acquired Bungie, and they moved out, similar to what we did a year before, en masse to Seattle. I had known a bunch of the guys for a while, because FASA Interactive and Bungie were both Chicago game developers. So, when they joined Microsoft, Jordan⁴, who was the guy who created *Crimson Skies*, said, "Hey, they need a lead designer for Halo, do you want to go talk to Jason Jones⁵ about going to work on that?" I sat and talked to Jason for, like, an hour about stuff and joined the team.

So the initial experiments that Bungie tried with Halo, the RTS side of things, that was just before you joined them by the sound of it?

Yeah. The game that Bungie had done just before *Halo* was *Myth II*, which was a 3D landscape tactical RTS, and the original idea, as I understand it, was 'what if we took this basic game engine and played with the idea of a sci-fi version?' Like, what would that be? But the Bungie approach I don't think is ever really, 'okay, we're going to come up with a gimmick and build a game around it'. I think it's more like finding what's interesting, looking for that experience, that style, or that whatever so you go 'oh, that's cool'.

I remember looking at builds that were clearly running the *Myth* engine that had *Halo*-like units on them, and then dropping to sort of a third-person



↑ Artist's recreation of 1993's difficult-to-capture Red Planet

mesh terrain with a bunch of different vehicles and enemies that were not even in the game.

Also, teams were smaller. *Myth* was maybe eight, 12 people. *Halo* at the end was maybe 60 people, but that was because just to get it out in less than 14 months was like 'okay ...' There were two projects running at the time, there was *Halo* [and] they were wrapping up *Oni*⁶. Then there was another team trying to get another project off the ground, and just to get the game done we needed to absorb everyone into

shaping *Halo*. That team felt big at the time, 60 people, but now, that's a mid-size team. It was just easier to riff on an idea.

Just briefly, the 'other game' you mentioned, is that *Phoenix*?

Yeah, the intention was sort of an RTS. The thing that they were really working on was a castle siege game, so they had worked on this voxel solution, very *Minecraft*, for the castle walls, where you used siege weapons to blow holes in the walls. This was like 2000,



↑ Zipper Interactive/Microsoft's Crimson Skies

2001, so you would get these ragged edges in the castle walls, and translating that [experience] to a controller was much harder, right? It wasn't going to be a PC game; it was going to have to be an Xbox game. They were trying to figure out how to make it an Xbox game, and I just don't think it survived. Trying to figure out how to translate what essentially is an RTS into a console ... I don't know that anyone's quite solved that problem in an extremely satisfying way.

Reading about *Halo*'s evolution, there's a lot of stuff that clearly got cut, but can you remember anything specific being removed?

You know, that's a funny story. One of the things that got cut that I think you see in one of the early pre-release videos was local fauna, local animals. One of those creatures was called the Thornbeast and someone was bemoaning the fact that we had cut them, [but] they didn't really do anything, they were just sort of there,



↑ The Warthog allowed for large, non-linear levels

they were kind of cool, [but] we've got to ship this thing. And it was 'well maybe we could make it cool', and someone was like 'maybe we could make them rideable'. And someone else was 'yeah, maybe we could make it so when you milk them bullets for the assault rifle come out'. So anytime someone came up with an idea that was interesting but, yeah, we're not going to do that, the response was 'you're really milking the Thornbeast right now'.

I was always interested by the shift mid-way through Halo from fighting the Covenant to battling the Flood. What was the idea behind introducing a second enemy faction?

The only story document that I saw when I joined the team was a text file, not a Word document, a text file, that's maybe a page of story beats. It was 'jump into hyperspace, find the Halo, escape the ship, land on the Halo, duh, duh, duh', right? And the idea of the Flood was in that document.



↑ Cortana's character would deepen over Halo's sequels

To me that's the brilliance of Jason [Jones], he's a big hard sci-fi fan, and there's a lot of themes that have come back in his games. The weapons were a similar thing; there was a document of single-line items that Jason had come up with that were these evocative, one-sentence descriptions of weapons. The one that I remember is the plasma pistol, and it was 'shoots plasma bolts but if you hold it down it charges up like the heat of a thousand suns'. It's that single description, plus people who are really smart

and talented going 'that sounds cool', and then just building from there.

Amongst Halo's innovations were only carrying two weapons and the recharging shield. Were these in the initial documents that you saw or did they evolve over time?

They evolved over time. I think, again, a lot of that comes from Jason - the two-weapons thing was one of Jason's ideas, the shield I think was as well.



↑ Covenant elites are always a serious threat

I thought two weapons wasn't a great idea when I first heard it, for all the obvious reasons. You know, why do I want to give up these choices? In retrospect it makes perfect sense - every time I see a weapon on the ground I've now got to make a choice. I'm thinking about the space I'm in, about the two weapons I have, how much ammo I have for those weapons, the types of enemies that I've encountered so far. Every weapon that gets dropped on the ground is an interesting choice that I have to make.

The shield was a result of Bungie learning from *Pathways into Darkness* and *Marathon*. Being perpetually low on health changes the balance of every fight, whereas the shield reset lets the team really control the pace and properly balance each fight. Is this fight intended to be an easy fight that's a precursor to the big battle that's going to come up next, or is this meant to be a crescendo moment? The shield allows you to do that. Previous to that, in most shooters you would walk into a battle, and you would be



↑ Halo's intro builds up to the Master Chief's reveal

low on health, and if it was a really tough fight it would end up either being impossible or being a grind. I think everyone just realised this is a way better way to do this. It sets each fight at the right level and lets you experience it at the sort of intensity it was intended to be.

"It sets each fight at the right level and lets you experience it at the sort of intensity it was intended to be."

Halo launched with a co-op campaign and four-player split-screen - was it the plan to include multiplayer from the beginning?

I mean multiplayer is built into Bungie's DNA, right? If you go back, *Minotaur*⁷, which was one of the first Bungie games, is a co-op multiplayer game. *Marathon* is a multiplayer game, *Myth*⁸ was multiplayer, both co-op and competitive.

The team was like 'of course we're going to do multiplayer,



↑ *The Covenant's distinctive, advanced technology*

it's a Bungie game'. So, the split-screen and the LAN play and the co-op were just, we did this in *Myth*, so not doing it would be backsliding. We tested a lot of that, there was a lot of late nights, after team dinners, playing 16-player with four Xboxes on Blood Gulch. We 'tested' that very thoroughly.

"I think everyone was generally surprised at the response to the game, because it came together super-late."

Halo is one of the first cross-media videogame franchises, with books and TV and all sorts of products. Was that Microsoft's or Bungie's idea?

I think everyone was generally surprised at the response to the game, because it came together super-late. I mean even [at] E3, 2001, they thought that *Munch*⁹ was going to be the big title. We had one level single-player, we had the multiplayer, but it was not running anywhere near framerate, and so not everyone was convinced.

I don't remember where the decision came from, but there was an opportunity to do a novelisation, and that ended up happening in parallel with the game. [Although] there was an option to do a novel, it was like 'let's not do a novelisation of the game, let's do sort of a prequel'. Eric Nylund was the author; [he] also worked at Microsoft at the time and had published a handful of novels on the side. Eric Trautmann was the novel's editor for Microsoft, he's a pen-and-paper games guy, worked with West End Games on the *Star Wars RPG* and had joined Microsoft in the group that worked on the *Crimson Skies* stuff. I was the person on the *Halo* team reviewing the drafts as they came in chapter by chapter.

At the eleventh hour, everything came together with the right level of polish. We were in final crunch mode, mastering the game, and Stuart Moulder, who was the business guy on the Microsoft side overseeing Bungie, we were standing around one day, and he [said,] "*I think Halo might be the best game Microsoft has ever published,*" and I was like, "*It's not better than Age of Empires II, right?*" [laughs]

Age of Empires II was the big hit Microsoft had at that point, and you know, [*Halo*] came out, it did what it did, and the novel did well, and 'oh, there's an appetite for more games, there's an appetite for more fiction in this universe, let's flesh out a world'. Eric Trautmann - who had edited the novel and worked with me on the story and actually drove and wrote a bunch of the dialogue, the mission dialogue for the game - ended up putting together a team to [create] a world bible to be able to do more fiction, so I think a lot of it sort of grew out of the confluence of those things.

What was your first inkling that this might be a big game? Most people that I've talked to had no idea that somebody would still be asking them questions about their game 20 years later.

Between the time that Microsoft acquired Bungie and the game shipping, I think we rebuilt everything. I don't think there was a polygon or line of code that was not touched in the 14 months between when Bungie moved from Chicago to Seattle and shipping in October, November of 2001. So we're just heads down



↑ Under attack and shields failing in Halo

six, seven days a week, dinner in the office every night, every weekend. There was a point where I made the calculation it was faster for me to go to the store and buy new socks and underwear than it was to do laundry.

We're all just in this tunnel, and we think what we're making is fun, we think it's interesting, but you have no conception of what the outside world is going to think about it. The fact that people care 20 years later, to me that's kind of the brilliance of Jason

and the culture of Bungie. It's very much like a gang, it's like you're in the club and being in the club is about getting the other members of the club excited. I can't speak to it today; Bungie's like 800 people now or something. But back then it was a small group and you're trying to do something cool to impress the person next to you because they just did something that you thought was awesome, and so it's like 'how do I keep up?'

Author's notes:

[1] *BattleTech* is a giant-robot tabletop, roleplaying and videogame franchise launched by FASA Corporation in 1984.

[2] FASA are also the creators of 1989's cyberpunk + magic RPG *Shadowrun*, initially as a pen-and-paper game, with novels and videogames following later.

[3] Best known as a 2003 Xbox title, an earlier *Crimson Skies* game was released on PC in 2000. John worked on the PC game, plus the 1998 boardgame both are based on.

[4] Jordan Weisman was one of the creators of *Crimson Skies*, founded FASA and *WizKids* (creators of *HeroClix*), and has been involved in a huge range of other games.

[5] Alongside Alexander Seropian, Jason Jones is one of the founders of Bungie. He still works at the company as Chief Vision Officer.

[6] *Oni* was a third-person, anime-style brawler, released on PC in 2001 and published by Rockstar Games.

[7] The 1992 game *Minotaur: The Labyrinths of Crete* was an online multiplayer combat game for the Mac, created by Jason Jones with support from Alex Seropian. With a top-down view, it allowed up to seven players to roam procedurally-generated mazes, attempting to find and kill each other while collecting equipment (including a sword called *Durandal*, a name which would of course resurface in *Marathon*). *Minotaur* included RPG-lite elements such as players having stats that affected things like how much damage their attacks caused.

[8] The *Myth* series of real-time strategy games was originally developed by Bungie, with *Take-Two* gaining the rights when they were purchased by Microsoft.

[9] *Oddworld: Munch's Oddysee* was the fifth game in the *Oddworld* series and a launch title for the Xbox.

2001

When a new gaming trend emerges, it takes time for that change to ripple out, with developers forced to choose: continue their original plan, update what they're working on, or scrap it and start again. While almost every game we're covering has shifted from sprites to polygons, you can watch the proliferation of 'multiplayer first' gameplay roll out over the next few years.





New gaming hardware

Nintendo's GameCube arrived in 2001 (though Europe had to wait until 2002) and was its first console to utilise disks rather than cartridges. Despite featuring games like *Super Smash Bros. Melee* and *Metroid Prime*, the console would 'only' sell around 22 million units. Nintendo's other hardware release, the Game Boy Advance, would be more successful, and despite forcing me to play *Castlevania* under my kitchen light due to the lack of a backlit screen, would sell 81.5 million units by the end of 2010.

Microsoft's Xbox also arrived in America in 2001, with the rest of the world following in 2002. The machine would go on to sell 24 million units before being discontinued in 2005, with two-thirds of those sales in North America. But despite the competition presented by these new consoles, Sony's PlayStation 2 was untouchable, reaching around 25 million machines sold by the end of that year alone and eventually rising to 155 million sold by 2012.

Online play

While the GameCube and PlayStation 2 supported network play, neither of their parent companies made this a core part of their strategy. SEGA had been the first to recognise the shift towards online rather than local multiplayer but the Dreamcast only shipped with a dial-up modem, leading to potentially scary phone bills when playing *Phantasy Star Online*.

Through foresight, or its PC heritage, Microsoft made online play a critical component of the Xbox from launch, with every console including broadband connectivity and a hard drive for storing downloads. Xbox Live would arrive in November 2002, a year after the console's release, giving console gamers the sort of online experience that PC users had been enjoying for years. Of course having everything running through Microsoft's service meant Xbox players were more limited in their options than home computer users, but features like Gamertags and friends lists meant console players could simply jump into a multiplayer game with an ease that required services like

GameSpy or Blizzard's Battle.net (and later, Valve's Steam) on PC.

But however they were getting online, it was clear that gaming tastes were leaning ever more in that direction. Players had embraced the challenge and variety offered by battling each other over the previously dominant single-player campaigns, and teams had to decide whether to focus their development time and resources on single or multiplayer gameplay, with only the larger companies able to deliver polished experiences for both.

"Sony's PlayStation 2 was untouchable, reaching around 25 million machines sold by the end of that year alone and eventually rising to 155 million sold by 2012."

CLIVE BARKER'S UNDYING

Developer: Electronic Arts

Original platform: PC

Though since purchased and renamed by EA, this is the ex-DreamWorks Interactive team behind *Trespasser* and *Medal of Honor*. This suggests *Undying* should be interesting, but the game suffered a protracted development, as illustrated by horror author Clive Barker joining to help with story and character problems, yet the game would need another 18 months before it could ship.

Undying's isolated, cursed family and 1923 setting give the game a Lovecraftian vibe, but more than anything, it evokes the iconic Gamecube horror game, *Eternal Darkness*. Both feature gradually unfolding mansions, a strong focus on plot and character, journeys to strange realms and the game playing visual tricks on you.

As you steadily gain magical powers, the early creeping horror gradually shifts towards tactical combat and obliterating targets in the most effective manner. Still, unlike other gun



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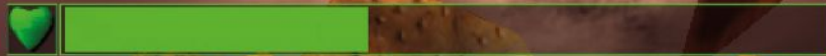
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+ magic games, *Undying* allows you to use weapons in one hand and cast spells with the other, meaning you naturally use both as opposed to being forced to swap back and forth.

Despite strong reviews, *Undying* failed to sell, meaning the multiplayer patch and PlayStation 2 port were cancelled, as were plans for the sequel hinted at by its ending. It's unclear whether this failure was down to strong competition or a lack of marketing support (see EA and *TimeSplitters 3*'s marketing). Either way the *Undying* brand was dead, with Barker's next videogame project being 2007 FPS *Jericho*.

"Despite strong reviews, *Undying* failed to sell, meaning the multiplayer patch and PlayStation 2 port were cancelled, as were plans for the sequel hinted at by its ending."

SERIOUS SAM: THE FIRST ENCOUNTER

Developer: Croteam
Original platform: PC

Formed in 1993, Croteam initially found success in football and kids games before beginning work on the hell-themed FPS *In the Flesh*. Transitioning into *Serious Sam*, *In the Flesh*'s S-Cape3D engine was replaced by the Serious Engine, and although Croteam built their own technology because they couldn't afford to license anyone else's, that new engine was a technical marvel. Providing portals, high-res textures and an enormous draw distance, the engine allowed *Serious Sam* to feature the huge, open areas required by its enemy hordes.

Davor Hunski's interview covers the game's lengthy development, but the freewheeling process means it's difficult to say what the final game's theme actually is. *Serious Sam* presents a detailed backstory and plenty of lore to read via your NETRISCA menu but contrasts this with headless, screaming, bomb-carrying enemies, a bad guy called Notorious Mental and



↑ *Serious Sam's* enemy design requires varied tactics

the sequel including a rock version of Jingle Bells in its soundtrack.

Matching its punk attitude to its theme, the game's combat works differently to that in most of its peers by zooming in on the you-versus-enemies-in-an-arena gameplay common to FPSs and making it the explicit focus. Though this sort of arena-shooter has become more common in recent years, *Serious Sam's* arcade-like approach was unusual at the time, with other games matching it for

environment size but not the number of enemies thrown at you. Combat forces you to repeatedly swap weapons as you mow down hundreds of opponents, and the constant strafing and firing gives the gameplay a hypnotic feel. As an aside, along with the expected deathmatch-play, *Serious Sam* also lets you take on the campaign with up to 16 players. The game really comes alive in co-op, giving fights an epic us-against-impossible-odds vibe and helping to mitigate the game's occasionally punishing difficulty spikes.



↑ Egypt, Serious Sam-style

With combat making up 99% of the gameplay, it's clear that enemies have been designed for their gameplay function over thematic direction. Despite the fact that you're fighting through ancient Egyptian levels, you'll face hopping frogs, skeletal horses, minigun-armed scorpions, ED-209-style robots and charging bulls. Scattershot design aside, each enemy forces you to adopt different tactics, with their distinctive sound effects alerting you that combat is about to shift pace. That said, despite enemy combinations

providing variety, the arcade-like gameplay can become repetitive over long sessions. Still, if you approach *Serious Sam* in the right frame of mind there's 'seriously' nothing like it (that joke copyright 2001).

The game would be followed by *Serious Sam: The Second Encounter*. Delivered just 11 months after the first game, this began as an expansion before growing into a full sequel, so as expected, it delivered new environments and weapons along with more levels. The *First* and *Second Encounters* were then combined into one game and ported to the original Xbox, followed by various HD remakes and console releases - including a Palm OS version for PDAs - all the way up to 2020's *Serious Sam 4*.

"With combat making up 99% of the gameplay, it's clear that enemies have been designed for their combat function over thematic direction."

HIRED TEAM TRIAL GOLD

Developer: New Media Generation
Original platform: PC

Released in Germany in 2001 and worldwide over 2002 and 2003, *Hired Team* wants to compete with *Quake III* and *Unreal Tournament*. The title refers to undertaking trials to join an elite team but caused confusion over whether it was a complete product or just a trial version. Huge 'inside this box you will find full version software' stickers were quickly added for clarification.

New Media's first game, *Hired Team* comes across as an advert for their Shiny engine, prominently featuring graphical tricks like mirrored teleporters alongside field-of-view-wobbling post-match screens. As a result the game lacks a strong theme, with a story about underworld crime and military operatives that doesn't carry through. Characters and weapons are semi-realistic but environments range from Aztec temples to *Unreal*-style alien castles. Similarly, friendly AI bots display heart emojis but explode into fountains of gore when killed. It's definitely a product of its time - with a default taunt



↑ Tech showcase Hired Team

of 'Prepare to die, faggots' - and commits the gameplay crime of its weapons having no bite. Combine that with AI bots that regularly get stuck on scenery and there's little reason to pick the game up today.

Reviews were not kind, with *Eurogamer.net* calling it "a hideous piece of derivative pap" and *Gamespot.com* saying it was an "uninspired, antiquated, and poorly designed copycat". I'm not sure it's quite that bad - *Hired Team* is perfectly adequate; it just lacks that killer touch.

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RED FACTION

Developer: Volition

Original platform: PlayStation 2

Red Faction began life as *Descent 4*, before a change of publisher caused a reboot. Made by Volition - best known for *Saints Row* - *Red Faction* was released on PlayStation 2 first, then on PC. Future *Red Faction* games appeared on a slew of systems, though only the first two were FPSs, with later entries swapping to third-person. Interestingly, John Romero's Monkeystone Software converted the first game to Nokia's N-Gage, including Bluetooth deathmatch.

Red Faction's selling point was the chance to damage the environment via the Geo-Mod engine, allowing unscripted destruction, like punching through walls. The original plan for everything to be destructible was toned down for technical and gameplay reasons; while the technology is cool, the game struggles to use it.

Fortunately, combat is satisfying anyway, with punchy guns that take up a big chunk of the screen. Ostensibly a simple miner



↑ *The entertaining Red Faction*

clad in an Envirosuit, you're a bit of a Gordon Freeman in that you're inexplicably proficient at violence, though unlike *Half-Life*, *Red Faction* doesn't have time to show you normality before events kick off.

Red Faction is remembered for its destructible terrain, but with its *Total Recall*-esque tale of Martian oppression, atmospheric environments populated by comedy NPCs, and vehicle sections providing variety, it's a solid FPS even without its gimmick.

LEGENDS OF MIGHT AND MAGIC

Developer: New World Computing

Original platform: PC

Originating in 1986, the *Might and Magic* series regularly embraced different genres through its spin-offs. *Legends* is one such experiment, providing an online-only, team- and objective-based shooter. Powered by the LithTech 2.0 engine, *Legends* originally had a much larger scope, including co-op, randomly generated adventures and a storyline to play through. This was scaled back to a cross between *Counter-Strike* (buy weapons, sit out when you're killed) and *HeXen* (melee alongside ranged weapons, magic spells acting as guns).

There are nice touches like monsters that attack players and 'rescue the princess' instead of the usual flag capturing, but *Legends* was a casualty of the transition period during which studios knew players enjoyed multiplayer-only games but didn't consider how to find and support the audience those games need to thrive.



↑ *Counter-Strike-alike Legends*

While *Might and Magic* has always experimented with genres, its fans probably weren't clamouring for a dedicated multiplayer shooter, and the game's *Counter-Strike*-lite action meant competitive FPS players were better off just playing that. Still, at least *Legends'* treasure chests occasionally give you a rubber chicken, which can be used to summon actual chickens. You don't see that in *Counter-Strike*, do you?

← *Legends' levels feature monsters to battle*

OPERATION FLASHPOINT: COLD WAR CRISIS

Developer: Bohemia
Interactive Studios
Original platform: PC

Growing up in the Czech Republic, it took brothers Marek and Ondrej Spanel a long time to arrive at *Operation Flashpoint*. Work began in 1997 on post-apocalyptic military game Poseidon, but when publisher Interactive Magic closed in 1998, Bohemia refocused the game towards realism before eventually signing with Codemasters. The Cold War theme was an important element, with Marek saying in an interview on *DailyRadar.com*, "Most of our lives, we lived behind the Iron Curtain, on the 'wrong' side, when the world was always very close to lethal conflict."

With the goal of simulating a small scale war between American, Soviet and resistance forces, a team of just 12 developers explains why the game took so long to release. And while *Flashpoint's* scale, scope and bugs sometimes combine to plunge it into a comedy of errors, for the most

part it successfully provides the realism that would see it adopted as a military training simulator.

Maps are huge, vehicles difficult to control, and you generally fight as part of a squad, requiring the campaign to act as an extended tutorial. Playing without care gets you killed, with missions featuring long periods of crawling across open spaces. But while single-player shows how the gameplay works, multiplayer really brings the game to life. Spending ages crossing a map knowing death can suddenly come from any direction makes *Flashpoint* uniquely stressful, so thankfully it supports co-op as well as deathmatch and team play. It even lets players create their own missions with a powerful editor.

Over 2 million copies were sold by 2010, so the game's approach was a success despite - or perhaps because of - the demands it put on players. It was ported to the Xbox as *Operation Flashpoint: Elite* in 2005 and followed by the *Resistance* expansion before things got complicated. Codemasters owned the series' trademark, so with Bohemia slowed by working on



↑ *Flashpoint's* single-player acts as an extended tutorial

multiple projects - including an open-world Wild West game - the publisher started releasing its own *Operation Flashpoint* games. The first was *Dragon Rising* in 2009, then *Red River* in 2011.

Meanwhile, the original developers shifted to the *Arma* (Armed Assault) series, even rereleasing the original *Cold War Crisis* as *Arma: Cold War Assault* in 2011. The engine developed for *Arma* would go on to power Bohemia's simulators, used by military clients around the world for training purposes,

but while the *Arma* series includes various games and expansions, it's probably best known for spawning Dean Hall's smash-hit zombie survival mod, *DayZ*.

Operation Flashpoint offered unprecedented scale, flexibility and realism at the cost of a steep learning curve. Whatever became of the series, the first game provided an experience a million miles from that of its contemporaries, and demonstrated the untapped potential of giving players an objective, an open world and a set of tools.

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Armor
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THE CONVOY (678 m)

Pilot (Bitmap Books): "FIRE"
Pilot (Bitmap Books): "FIRE"
Pilot (Bitmap Books): "FIRE"





BACKTRACK

Developer: JV Games

Original platform: PC

While a PC version of *BackTrack* was released in 1998, I'm covering the later Game Boy Advance conversion. This is because the PC version has effectively vanished (with just an online demo to mark its existence) and because the game is close to being a *Wolfenstein 3D* clone, meaning it's mainly of interest due to the handheld hardware it's running on.

BackTrack presents its environment as a single space, with 110 humans to be rescued and lifts used to travel between floors, so you need to pay attention to where on each floor you left pickups for later. It features computer terminals to access and a dying NPC delivering a message, and requires surprisingly accurate shooting to hit enemies, which coupled with their silent movement means you get shot a lot. All this points to a serious shooter, but the game's tone is all over the place. The bad guy is called Domingoanix and his plan is BSBODSOM (Build Secret Base on Dark Side of



↑ *BackTrack's novelty appeal*

Moon). Also, your melee attack is a Swiss Army knife, which adds a touch of horror by requiring lots of stabbing to kill someone as they dance about in pain.

Alongside *DOOM*, *BackTrack* was one of the first FPSs to appear on the Gameboy Advance, giving it novelty appeal but not that much more. It's serviceable and quirky, but feels out of date and would be surpassed by later FPSs on the platform.

MEN IN BLACK: THE SERIES - CRASHDOWN

Developer: Runecraft

Original platform: PlayStation

A late release for the PlayStation, *Crashdown* is based on the 1997 to 2001 Men in Black cartoon, not the movies or the original comic. The game was developed by Runecraft, best known for producing licensed tie-ins like this and the Dreamcast version of *Soldier of Fortune*.

With the PlayStation's twin-stick controller by now firmly established, *Crashdown* makes use of being able to smoothly look around its 3D environments by having enemies attack from above. Thankfully for the combat-heavy gameplay, the enemies are fun, with a roster including skinless chickens, big-eyed scorpions, disturbing, crawling Greys, and what appear to be dancing, underpant-wearing T-Rexes.

The standout level has Agent J shrunk down to explore a garden, but environments are colourful and varied throughout. They include a spooky fairground ride, Giger-esque alien ships,

the White House and the Men in Black HQ. Puzzles are kept light, with gadgets including a camera, fire extinguishers, and of course the Neuralyzer, while oddly you don't pick up ammo, instead recharging from wall panels.

Crashdown isn't perfect, suffering difficulty spikes, clunky AI, and sticky controls that lock onto enemies whether you want to or not, but it balances these with amusing cutscenes, fun levels and excellent music. So while it's not going to set the world on fire, it's worth checking out if you're a fan of the licence, console shooters, or dinosaurs in underpants.

"The enemies are fun, with a roster including skinless chickens, big-eyed scorpions, disturbing, crawling Greys, and what appear to be dancing, underpant-wearing T-Rexes."

ALIENS VS. PREDATOR 2

Developer: Monolith Productions
Original platform: PC

You know how this works: three campaigns, with the Marine's predominantly survival based, the Predator as the powerful hunter and the Xenomorph all speed and clambering around. AVP2 separates itself from its predecessors with a more developed story that features interesting characters, plot twists and areas revisited as multiple species.

The Alien campaign transitions you from face hugger to chest burster before you become the warrior, forcing stealth before you get to the leaping and biting. Meanwhile, it's not until halfway through the second level that the Marine encounters enemies. Finally, the Predator campaign tones down the power fantasy by rationing weapons, forcing a reliance on occasionally clumsy melee attacks.

As with Rebellion's AvP, the multiplayer is excellent, with combinations of various species shifting the gameplay

in different directions. Standout additions include character classes for each species, Marines able to pilot the heavily-armed Exosuit, and Aliens able to grow into the huge Queen.

AVP2 was followed by 2002's *Primal Hunt* expansion, made by Third Law Interactive (KISS: *Psycho Circus*). It neatly ties into the base game's story but is too short, giving it poor pacing with - just as in *Psycho Circus* - the unceasing attacks quickly becoming wearing. A final odd note is that by adapting AVP2's plot, Ren Wargner's *Alien vs. Predator: Forced Chase* is the only one of a string of completely unofficial Hungarian novels featuring the Alien versus Predator franchise that uses an existing story.

"AVP2 separates itself from its predecessors with a more developed story that features interesting characters, plot twists and areas revisited as multiple species."

DEADLY DOZEN

Developer: nFusion Interactive
Original platform: PC

Deadly Dozen tries to pack in a lot for a budget title, presenting varied environments, vehicles to drive and a selection of troops with names like Mike 'Iron' Calahan, 'Papa' Gino Sizi and Bob Smith to choose from and equip. Character skills make a big difference to how they play, such as someone with a high medical skill getting a lot more value from medkits.

Fog shrouds *Deadly Dozen's* environments at exactly the same distance that enemies can see you, meaning gameplay is something of a masochistic experience of carefully edging forward until you spot an enemy (or more likely one shoots you with pinpoint accuracy), killing them, and repeating. As a result elements like stealth are a complete gamble, and while you can give simple orders, most missions involve telling your squad to follow you and letting them spot enemies before you can.

The game was followed by 2002's *Pacific Theater*, adding playable tanks and better enemy



↑ *The methodical Deadly Dozen*

AI (sometimes they miss!), but degrading your squad's pathfinding. After this, nFusion would move onto *Line of Sight: Vietnam* and *Elite Warriors: Vietnam*, and are still going today, releasing games like *Hour of Victory* and *Deus Ex: The Fall*.

While it crams in a lot of features, *Deadly Dozen's* limited budget inevitably means they lack polish. But if you're in the mood for slow, methodical combat in surprisingly varied environments then *Deadly Dozen* will provide all the punishment you like.





HEALTHY
DANSKY



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ECKS VS. SEVER

Developer: Crawfish Interactive
Original platform: Game Boy Advance

We're actually covering two Game Boy Advance FPSs here, both adaptations of the terrible movie *Ballistic: Ecks vs. Sever* (the lowest-scoring movie on *RottenTomatoes.com*). The first game was released before the movie had even begun shooting so is based on an early script, while the sequel was released a year later alongside the movie and so follows its plot more accurately. Both were created by Crawfish, and you can clearly see their skills develop from game to game.

The first game is limited in scope but moves more smoothly and features surprisingly entertaining combat. You can play as either character and there are fun touches like nightvision goggles and crawling in vents, alongside levels that strive to present semi-realistic environments. The sequel is more polished, including swimming, some effective sniping gameplay and the ability to headshot enemies. It even includes



↑ *The GBA's best FPSs?*

hostages that you can give orders to.

Both games feature multiplayer and both do a great job of setting the scene, considering the GBA's limited capabilities (special mention to the first game's frequently bizarre script). So, where most of the GBA's FPSs are interesting from a technical point of view but aren't particularly enjoyable, both of the Ecks vs. Sever games transcend their platform to deliver fun little experiences that are genuinely worth playing.

TOM CLANCY'S GHOST RECON

Developer: Red Storm Entertainment
Original platform: PC

If *Rainbow Six* is Red Storm's indoor series, then *Ghost Recon* is the outdoor one. Indeed, *Ghost Recon* leans so heavily towards the long-range sniping of enemies before they see you that sections in which you need to clear buildings can be frustrating (with saving and loading your best option for dealing with instant-kill enemies standing behind doors).

You give orders to your AI squad in a similar manner to *Rainbow Six*, but while planning may feel slightly more relaxed here, the gameplay has the same precision and sense of realism. For instance, you're basically forced to stand still if you want to hit anything.

One of the game's strengths is multiplayer, which includes competitive modes for 36 players, plus tense co-op where a single mistake can plunge an entire squad into trouble.

Followed by the expansions *Desert Siege* and *Island Thunder*, *Ghost*



↑ *Stealth action in Ghost Recon*

Recon was converted to Mac, PlayStation 2 and Xbox in 2002, then GameCube in 2003. Combined console sales of 2 million in the first year meant that what began as a hardcore PC series would shift towards faster gameplay more suited to a console audience. As a result, the first game is still supported by dedicated fans, including expansions like ApexMods' *Heroes Unleashed*. Initially released in 2008, the ridiculous number of new weapons, improvements and maps it adds meant the mod took 10 years to reach its final beta.

← *Fight alongside a squad in Ghost Recon*

007: AGENT UNDER FIRE

Developer: Electronic Arts
Original platform: Consoles

Running on the *Quake III* engine, *Agent Under Fire* began as a conversion of the previous Bond game, *The World Is Not Enough*, to the 'next-gen' consoles of the time. That was cancelled, shifting to a brand-new story apparently made under tight time constraints.

The hurried development is reflected during play; while varied, this is one of the less polished Bond games, using PowerPoint presentations to introduce missions and the game's main bad guy being killed off-screen with no fanfare. Pre-release footage showed changes made to the game, including losing John Cleese's likeness and voice, and an old HUD featuring *GoldenEye*'s health and armour bars.

The lack of polish reaches the gunplay, which requires juggling between aggressive automatic and finicky manual aiming, and trial-and-error stealth sections. The latter may have been designed to help extend the game's length,

though earning medals to unlock multiplayer content provides some replayability. Speaking of which, while its use is limited to preset points in single-player, the grappling hook can be used in multiplayer throughout, making for chaotic fun. Finally, vehicles are one of the few areas where this game outdoes its follow-up by allowing you to drive anywhere, rather than only along linear paths.

In the end, while *Agent Under Fire* is a fun, varied little shooter, it's something of a practice run for the next Bond title, *Nightfire*, which improved almost every aspect of the Bond adventure template.

"The lack of polish includes the gunplay, which requires juggling between aggressive automatic and finicky manual aiming, and trial-and-error stealth sections."

HALO: COMBAT EVOLVED

Developer: Bungie Studios
Original platform: Xbox

After *Pathways into Darkness*, *Marathon* and *Myth*, Bungie had experience with both RTS and FPS games, so their next game evolving from real-time strategy into a shooter isn't as strange as it may seem. Initial experiments with ordering military assets around as you fought aliens in open environments gradually shifted towards action instead of tactics, with the view transitioning to third- and then to first-person. But while its genre shifted, the game continued exploring the themes introduced in Bungie's *Marathon* series, even naming Cortana after a mythical sword in the same manner as *Marathon*'s AI, Durandal.

Initially aimed at the Mac, the project's scope - and having suffered a financial blow from recalling 200,000 bugged copies of *Myth II* - put pressure on Bungie's finances, so the company pitched an acquisition by Apple. They were turned down, so, urgently needing games for their upcoming

Xbox, Microsoft stepped in and acquired Bungie in 2001. *Halo* absorbed everyone from Bungie's *Oni* and Phoenix teams, with staff working desperately to bring the game together. Early project names included *Armor*, *Monkey Nuts* (chosen to be impossible to ship with), *Blam!*, and *Covenant*. Microsoft didn't like the name *Halo*, but Bungie stuck to its guns, eventually compromising with the *Combat Evolved* subtitle.

With very little content in place and the Xbox's launch as a deadline, *Halo* would be stripped down to its essentials. This is most visible in the level design, with interiors repeatedly reusing elements and several levels requiring that you play through them twice. But planned sections being cut is one of very few sacrifices that you feel in play; Bungie's iconic '30 seconds of fun' design principle ensures battles are varied, with gameplay smoothly scaling between close-up combat and skidding about in Warthogs.

Despite its rushed development, *Halo* delivers a supremely polished experience, including a willingness to let you pause

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16 - 450

and breathe as you look up at the sky. It also has the same 'dropping you into the middle of a story' feel as the original *Star Wars*. When you finish *Halo* you still know almost nothing about AIs like Cortana, the Flood (who are surprise-introduced midway through, in the series' most horror-themed section), the Forerunners, or even the Covenant. And despite being little more than a heavily-armed disk caddy for Cortana, the Master Chief delivers in his role of eternal warrior, managing to remain stoically mysterious in spite of being 'you'.

Though Xbox Live wouldn't launch until a year later, *Halo* nonetheless provided fantastic multiplayer. Most people would be limited to four-player split-screen, but those who could link multiple Xboxes experienced 16-player battles. Plus, there's co-op play through the entire campaign, really showing off the game's dynamic AI.

It's impossible to discuss *Halo* without mentioning Martin O'Donnell's iconic soundtrack. Beginning with the brief of 'ancient, epic, mysterious/

alien' (sources differ), the music combined chanting performed by O'Donnell himself with orchestral and rock themes to deliver a cinematic soundtrack a world away from those of most games.

There had already been console FPSs featuring twin-stick controls (e.g., *Alien Resurrection*) but *Halo* would cement it as the genre standard. This was helped by providing a huge range of control layouts, perfectly balanced 'sticky' auto-aim, the Xbox providing enough controller buttons for dedicated punch and grenade attacks, and the game ostensibly calibrating the Master Chief while actually setting your view options. There was also the two-weapon limit, forcing players to constantly prioritise and avoiding the need for a menu to select weapons. Lastly, recharging shields meant each battle could be balanced independently. All this provided a game designed for console play from the ground up, with no sense of compromise.

Halo sold 5 million copies by 2005, meaning a third of Xbox owners bought a copy, and was ported to the PC by Gearbox



↑ Turning the Covenant's weapons against them

and to the Mac by MacSoft. Discussing all of *Halo*'s sequels, spin-offs, novels, TV shows, web machinima and the Forge editor would take an entire book, but even just focusing on the original game, it's clear that it represented a shift in the genre.

Revisiting *Halo* today, it's surprising how many elements of the franchise you take for granted - such as picking up Covenant energy swords - that only appeared later, but the creative decisions Bungie made

still helped point the FPS in a new direction for the next decade. In a way, then, *Halo* successfully delivered on its subtitle: combat, and the FPS as a genre, did indeed evolve.

"A game designed for console play from the ground up, with no sense of compromise. *Halo* sold 5 million copies by 2005, meaning a third of Xbox owners bought a copy."

RETURN TO CASTLE WOLFENSTEIN

Developer: Grey Matter Interactive / Nerve Software
Original platform: PC

While revisiting old games is now common, *RtCW* was an early example of reinventing an effectively dead brand. Running on the *Quake III* engine, *RtCW* references the original *Wolfenstein* by starting in castle dungeons and eating meals for health, plus the game continues its predecessor's tradition of mixing paranormal science with its Nazis. The weapons demonstrate the blend of science-fiction and authenticity by including a minigun, plus the coolest-looking flamethrower since *Kingpin* (which makes sense, as the game was developed by former employees of *Kingpin*'s developer, Xatrix).

Multiplayer was handled by Nerve Software and features objective based, Allies-versus-Axis teamplay. Matches are surprisingly tactical, featuring different character classes, loadouts, medics and respawn delays, with gameplay shifting in tone as teams attack or defend.

Along with having Linux and Mac versions, *RtCW* would be ported to the PlayStation 2 as *Operation Resurrection* and Xbox as *Tides of War*. The former was handled by Raster Productions (N64 *Quake II* and Dreamcast *Quake III*) and the latter by Nerve. Both ports make sacrifices, with the PlayStation 2 version losing multiplayer and the Xbox suffering an inconsistent framerate, but both include a brand new Egyptian section plus elements like RPG-style levelling up, and unique weapons and enemies.

Providing something for everyone, *RtCW*'s blend of recognisable WW2 elements, magic and super-science proved popular enough to reignite the *Wolfenstein* brand and ensure a string of follow-ups starring William Blazkowitz and his daughters.

"While revisiting old games is now common, *RtCW* was an early example of reinventing an effectively dead brand."

CODENAME: OUTBREAK

Developer: GSC Game World
Original platform: PC

Also given the prefix *Venom*, this was GSC Game World's first title, with the studio going on to the S.T.A.L.K.E.R. series. There are hints of that series' open-world exploration here, with bodies to search, an inventory, and data logs that fill you in on the low-key alien invasion.

Running on the studio's Vital Engine ZL, *Outbreak* is spectacularly unpolished, with framerate, AI and visual issues, crashes, sticky geometry, difficulty spikes and missions becoming unwinnable. But for all that, it features some great touches. For instance, you only carry a single weapon - the Universal Assault Rifle - which alters as you swap ammo types, and includes a directional microphone for eavesdropping on enemies. Meanwhile, ammo, health and armour are shown diegetically on the gun and your arm.

Levels mix interiors with open environments, and you're always accompanied by an AI buddy you can swap to. Soldiers have names like Prof and Joker, and their



↑ *Outbreak's in-world HUD*

stats upgrade between levels, but if they die they're lost for good. You can also play in co-op, which allows you to execute some fun ambush and flanking tactics.

As a budget game, *Outbreak* feels like a less polished *Ghost Recon*. Gameplay revolves around managing your buddy alongside long-range sniping, and while individual hits aren't too punishing, limited resources mean it shares *Ghost Recon*'s requirement that you try to ensure situations are weighted in your favour.





closest entity = monster (247, 0, 0, 0), selection = (1, 1)



100



32



15

fps 59
wqd 557
wvt 1796
evt 15697

CUBE

Developer: Wouter van Oortmerssen
Original platform: PC

Created by Wouter van Oortmerssen - a programmer at Google with credits on *Far Cry* and *Borderlands 2* - *Cube* is technically the engine, but as it comes with a huge selection of single and multiplayer maps you can treat it as a free game.

Those levels tend towards abstract Egyptian or castle environments populated by chunky characters, and while map quality varies, some of them are as clever as anything you'd find in a full-price game. Their biggest weakness (presumably from lack of playtesting) is a tendency towards too many enemies and not enough ammo, but if you like challenging, crowd-management combat, *Cube* has you covered.

The engine's standout element is that at any time during gameplay you can tap a key and instantly edit the level. Moving, adding or removing geometry and entities before seamlessly dropping back into gameplay and seeing it relight the newly changed environment is a trick that never gets old. Though levels



↑ *The fun - and free - Cube*

are 2.5D (with no rooms over rooms), it's still an impressive piece of work and a great introduction to level design.

Cube was followed in 2010 by *Cube 2: Sauerbraten*, made in conjunction with Lee Salzman. This continues the edit-anytime approach while making a long list of improvements. There were also spin-offs like *Red Eclipse*, an arena FPS built on *Cube 2* with heavy *Quake III/Unreal Tournament* vibes, and *AssaultCube*, which provides a touch of *Counter-Strike*'s realism.

WWII ONLINE: BLITZKRIEG

Developer: Cornered Rat Software
Original platform: PC

First released in 2001, *WWII Online: Blitzkrieg* changed its name to *Battleground Europe* in 2005 and then back to *WWII Online* when it was released on Steam in 2017 (with the 21-year-old game amusingly listed as 'early access'). All the while, players have been fighting back and forth over the game's single map, which encompasses most of Europe (135,136 square miles according to the game's world record for 'largest playable area in a shooter videogame').

The game's impressive scale makes it possible to drive through England, cross the Channel and then continue across the entirety of France and Germany, all in real time and without a loading screen. As you'd imagine, combat tends to focus on shifting hotspots, with players organising assaults on key locations. In play, the game has the same depth as *Operation Flashpoint*, with stances, stamina, range settings and so on to master. Driving vehicles has more the fidelity



↑ *The hardcore WWII Online*

of flight-sims than the feel of the *Battlefield* series, with no place for wing-surfing shenanigans here.

Despite running for 20 years, it's not difficult to see why *WWII Online* remains so obscure. Even after all that time it's still awkward to get into, with roughly a million keys to learn and the clunkiest of menus. True, *WWII Online* is everything that *Battlefield* is not, but that goes both ways, restricting this to a game for the hardest of hardcore players.

← *You can edit Cube's levels at any point*

INTERVIEW WITH DAVOR HUNSKI



It's difficult to overstate how different *Serious Sam* was to the average FPS of the time, not just in its wide-open, colourful environments, but its irreverent attitude and fast, arcade-style gameplay. Davor Hunski has been at Croteam since the beginning, so I wanted to get his insights into the journey that led to *Serious Sam*, the references that inspired the team, and the work that goes into balancing arena-based combat.

What were your early gaming inspirations, and did you always want a career in gaming?

Davor: Roman [Ribarić, CEO of Croteam] and I went to the eighth grade of elementary school, and we went to class with one of our friends. His brother was a little bit older, and he made his first game on [the] ZX Spectrum, called *Spaghetti Junction*. It was a cool little Spectrum game where you are sitting in the middle of the square, directing traffic. We heard from his younger brother that he earned a cool amount of money. At that time I got my first computer, a ZX Spectrum, and we were playing games every day. It was mind-blowing that I would be able to live my life connected with games. It's a dream life for me.

So we heard this information that you can make a living, or at least some money out of it. It was really important to

have something concrete. Your parents are like 'when will you get a real job?' But in the end we pushed so, so hard, it was unbelievably hard to get where we are today, but it was a dream come true for us.

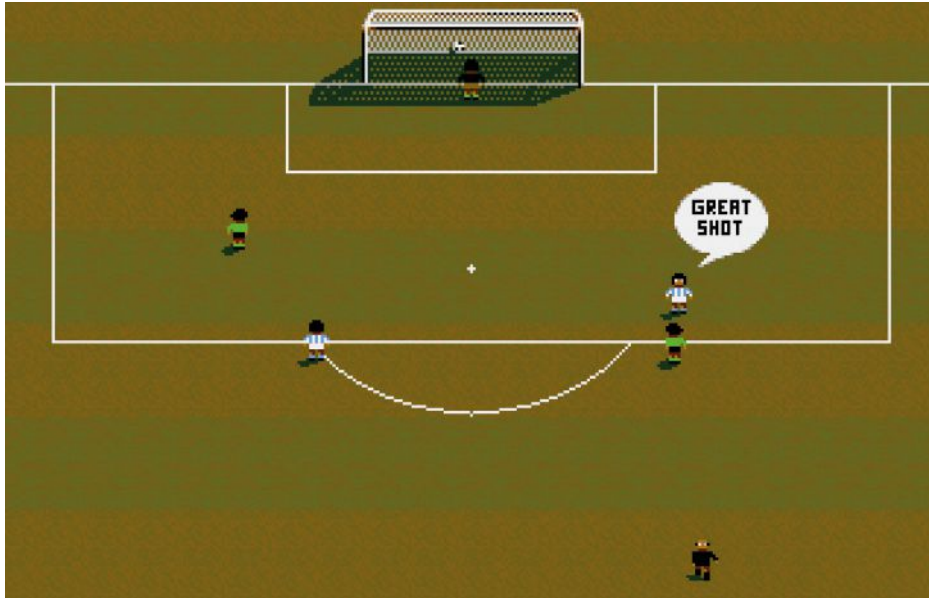
What led to the founders coming together to set up Croteam?

It was Roman, myself, and Dean Sekulić, senior programmer here at Croteam. The other guys joined the development team in the following years. We were all working hard throughout [the] decades to make the best games that we could.

The first game was done in my room. We were working on the Amiga at the time. The first game that we created was just used to get in touch with publishers. I made a little puzzle game, simple, but it was fun. We pushed that to several publishers but there wasn't interest there. But we [had]

created the complete game, from scratch to a shippable state, with manuals and everything. It was kind of proof for future contacts that we can actually make games.

We got in touch with a London-based publisher called Black Legend¹ and we agreed that we would make a game. They offered us three pitches; one of those was a football game, and since we were all playing football as friends and everybody likes football here in Croatia we decided to make that, especially as there was a game called *Sensible Soccer*² that was the best game at the time. We were inspired by that, and wanted to make a game that was kind of similar but upgrade it in several ways. That was our first serious game, and the majority of the game was done remotely, but as we managed to get some money out of that game, we rented a little apartment.



↑ Sensible Soccer inspired Croteam's Football Glory

What caused the shift from making Amiga soccer and kids' games to an FPS with your own engine?

It's actually simple - we just loved those games and were mind-blown by *DOOM*, *Duke Nukem*, *Wolfenstein*. But *DOOM* was the killer; we played like crazy. You know, the id guys, the whole first-person revolution, it was unbelievable. We were shooting throughout the night because we had our apartment. I remember it was three in the morning and all those firing guns, screaming and shooting, the windows were wide

open because it was hot in the summer, I can just imagine what people were thinking.

Before it became Serious Sam, your first FPS was In the Flesh. Can you remember much about it and why it changed?

First of all, the period that gets to *Serious Sam* was five years. Because we didn't have money - we had, like, a hundred dollars - we started developing our own engine [instead of licensing one]. First we created, in C

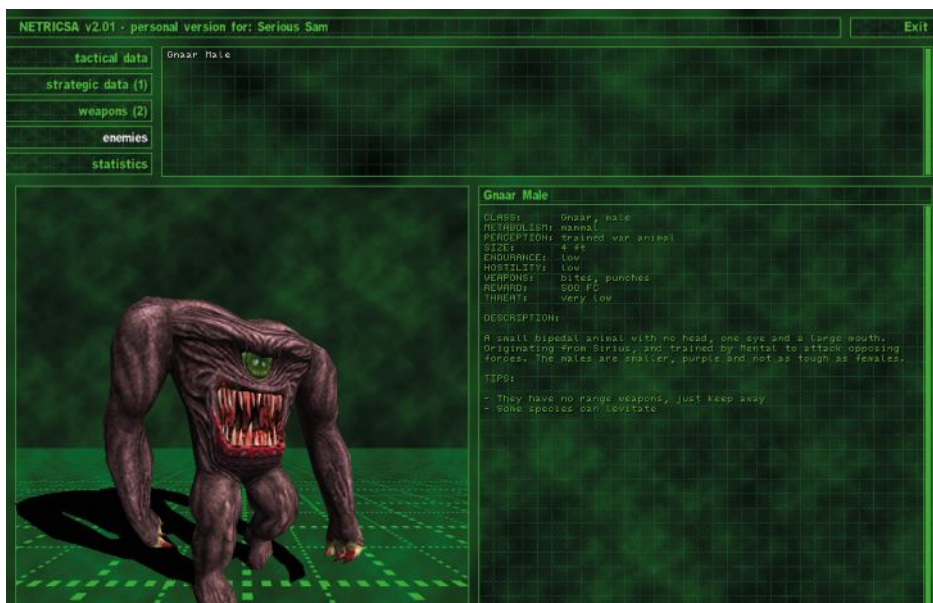


↑ Serious Sam's headless, screaming enemies

language³, in DOS, a 2.5D engine like *Duke Nukem*, and at that time we were talking about a game called *In the Flesh*. It was, like, horror, dreamy stuff; that was our vision at the time. It took a long time, and *Half-Life*, *Quake* started to appear in true 3D. So we switched to C++, we switched to Windows, we switched to a full 3D engine. We had to make editors for that - before that you edited from within the game, you played and you edited the levels, that was the original concept of how you created the data.

Over time we switched to some kind of Duke Nukem hero-style character but *DOOM*-style gameplay. Movies like *Rambo*, *Commando*, movies of the time, some comic books, this was the inspiration behind the *Serious Sam* character.

"We just loved those games and were mind-blown by *DOOM*, *Duke Nukem*, *Wolfenstein*. But *DOOM* was the killer; we played like crazy."



↑ Sam's NETRICSA provides detailed lore

One of the odd things about Serious Sam is it has lots of earnest lore text to read but other elements - Jingle Bells playing and headless guys exploding - are comical. How did those come together?

They are reflections of the personae that lived at Croteam. Some of the guys really want to keep it serious, to have a franchise, like, could we make a movie? The other guys wanted to have just fun - whatever is fun gets in. We started with a mix of those, something that could

be executed as a serious movie but also was crazy. We had fun as much as we could during development of the game, and it ended up [with] its own brand and style. The core was, we never thought too much, we just relaxed and had fun. 'Oh, this will be cool, let's put it in', and if we enjoyed it, if we laughed, if it was scary, funny, cool, stylish, then we used it. It wasn't like today where every little detail is sketched from every angle. It was like really hardcore garage development; guys brainstorming, having a ton of fun, working hard every day.



↑ Not every battle takes place in an open arena

I think it's fair to say Serious Sam's gameplay is driven by its enemies. How did you come up with them? Did you design what you needed the enemies to do or was it about a concept first?

It was a mix of both. I think Roman, our CEO, invented the headless Kamikaze. [The] Kleer was inspired by the Fiend, which was one of my beloved enemies from Quake. The Walker character, those biomechs, they were inspired by an RPG, some fish-like robot creature.

In general, it was what we actually need for gameplay reasons. We know that we want immediate shooting, we wanted flying projectiles. 'Dancing with enemies' is the core of the Serious Sam formula, right? It's also the heart of the DOOM series, you dance with enemies, you dodge the projectiles that are flying, and that's a very simple formula. I used to call it 'Galaxians' in 3D'. [Enemies] are separated by function, visuals, sizes, sounds - you need to recognise each enemy in all this mess. You are playing

chess; which enemy, which gun, and where you will move around; it's just a big dance. We loved this formula, and we tweaked it I think pretty nicely, and it brought much fun to many, many people.

"We thought at the beginning 'the more the better', so we created 40 enemies, 40 different, huge levels."

With open spaces and hordes of enemies, the game's levels and gameplay style are very different from those of other FPSs of the time. Did you guys deliberately set out to be different?

Yes, yes, yes, it is actually driven by technology - in the beginning everything was driven by technology. First of all, the original engines for *DOOM* and *Quake* had limited colours, and they had many gradients of a few basic colours, so the games look dark, brown, greyish, and what we like is sunny, bright, open spaces. We were inspired by Egypt - we wanted blue water, green palms, blue sky and yellow sand. We are thinking that we

don't like to be confined by space, by corridors and small rooms. It felt a little bit unnatural. Of course, it was there because the *Quake* series was more horror-style and technology was not able to do large spaces in the beginning. We didn't have [the] limitations of technology because we were creating the 3D engine from scratch - we just went a different direction with technology.

Did you have a detailed plan and schedule for the game or was it a case of just adding stuff until it's done?

We did all the beginner's mistakes. We thought at the beginning 'the more the better', so we created 40 enemies, 40 different, huge levels. Our original design document and rough levels had five different planets, huge environments - we were just exploring what is cool. But it doesn't add up, it wasn't beautiful. It was interesting, but the game wasn't focused, and you couldn't feel it, the charm of it, the real excitement.

We sent those demos with 40 levels to many publishers but



↑ 'Dancing' with Serious Sam's many enemies

there wasn't a single positive response to that. We decided we need to focus, so out of four or five Egypt levels we took one level and made it into a one-hour long experience and we made a demo, but we polished it to the maximum. We had six, seven, eight enemies, maybe even 10, six or seven guns. Everything was polished, beautiful sounds, everything was nicely done. And that was our entrance to the big stage, when we published that. Then people started [saying] 'wow, this is amazing', and then we got the call from the

publishers. It was almost ... if we hadn't made it using that demo I don't think there would be any Croteam or Serious games because that was our last chance.

And once you'd signed, was there any pressure to get it done by a certain time?

Yeah, of course, it's always like that, but that's not all bad because when you don't have any goals or deadlines it's a never-ending story. You could make [a] game for years, trying



↑ Missiles can be explosively intercepted in mid-air

to catch up with the technology. When you're not confident, you're not focused, and you can easily get lost. It's a question of technology, because every two years the games ramp up really strongly and your game looks outdated and you have to catch up. You can run around in circles, and actually some deadlines can help with that.

It wasn't a long time, maybe six to nine months for us to go from one level to 30 levels for *The First Encounter*. With the bosses and everything it was pretty

demanding. It was, like, 10 of us, it was busy, but we were so happy that there was sun on the horizon, a real promise that we will be able to finish what we love, what we are doing for five years now.

"It's a question of technology, because every two years the games ramp up really strongly and your game looks outdated and you have to catch up."



↑ Mowing down hordes of Mental's minions

You've mentioned environments that were cut out, but were there any enemies or weapons that didn't make it?

Yes, of course, we had a few weapons that didn't make it, and more than a few enemies. I don't know if it's half or something like that. Many, many environments didn't make it. It was crazy how many we imagined in the beginning, but in the end we finished with just the Earth-like locations. We always felt about *Serious Sam* that it was a space saga, but we never got to

do the outer space parts. It is an alien invasion, but we wanted to explore the other worlds, too.

You released *The Second Encounter* quickly, effectively as an expansion, rather than making another epic game ...

Initially, the thought of *Second Encounter* was for DLC, and we started developing it like that, but of course you always make it too big, right? It felt like a proper game, with three different environments - the original game just had one



↑ The First Encounter still looks great today

environment - and new, cool enemies and some new weapons. We had the introduction of puzzles, traps, and stuff like that. It was thought to be an expansion, but it grew into its own game. We had perfected [the] gameplay so we can experiment now.

It must be cool to have a series that people are still enjoying twenty years later.

Yes, yes, it is. For me I don't think that some basic formulas actually change. A good movie twenty years ago is

still a good movie, right? The same with music - people are listening to classic music from a hundred years ago. We try to adapt a little bit [but] I feel that we managed not to lose the original formula. It's still hardcore, you know, crazy. When you see it, you know it's Serious Sam. It's pretty simple, well, it's not that simple, people have tried to make copies but it's not that simple to do. You really need to tweak it properly and know what you are doing. We've polished this formula for a long, long time

now and hopefully know what we are doing.

I don't think it's fair to say it's a brainless action shooter because while that describes how it feels, it's not easy to play a game like that, to have spatial awareness. It's complicated, it's messy. Current games are like, pop [music], and what we did was more punk.

Finally, do you have any further plans for the series?

For me it's always a dream to make the next Serious Sam game. Who knows what will happen, but it is an open universe, almost limitless, and if people would like to play that I think we could deliver really cool games for a long time.

Author's notes:

[1] Black Legend were founded in Switzerland before moving to Hertfordshire, England. They published Amiga games from 1993 to 1996, including Fatman: The Caped Consumer, Tactical Manager, Tower of Souls, and 1995 FPS Behind the Iron Gate. The decline of the Amiga market led to Black Legend closing soon after.

[2] Sensible Software put football kits on the little characters from their Mega lo Mania game and Sensible Soccer was born, going on to sell an estimated two million copies by 2002.

[3] C and C++ are fast, flexible programming languages used in modern game development. C++ is built on C and adds lots of extra features/complexity. Programmers like to argue over whether that extra stuff is a feature or a flaw.

[4] Namco's 1979 arcade game Galaxian evolved the shoot-'em-up template established by Taito's Space Invaders. The small formations of diving aliens gave Galaxian the same central gameplay decision as that behind Serious Sam: do you focus on lining up a shot to destroy approaching enemies or concentrate on getting out of the way? Being forced to answer this shoot-or-dodge dilemma under intense pressure gives both games a great feeling of risk versus reward.

2002

Though we've focused on the emergence and meteoric rise of the FPS, the genre would of course continue to evolve over time. One of the advantages of studying so many FPSs has been clearly seeing new trends arriving in the genre, but while some of these shifts reflect advances in gaming hardware, others are the result of changing gamer tastes.





Technology advances

From the beginning the FPS has always been both driven by and in turn the fuel for the relentless improvement of gaming hardware; graphical fidelity, physics, AI, frame-rate and environment size would continue to improve. This led to 'graphics showcase' games like *Crysis* and *Killzone*, while games like *Far Cry* would deliver the sandbox simulation promised by *Trespasser*.

An online world

The success of *Unreal Tournament*, *Quake III* and *Battlefield 1942* demonstrated the viability of online-only multiplayer games, and this sub-genre would continue to grow, with many FPSs swapping from a primary single-player campaign backed up by multiplayer to the other way around. Over time we'd see the intimidating complexity of character-based FPSs like *Team Fortress* evolve into *Overwatch*, plus living, constantly updated experiences like *Destiny*, and throughout all of this will run the always adapting, always popular *Counter-Strike*.

The rise of 'let's play' videos on YouTube would also contribute to games moving away from 'seen them once and you're done' linear campaigns into new directions. Open-world survival sims such as *Escape from Tarkov* use the unpredictable threat of other players to provide an infinitely varied challenge, making them ideal for live-streaming.

Online play would also grow to encompass persistent games that operated from servers running 24/7. This meant that when players logged out of a game they knew the world they'd just been fighting through was still running, with other players coming and going (as opposed to early multiplayer games where the spaces you fought over existed only as long as someone's PC was providing that particular match). We've already mentioned 2014's *Destiny* and 2016's *Escape from Tarkov*, but *WWII Online: Blitzkrieg* had been operating in this way since 2001. A related shift would be FPSs embracing RPG mechanics like levelling up your character and unlocking new abilities or costumes, which makes sense when you know there's a persistent world for that character to return to each time you play.

Innovations and experiments

Over time, the genre would be increasingly pulled into new forms by both indie creators and big studios. While 'walking simulators' are perhaps stretching the term FPS there's no denying that the immersion provided by *Firewatch* and *Everybody's Gone to the Rapture* would be lessened if they weren't presented in first-person view. Games like *Mirror's Edge* and *Titanfall 2* will overcome the curse of FPS platforming, while *Portal's*, well, portals would take spatial puzzles in brain-bending directions. Finally, with its one-to-one mapping of your view to the in-game camera, it's no surprise that virtual reality FPSs like *SUPERHOT* and *Half-Life: Alyx* would emerge.

Military spectacle

The seeds would be sown by *Halo*, but the biggest shift in the genre would come with the release of the first *Call of Duty* in 2003. Combining the 'series of scripted events' approach to level design begun by *Half-Life* with a focus on military tech and real-world conflicts, the series

- particularly the smash-hit *Modern Warfare* - would help usher in the FPS as a cinematic spectacle.

But with this increasing focus on heavy scripting pushing development budgets upwards, the FPS would begin to narrow its focus towards military realism at the expense of demons and monsters. While this makes sense from a business point of view - there's no arguing with *Call of Duty: Modern Warfare's* 20 million sales - it seemed like the era of the fantastical FPS was drawing to a close. Fortunately for fans, this period of dour military men and faceless terrorists wouldn't last long, proving less of a long, dark night for the FPS genre and more a short twilight. A *DUSK*, if you will ...

"The seeds would be sown by *Halo*, but the biggest shift in the genre would come with the release of the first *Call of Duty* in 2003."



Destroy
Range 20m



Hand of God
[Health bar]

CL



100

Chain Gun

CL

300

Automatic Rifle



HUD elements:

- Top left: Two small square icons.
- Top center: A large green digital display showing "99".
- Top right: A yellow digital display showing "025".
- Bottom left: A red digital display showing "0:02:31".
- Bottom center: A character portrait of a character with orange hair and a blue visor.
- Bottom right: A green crosshair icon and three colored squares (white, green, yellow).

DARK ARENA

Developer: Graphic State
Original platform: Game Boy Advance

To cut to the chase, *Dark Arena* is basically *DOOM* on the Game Boy Advance. While there was an actual conversion of *DOOM* for the GBA in 2001, *Dark Arena* is so close it can genuinely provoke déjà vu during play. Using the same engine as Graphic State's previous GBA racing game, *Cruis'n Velocity*, *Dark Arena* may be more colourful than *DOOM*, but its 2.5D environments could have been lifted straight from it, and it comes as no surprise to learn that the game includes levels made by the *DOOM* community.

You play last survivor Angelina Bradshaw, trying to escape a facility where genetic experiments have gotten loose, *Jurassic Park*-style. Angelina reacts to this situation with an amusing 'Oh yeah!' at the start of each level. But while *Dark Arena* includes neat touches like rain and snow effects plus remote-controlled missiles, it falters with the basics. The frame-rate tends to collapse if more than a



↑ 2.5D combat in *Dark Arena*

couple of enemies are around and the AI clearly struggles, with difficulty coming from the juddering frame-rate and cramped environments rather than cunning opponents.

Dark Arena scratches the same novelty 'I want to play an FPS on the move' itch as GBA *DOOM*. The small screen means it's never scary, but it puts up a challenge, allows you to get lost in sprawling levels of keys and secrets, and features the same circle-strafing-around-enemies combat you'd expect.

COMMAND & CONQUER: RENEGADE

Developer: Westwood Studios
Original platform: PC

Renegade brought the Command & Conquer RTS series into first-person, and while predominantly focused on multiplayer, it includes a long, sprawling, single-player campaign.

You play as ridiculous lump of beef Captain Nick 'Havoc' Parker, with the story told through rendered cutscenes rather than the series' trademark cheesy FMV. Special mention to the small moment when the camera zooms in on a computer screen displaying a game of *C&C*.

Single-player is fun, allowing you to mow down troops and vehicles with ease, meaning the transition to multiplayer is a bit of a shock. Revolving around GDI and Nod trying to destroy each other's bases, there are *Tribes*-like terminals that let you choose your class, though cleverly these are arranged around buildings, so as you destroy them you deprive that team of options. It has a similar sense of mayhem to the *Battlefield* games, with troops



↑ Going *renegade* in *Renegade*

and vehicles constantly in action, though it's much more arcadey in its movement and combat.

Renegade would be a lone experiment, with a PlayStation 2 conversion and sequel set in the *Red Alert* universe cancelled when Westwood closed in 2003. I must also mention *Renegade X*, a slick remake of the game in the Unreal engine by fan team Totem Arts. Beginning in 2006 and still going strong, it's notable for EA allowing the project to proceed rather than shutting it down over IP rights.

← *Dark Arena* delivers uncannily *DOOM*-like action

387

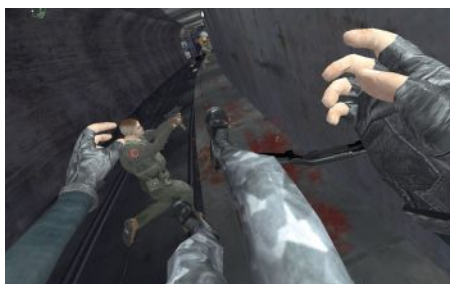
NEW WORLD ORDER

Developer: Termite Games
Original platform: PC

Around 1998 a studio called Insomnia Software were working on a *Blade Runner*-esque FPS called Decay. Presumably due to trademark conflicts with *Disruptor* developers Insomniac, Insomnia changed their studio's name to Termite, then canned the ambitious Decay to instead make *New World Order*.

This new game revolved around battles between the Global Assault Team and terrorists The Syndicate. You play as agent Dobbs (or possibly Parker, it's confusing), but while it features a single-player mode of hunting swearsy AI bots, *New World Order* was primarily designed around multiplayer.

The studio's DVA engine delivered several clever graphical features but at the cost of the game demanding a high-powered PC to run. Gameplay aims for realism, with weight limits and damage to body parts, even going so far as to include 'traps' like not telling you when you're carrying an empty gun. Levels are atmospheric but



↑ Hunting terrorists in NWO

generic, sporting drab names like Tunnel and Mine, and lack a sense of flow, leaving you to amble around while searching for enemies, rescuing hostages or defusing bombs.

New World Order was not a success, hewing too closely to *Counter-Strike* to attract attention. Sure, it looked fancier than its competitor did at the time but that came at a technical price, and more importantly *New World Order* lacked a compelling reason for players to make the switch.

GLOBAL OPERATIONS

Developer: Barking Dog Studios
Original platform: PC

Following straight on from *New World Order* we have *Global Operations*, another contender offering to provide players with an alternative to *Counter-Strike*. Built on the LithTech 2.5 engine, *Global Operations* delivers the same military-versus-terrorists theme (including real-world military groups), featuring missions loosely based on real events and detailed backstories for every map.

The game includes different roles, such as Snipers and Commandos, each with its own abilities and weapons, though anyone can pick up weapons from the ground. Cleverly, roles earn money for doing their 'thing', with Medics rewarded for healing and Recon troops paid for highlighting enemies through scenery. Other deviations from *Counter-Strike* include a non-combatant Commander, timed respawning from vehicles, and bomb defusal requiring you to wait while a little device tells you which wire to cut (or you

can just take a desperate guess). The game strives for a focus on teamwork, with executive producer Mike Arkin saying in an interview on *TheLostParadise.com*, "If you want an FPS that encourages team play above all else, there is no other game that even comes close."

Despite its additions, *Global Operations* still feels very much like *Counter-Strike*, which is presumably deliberate as Barking Dog worked on that game's beta 5.0 before creating this. *Global Operation's* problem was that no-one could have predicted *Counter-Strike's* incredible longevity, so, as changing games required players to learn new rules, weapon handling and maps, why swap from what they knew?

"Following straight on from *New World Order* we have *Global Operations*, another contender offering to provide players with an alternative to *Counter-Strike*."

Captain Corless

Captain Burke

4:22



Sergeant Grant [West Train Tracks]: Enemy Spotted
Captain Burke [West Train Tracks]: Enemy Spotted
Sergeant Grant [West Train Tracks]: Medic
Corporal Denofreo [West Train Tracks]: Yes

5.56x45 mm
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Dillon picked off Wycek.
BitmapBooks blasted Heywood.
Dillon: When I'm bad, I'm real bad...

You killed Heywood

Scagnetti



DIE HARD: NAKATOMI PLAZA

Developer: Piranha Games
Original platform: PC

Nakatomi Plaza was originally a mod before Piranha Games (creators of *MechWarrior Online*) made a deal with Fox Interactive to turn it into a full product. As you'd expect, the resulting LithTech 2.0-powered game is based on perennial Christmas movie *Die Hard*, though more specifically on the version of the film described to you by a drunk friend.

While the story broadly follows the movie's plot, it adds more enemies before beginning to really deviate. Examples include escorting Argyle's limo, rescuing an architect who falls down an elevator shaft, swimming sections, battles with SWAT teams, and McClane running amok with a fire axe.

The entire game is set in Nakatomi Plaza, making it feel a bit like a movie set theme-park ride, and, despite the changes above, is still limited by the scope of the film. Still, there are neat touches, including McClane holding guns in his left



↑ It's Die Hard with a twist

hand, the ability to lean around corners, holding up your police badge, and having health, morale and stamina meters (though only health seems to really matter).

Make no mistake, *Nakatomi Plaza* is limited and low-budget, with only a couple of hours of linear play time, identical enemies and few weapons, but I found it charming. It's entertaining to pad barefoot through offices full of enemies able to kill you in a few shots, wondering where the hell the story's going to go next.

MOBILE FORCES

Developer: Rage Games /
Realtime Worlds
Original platform: PC

This was the year of developers seeking to tempt the multiplayer audiences of games like *Team Fortress* and *Counter-Strike* away, with the Unreal-powered *Mobile Forces* pitching vehicles as its selling point. While they're unarmed, the buggies, APCs, trucks and Humvees can carry several players and are detailed enough that you can blow their tyres off. The handling model is fun, with vehicles leaning on corners then skidding wildly when you clip something while trying to run someone over.

Mobile Forces has an odd tone, presenting relatively realistic, moody environments alongside arcadey weapons and characters shouting, 'When I'm bad I'm really bad!' There are no fixed roles, but you select gear each time you spawn, letting you specialise in sniping, demolitions, etc. Single-player skirmishes against bots work as practice, but multiplayer is the clear focus. Teams battle over a range of modes, such as

competing to drive a vehicle towing a huge bomb into the other's base.

Several games we've covered have suffered from apparently evil, money-obsessed publishers stamping on the beautiful dreams of noble developers, but *Mobile Forces* illustrates why such publishers exist. If Majesco had used their marketing expertise and money to promote the game it might have attracted the critical mass of players a multiplayer-focused game needs. But without a big enough audience to generate a community, *Mobile Forces* would swiftly be forgotten, with the team evolving into Realtime Worlds, developers of *Crackdown*.

"Several games we've covered have suffered from apparently evil, money-obsessed publishers stamping on the beautiful dreams of noble developers, but Mobile Forces illustrates why such publishers exist."

← *Multiplayer mayhem in Mobile Forces*

GORE: ULTIMATE SOLDIER

Developer: 4D Rulers Software / Eyecon Pty
Original platform: PC

Videogame creation requires a delicate balance between the commercial, artistic and technical demands of a game, potentially dragging out the development time of what seems like a straightforward project. *Gore*, for example, was in development for over five years, and even after its initial demo was released, the full game took another 18 months to appear.

Revolving around a war against criminal organisation 'the MOB' that's wiped out 70% of humanity, rather than fighting in reality, *Gore* takes place inside virtual training simulation 'the Meat Machine' as it's invaded by MOB hacking.

Taking a similar approach to the first *TimeSplitters*, the single-player campaign is built around the needs of multiplayer. This, and the simulation angle, mean the game's environments shift from urban warzones to cowboy towns and a haunted house full of chainsaw-wielding skeletons.

A similar anything-goes approach applies throughout, giving your character an extremely fast running speed somewhat undermined by a stamina system, armour only covering specific parts, the shotgun deploying an energy umbrella to deflect fire and weapon pickups that can be shot, causing them to explode.

Developer 4D Rulers would release just two more games (both low-budget FPSs), and it's clear that they simply couldn't afford to compete with the big shooters appearing at the time. For example, *Gore* begins and ends with text on a black screen, like the nine-year-old *DOOM*. Still, despite its limitations, you can't accuse *Gore* of lacking ideas.

"Gore, for example, was in development for over five years, and even after its initial demo was released, the full game took another 18 months to appear."

AMERICA'S ARMY: OPERATIONS

Developer: Army Game Studio
Original platform: PC

Operations was created by the United States Army as both a training tool and to encourage the young, videogame-playing audience to enter military service. The project was driven by Lt. Col. Casey Wardynski, director of the Office of Economic and Manpower Analysis, after he realised his sons were big fans of NovaLogic's *Delta Force*.

The resulting Unreal engine-powered game cost around \$7.6 million to develop, plus another \$4 million more to update and maintain. While that sounds like a lot, it was one of the cheapest recruitment tools the Army had, when compared to the reported \$1.2 billion it would normally cost to recruit the 80,000 soldiers it needed that year. As you'd expect for a project with government funding and bureaucracy involved, development was 'complicated'. Army and Navy departments argued over who actually made the game, leading to claims



↑ Recruitment tool *Operations*

of mismanagement and internal audits being carried out.

The game features *Counter-Strike*-style soldiers-versus-terrorists multiplayer and a virtual career mode. The career teaches weapons training plus a range of skills including basic medical knowledge, with the Army promoting news stories of players using the first-aid skills they learned in the game in real life. Cleverly/disturbingly, in multiplayer you always play as the U.S. military, with opponents



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PURSUE OPTIKNERV
ESCAPE VIA CHOPPER

USA 149 JPN 194



appearing to you as terrorists (as you do to them). Completing objectives earns you 'honor points', which lead to promotion through Army ranks.

Operations has little interest in fun or accessibility over realism - anyone pulling out a knife to run faster was in for disappointment. For example, with everyone dressed in drab colours, it's really easy to shoot a teammate, but friendly fire gets you in trouble (with the sequel placing you in prison for friendly fire, which persists even if you quit and reload the game). As you'd expect, weapon handling is detailed and apparently pretty realistic, with recoil and ammo jams to contend with.

The free-to-download game was a big success, with Wardynski reporting that 20 to 40% of soldiers recruited in the real world had played *Operations*. It would then be further developed for virtual training across government departments, including, somewhat ironically, helping wounded soldiers to relearn skills.

Operations was followed by *America's Army: Special Forces*



↑ 2015's *America's Army: Proving Grounds*

in 2003, which added a virtual classroom, complete with multiple choice questions. The Army made a deal with Ubisoft for 2005's *America's Army: Rise of a Soldier*, and though a PlayStation 2 version was canned, the Xbox and Xbox 360 versions were released. *America's Army 3* followed in 2009, then *America's Army: Proving Grounds* in 2015; at the time of writing, development is underway on *America's Army 5*. Series merchandise has included comics based on *Proving Grounds* and *America's Army*

branded toys (yes, really). In general, each version has improved its graphics fidelity but - presumably in the face of equally realistic-looking but fun-focused games like *Call of Duty* - gradually relaxed its emphasis on training.

"Operations has little interest in fun or accessibility over realism - anyone pulling out a knife to run faster was in for disappointment."

BATTLEFIELD 1942

Developer: Digital Illusions CE
Original platform: PC

Expanding on the Refractor engine used in 1999's *Codename Eagle*, *Battlefield 1942* was originally pitched to Nintendo as a GameCube exclusive, but talks stalled because Nintendo didn't have an online strategy at the time. The eventual PC game was a multiplayer revelation, presenting expansive levels based around WW2 battles over the Pacific, Europe and Africa which, coupled with the game's focus on vehicles, gave it an incredible amount of variety.

Players choose from roles including the ever popular/hated snipers, and medics who could heal but not yet revive. With no voice chat or commander role in the original game, you were limited to text input or preset voice lines to try to operate as a team. Communication was important, as the gameplay revolved around capturing objectives as much as killing, with teams losing 'tickets' each time a player died, but also from controlling fewer objectives than their opponents.

In addition to their role's weapons, players have access to comically powerful grenades that fling enemies through the air. This was in keeping with the game's emphasis on the slapstick spectacle of 64-player battles over any interest in historical realism, going so far as to arm some factions with another country's weapons.

Mentioning spectacle leads us to *Battlefield's* 35 ground, naval and flying vehicles. While combat - and in some maps simply travelling to the action - revolved around using vehicles, they were usually vulnerable or unwieldy enough to not dominate the action. The aircraft in particular were notoriously tricky to control and would be refined in future *Battlefield* games. One of the reasons vehicles were so integral to the game was that any role can jump into any of them and start blasting. *Battlefield* imposed very few limitations on players, combining borderline cartoonish physics with intuitive accessibility, leading to lone players being able to control massive warships while other players rode by on the wings of aircraft.



↑ One of *Battlefield's* notoriously tricky-to-fly aircraft

Part of *Battlefield's* success came from the huge number of fan mods created for it. Some were total conversions, replacing the game's graphics and sounds with characters and vehicles from brands like Star Wars or G.I. Joe. More in-depth mods included *Forgotten Hope*, which also focused on World War 2 but attempted to be more realistic than *Battlefield*, and *Desert Combat*, which moved the setting to the Iraq war. Modders would also introduce elements that would be rolled into later *Battlefield* games, such as a

commander role and the ability to drop healing items.

While it featured the modern gaming trend of shipping with bugs that required a day one patch, *Battlefield* sold and reviewed well. DICE used the same engine for 2004's *Battlefield Vietnam* before upgrading it for 2005's modern-warfare *Battlefield 2*. These were followed by the sci-fi *Battlefield 2142* in 2006 and a host of further games, including the *Bad Company* and *Hardline* spin-offs.

SNIPER: PATH OF VENGEANCE

Developer: [Mirage Interactive](#)
Original platform: PC

Running on the LithTech 2.0 engine and made by Mirage Interactive (*Mortyr*), you play Dominick 'The Sniper' Trulione, but do almost no sniping. The levels feature atmospheric fog, but this limits visibility, which combined with the shotgun being deadly at any range, makes sniping irrelevant and this a game about running and gunning.

There are vestiges of an RPG mixed in with the game's action, including dialogue choices, levelling up, and an inventory of healing items. Combat can be challenging, with enemies moving quickly and erratically. They also have a bad habit of walking through closed doors, plus snipers are able to hit you from beyond the fog.


Sniper's plot is simultaneously ridiculous and fantastic: after carrying out a hit, you're thrown in prison, so you immediately trigger an extremely polite prison riot (chapter title: *The Mutiny*), then move to city streets where everyone



+ HEALTH

04
020

ENEMY 

MISSILE LAUNCHERS 



A HUD reticle is centered on a helicopter. The reticle features a vertical scale on the left with values: 1.2, 1.5, 1.8, 2.1, 2.4, 2.7, 3.0, 3.3, 3.6, 3.9, 4.2. The top of the scale is labeled '600.0'. The helicopter is labeled '12.2'. Below the helicopter, the number '3478' is displayed. The reticle also includes a horizontal scale and a circular radar-like display.

443

3

attacks you on sight. After fighting through some mafia, a monastery, the local Chinatown and then what appears to be an actual Chinese town, you meet teleporting love interest Stella. Brilliantly, the ending has you thrown back in jail but when you get out you decide to stand up Stella, leaving her 'cold and alone'.

Sniper is the equivalent of stumbling across a low-budget action movie at 2am. The acting is bad and the plot makes no sense, but sometimes all you're looking for is some straightforward, uncomplicated blasting.

"Sniper's plot is simultaneously ridiculous and fantastic: After carrying out a hit you're thrown in prison, so you immediately trigger an extremely polite prison riot."

ReVOLUTION

Developer: Fun Labs
Original platform: PC

Alongside their Cabela games, Fun Labs was infamous for the rate they pumped out titles. Among the four budget FPSs they released in two years, *ReVOLUTION* stands out in both ambition and scale.

You play gun-wielding janitor Jack Plummer, starting work for a corporation called The Corporation. The first half of the game echoes *Half-Life* (you even wield a crowbar) as you're left to jump around deserted chambers, with the arbitrary physics leading to a lot of saving and loading. Midway through you get turned into a super-soldier and join the resistance, called The Resistance, and from this point the gameplay predominantly revolves around combat.

There are hints of something interesting here, but it's clear that *ReVOLUTION* is simply not finished. Aside from shipping with a fatal bug, combat is unbalanced and connecting cut-scenes were removed, with levels ending abruptly, placing you



↑ [Join the ReVOLUTION](#)

somewhere new and pursuing a different objective. Finally, dialogue lines like, 'If I will not know you, id [sic] say that you are right', show a lack of localisation support from the publisher.

Aside from a couple of set pieces, most of *ReVOLUTION* centres on navigating large, eerily deserted levels. So, if you're interested in exploring a strange, evocative, often surreal world then there's entertainment here as you wonder at what might have been.

TIMESPLITTERS 2

Developer: Free Radical Design
Original platform: PlayStation 2

The second *TimeSplitters* expanded on the first's barebones campaign with different objectives per level, a story revolving around Time Crystals and a protagonist who looks like Vin Diesel in *Pitch Black*. The campaign also adds puzzles, boss fights, checkpoints and tighter controls, while still finding time to evoke *GoldenEye* through its snowy opening level on a dam. There are a few missteps, such as slow NPCs to follow around, instant-fail stealth levels, and occasionally punishing difficulty, but the single-player is infinitely stronger than last time.

While the campaign is much tighter and more varied it's not much longer, so you're soon in the game's familiar arcade and challenge modes. There are also new multiplayer modes, such as Vampire, Shrink and Virus, with special mention to Monkey Assistant mode, which gives the player in last place, well, monkey assistants. Finally, the MapMaker has also been expanded,

now allowing you to make story levels with their own logic and triggers.

TimeSplitters 2 is a vastly more generous and polished version of the first game, and is definitely the one to try first. It was followed by a third game, *Future Perfect*, technically published but effectively buried by Electronic Arts in 2005. A fourth entry was underway but was cancelled when Free Radical closed, though in 2021 new owners, Deep Silver, have announced that *TimeSplitters 4* is underway, with members of the original team involved.

"TimeSplitters 2 is a vastly more generous and polished version of the first game, and is definitely the one to try first."

IRON STORM

Developer: 4X Studio
Original platform: PC

Not to be confused with *Ion Storm* the developer, this FPS is set in an alternate timeline in which World War 1 never ended. Now 1964, the conflict mixes trench warfare and mustard gas with helicopters and automatic turrets. You play as legendary super-soldier James Anderson, sent in alone to stop the enemy's nuclear weapon program.

Iron Storm's strengths are its unusual premise, effective world-building and satirical hints at the business realities of the war. But it's undermined by a lack of both budget and attention to detail, such as characters swapping voices mid-level and Anderson not bothering to remove the magazine from his assault rifle while reloading it.

In keeping with the game's setting, an alternate version of *Iron Storm* was released two years later on the PlayStation 2 by Rebellion. This makes improvements, but still suffers from bugs and odd decisions like enemies simply ignoring being shot until they've absorbed



↑ *The satirical Iron Storm*

enough damage. In a bizarre twist, that version would then be ported back to Windows, fixing some of the problems of the original version but removing elements like multiplayer.

Iron Storm was 4X's only game before they closed and reformed as Kylon Entertainment (still operating today). As a result the game didn't receive a sequel, though several of the game's staff would go on to work on 2005's *Bet on Soldier*, which is considered something of a spiritual successor.

DIE HARD: VENDETTA

Developer: Bits Studios
Original platform: GameCube

While *Die Hard: Nakatomi Plaza* recreated the first film, *Vendetta* presents a brand-new story. Set after the initial trilogy, John McClane's daughter, Lucy, is now a cop caught up in a criminal plot orchestrated by Piet - son of Hans - Gruber. Both Reginald VelJohnson and *Nakatomi Plaza's* John McClane, Michael Blanchard, return.

Vendetta is surprisingly ambitious for a licensed game: you can take hostages to cause other bad guys to surrender. There's *Max Payne*-style 'Hero Time' where you move and shoot in slow-motion while *Ode to Joy* plays. There are kill-cams, jumping sections, stealth, disguises, bomb defusing and lots of puzzles.

These puzzles are both the game's strength and its weakness, adding interest but often requiring trial-and-error attempts that conflict with the game's lack of mid-level checkpoints. For example, McClane must escape prison by

Vendetta blends FPS action with puzzles →





knocking out several guards, finding cigarettes and a lighter, then starting a fire so he can hide in a cupboard. With no multiplayer or replayability, perhaps the developers used difficulty to stretch playtime, because alongside the puzzles there are instant fail traps and occasional difficulty spikes.

Vendetta was released worldwide on Gamecube, featuring control issues that forced a reliance on overly powerful auto-aim, then a year later on PlayStation 2 and Xbox in Europe only. It was reviewed harshly, predominantly due to the trial-and-error gameplay, but *Vendetta* is a case of ambition and ideas over polish, and is full of quirky surprises.

"These puzzles are both the game's strength and its weakness, adding interest but often requiring trial-and-error attempts that conflict with the game's lack of mid-level checkpoints."

METROID PRIME

Developer: Retro Studios
Original platform: Gamecube

With Nintendo's internal teams stretched, the N64 would suffer a lack of games throughout its lifetime. And so, keen to avoid this with the Gamecube, some of the company's 'smaller' brands were handed to developers like Retro Studios. Of course the notoriously quality-focused Nintendo were still heavily involved in *Metroid Prime's* development, helping guide the project from third-person to first in order to make combat more intuitive.

Prime took three years to develop, with Retro closing down other projects to focus on it. The previously 2D series' shift to 3D was controversial, both inside Nintendo and with fans, whose scepticism only grew over time. In 2001 *IGN.com* ran a story quoting 'insiders' who'd played the in-development game and reported, "A lot of uninspired, formulaic shooting through 3D hallways. There was barely anything to do." However, the finished game received glowing reviews, won scores of awards and was a sales success,



↑ *Prime* evokes the feeling of being in a suit

comprehensively ending concerns about the *Metroid* series working in 3D.

The campaign follows the same structure as 1994's *Super Metroid*, teaching you the game's mechanics on a seemingly abandoned space station, then, after a boss fight, the bulk of the game is spent exploring an alien world, gradually reclaiming and upgrading your abilities. Throughout, the game delivers a sense of eerie isolation, with Samus never speaking - there's no-one to

talk to anyway - as you pick through long-deserted ruins on a world that's at best indifferent to you. Of all the games we've covered, *Prime* has the strongest sense of place - the feeling that Tallon IV has slept silently for centuries and will do so again once you leave.

Thanks to the Gamecube controller's unique layout, *Prime's* controls are somewhat idiosyncratic, providing a clever but not immediately intuitive scheme. To be fair, the team called the game a 'first



↑ Explore Prime's Tallon IV

person adventure' rather than a shooter, and the non-standard controls do suit a game that stands apart from traditional FPSs. But while its controls can occasionally snap you out of the game's fantasy, there's no faulting how hard it works elsewhere to enclose you in Samus Aran's suit. The floating HUD shifting as you move, moisture forming on the glass and bright flashes providing a glimpse of your character's reflection all give *Prime* a fantastic sense of a layer of armour sitting just inches from your face.

Though there have been several other *Metroid* games in the series, the Prime trilogy itself includes 2004's *Echoes* and 2007's *Corruption*. *Echoes* brought in a light-versus-dark world theme alongside multiplayer, while *Corruption* moved the series onto the Nintendo Wii and revolved around gesture-based controls.

Metroid Prime has aged remarkably well, with only its texture detail betraying that it's over 20 years old. The semi-abstract environments still hold up, and the game's sense of progression, of finding the next upgrade and feeling like an explorer even though everything's been carefully designed for you, is as strong now as it ever was.

"Metroid Prime has aged remarkably well, with only its texture detail betraying that it's over 20 years old."

JAMES BOND 007: NIGHTFIRE

Developer: Eurocom

Original platform: Console

Nightfire begins strongly, with Eurocom firmly into their Bond-game stride, dropping you straight into the action before playing the song written specifically for this game and only then displaying the main menu. Released on consoles and PC in 2002, then Game Boy Advance in 2003 and Mac in 2004, *Nightfire* (originally titled *Phoenix Rising*) features an original story which nods to *Moonraker*, culminating in a zero-gravity level set in space. It also included current Bond Pierce Brosnan's likeness but not his voice, and a cameo from *Agent Under Fire*'s Zoe Nightshade.

The console version's levels allow for different approaches, including combat, stealth and finding alternate routes. There are driving and on-rail sections for variety, which are fun, apart from an overly long and punishing underwater level that's immediately followed by yet more driving and flying. Breaking this up with an on-

foot level means the PC version trumps the console here.

Running on Valve's GoldSrc engine, that PC version was created by Gearbox. It strips the vehicle sections, replacing them with more shooting, which while fun are frequently undermined by frustratingly accurate AI.

The next Bond FPS would be 2004's *GoldenEye: Rogue Agent*, handled by the developers of *Medal of Honor*, which featured the name but none of the panache of the classic shooter. On console at least, *Nightfire* remains the better game, delivering a polished and cinematic 007 adventure.

"Running on Valve's GoldSrc engine, that PC version was created by Gearbox. It strips the vehicle sections, replacing them with more shooting, which while fun are frequently undermined by frustratingly accurate AI."



INTERVIEW WITH KARL DECKARD



Now the senior game design manager on Hypixel Studios' upcoming game, *Hytale*, Karl's 25-year career has seen him involved in the making of several of the most important FPS releases in the genre. These include *Half-Life*, the *Metroid Prime* trilogy, and work on Valve's cancelled *Prospero*.

Can you remember any early games that inspired you, and did you always plan to work in the games industry?

Karl: My life has been saturated with games since early childhood, so I have numerous sources of inspiration. My mother worked at the local library and every Saturday they would open up their auditorium for us to play pen-and-paper RPGs. Pair this with living near the college campus housing the ILLIAC IV mainframe supercomputer that offered a collection of text-based and vector-rendered dungeon crawls and multi-user dungeons.

In college, my friend Greg and I both studied graphic design, but my passion was definitely games, so I would always bounce ideas off of him. After college, when I was working at Nintendo as a graphic designer on *Nintendo Power*¹, I was designing a game in my spare time with no real

outlet for its development. My friend came to me and said that his colleague was starting a game company, that he was going to work there, and that I should pitch the game design to his colleague. That company was Valve, that friend was Greg Coomer², and that colleague was Gabe Newell³.

The move to Retro Studios I credit to Gail Tilden⁴, then Vice President at Nintendo of America. When she first mentioned the company, I had no interest in moving away from Seattle and didn't pursue the opportunity. She kept after me, though. Gail not only pushed me to talk to the founders, but she served as an important role model, for which I am eternally grateful.

The way *Metroid Prime's* world opens up as you gain new abilities is incredibly clever. Did you approach it 'ability first' or 'world first'?

When our colleagues at Nintendo flew us to Japan to meet with Shigeru Miyamoto⁵ and his talented team of designers, I went with a 12-page pitch in hand. This included a diagram of the entire game that served as a flowchart of sorts; it identified every thematic world, how they were organized, and the corresponding lock-and-key mechanics used to traverse them. This outlined which abilities, items, and weapons unlocked which worlds and all the alternate pathways players could use throughout the course of the game, at a high level.

Oftentimes, you will hear game developers talk about how the finished product was nothing like the original plan, which is perfectly fine, but after shipping *Metroid Prime*, I looked back at that flowchart and, no matter what else had changed, we followed that initial layout to the letter.



↑ Much of Tallon IV's wildlife is hostile

Was Prime's scanning objects to piece together the game's story from lots of small details always part of the plan? It gives the game a slower, almost archaeological tone, so I'm curious if that was always the goal?

Scanning parts of the game world to obtain lore served a couple different purposes. One of the core game pillars was that the player had to feel like they were Samus Aran, but at the time, there was no real blueprint for this in a first-

person game. This is why I came up with the concept of visors; different vision modes that an environmental suit would have, in order to deal with harsh conditions encountered on other worlds.

The inclusion of the Scan Visor was to address a problem we sometimes saw in games, which was players spamming through text without reading it and sometimes even being irritated with its inclusion. We wanted story depth, but not at the cost of repeated walls of text



↑ Upgrade Samus' armour as you progress

or endless cinematics. Housing lore on actual objects in the game world allowed us to have abundant opt-in storytelling for those that wanted to dive deep, which reserved the classic narrative vehicles to be utilized for story beats that we wanted to ensure every player saw.

Lastly, we wanted this game to be something different than the average first-person shooter. We wanted the player to feel as if they were an explorer on an alien world, uncovering its secrets and learning from

them, which would then dictate different game mechanics and pacing than in the typical first-person shooter.

Prime's control scheme is pretty unusual. Was it designed that way to best suit the Gamecube controller's layout, or did you have other goals in mind?

We faced a somewhat unique challenge: above all, Nintendo games must be approachable. They adopted a 'blue ocean strategy', which meant expanding outward from the core gamer demographic



↑ Use the Morph Ball to roll through tight areas

to include casual gamers of all ages; anyone and everyone should be able to pick up the controller and play a Nintendo game. That presented a challenge for us, because typical FPS games were played with a mouse and keyboard, and on consoles you had dual-stick controls. For casual players, dual-stick controls can be hard to manage. We recognized that some players had a hard time keeping targets in view and, for fast-paced combat against dodging, flying, leaping, and tunnelling enemies this was a problem.

For a solution, I looked to third-person games like the Zelda franchise⁶, for their lock-on and 'orbit' systems. This had not been done before, to my knowledge, but locking-on in first-person would allow players of all skill levels to keep an enemy directly in the centre of the screen. This was a bit controversial, but we weren't doing a vanilla FPS, we were doing something different. You have to design for the constraints you are presented with and this solution made the game more approachable for



↑ Samus' ship hovers over the surface of Tallon IV

the breadth of the Nintendo audience.

While Prime has some tough boss fights, the sequel, Echoes, is a much more stressful affair, forcing you to keep moving in a directly hostile environment. Where did the Dark World concept come from?

We wanted an immersive world that operated under its own rules, we wanted for those rules to be directly experienced, instead of simply witnessed, and we wanted players to be scared.

It was a fine line, when making a game that is approachable, but it was important for us for another reason: we didn't want to make a re-skinned version of the first game. As gamers ourselves, we had played countless sequels to great games that were too similar to the original, and we wanted to avoid that pitfall.

As to the Dark World concept itself, which allowed us to achieve the goals stated above, there were two very different influences. A popular music



↑ Scanning enemies and objects reveals backstory

video at the time was Queens of the Stone Age's *Go With The Flow*, and while thematically it was ... let's say, quite different ... the look of it was striking; hard-edged, flat black-and-white foreground content, set against a stark red background sky. To us, it felt almost alien, and that was exactly what we wanted.

The other influence for the Dark World was quite simple: it was a homage to the Dark World in *Legend of Zelda: A Link to the Past*, one of my favourite

games of all time. You see, for me, the best game design often harkens back to comforting memories of other great games and their mechanics, but by enabling players to experience them in a completely different way, you make them your own.

"As gamers ourselves, we had played countless sequels to great games that were too similar to the original, and we wanted to avoid that pitfall."



↑ You can unlock a range of ammo for your cannon

While this interview is focused on the Prime series, I saw that you were involved in Prospero, the game Valve cancelled to focus on Half-Life. Can you remember any details of its gameplay or universe?

Prospero was meant to be a 'metaverse'; a shared space in which players could interact and visit worlds created not only by Valve, but also by players. The in-game world itself was actually a multiverse; a massive library of worlds, populated by levitating monks who were

caretakers of endless shelves of books reaching skyward, each book a world that players could explore. Aleph, the female protagonist, was outfitted with weapons, gear, and psionic abilities that would allow her to traverse these spaces, combat the foes she encountered, and solve environmental puzzles to progress. That progress could then curry favour with, or draw scorn from, various factions of monks when returning to the persistent library, as those factions struggled for power. This enabled us to tell a



↑ Prime's first boss tests your combat abilities

compelling ongoing story, but still encompass future content drops. A forward-facing level editor that was to ship with the product was conceived entirely around the notion of accessibility, with a simple drag-and-drop interface, [and] chunky and colourful icons, designed to let anyone jump in and create a world. I admit, it may have been a bit overly-ambitious in the mid-nineties to be talking about a cerebral storytelling game with a persistent hub and server-hopping between user-generated worlds.

However, those early explorations of a living, breathing world, populated by characters with agency, the importance of narrative flow, distributed content, and the democratization of game design are concepts that would later find their way into various other Valve releases.

That's not the only occasion those early ideas were realized; they live on in many ways. An important skill for a designer is the ability to be at peace with content that is cut or unreleased. What I have learned



↑ The cancelled Prospero helped influence Diablo III

over the years is that good ideas generally gain traction at some point. In *Metroid Prime*, the duality of weapons and visors came from Aleph's duality of weapons and psionics. That world-building concept and level editor guided the user-generated content editor in *inFAMOUS 2*. Aleph's psionic amplifiers were applicable to skill runes in *Diablo III*. What I learned about quantum mechanics for *Prospero*, when studying the many worlds theory, I later used in my work with Neal Stephenson⁷, exploring the future of storytelling and

what occurs at the nexus between narrative and algorithm.

Finally, did you think people would still be talking about *Metroid Prime* as a classic FPS twenty years later?

We didn't know how it would be perceived by the public, but we knew we were making a game that we really enjoyed playing, even after hundreds of hours of testing, which is typically a very good sign.



↑ Karl helped design Sucker Punch's inFAMOUS 2

From a personal standpoint, *Super Metroid*⁸ is one of my top ten games of all-time, so an opportunity to create a new game in the franchise, hopefully recognizing the strengths of what came before but also bringing our own creativity to the forefront, was very rewarding. *Metroid Prime* had more of me in it than any game I worked on before or after, but the creativity and dedication of the people I worked with is what I think about twenty years later. It was a concerted effort by the entire team to make a

game that would stand out, add worth to an amazing franchise, and that would make Samus proud.

"Metroid Prime had more of me in it than any game I worked on before or after, but the creativity and dedication of the people I worked with is what I think about twenty years later."

Author's notes:

[1] Nintendo Power was the official Nintendo magazine of America and ran from 1988 to 2012.

[2] Greg Coomer has worked in Design + Communication at Valve since 1997 and was the project leader on Prospero.

[3] Gabe Newell was one of the founders of Valve and is the studio's managing director.

[4] Gail Tilden worked at Nintendo from 1983 to 2007, helping create Nintendo Power and introduce the Pokémon brand to America.

[5] Shigeru Miyamoto is the legendary designer behind classic Nintendo brands including Mario, Zelda and Star Fox.

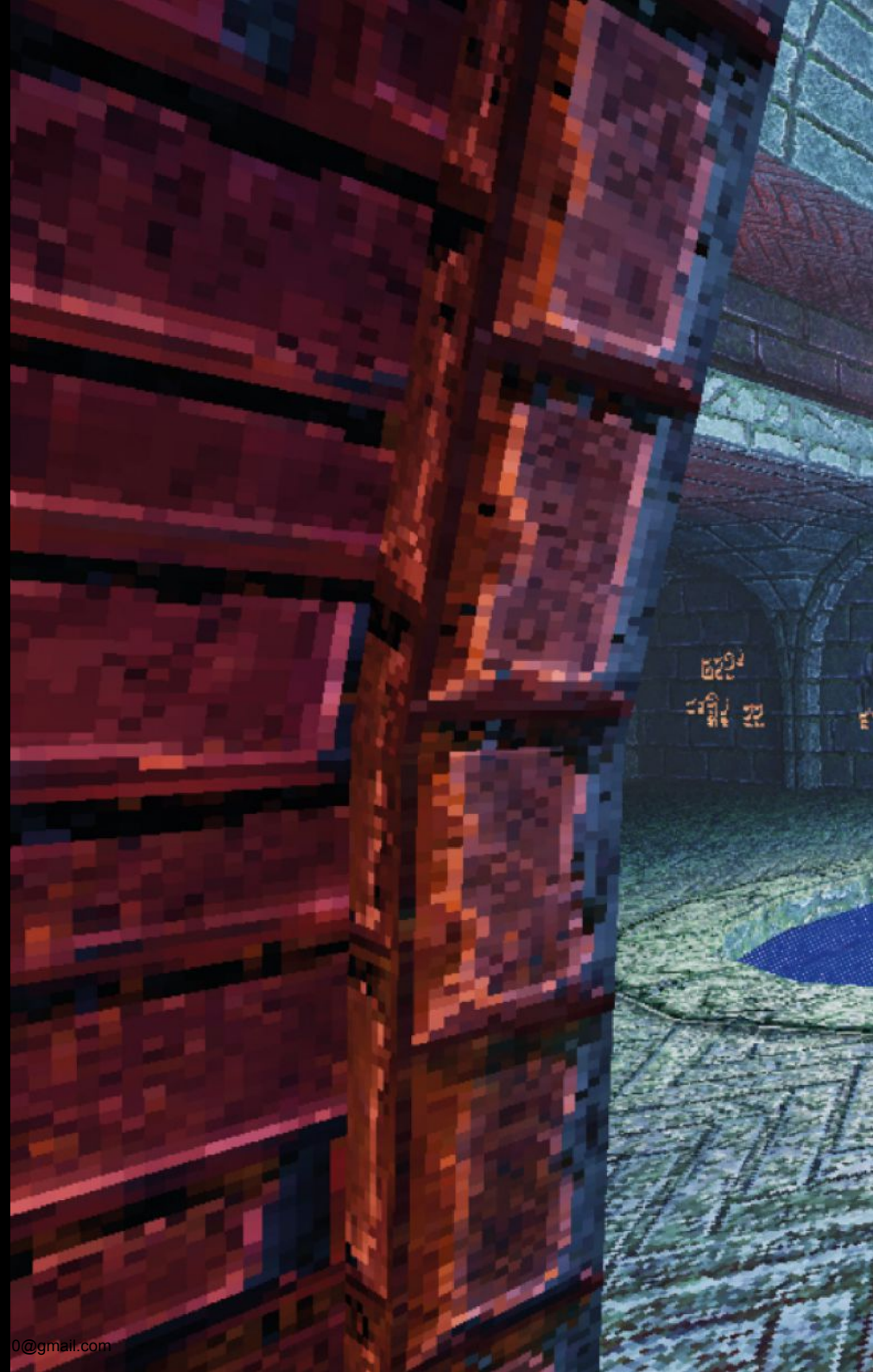
[6] The Legend of Zelda franchise has featured more than 25 games since 1986. The 1998 N64 game Ocarina of Time popularised being able to lock-on to an enemy, helping streamline combat in a 3D environment by keeping the camera centred on an opponent while players focused on attacking and dodging.

[7] Neal Stephenson could be described as a technology focused author, and is perhaps best known for 1992's *Snow Crash*. This science fiction novel features the Metaverse, a first-person virtual reality whose name has been adopted (depending on your perspective) for the next evolution of the internet and/or as a buzzword for tech firms desperately searching for the next boom.

[8] *Super Metroid*, in 1994, was the last home console *Metroid* game before *Prime* (with the Game Boy Advance receiving *Metroid Fusion* on the same day that *Prime* was released). As the name suggests, *Super Metroid* was released on the Super Nintendo, with the franchise skipping the N64 entirely. As a 2D platformer, *Super Metroid* obviously has completely different gameplay to *Prime*, but they share common elements, such as an early space station escape stripping you of your powers, progress gated through recovery of your equipment, and a hostile, lonely environment.

2003 AND BEYOND

While *Halo* revolutionised FPS gameplay, it would be the *Call of Duty* series that would define the genre's themes for the next decade. Where before we had demons, aliens, dinosaurs and the undead, the incredible success of 2007's *Call of Duty 4: Modern Warfare* would shift FPSs towards delivering real world conflicts, firstly against Nazis then later, terrorists.







↑ Call of Duty evolved Half-Life's cinematic action

Over time the series would also shift single-player FPS campaigns towards short but heavily scripted, movie-like experiences, with the bulk of a game's play-time provided by substantial multiplayer offerings.

However, as demonstrated by 2001's *Legends of Might and Magic* and many others, simply releasing a multiplayer-only game onto the market isn't enough. These games rely on achieving a critical mass of players to generate a buzz,

attracting new recruits who balance veterans moving on to other games. Achieving this requires money be spent on a huge marketing push to attract player attention and/or on securing the game a recognisable licence. Such high costs contributed to the blockbuster gamble of these games; they either succeeded and generated big profits or failed and dragged studios and publishers down with them. No wonder the guaranteed mass-market appeal of realistic warfare became the default.



↑ HROT is both creepy and bleakly comical

A flexible genre

While the era of sprawling FPS campaigns and varied settings seemed to be over for now, the FPS genre itself would shift to become more of a choice of camera view rather than a specific experience. This period would see survival, narrative, virtual reality, horror, platforming, social deduction, adventure and hand-to-hand combat games all played from a first-person perspective. Perhaps this flexibility in the experience an FPS can deliver

has always been present in the genre; after all, even in the era of fantastical FPSs that we've just covered there was a huge array of gameplay styles amongst all the demons and shotguns.

Classics reborn

With the passing of time, even simply playing the increasingly old games from the '90s and 2000s on modern operating systems became a challenge, and for years it would fall to fans like Samuel Villarreal to release unofficial patches for



1
∞

MORALE
96

SWORD
—

HEALTH
101





↑ Project Warlock looks back as far as Wolfenstein

these games. Villarreal is now employed by remaster specialists Nightdive Studios; his most impressive feat was creating an unofficial PC port of the previously tricky-to-acquire *DOOM 64*.

Passionate fans are one thing, but when companies start getting involved, it suggests that the appetite is large enough to have a chance of making money (after all, while studios might be looking to help preserve gaming history, they still need to make enough profit

to survive). Formed in 2012, Nightdive Studios is one of the most prominent developers working in this space, bringing *Turok*, *Blood*, *System Shock*, *DOOM 64*, *SiN* and *Strife* to modern systems. Another big name from the genre is 3D Realms, bringing back old brands and working with developers like Slipgate Ironworks to revisit *Kingpin*.

The new age

But while plenty of old games are being updated, they have nothing on the flood of



↑ The exploration- and puzzle-focused Hedon

new 'golden age' FPSs being developed. In 2019, 3D Realms released *Ion Fury*, running on an updated version of the Build engine, and *WRATH* and *GRAVEN* are on the way. New Blood Interactive has *AMID EVIL* and the astonishing *DUSK*. Meanwhile games like *HROT*, *Selaco*, *Strafe*, *Prodeus*, *Gloomwood* and *Hellbound* are just a few from the way-too-many-to-list flood of upcoming FPSs evoking the '90s era. Not all of these will be successful, but they do at least demonstrate that this exciting sub-genre is very much alive.

More than nostalgia

The surge of interest in revisiting '90s gameplay makes sense, with the Entertainment Software Association placing the average American videogame player at between 35 and 44 years old. It's a similar story in the UK, meaning there's a huge audience of people who played and grew up with the games of the '90s for whom FPSs mean juggling loads of weapons during long single-player campaigns full of secret doors, puzzles and boss fights, while multiplayer entails



↑ DOOMBRINGER is fast, fluid and punishing

back-and-forth rocket duels with opponents.

Speaking of multiplayer, another potential factor is that on a purely practical level, this older generation of gamers can't compete against lobbies full of 13-year-olds fizzing with energy drinks and insults about your mum. Our reaction time peaks at age 24 and then drops each year, which may be why the average age of the last three *Counter-Strike* tournament winners is 23. That's not to suggest that *Quake* deathmatches were sedate, but

modern FPSs trend towards whoever sees their opponent first coming out on top, with *Call of Duty* players dropping to just a couple of instant-hit bullets. True, years of playing classic FPSs gives older players experience to draw on, but - just as we did at the time - the younger audience has the spare time to dedicate to practice (plus they live in an online world suffused with tips and tactics for pretty much any game you can imagine).

The point is, a huge audience of gamers may be looking back



↑ DOOM received an excellent reboot in 2016

to classic FPSs, not just with nostalgic eyes, but because the who-shoots-first gameplay of modern FPSs has evolved away from what they're looking for. It's not that older FPSs were better, but that they had a distinctive appeal all their own. And it's here - safe from needing to sell 5 million copies to be considered a success - that smaller, able-to-take-chances, indie developers can flourish, with games like *DUSK* proving that modern and nostalgic design sensibilities can live side-by-side in a game.

What next?

Who knows what the future of the FPS looks like, but it's probably safe to say the genre will remain popular for its visceral connection between you and your avatar. After all, no matter what shape the FPS adapts to there's simply no arguing with the satisfaction of battling your way out of an arena, being sucked into exploring an alien world, finding a secret when you're low on health, or nailing a perfect headshot.

UNRELEASED FPSs

For every game we've covered during this period, there were many more that were cancelled and never released. The games industry is a turbulent business, with games, development teams and even entire studios regularly vanishing due to business realities, politics or simple bad luck. Let's end with a quick salute to these lost FPSs.





Unreleased FPSs

Some of these cancelled games will have gotten no further than a pitch or demo, but with marketing costs easily doubling a game's development budget, it can make business sense to simply write off a finished but poorly reviewed game.

The fallen

Several of the games we've covered have lost planned sequels, such as Dark Hermetic Order, the proposed sequel to *Azrael's Tear*, and a couple can almost be considered sequels themselves, for example *New World Order*, which grew from the overly-ambitious, cancelled *Decay*. Other unreleased FPSs from this period include *XCom Alliance*, an Unreal engine-powered FPS in the *XCom* universe, which allowed players to point at locations to direct their AI squadmates. *Alliance* was killed by internal politics when the game's publisher was purchased by Hasbro, which, as a toy company, made several videogame-related blunders. Another is Italian developer Trecision's *Samhain*, a horror-themed FPS influenced by *Deus Ex*. A demo was taken to gaming trade show E3 in 2000 but failed to secure publisher interest,

with Trecision's Federico Fasce saying in an interview on *GenesisTemple.com* that "the talk of the event was actually an FPS, *KISS Psycho Circus*: it was all loud and questionable marketing gimmicks. No one would even notice something moody and atmospheric like *Samhain*."

Team SAS

A direct example is Andy McNab's *Team SAS*, an FPS I worked on for Rage Games for the original Xbox. The game failed to be released despite having the direct involvement of Andy McNab, SAS veteran, author of *Bravo Two Zero* and choreographer on the movie *Heat*. The problem was that while we were creating the Xbox version of *Team SAS*, another studio in the Rage family was working on the PlayStation 2 port. When Rage suffered bankruptcy their teams went unpaid and the other studio moved their developers off *Team SAS* and onto other projects. This meant that while our Xbox version looked stunning, the PlayStation 2 version was nowhere near as advanced; as the PlayStation 2 dominated the market we couldn't secure completion funding.



↑ *The squad-focused, Unreal-powered XCom Alliance*

Historical artefacts

While some of the games in this book can still be purchased or have been remastered, many are now 'abandonware' and rely on fansites to keep them available. The chances of a game being lost to history is compounded for unreleased titles, as they're often tied up in legal rights around who owns what once the developer or publisher shuts down (made even more complex if the game features someone else's IP). Sites like *GamesThatWereNot.com* or *Unseen64.net* along with

institutions like the UK's National Videogame Museum are doing their best to document gaming's history, but with the archiving of unreleased games something of a legal grey area, gaming's 'what if' titles are in danger of being lost.

Retro-gaming archivists continue to seek out leaked builds of games like *GoldenEye* and *Duke Nukem Forever*, demonstrating that fans are still keen on seeing what might have been. Who knows which unreleased FPSs are waiting to be discovered ...



A HUGE THANKS TO ALL THE INTERVIEWEES



Ian and Chris Andrew
Creators of worlds



David Smith
Colonist and explorer



Scott Miller
Opportunity creator



Ken Silverman
Builder and architect



James Hampton
Alien wrangler



John Romero
Father of Deathmatch



David Doak
Time-travel agent



Randy Pitchford
Gearbox visionary



Warren Spector
Provider of choices



Ken Levine
Storyteller supreme



John Howard
Official Spartan



Davor Hunski
Master of the arena



Karl Deckard
Tallon IV Loremaster

AUTHOR THANKS

Special thanks to the ever-patient Sam at Bitmap Books for taking a chance on an unknown writer and for all his work in making this book looks so incredible.

I'd also like to thank Nick Dixon and Mark Brown for their game-developer feedback, and Richard Moss for casting his expert eye over everything. Also, thanks to Karen Giles for proof-reading.

Thanks to everyone who helped with taking tricky screenshots, including Julien Fouillat from *Video-Games-Museum.com*, Terry Greer, David Evans, Max Pritchard, Paul Davies, Richard Moss, *TheWorldofCDi.com*, Trevor Storey, Vinay Saunders, Ian Lightbody and *hol.abime.net*, and particularly to Gonçalo Lopes for his invaluable assistance. Also, to my old colleague Ian Petridge for the amazing cover artwork, Kenney Vleugels for the crosshairs, and Christopher Kelsall for the avatars.

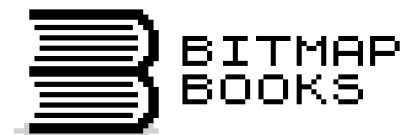
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p224 - *Forbes Corporate Warrior*
p250 - *Z.A.R.*
p345 - *Crimson Skies*

Thank you to Ian and Chris Andrew, David Smith, Scott Miller, Ken Silverman, James Hampton, John Romero, David Doak, Randy Pitchford, Ken Levine, Warren Spector, John Howard, Davor Hunski and Karl Deckard for giving up the time to be interviewed. Also, to Imre Jele, Brenda Romero, Rebecca Grealley, Dan Hewitt and Lizzie Keegan for helping to arrange said interviews.

Thanks to Michael Hitchens for permission to use his definition of an FPS from his *GameStudies.org* article, 'A Survey of First-person Shooters and their Avatars.'

Thank you to anyone who has posted a guide, review, interview, playthrough or list of ultra-obscure FPSs, and of course to the developers who made these games and the dedicated fans keeping the classic FPS torch burning.

Finally, I'd like to thank my wife, Jess, for her patience while I muttered about random games, and my parents for their support while I turned a hobby into a career.



First published in 2022 by Bitmap Books Ltd.

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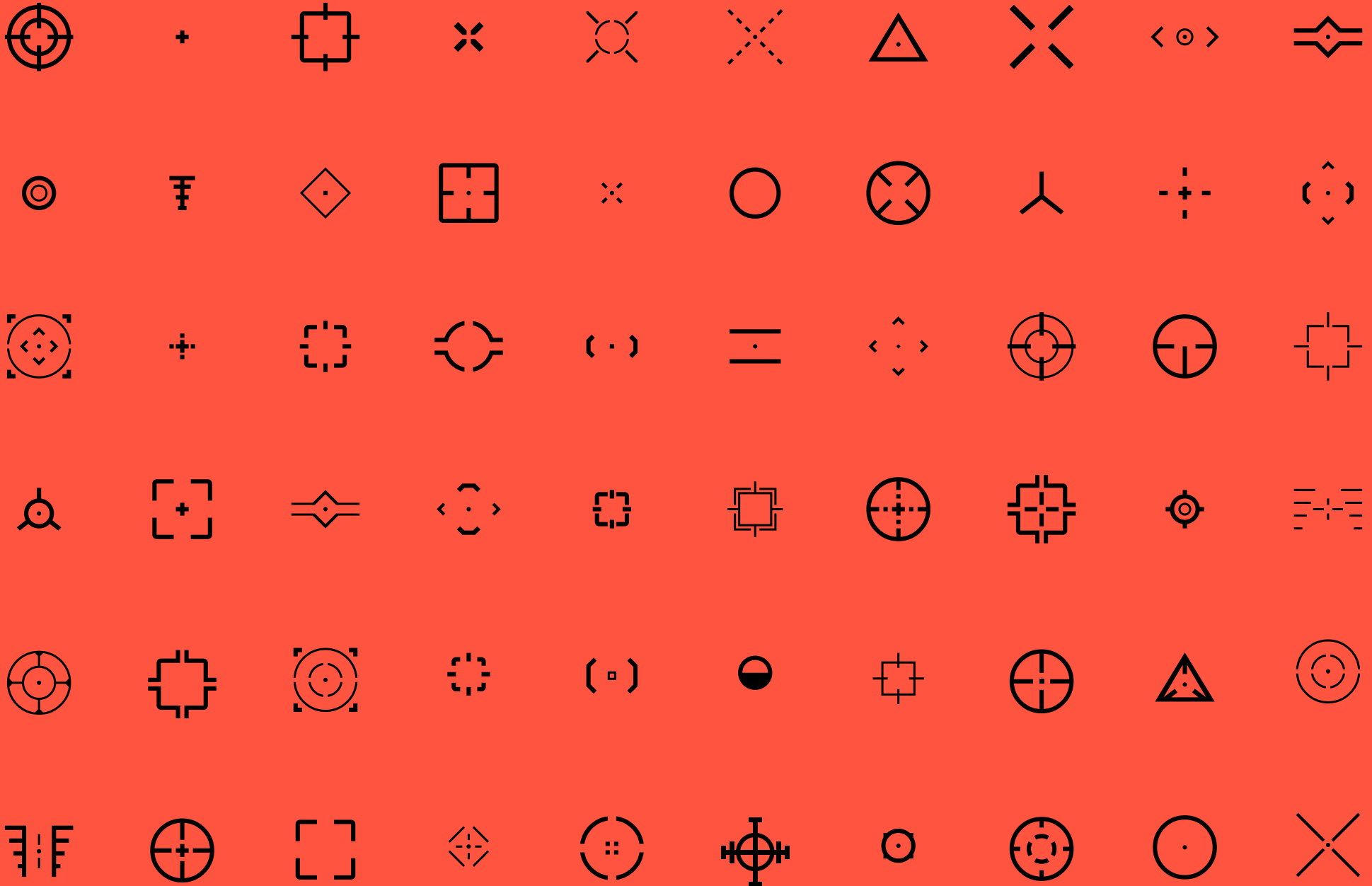
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