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# Wireframe

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INSIDE THE MUSIC  
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BLIND FOREST

## HOTSHOT RACING

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# In defence of boredom

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**C**onventional wisdom suggests that the worst sin a game can commit is being boring. But does boredom sometimes get a bad rap? It's certainly something we're more familiar with these days, having spent time in Covid-19 lockdown. In the early weeks, while it obviously wasn't the biggest concern among the stress relating to vulnerable family members, lost work and, well, everything, I found it was often the most immediate day-to-day issue. But as time (very slowly) wore on, I got used to certain aspects of this boredom. There's something to be said at least for not feeling like you're always meant to be doing things.

Some philosophers have emphasised the virtues of boredom. Bertrand Russell maintained that constant excitement is exhausting and leaves us craving endless satisfaction that becomes unfulfilling, and that slow persistence is the engine of achievement, so "a certain power of enduring boredom is therefore essential to a happy life." Walter Benjamin stated poetically that "Boredom is the dream bird that hatches the egg of experience. A rustling in the leaves drives him away." Here he was referring to how the boring labour of traditional crafts encouraged contemplative absorption of ideas, in contrast to the noisy rhythm of machine work.

It follows, then, that games can also be boring in ways that make them more satisfying. Ponderous pacing, repetitive gameplay loops, and empty environments can be our virtual 'dream bird'. *Death Stranding* is a recent example, which offers an alternative sense of achievement to traditional game challenges. Its theme of bringing a divided America back together is overt, but the process of slowly walking between locations and sharing resources shows what that really means. Rather than a heroic battle, it's a step-by-step effort of heavy



**JON BAILES**

Jon is a social theorist and freelance games critic. He's the author of *Ideology and the Virtual City: Videogames, Power Fantasies and Neoliberalism*.

lifting, balance, and patience. Alternatively, there's *NieR: Automata*, where the boring activity of travelling back and forth across the same ground, especially with side quests, makes space for contemplation. In a game that deals with the reasons for our existence and behaviour, this added time to ponder why you're fulfilling these commands and why you're suited to this role is important. Or there's the way *No More Heroes* contrasts boredom against action and excitement. Here, open-world city traversal sections are strangely empty, but the tedium of running or riding around the streets illustrates the lack of purpose in modern reality. Conversely, the game's missions offer clear direction to Travis, the deluded protagonist.

To me, all these games are flawed gems, but that's in part because they rub against my expectations for instant entertainment and resolution. Russell noted back in 1930 that modern distractions make us afraid of being bored, and that's surely doubly true for today's digital lifestyles. It's hard to adjust to the idea that boredom isn't always something we have to avoid, whether in work, games, or elsewhere. In a world that expects us to be in a state of constant productivity, or to always be jumping to experience the next new thing, being bored because there's nothing to do feels like a curse, but might be more of a luxury.

I'm not suggesting of course that boredom is simply a good thing. Indeed, the games I've mentioned are also all concerned with alienation, and touch on a deep existential boredom that comes from being delinked from humanity. This is a condition we've felt physically in the lockdown, but in a way, it's present everywhere in a society geared towards personal excitement, gratification, and achievement. It's complicated then, but perhaps a little of the right type of boredom, both in games and in reality, can help us relink and avoid a worse kind. 🗨

**#39**



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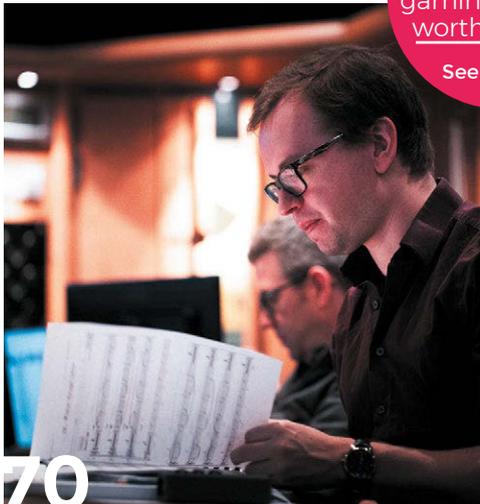
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## WELCOME

And... we're back. Like Clark Kent disappearing into a phone booth, only to emerge moments later with muscles bulging through his spandex, Wireframe's returned in a chunkier, bolder, more monthly format.

For the past few weeks, we've been beavering away at the task of ensuring your favourite games magazine retains the unique feel of its fortnightly incarnation, but with a little bit more of everything: there's now the space for longer features, extra reviews, previews, and in-depth game design guides. Our Backwards Compatible section has grown in girth, which means we can share more of our retro gaming and tech antics with you every issue.

We'll also be showcasing some of our favourite art and design from the indie gaming realm – check out Richard Lems's behind-the-scenes sketches for *Mighty Goose* on page 68 – and sharing a regular diary of our flailing adventures in online gaming (see page 82). And if you're keen to tell us what you think of the new, monthly Wireframe, then you can let us know through our letters page – you'll find details of how to get in touch on page 22.

Most importantly, thank you for supporting the magazine so far. We hope you'll enjoy Wireframe's new phase even more than the last.

**Ryan Lambie**  
Editor



# THE LAST STRETCH

IT'S THE LOW-POLY RACER THAT HARKS BACK TO NINETIES ARCADES.  
SUMO DIGITAL AND LUCKY MOUNTAIN GAMES INTRODUCE HOTSHOT RACING



**“ONE OF THE HANDLING GOALS WAS TO BE SIMILAR TO BURNOUT AND SPLIT/SECOND”**

**T**revor Ley knows a thing or two about racing games. As a 3D artist, he’s worked on such franchises as *Burnout* for EA, and the *Midnight Club* series for Rockstar London. But about a decade ago, Ley decided to take his passion for racing games one step further: he left the triple-A side of the industry, set up his own indie studio – Lucky Mountain Games – and started working on *Racing Apex*, a low-poly racer steeped in the arcade titles Ley enjoyed as a youth. “In the nineties, I used to skip school to go the Trocadero in London,” Ley tells us, referring to Sega’s sadly defunct amusement arcade located near the capital’s Leicester Square. “I played games like *Daytona USA*, *Sega Rally*, *Hard Drivin’*, those kinds of games. So I wanted to go back to something like that. I wanted to do a racing game.”

Ley’s initial prototype was built in Unity, and largely self-funded, but the idea was clear right from the start: an arcade racer that captured the vibrant colours and blue skies of Sega’s eighties and nineties output, and the kind of handling that favours speed and exhilarating drifts through tight bends over absolute realism. The project’s early years weren’t without the odd setback – a 2016 attempt to crowdfund the game was unsuccessful – but then the real boost came in 2018, when Sumo Digital stepped in to co-develop the game.

Now called *Hotshot Racing*, Ley’s pet project is back in a more refined, finely tuned form: the expected quick races and single-player championship modes are joined by a varied mix of multiplayer modes, while the transition from Unity to Sumo’s own proprietary engine means those low-poly cars now streak around the track at a smooth 60 frames per second.

To discover more about *Hotshot Racing*’s story, we spoke to Ley and Sumo Digital development director, Tom Turner. Turn the page to find out what they had to say about the game’s mix of old and new, and why it owes as much of a debt to more modern titles like *Split/Second* as it does to *Ridge Racer* and *Daytona USA*... ➔

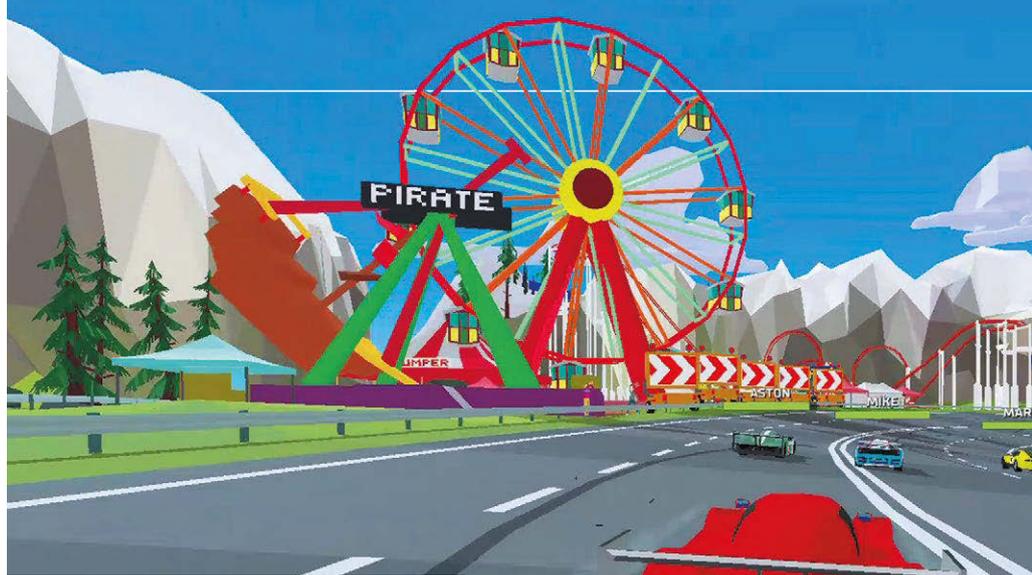
An obvious place to start, but can you talk about how *Hotshot Racing* originally began?

**Trevor Ley:** I've been working on it since 2010. I've worked in racing games pretty much for my entire career at games studios – EA on the *Burnout* games, then moved to Sony to work with some of the *Burnout* and *The Getaway* and designers on *Eight Days*. Then I moved to Rockstar London to do *Midnight Club*. After I left the games industry and became an independent developer, I wanted to do a racing game.

I started off with the Unity engine making a prototype, just working on it and self-funding it for years and years. Then Curve [Digital] got involved, Sumo came along, and without Sumo, it wouldn't be the game that it is today.

So how has the game changed with Sumo involved?

**Tom Turner:** We got involved in the game back in October 2018. We'd done a number of projects with Curve Digital, and their upper management came to us and said there's this awesome opportunity to bring Trev's baby to fruition. We saw the prototype that Trevor had got together in the latest build, and we basically just fell in love with it. It was such an awesome homage to those good old days Trev refers to. We've got extensive experience in our studio. Recently, the Nottingham studio – we're the team that worked on *Hotshot Racing* – just recently shipped *Team Sonic Racing* with Sega, but Sumo has a long

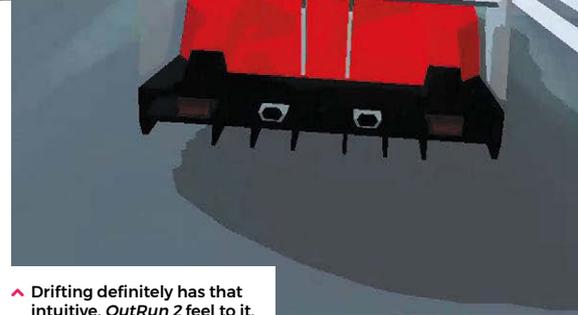


history with Sega on the *Sega All-Stars* racing games, and dating all the way back to *Burnout*, which we also worked on.

We've got our own bespoke Sumo game engine, and editor tools that are specifically tailored towards driving experiences. We've got a huge range of different tools for tailoring handling models and track design layout – it's something we're really focused on and excited about in the studio. So the opportunity to work with Trev and bring this game to fruition was really something we couldn't pass up. We've had the team at Nottingham working on it now for just over 18 months; we've had a peak team of about 30 people on the project, and it's just been a joy to work on, really.

It's on a proprietary engine now, rather than Unity, then. What prompted that move?

**TT:** When we looked at the build that Trev had, we had a decision to make, which was that if we're going to move forward with Unity, bringing the handling model right bang up to date in terms of what modern racing fans would expect, there would be a heck of a lot of work to do on the Unity side. And to be honest, that's not an



▲ Drifting definitely has that intuitive, *OutRun 2* feel to it.

engine we have a great deal of experience in – we have some people who've worked on Unity games, but at the time we were closed to shipping *Team Sonic Racing* on our proprietary technology. So rather than starting from scratch, we basically built the game in our engine, and we had that head start – all the team were up to speed with the tools, and an engine that was focused on that driving experience.

**TL:** ...and thanks to that, the project got the 60 frames per second, which is obviously very important. We've got the multiplayer things as well, which are a key aspect of it, and as Tom said, the handling was key, so one of the handling goals was to be similar to *Burnout* and *Split/Second* – so very modern in its weightiness and driftiness and things like that, but with the retro vibes around it, which we got from the Sumo engine as well.

So what were those first few years like, Trevor, when you were making it in Unity? Because you're a 3D artist, right? Was it a learning curve for you, creating the prototype?

**TL:** The way I worked was, I would do contract work for other companies – so I would do contract work for Sony – and I'd use that money to pay a programmer to put my art into Unity. So that was the way the game was developed and prototyped. I always had a programmer who I contracted





“THE KEY FOR US IS THE FEEL OF THE DRIFT - OF NAILING THAT PERFECT LINE”

Hotshot Racing's Cops and Robbers mode recalls Taito's Chase H.Q. and certain pursuit modes in the Burnout series.

Hotshot Racing's roster of characters also add to the game's colourful retro vibe.

to work with over the years, and that's how we got all the technical aspects done. And I did all the vehicles and track parts up to that point.

From that, the team at Sumo have taken the art as inspiration and cranked it up to eleven. So it's still in the same low-poly art style, but it's a lot more modern and a bit more detailed than the earlier games.

I was playing it this afternoon, and there's that really nice taut, arcade feel to the handling, which is quite hard to articulate. So what's the secret of getting that feel right?

**TL:** Iteration! Because we did go through a lot of handling models with the guys at Sumo. They had all the inspiration as well, so they had copies of *Split/Second* and other games they were referencing. So it's been continuously iterating on it to get it where it is now.

**TT:** The key for us is the feel of the drift as well - of nailing that perfect line, where you're just haring around that corner, and you're holding it for as long as you can, as long as you can, and then release and go down the straight. It's just that feeling of being an absolute demon driver - that's the key for good arcade-style racing; it makes you feel like a don, basically, when you're driving, but you don't quite know why - it's just when you nail one of those corners, it feels fantastic.

That's what I think we've got here - you're harking back to those days of *Ridge Racer* and *Daytona USA*, those amazing corners that seemed to go on forever, and you're holding it, holding it, holding it, and you're off hurtling down a straight. It's that adrenaline and feeling the master over the controls and the handling. But obviously, in simulation terms, you don't really have that kind of control. So it's giving that feeling and that exhilaration, and just enough play within there, that you feel like you could mess it up, or you have managed to just hold on long enough to nail a tough corner.

I suppose the non-player AI feeds into that, too - you want to feel like you're driving against strong competition, but then you don't want to have that rubber banding you sometimes get in karting games.

**TT:** It's about having the right amount of aggression within the [non-player] cars as well. So you have different kinds of encounters with the cars - you're getting roughed up, you're able to affect them. It's not just, as you say, a car hovering over your shoulder, and you think you've got rid of them, you're racing really well, but you look in your rearview mirror, and they're still there, hovering behind you.

Again, our engine has gone through numerous iterations over the years of honing that AI experience. It was about tailoring that to the kind of tracks we wanted to give the player within our game. Having the right amount of rough and tumble on the track, but also letting the player get on and race was a key balance we had to strike. ➔



### TREVOR LEY

His ultimate arcade racer? "I'd say *OutRun 2*, and *OutRun 2006: Coast 2 Coast*. Obviously, with the Ferrari licence gone, you can't really play those games any more. But we've got a bit of the *OutRun*-style drifting on in *Hotshot Racing* at the moment."



**“IT WAS ALL ABOUT PUSHING THE DETAIL AS FAR AS WE COULD”**

▲ The game's low-poly style means it looks stylish and will run smoothly even on the Nintendo Switch.

▼ It owes a debt to old arcade games, so are we likely to see a coin-op version of *Hotshot Racing*? “We would have loved to, but it's more expensive than you might think,” Curve Digital tell us. Bah.



Of all these things we've been talking about, what's been the biggest challenge you've come up against in development so far?

**TT:** I think for us, getting that performance there. The art style is so deceptive, because you might think, 'Oh well, you're just chucking a bunch of polygons around, so surely it should run at 60 frames per second right out of the box'. But you have to be considering the world design, and how much you're cramming in there. You've got to consider how much you'll be drawing as you're racing around these tracks. And as Trev said earlier, having that 60 frames per second experience was really key for us.

Also, we made the Switch the lead platform on this, so we wanted that consistency of experience on all platforms. We took the Switch as our benchmark: we've got to make it run absolutely butter-smooth on the Switch, and then we should be in the perfect place to replicate it across the other systems, given the extra power you've got available there.

That was really it: making sure we had the performance targets to complement the gameplay we were shooting for.

**TL:** As Tom mentioned, the art style looks low-poly, but it's actually quite high-poly. In most games, for a road, you'd have a couple of quads, and then a road texture with all your road lines and things like that, but everything in the environment [in *Hotshot Racing*] is polygon-based – all the road markings are separate polygons, overlaid. Window panes and little slashes for reflections – that's all modelled in as well. So it's all quite high-poly.

How has that art style evolved as you've progressed?

**TL:** In the Unity game, I was aiming for something closer to *Virtua Racing*.

Do you refer to real-world physics of cars when you're making this? Obviously, you can take all kinds of liberties in an arcade racer, but at the same time, are cars based on the movements cars make in the real world? Body roll, steering, that kind of thing?

**TT:** Our tools for setting up cars have a huge range of variables and values we can tweak and play with. The game itself has four different base cars that we've tuned to give very different experiences and handling, so you can pick one to suit your play style. It wasn't a route we intended to go down to the nth degree – the amount we have in there will give a decent bit of variety, but we weren't focusing too much on the simulation aspect of it. I mean, it was to give a bit of variety in the different cars, and still keep it really fun and keep the action flowing.

**TL:** One of the main goals for the handling was that drifting would be easy for anyone to do, but hard to master. So straight off the bat, we wanted players to be able to learn how to drift in their first races, and then over time, they'd hone their lines and master hairpins and cornering and things like that. So there's a bit of depth in it as well.



**TOM TURNER**

Ultimate arcade racer: “For me, it's got to be *Daytona USA*. That was my real first racing love in the arcades. It blew my mind, seeing that in all its polygonal glory. And let's not forget the awesome experience that was *Ridge Racer* with the three massive screens in front of you. So you had the full field of vision in the Ferrari. That was definitely an eye-opener.”



Very low-poly, then.

**TL:** Yup. Because at the time that was the only way I could get anywhere close to the high frame rate in Unity. But what the artists at Sumo have done has ramped up the art style – it's more a mix between the past and what you'd expect nowadays in a modern racing game. But if we made it look like *Virtua Racing*, then there's already *Virtua Racing* out there on the market on Switch, for instance, so it has a style of its own now.

**TT:** It was about raising the detail as much as we could without breaking the vision for the game. We didn't want it to look like a simplified, modern environment – we wanted it to look like the most detailed eighties, nineties homage we could manage without breaking that feel to the game. It's difficult to explain, but it was all about pushing the detail as far as we [could] without going too far.

It's about what you leave out with this sort of aesthetic, isn't it? I wonder if that's why beyond nostalgia, this look is still so appealing – it creates its own alternate reality that's fresh and inviting.

**TL:** Yeah, that's true. Most of the modern racers you get nowadays are all going for licensed cars, 30,000 polygons per vehicle, HDR lighting, and crazy effects like that. Whereas this is back to the arcade style – it's about the racing action and the speed of the visuals.

And you have the Cops and Robbers, as well, which sounds like something you'd have got in *Burnout*.

**TT:** Yeah, so as well as GP, Time Trial, and Quick Race, we have two multiplayer modes in there. We've got Cops and Robbers, which is an infection mode where you start out with a team of robbers and a single cop car, and basically, the robbers are trying to get away from the cop, and there are various checkpoints you'll pass and you'll accumulate cash, but the cop is in pursuit, crashing into the robbers, and if you do enough damage to them, they'll eventually convert to another police car – hence the infection term. So eventually all the robbers will get converted into cops, and it's the last player standing at the end.

The other mode we've got is Driver Explode, which is a little bit simpler – basically, you've got to maintain a top speed as you're driving around. If you dip below a certain level, your car runs the risk of exploding. So as you're going around the track, you're trying to keep your speed up, but then when you're close in the pack, you're trying to do what you can to bump players into barriers, or just do anything to get them to slow down and trigger that countdown on their car. We've got that in online multiplayer, and you can also do it in single player with AI cars.

When it comes to multiplayer, have you relied a fair bit on player feedback for refining that?

**TT:** Yeah, we've done internal playtests and some slightly wider tests. We haven't gone



Yes folks, there's also a first-person view if you want it.

out with a beta demo or anything like that yet. I think the game modes are always a thing where you're trying your first iteration and then what sounds good on paper isn't going to be what's good in practice. Those are the things we've been spending a lot of time honing and gaining feedback from within Curve, within the wider Sumo group, and of course, Trevor's been pivotal to all of this, because it's his baby.

In addition to the online multiplayer, we also have four-player split-screen. It's a feature that I feel like, in the last 10, 15 years has gone slightly out of vogue, but it's definitely something players appreciate now – particularly in these kinds of times [in lockdown] – than ever before.

As you say, it's a mode we see less of in racing games these days. So was that a must-have from the beginning, the split-screen multiplayer?

**TT:** Definitely. It was something we all agreed on right at the start that we couldn't really ship without. The ideas for what became those game modes – we always wanted something highly competitive, where you'd probably end up shouting and cursing at everybody. It's one thing to do that online, but I think back to my own teenage years, 20-plus years ago, those were some of the best Friday nights – everybody gets around the TV and just kicks the you-know-what out of each other. We felt like the vision for this game played into that perfectly. 🗨️

*Hotshot Racing* is due for release this summer on Xbox One, PS4, PC, and Switch.

"It was really important for us to have four-player split-screen," says Turner.





# Honk if you love explosions

It's Metal Slug... with feathers. Introducing Mighty Goose

## Info

**GENRE**  
Goose-'em-up

**FORMAT**  
PC

**DEVELOPER**  
Blastmode

**PUBLISHER**  
Blastmode

**RELEASE**  
TBA 2020

**D**espite the promise of its title, 1978's *The Wild Geese* wasn't about waterfowl at all, but rather a war film starring Roger Moore and Richard Burton. Thankfully, last year's *Untitled Goose Game* finally gave this underrated bird the celebrity it deserved; and now, along comes Richard Lems's *Mighty Goose* – a run-and-gun action-fest that is inspired by the likes of *Contra* and *Metal Slug*, but replaces those games' muscle-bound heroes with (you guessed it) a feathered bounty hunter who likes to fire guns and ride around in military vehicles.

If the style of the gorgeously outsized explosions and sprite designs dotted around these pages looks familiar to you, that may be because Lems's work has graced the pages of *Wireframe* in the past. Last year, he worked with developer TurtleBlaze on its 2D *Metroidvania*, *KUNAI*, and was responsible for creating its Game Boy Color-inspired artwork. Now, though, Lems is going it alone, having set up his own

indie studio and committing fully to his debut title. Interestingly, Lems says he came up with his goose character several years ago – so a while before House House unleashed its own obnoxious goose on the world – when he was roughing out ideas in his sketch-book.

Before long, Lems had his concept worked out – that of a combat-ready goose sent out to fight an army of one-eyed humanoids collectively known as the VOID. These blue-clad enemies are heavily armoured and have a seemingly inexhaustible supply of tanks and other sci-fi hardware, but fortunately, our goose isn't a slouch in the weaponry department, either: the bird's wings are fitted out with a pair of gigantic cannons, while its robot legs allow it to leap around the screen with ease. In addition, there'll be four weapons to pick up, and four vehicles to uncover as you progress through the game's five stages. "One of my favourite vehicles is the Mono-Bike," Lems tells us. "It's a fast-moving ground vehicle which can do agile bunny hops. The player can increase its speed even further by using its boost ability, which sends the bike flying in the current movement direction. It's just one of those vehicles which is cool and silly at the same time. It totally fits *Mighty Goose*."

In line with those run-and-gun games of the past, *Mighty Goose* will soon ratchet up the challenge. "I'm designing the game to start out easy and ramp-up to ultra-tough as it progresses," Lems says. "I want it to be tough in a fair way, though. Relying on memorisation rather than skill is something I want to avoid. I'd rather draw inspiration from *Metal Slug*, where every death at least feels like it's the



▲ We've seen a fair few run-and-gun games come out lately, but Richard Lems's distinctive artwork really sets *Mighty Goose* apart.



player's own fault. Speaking of ultra-tough, the final mission is going to be near impossible. I'm sure there'll be individuals out there who will still be able to manage [it], but those will be the exception rather than the norm."

If the idea of a relentlessly tough final stage fills your heart with terror, though, fret not: as well as those weapons and vehicles mentioned above, there'll also be upgrades and unlockable companions that, Lems says, will help even the odds for the less skilled players out there. "A lot of these are hidden and have to be found first," Lems explains. "Through customisation and experimentation, players will be able to make a 'build' to tackle the difficult segments of the game in a different way. Some of these upgrades and side characters are intentionally overpowered. Part of the design philosophy in *Mighty Goose* is that when the player has invested a fixed amount of time in the game, it's only natural to reward them with the power to break the game. It's just fun, like a modern version of the cheat codes we used in old games."

Since *Mighty Goose* is a solo project, Lems is handling pretty much every side of development by himself – all except the synth soundtrack, which is being handled by Swedish composer Dominic Ninmark, whose work you may have heard on another cracking run-and-gun title, *Blazing Chrome*. "When working on a game solo, it's easy to get lost in the details and lose track of the global scope," says Lems. "There are days when you've worked on a load of stuff, and at the end, you're like, 'What have I actually

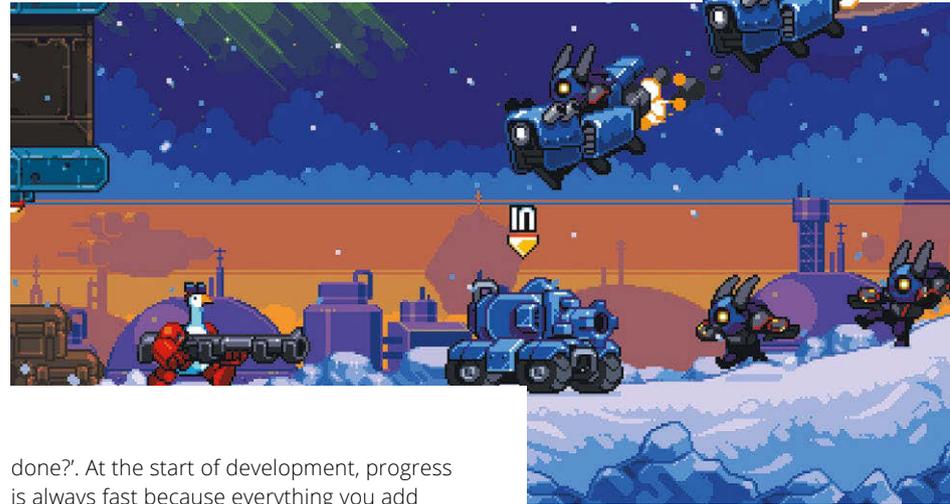
**"Speaking of ultra-tough, the final mission is going to be near impossible"**

done?'. At the start of development, progress is always fast because everything you add feels like a major step forward. As the game project grows larger, that feeling of a major step forward becomes more rare. Finishing stuff is challenging, the instant gratification is mostly gone. It's true for most projects, also outside of games."

Despite all this, *Mighty Goose* has clearly made considerable progress over the past few months or so – partly because he's building the game using the Construct 3 engine, which allows him to try out ideas and iterate quickly without getting bogged down in writing line after line of code. "I'm sure it gets frowned on in some circles," Lems says

of the engine. "I've seen the term 'Fisher-Price game engine' dropped, but I'd say it's the perfect tool to get any technical barriers out of the way. It allows me to focus on creating rather than technical details."

*Mighty Goose*, then, is shaping up to be a bullet-soaked, explosive delight. Its action is zippy and slick (apart from the slowdown that occurs when something huge blows up, which Lems intentionally added for dramatic effect), its pixel artwork packed with character. Here's hoping the game ruffles a few feathers when it emerges later this year. 



▲ Like *Metal Slug* before it, *Mighty Goose* will occasionally let you hop into a tank to change up the game's tempo.



**MASCOT MAYHEM**

As well as old military action games, *Mighty Goose* also has its creative roots in an early nineties era of mascot platformers – an era dominated by the likes of *Sonic*, *Rocket Knight Adventures*, and, er, *Bubsy*. "Growing up in a time where cute and cool animal mascots were the standard has left its mark on me," Lems tells us. "But also a big part of that cute side is due to my life partner, Diane. She's a person that doesn't really enjoy being in the spotlight but gets great satisfaction from seeing the joy that those cute characters bring to people. When we collaborate on a game, it's probably going to end up looking cute!" For more of Lems's goose-tastic artwork, check out page 68.

▶ Each of *Mighty Goose*'s five stages represents a new mission. Lems says he still has the last two stages to finish up before release.





# Mira's Tale

Bloody students, sitting around, making exciting-looking action romps

## Info

**GENRE**  
Action adventure

**FORMAT**  
PC

**DEVELOPER**  
Canalside Studios

**PUBLISHER**  
Canalside Studios

**RELEASE**  
August 2020

# A

n ongoing project at the University of Huddersfield, Canalside Studios sees a team of game design students come together as part of their course to create and release a game. This year's effort is one *Mira's Tale*, a platformer leaning heavily on a grappling-hook gimmick and, frankly, a game that looks better than you might expect from a team of eight students (and the tutors who manage the studio).

Mira – she of titular fame – is tasked with saving her family and village from an ancient curse she herself has unwittingly released on them. It's your typical fantastical adventure fare from a storyline perspective, and it's backed up by a decent set of mechanics: you run, jump, climb, and glide around environments, solving light puzzles along the way and making heavy use of that grappling-hook to get around. One factor that stands out is how this young team is attempting to bolt on additional challenges for more experienced players – this is no throwaway half-baked thing, instead offering more difficulty for those who might find the regular action a bit on the easier side.

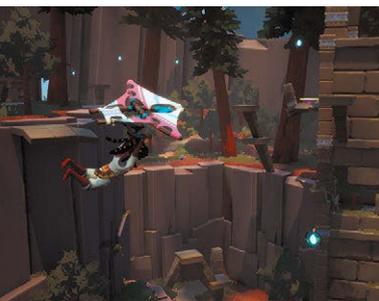
"We've tried to hit two birds with one stone here," explains Josh Pritchard, one of the student developers. "[There's] a fun set of mechanics for those more experienced in games, accompanied by a story that allows people who haven't played so many games before to get just as much out of the game as anyone else would." That desire for complexity wasn't there from day one, with an awareness that what became *Mira's Tale* would need some strict limitations in place right

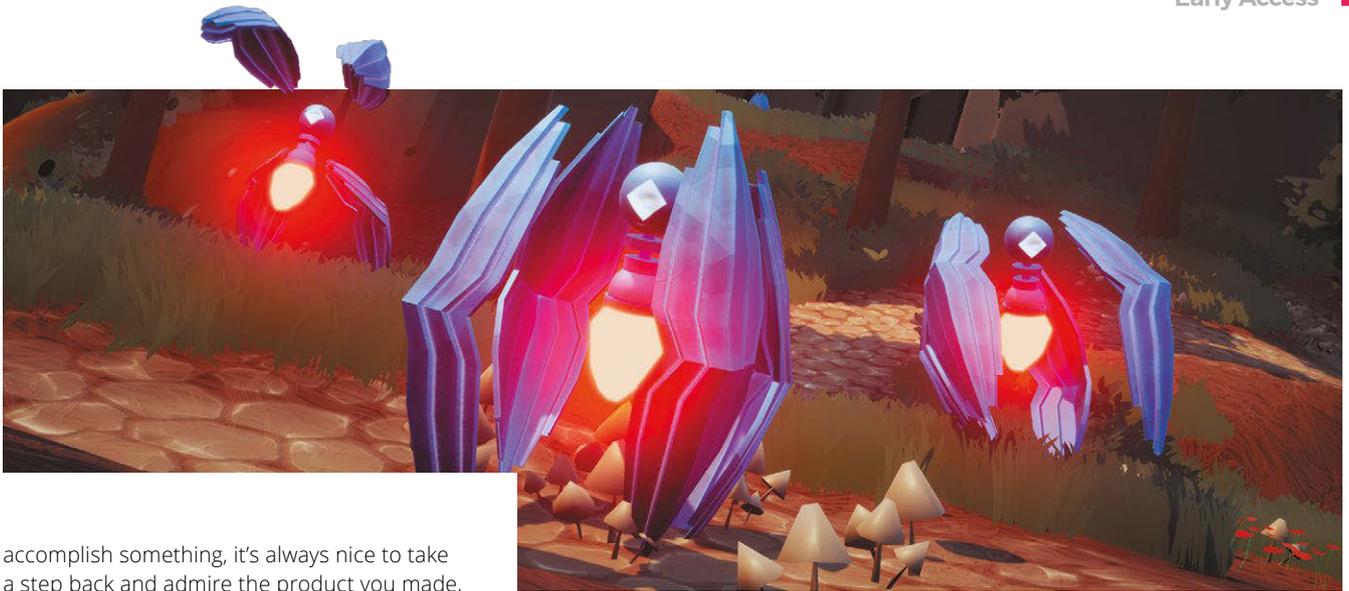
from the off: "With only one C++ developer, we couldn't pick anything too complex," says Pritchard, "but we also wanted to pick something to showcase the abilities of all our artists."

The decision for a platformer with traversal mechanics came soon after, and *Mira's Tale* was born. A pretty straightforward genesis for any gaming project, sure, but one with a background of lazy jokes about students, drinking, and any number of tired *Young Ones* references littered through a preview. Oh, but wait... "The most important thing to note about Canalside Studios is it's 95% run by us eight students," Pritchard says. "We define almost everything, from the concepting process, the development tools, and the genre all the way to the major decisions. For the most part, we keep each other accountable, and have an effective structure where we all have roles that suit our strengths. Where a publisher might be influential in a game's content, this one is pretty much all down to us. The only thing we had to do was pitch the game to the tutors before we began development."

So less lazy, more 'early prep for studio management', then. The team's tutors do check in and help out when required, but this is a largely autonomous project: a game made by students with the express intention of releasing *and* selling it. It's a lot of pressure for the team, but at the same time nobody is getting carried away with their expectations – and that's a big help, as *Mira's Tale* might just surprise a few. "It's symbolic of how far the industry has come in such a short space of time really, but modern games and modern audiences expect a lot from games," says Pritchard. "Whenever you

▼ The *Zelda* influence is something worn proudly on *Mira's* wrist. The game, not the character. She's just wearing a wristband or bangle, not an influence.





accomplish something, it's always nice to take a step back and admire the product you made, but when you're doing the real thing, it's like: 'Yeah, cool, time to get moving on the next thing' – of which there are plenty."

While traditionally projects from Canalside have been made in Unity, this time around, the decision was made to pivot to Unreal – visual scripting and the speed of iteration when using blueprints being two big factors there, though it's not all been plain sailing: "Unreal is still a difficult engine to work in, and it took our programmer at least a month or two to get up to speed with it," Pritchard explains. "Having a skilled blueprinter has been a godsend, but I don't think we'll ever stop discovering all those little quirks with Unreal engine that make it so tricky to use."

Being thrown in the deep end as the team has, each individual has had to pick up all manner of new skills – not just a different engine, but marketing a game, project management, even seemingly simple things like making a decision; it's all had to be learned or brushed up on while doing the job. "As time has progressed, and especially recently, we've got stricter with ourselves, and it's lent itself to better planning, which we've all improved at," Pritchard says. "We've got a clear road map to our release date now, and it's pushing us harder than before. You can easily imagine the impact Covid-19 has had on communication as well. Regardless, planning and sticking to road maps has definitely been the hardest thing for us."

But, of course, this is the process of making a game – there is fun to be had. And when you're making a game and putting it out there, it means it's something you can share with peers, and something you can get direct, instant feedback on. "As soon as we started to post about our game on social media, people started getting interested, and kind comments came

rolling in," says Pritchard. "It's really nice to have your work be actually appreciated by people who might even buy your game... Sometimes, just knowing that there are actually people out there who are going to enjoy what we've put so much time into [is what keeps us going]."

The team hopes the game will do well, of course, but there are few expectations *Mira's Tale* will take over the world. Instead, it's just a healthy dose of optimism: "Honestly, our hope is just that it's going to find an audience, and they're going to enjoy it,"

admits Pritchard. "Obviously we would love for the game to be wildly successful and make us loads of money so we can all live in super-sparkly accommodation next year, but the likelihood is it's not going to be like that. As far as the game goes, we just want it to be enjoyed by a decent group of people." Hopefully, it'll make enough that those 300 years of loan payments are a little bit smaller. 🗿

**"The most important thing to note is Canalside Studios is 95% run by us"**

^ While inherently terrifying in that they're not like any spiders we've ever seen before, these little blighters do have one thing going for them: they're not spiders.

✓ The world created is imaginative and bright, and while you're not getting your UE5 demo level of geological features, there's still a real charm to things.





## Grim up north

Back to the divided eighties for a few pints of Landlord's Super

### Info

**GENRE**  
Thatcher-'em-up  
**FORMAT**  
PC  
**DEVELOPER**  
MinskWorks  
**PUBLISHER**  
The Yogscast  
**RELEASE**  
2021  
(out now in Early Access)

▼ Prymachuk hasn't yet implemented the ability to drive - nor is it guaranteed - so right now it's a case of taking the bus or pootling along with your wheelbarrow.



Saving the world, being the hero, fighting the good fight - it's all well and good, but it's not really representative, is it? It doesn't show what life is or was really like for anyone. Video games focus so heavily on the hero narrative; on players being the central cog in a vast machine of Good and Glory. It's all a bit boring, really. *Landlord's Super*, meanwhile, plops you in a caravan, gives you a run-down ex-council house to renovate, and lets you nick cement from people's gardens. Even now in (very) Early Access, it's sublime.

Set in the fictional town of Sheffingham, *Landlord's Super* paints a vivid picture of 1980s Britain: right-to-buy; Thatcher; an unerring sense of a general rumbling grievance with most facets of day-to-day life; grotty pubs and terrible beer. It's striking how *real* (and note this comes from a northerner who grew up in a poor northern town in the eighties and nineties) it all feels as

you wander around town, looking for something - *anything* - to do. This is a fake place borne of a real world, of real situations, of real problems that are still very much apt to this day. It is, in short, a highly politicised game masquerading as a bit of a jolly, where you can wee in a cement mixer if you want.

Greg Prymachuk is behind *Landlord's Super*, his dev company MinskWorks supported by The Yogscast on publishing duty.

After achieving some success with 2018's *Jalopy* - a game that saw you driving (and repairing) a battered old car through eastern Europe - his attention turned to something more personal. "I wanted to be able to buy a home," Prymachuk explains, "but I couldn't afford the deposit. I was someone doing alright, too; it was off the back of *Jalopy* and for the first time in my life I was earning a nice middle-class income. I thought that was a bit terrifying, to be honest, so I started looking into how the country got into this housing crisis. That brought me to Thatcher's Right to Buy and the UK 'bang' period of the 1980s."

The research and realisation just happened to coincide with what was becoming MinskWorks' next game: a house building simulator. While the project was originally intended as a pure building sim, the release - and success - of *House Flipper* put paid to that notion. This would have to pivot to become something more, to add a 'but that's not all' onto the package, as Prymachuk puts it. "It came time to pick a new project to get the bills paid," he says. "And the two elements, [the genre and setting], just fit together like chips and gravy."

While initially, it might have been about the practice of bricklaying and shingling, that aforementioned time and place impacted things massively. Putting things in an English regional setting – a vague mishmash of The North and the Midlands – meant this couldn't just be aspirational profiteering, the sort of thing you'd see a reality show made of today. The march of the political statement was inevitable. "It's been really surprising that there hasn't been much – if any, really – typically negative political reaction from players," Pryjmachuk says. "Maybe it's the nuance, or maybe it's just because I'm a white man. Either way, a lot of it is lost on players. We're Early Access and asking people to report whatever they find at fault, so of course, someone reported that the logo's flag is upside down without considering why that might be.

"I was reading a comment the other day," he continues, "about me doing a good job at making a British-themed game, because clearly, I'm Baltic because of my last name." This isn't the case, Pryjmachuk explains, with his grandfather arriving as a displaced person and aiding in the post-war rebuilding effort. "His story isn't unique. Post-war Britain was helped by immigration from all over, and we were stronger for it, until the whole 'No such thing as society' [Margaret Thatcher, 1987] came about... We should never forget that."

*Landlord's Super* is bleak, there's no getting around that. It wouldn't be honest if it wasn't downcast, and it leans into this aspect with a desaturated, rough-VHS look to things. Your goal is to renovate a house given to you, to take advantage of the situation you've inherited – as one character in the game says, "You need to get in there first and get your little bit, otherwise it's all gone, and no one is buying spuds for you."

You have your targets, your gamey bits, your objectives, your subquests, NPCs, and everything else. But it's not particularly aspirational. It's that new beginning offered by the UK's monetary policies in the eighties, viewed through the lens of a millennial living at the tail-end of it all. And in that way it's effective.

Out now on Early Access, *Landlord's Super* is taking full advantage of the public beta testing this release format offers. The game is intended to be the pre-release version, with updates for

### "I started looking into how the country got into this housing crisis"



▲ For a certain subsection of our readership, this will be a very familiar illustration of the past in certain parts of Britain. Jarringly so, in fact.



▲ Of course it's not all getting drunk and weeing everywhere – there are housebuilding tasks to be done. Unless you do just want to get drunk.

about a year ("So probably two," Pryjmachuk jokes) before the finished version releases. Pryjmachuk is also keen to point out that while he's the main development force behind the game, *Landlord's Super* is the work of a team. "My partner Rūta joined me last year to do a lot of the 2D art and concept work and actually make things like nature look like nature," he says. "We're also honoured to have Jeremy

Warmsley doing the soundtrack again, which features Pete Fraser on saxophone. A lot of bug-chasing and suggestions also come directly from

the community. And of course [publisher] Yogscast has helped hugely with getting it to where it is.

"The game wouldn't be what it is without all these people. I like to make a point of this because... it's important our industry starts being sincere about how games come about. They're not just the results of one creative director's delegation, no matter what the cover says."

So in game development, at least, there *is* such thing as society. 🗺️

## BABEL

*Landlord's Super* is riddled with regional dialects from around the UK, so it's not one everyone might understand at first glance. As such, it includes an option for American English translations – a joke in itself, but a calculated one nonetheless. "The North American localisation is more a reread of the classic gag 'Did anyone understand a word of what the Brit just said?'," Pryjmachuk explains. "But also people don't like feeling like they're being left out of the joke, so it's also to save the Steam review rating."

# Headlines

from the virtual front



## 01. Dying Light 2 not dying

Polish studio Techland has been parrying claims that its upcoming *Dying Light 2* is 'a total mess', following a report by PolskiGamedev.pl. Said report cited an anonymous studio source who claimed disorganisation, low morale, and an inability to make the game work around its core choice-led story mechanic as reasons why the dev process is proving difficult. The game has seen delays, but outwardly things were looking rosy. Techland quickly retorted, claiming the article's translation to English as "totally inaccurate", that development of the game "is moving forward", and the game is "in good shape." That's the hope, because the first game was amazing, and the second has a hell of a lot of potential. Hat-tip to VG247 and Eurogamer Poland on the translation.

## 02. Figures in isolation

It's one of those news stories sent by a company advertising its product, sure, but *it's still interesting*: a study of 70,000 of its users by Yolt, a money management app, has shown marked increases in gaming spending during the Covid-19 lockdown. Surprising? No. Fun to see numbers? Hell, yes. According to the company, between February and April of this year spending on Nintendo games and hardware increased a whopping 335%; Steam purchases went up 251%; PSN buys leapt 158%, and Xbox Live cash-lobbing grew by 137%. What do these numbers mean in isolation? Not a huge amount, beyond the excellent pun. Have you seen your gaming spend increasing? Let us know: [wireframe@raspberrypi.com](mailto:wireframe@raspberrypi.com).

## 03. Animal museum

Nice things! The Centre for Computing History in Cambridge is, like most other event and space-based organisations, struggling in the current situation. You know, with people not being allowed or wanting to go to places, and the museum itself unable to go on the road and into people's houses. Until now! Sort of. Design and communications officer Katrina Bowen has recreated the museum in *Animal Crossing: New Leaf* (yes, the 3DS game), allowing people anywhere around the world to see a tour of the digitally recreated museum. For now, it'll do. You can watch the tour right here: [wfmag.cc/CCHAC](http://wfmag.cc/CCHAC).



2K's *Mafia* trilogy returns as remake, remaster, and re-release, respectively

SteamDB dev claims Valve working on loyalty scheme, discounts and all, for Steam



## 04. Strategic advance

Strike this one up as 'unexpected': MicroProse is back from the dead. The publisher of strategy classics such as *Civilization* and *UFO: Enemy Unknown* had been off the map since around 2003 when then-owners Atari closed down the final studio bearing the name. The brand was purchased by ex-Bohemia Interactive developer David Lagettie last year, and the reformed MicroProse went on to announce three new games under the publishing label: Triassic Games' *Sea Power*, Drydock Dreams' *Task Force Admiral*, and HexDraw's *Second Front* – all strategy titles. Plans are in place to release a further 20 or so titles, with Lagettie saying the publisher would move beyond just strategy, though that genre would still be the main focus.



## 05. Pass-ed the test

Hey, let's stick with the lockdown theme, because why not, eh? Sales of Xbox games might not have rocketed up as much as on other formats, but that's probably because loads of people have got involved with the excellent Xbox Game Pass subscription service. Microsoft head of communications Frank Shaw revealed over ten million people have now subscribed, while Xbox big boss man Phil Spencer pointed out some whopping increases, with 23 million more friend adds ("a 70% growth in friendship rate") and an increase of 130% in people playing multiplayer titles through Xbox. It's almost like games are good at killing boredom...



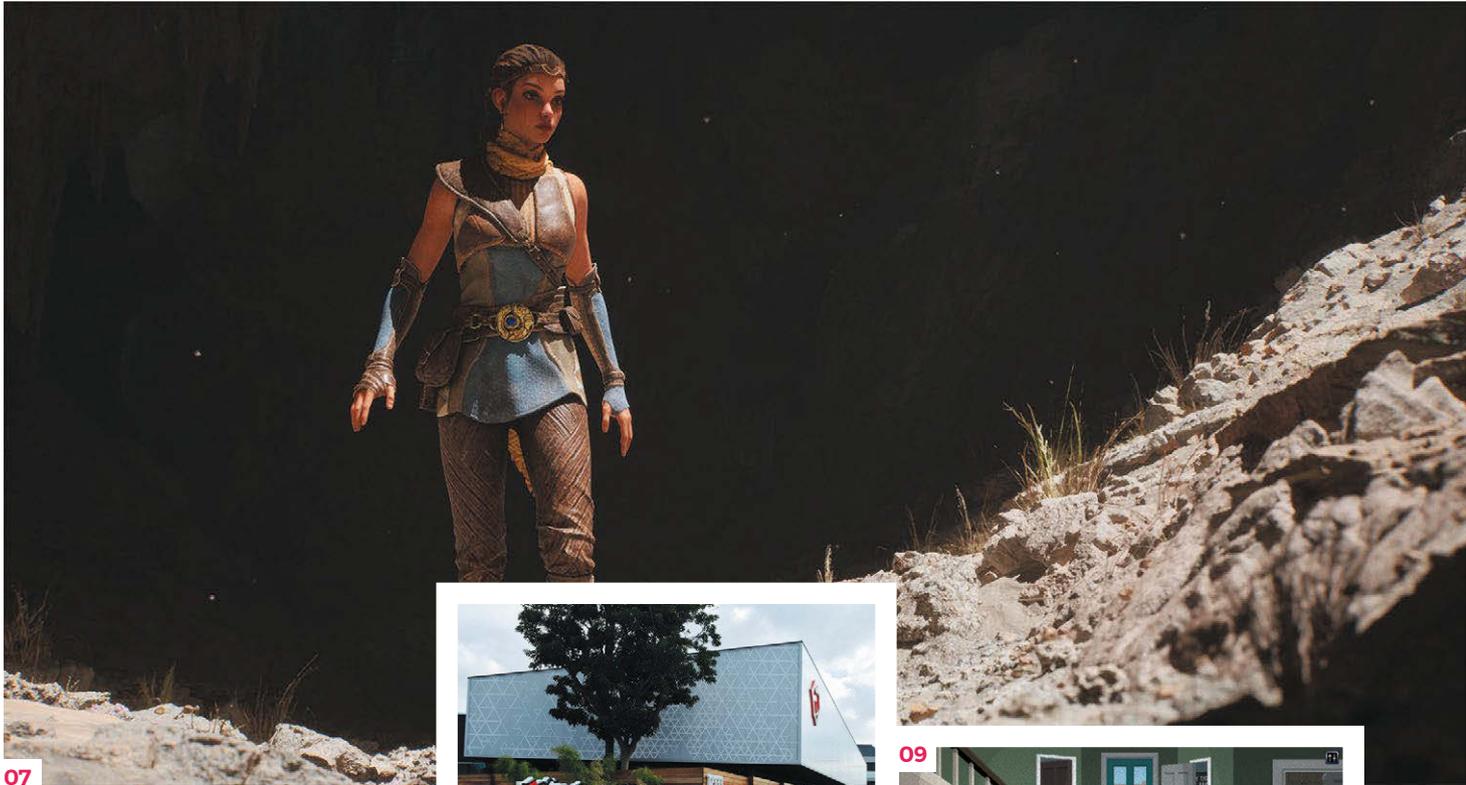
## 06. Notendo

A recent leak briefly sparked a bout of excitement, before it was replaced by a collective shrug and sigh. Two terabytes of legacy Nintendo data was leaked to the internet, with the cache including things like hardware specs, the physical layouts of DVD drives and discs, and – interestingly for the hacking community – the Wii's IOS source code in its entirety. But cries of 'huzzah' were quickly drowned out by the fact that, a) a lot of the really interesting and understandable stuff has already been figured out through reverse engineering, and b) most hackers of repute wouldn't go near this stuff with a bargepole, given the Big N would come down on them with the hammer of Mario. Those behind the Dolphin emulator, for example, responded by saying they "wouldn't even look at it." So... there's that.

Slitherine announces K-Project, an indie publishing label



*Resident Evil* remade in *Resident Evil 4*'s engine is a fine mod, just so you know



07

## 07. Real

Epic Games has revealed the next step in its march to world domination (or just 'a new thing'): Unreal Engine 5. The company showed off *Lumen in the Land of Nanite*, a real-time demo running live on PlayStation 5, and it looked... well, like a next-gen engine. The main focuses from the demo seemed to be on geometry – golly gosh, those rocks look good – and real-time lighting, with dynamic global illumination one of the lovely oft-used phrases of the day. It's all very exciting.

The new version of the engine will be available in preview form early in 2021, with the full release slated to follow later in the year. But fret not, for Unreal Engine 4 has already had support for the upcoming new Xbox and PlayStation consoles as of a recent update, so everyone is covered for the time being. We'll just have to wait a bit longer for those *really* realistic rocks.



08

## 08. Riotous

Riot Games released details of its Diversity and Inclusion Progress Report, taking a look at efforts to improve diversity and inclusivity in its workforce. The move came following an in-depth (and brutal) report from Kotaku in 2018, which highlighted claims from employees past and (then-)present of an incredibly toxic work culture. Anyway, the report, published at the end of April, showed employment of women at the studio was up a percent to 22% of all staff, while the number of under-represented minorities working there also rose a percent, to 9% overall. Slow moves, but at least they're in the right direction. More details can be found here: [wfmag.cc/riotous](http://wfmag.cc/riotous).



09

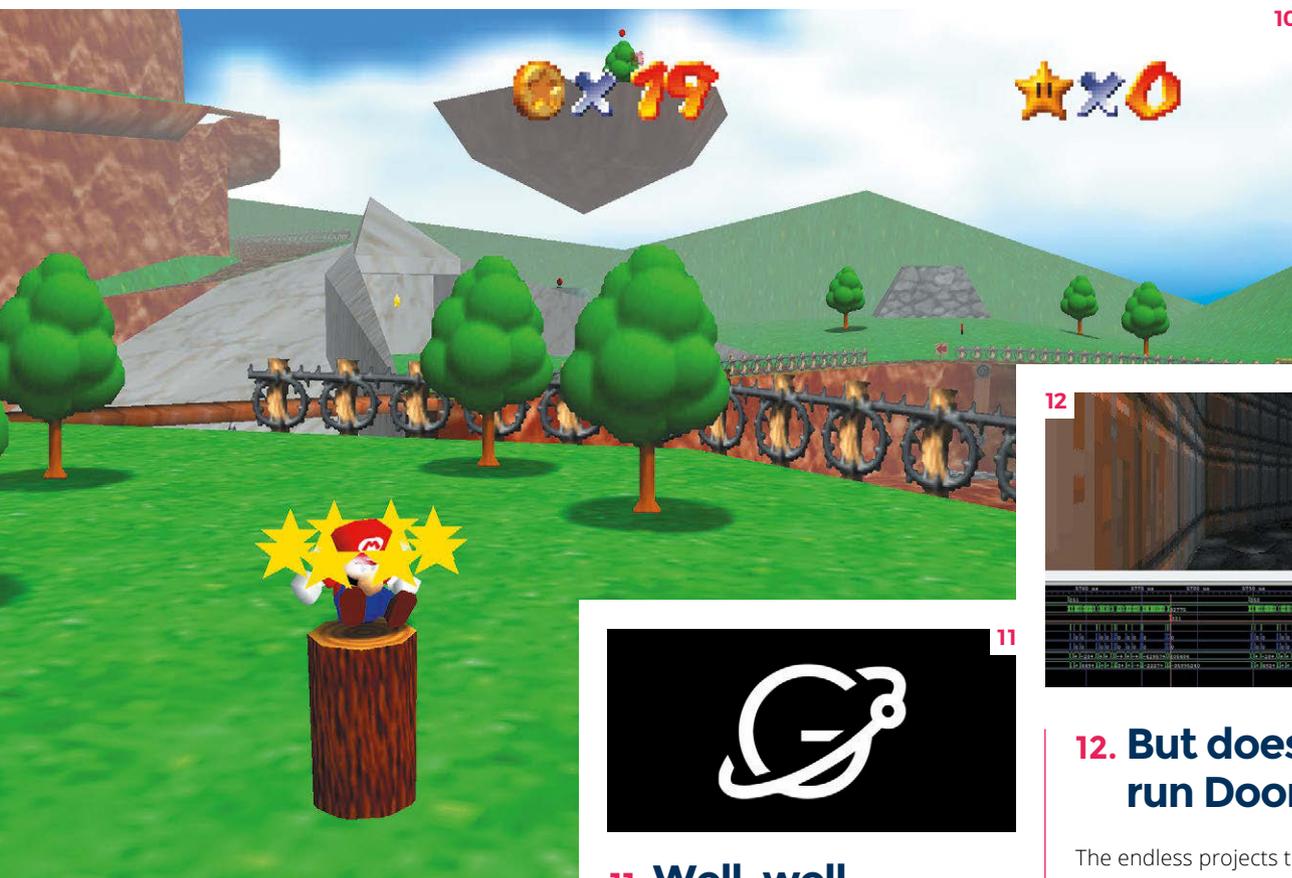
## 09. Lock-'em-up

This month's theme does seem to be the lockdown, so why not take a look at a point-and-click game based around the idea of not being able to leave one's residence for extended periods? Why not, indeed. *Lockdown* was created by Tom Hardwidge – brother of Custom PC editor Ben, conspiracy fans – to 'help make the most of his own time during the coronavirus lockdown'. You can play it for free, and of donations received for the game, 50% will go to Women's Aid to help support victims of domestic abuse. See [wfmag.cc/lock](http://wfmag.cc/lock) for more.



NatWest launches *Island Saver* to help teach kids money management/first-person mechanics

*Diablo II* remaster rumoured, though source code was lost



10

## 10. PC Kid

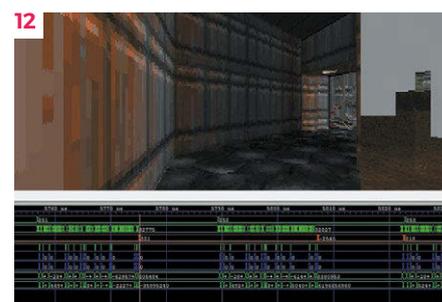
More Nintendo news, as a PC port of *Super Mario 64* appears – not an emulated version, not something working via confusing doohickery, but an honest-to-goodness PC version of the game. Nintendo was, of course, not involved in the slightest and quickly moved to destroy any trace of the game from the internet – as such, you won't find it out in the open. If you *were* able to find it, though, you'd get a version of the N64 classic recompiled for PC, using DirectX 12, and outputting resolutions all the way up to 4K. We've had a play about, and it's genuinely fantastic stuff. Such a shame Nintendo hates tinkering.

## 11. Well, well

Gravity Well is a new studio launched by ex-Respawn and Infinity Ward devs, Drew McCoy and Jon Shiring. 'But wait!' you cry, not unexpectedly, 'isn't launching a studio in the middle of global lockdown an odd thing to do?' Well, of course, but Gravity Well aims to be something a bit different: a triple-A studio with a remote-focused ethos to things from day one. Speaking to Gamesindustry.biz, the two pointed out the logistical difficulties of getting people into Los Angeles as another part of the reasoning – beyond the pandemic – for going this route. The plans are to grow and get an office, but even then Gravity Well will be working with a majority-remote workforce. Best of luck to all, then.



11



12

## 12. But does it run Doom?

The endless projects to get *Doom* running on literally everything in the world took another turn for the excellent, as developer/maker Sylvain Lefebvre revealed he had coded a field-programmable gate array (FPGA) to run id's classic shooter. Why is that *a thing*? Well, the game running on an FPGA means there's no CPU or GPU, nothing external beyond the FPGA and a power source (and the cabling, of course) running it: the chip is made for *Doom*, and *Doom* is made for the chip. It's more technical than that, of course, but as soon as people start explaining FPGAs, we go a bit funny. Basically, it's an incredibly cool thing to have done, and while the version Lefebvre showed off isn't playable, it is quite the achievement. More details, they be here: [wfmag.cc/doomy](http://wfmag.cc/doomy).

*The Last of Us: Part II* confirmed for 19 June launch; could be out while you're reading this



*Terraria*'s final update launches nine years after game's release

# Post Apocalypse

Wireframe now has its own letters page!  
Here's what you've been saying this month



Issue #38

## Fine organ

Firstly, all the best on your move to a monthly format. Very much looking forward to seeing what you have in store.

I do hope that your focus remains on the games that simply aren't getting much attention elsewhere. I'm sure it's not just me that's been baffled and a little disappointed by the gradual build-up towards the next-next-next-next generation of games consoles from Microsoft and Sony – particularly, the narrative around them. I appreciate there's a willy-waving sport to comparing the specs of both, but where's the chat about the actual games? Instead, we have

posh events announcing things via small video clips, that are then torn apart by a feral social media 'fan base'.

I just want to know about the games. I don't care if my next favourite game plays on a PS5, a ZX Spectrum clone, or my fridge. The move towards valuing the hardware far more than the software has been demonstrated elsewhere in the world – look at the iPad, for which people are happy to pay hundreds, but grumble when asked to pay a quid for an app for it – but hopefully, your fine organ can keep the focus where it should be.

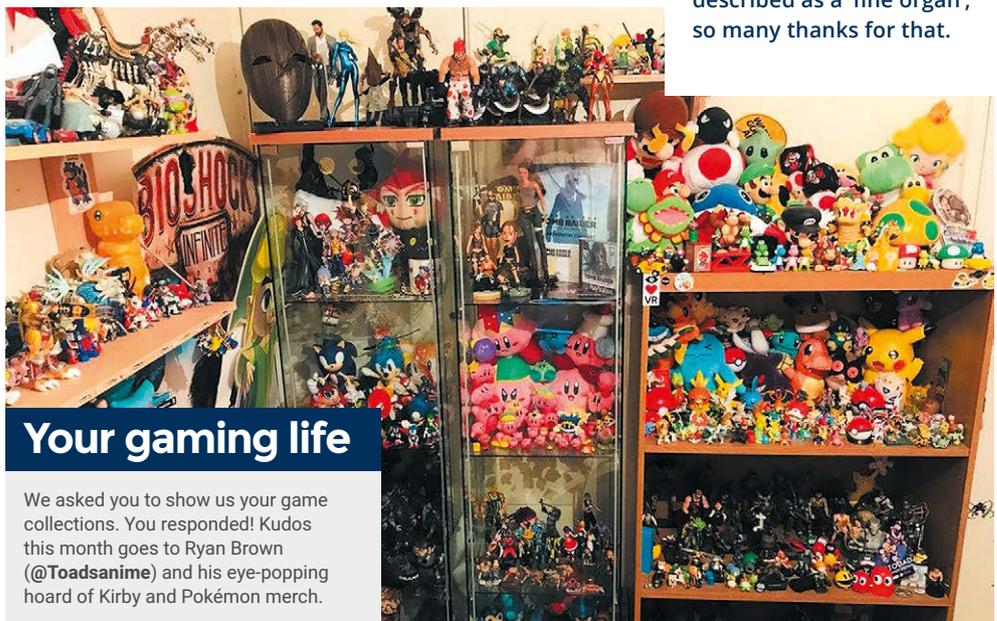
HL Graham

### Ryan writes:

We like fancy graphics or a whizzy new bit of hardware at Wireframe Towers – we've cooed more than once at the lighting and detailed rocks in Epic's Unreal Engine 5 tech demo – but our focus remains very much on the unusual, the individual, and the plain weird in-game ideas. It's exciting to think about what the next generation of consoles will bring, not just in terms of more 'realistic' imagery, but how developers will use that technology in new and unexpected ways.

Also, this is the first time I've heard Wireframe described as a 'fine organ', so many thanks for that.

Want to write to Wireframe?  
Message us at [wfmag.cc/hello](https://wfmag.cc/hello)  
or tweet us @wireframemag



## Your gaming life

We asked you to show us your game collections. You responded! Kudos this month goes to Ryan Brown (@Toadsanime) and his eye-popping hoard of Kirby and Pokémon merch.

## Why print?

As much as I applaud your continued existence and your move to monthly, did you all not get the memo? Surely the future is not print magazines, but words beamed directly to our heads, or clickbait articles on a web page?

I trust you'll correct this error in due course.

**John Oakley**

**Ryan writes:**

Magazines are like iPads that don't have to be charged up. More seriously,



though, we love magazines because, in contrast to the sea of information on the internet, they cut the gaming world down to size. Magazines are little curated bundles of content – a physical snapshot of an ever-changing medium. Plus they also look quite nice on a shelf.

**“Surely the future is not print magazines, but words beamed directly to our heads, or clickbait articles on a web page?”**

## Troubled times

In these troubled times, I have no idea how you guys are managing to put Wireframe and The MagPi together, but I thank you all for continuing to manage it. You are truly appreciated.

Keep safe!

**Ben Woodcock**

**Ryan writes:**

We can only speak for Wireframe, but it involves a lot of coffee, snacks, and panicked messages back and forth on Skype. Many thanks for your message, though. We'll pass this on to The MagPi team, too.

# Shortcuts

Slightly childish reaction to opening the post, but I don't care! You'd understand if you read Wireframe for all of its essential #gaming goodness. Unusually, I'm glad of lockdown giving me all this time to read each issue! - **@Digital\_Shore**



Howard Scott Warshaw is a treasure. Every article he writes for Wireframe has been a gem. - **@shanecellis**

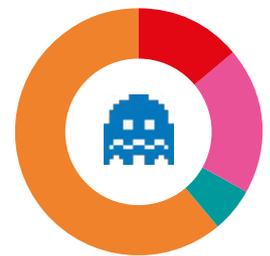
How the hell did I not know about Wireframe before? A fortnightly games magazine for adults that does all formats and isn't shy about printing code if it'll help you create stuff. - **@yesterzine**

Does anyone else constantly find themselves reading Wireframe, thinking a game sounds interesting, and then completely forgetting about it? I need to develop some sort of log! - **@micmcgrorty**

Wireframe? Never heard of it. - **Anon, the internet**

## Top Ghost

Pac-Man celebrates its 40th birthday this year, so we asked our readers to make a difficult decision: choose their favourite Pac-Man ghost. As you can see, Clyde romped to victory; we're not sure why Inky – the bashful ghost – is so unpopular.



**BLINKY - 13.9%**

**PINKY - 19.4%**

**INKY - 5.6%**

**CLYDE - 61.1%**

# Wireframe

## Navigating the Now

Preparing for the new normal & Ukie Game Showcase

ukie

**E** 3 might be dead in 2020 – some would guess it won't ever come back again in the same form – but that hasn't stopped the shows from going on. They're elsewhere, they're smaller, and really they're far more palatable than the Los Angeles monstrosity for those of us with delicate dispositions. So when UKIE approached Wireframe and said 'Hey, we're showing off some games in a digital event, as well as hosting talks to help indies and

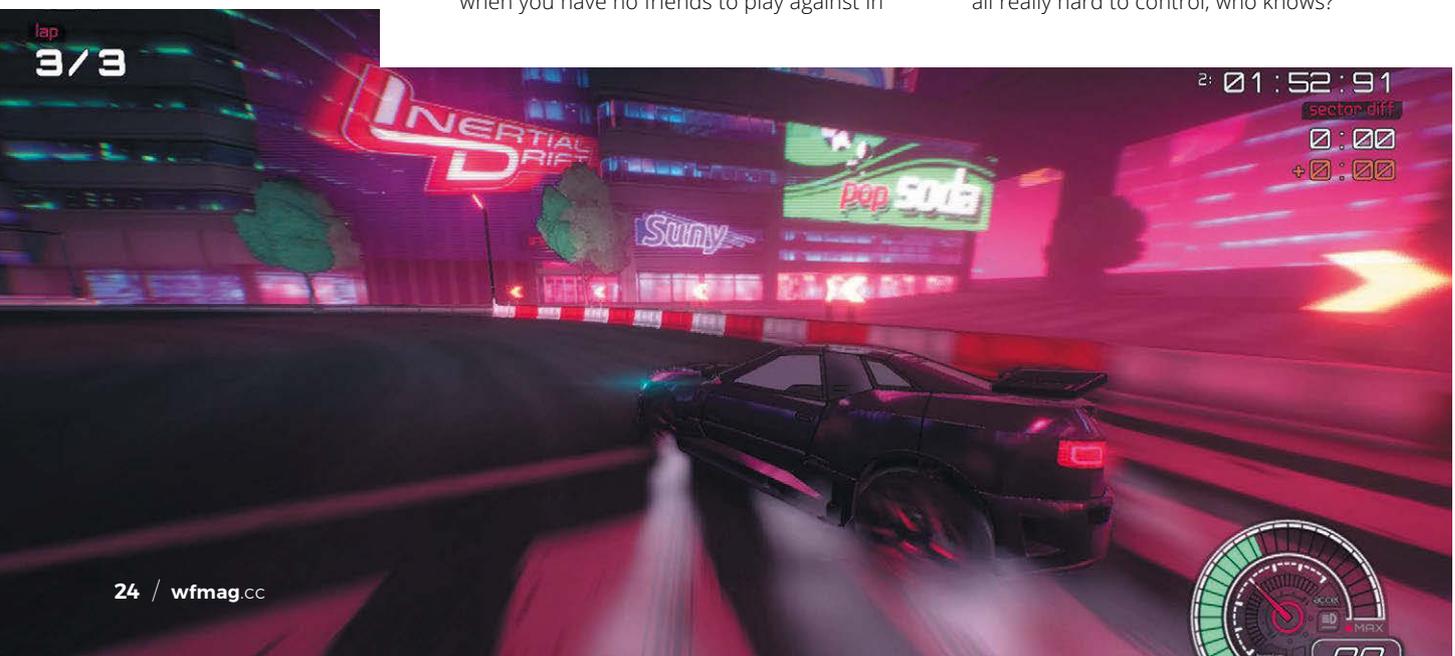
generally attempting to give a helping hand to smaller studios that might be losing out, thanks to the cancellation of multiple events around the world this year', what were we supposed to say?

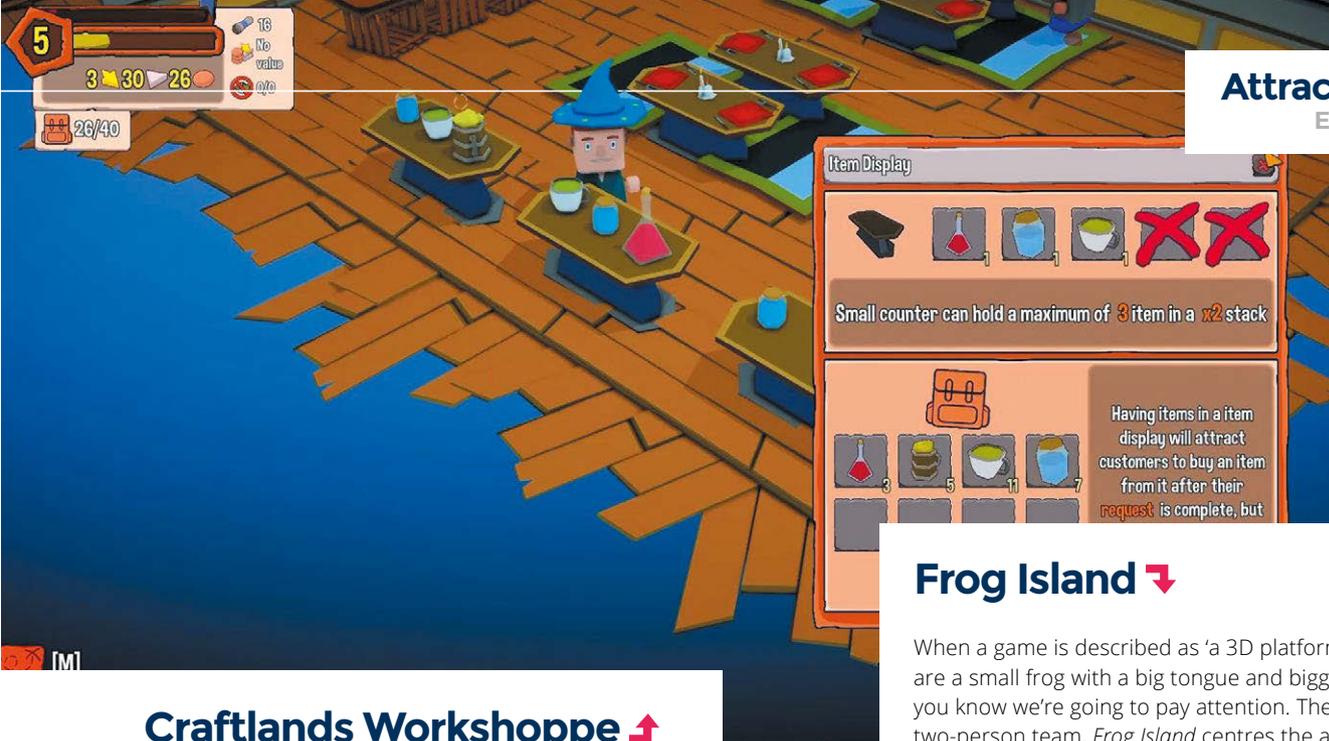
So here are some of the games shown off by UKIE at its Navigating the Now event, held across 3 and 4 June. You can find more details, along with videos of the titles on these pages and talks from the event, right here: [wfmag.cc/NavtheNow](http://wfmag.cc/NavtheNow).

### Inertial Drift ↴

We've gone a bit funny for retro-styled racers this issue, with *Inertial Drift* joining our cover star *Hotshot Racing* as a tribute to classic racers of years gone by. *Inertial Drift*, though, celebrates more the underground street racing – and specifically, the drift aspect – of something like a *Need For Speed: Underground*. Set in a neon-drenched world of permanent twilight, players race around dozens of tracks in a selection of 16 – and to quote – 'fiercely individual' cars, meaning each one has markedly different specs and performance to the others, and there's a single-player story mode to get you through when you have no friends to play against in

local multiplayer. But it's the drift mechanic that has us paying the closest attention – yes, it's been done many times before, but we're struggling to think of a time it's been a twin-stick control thing: the left stick handles steering, as you'd expect, while the right stick engages and controls your drifting around corners (and, if you're anything like us, into walls). Touted as easy for beginners to learn and a challenge for experienced players to get to grips with, it could be a key difference-maker in marking *Inertial Drift* out as a skill-focused racer for the hardcore players who stick with it. Or it could just make it all really hard to control, who knows?





**Attract Mode**  
Early Access

## Craftlands Workshoppe ↑

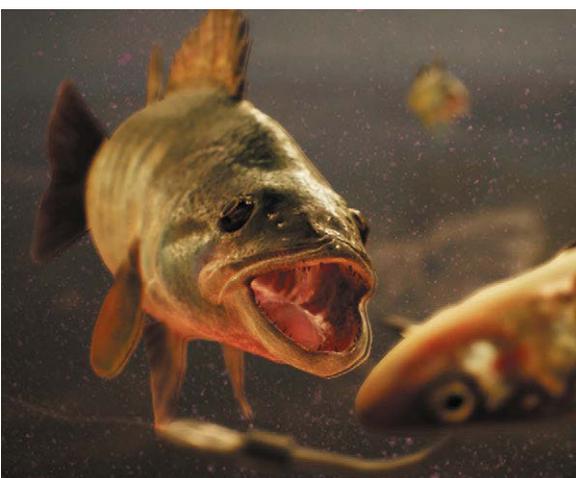
Or to give it its full title, *Craftlands Workshoppe – The Funny Indie Capitalist RPG Trading Adventure Game*. You know what you're in for here, then. It's a take on the usual crafting games and business sims that adds a welcome dash of humour and silliness – including a few fart jokes dotted around here and there.

The core mechanics behind *Craftlands Workshoppe*, meanwhile, strike a more traditional tone: you take ownership of a dilapidated workshop and get on with the task of improving your crafting skills. Alchemy, cookery, and blacksmithing are the core aspects, with resources gathered, items made from recipes, and the fruits of your labour then sold on for profit.

The layer on top of all that is an asynchronous multiplayer mode, which allows you to team up with other players to fulfil larger orders – and so profit more. Developer Arvydas Žemaitis previously worked on *Shopee Keep* and its sequel, so has some skin in the genre; it'll be fun to find out if that experience leads to a more rounded experience than those previous titles managed. However it ends up as a finished product, though, we can at least rest easy in the fact you're able to stroke a dog. Every game needs that feature.

## Frog Island ↴

When a game is described as 'a 3D platformer where you are a small frog with a big tongue and bigger ambitions' you know we're going to pay attention. The work of a two-person team, *Frog Island* centres the action on that core tongue concept (which really should be a marketing term) – you use your stretchy mouth muscle to tether to objects, swinging about around levels like an amphibian Bionic Commando. Unlike Capcom's classic, though, it's not just lifting and swinging yourself about – there's fishing, rowing a boat, throwing darts, and more that comes about thanks to the tongue. All hail the tongue. An early version is currently available to play here: [wfmag.cc/Froggo](http://wfmag.cc/Froggo).



## ↴ The Catch: Carp & Coarse

Dovetail Games has been casually hanging out, creating fantastic simulation games for years now. So it's of little surprise to see the Chatham-based studio releasing another fishing-focused title. With *The Catch: Carp & Coarse*, however, Dovetail are attempting to take a traditionally strait-laced simulation into a more exciting realm – it's not outright silly, of course, but carp fishing is a younger sport than those not in the know might expect, and so the theme and presentation is, accordingly, altered. What that means is you enter *The Catch* with a much more

video game-y goal in mind: to catch (natch) 'monster-sized' fish across plenty of different venues around the world. With 35 realistically modelled species out there to have a pop at, there's sure to be plenty of challenge as you match their behaviour with your own technique – and your equipment, bait, and so on. It's never likely to be as all-conquering as a fishing minigame in *Zelda* or *Final Fantasy*, sure, but for those with even a passing interest in pulling living creatures out of water using nylon before posing with them, this could be a great entry point. ➔



## Tears of Avia ↗

At first glance, it might look like another one of the myriad JRPGs coming from the likes of, say, Gust – but *Tears of Avia* has its roots somewhere a mite closer to home: Bournemouth, on the sunny south coast of the UK. CooCooSqueaky Games is the small team handling development of this turn-based strategy title set in the world of Estera. There's war, there's strife, there's society being torn in two, and there's the player: creating a party out of the classes and characters available to take on enemies in your typical grid-based combat situations. In combat, there's an emphasis on strategy – doubling up your attacks in powerful combos, say, or taking advantage of status effects, immunities, and so on... if you've played a turn-based RPG before, none of this is going to sound unfamiliar. Helping it all trundle along is a narrative based on the player's input – branching decision paths can have wide-ranging impacts on the story and the world around you, and your team will get involved in things too, hashing it out should you present a decision or opinion that goes against their personal beliefs. It sounds by the book, really, but that doesn't make it any less enticing for genre fans – and a UK spin on the traditionally Japanese style could well lead to something exciting.

## Pandora: Chains of Chaos ↘

Pig riding. Riding a pig. This game lets you ride pigs. Brilliant. Anyway, Party Llama's action-adventure title casts players as the titular Pandora, whose actions unwittingly unleash monsters and demons on her world (not too dissimilar from *Mira's Tale* a few pages back). And so it is she has to explore the world around her, fight enemies, master new abilities, and ride loads of pigs on her way to making things right again. Development is being handled by a team of around ten people, mostly a

spare-time sort of thing, and there's open discussion of the trials and tribulations of this approach across the studio's social channels. It's exciting to see a game taking shape over the weeks and months, and with *Pandora: Chains of Chaos* so close to its touted release (July, though this may change), it'll be good to see what the end product is like. And just how many pigs you're able to ride. Also, you can ride pigs in the pre-alpha version of the game right now: [wfmag.cc/PigRider](http://wfmag.cc/PigRider).



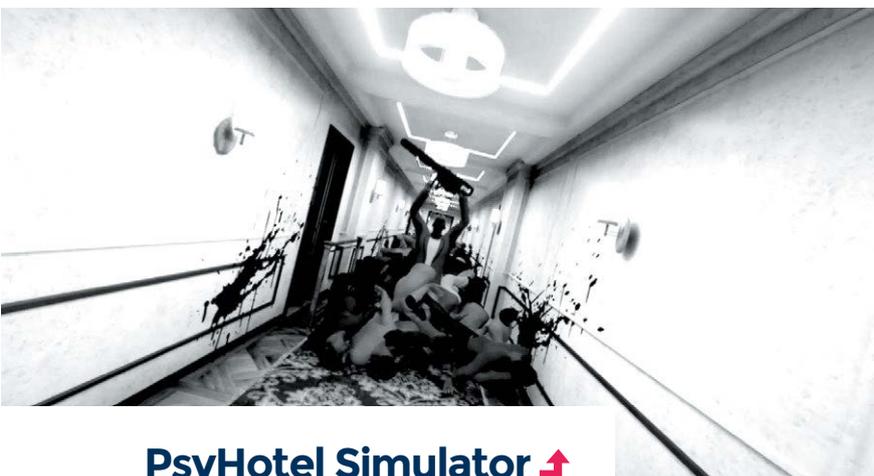
## AND SOME OTHERS

Away from the UKIE event, here are a few more titles to look forward to:



### ↑ Harvest Moon: One World

Thing is, *Stardew Valley* and *Story of Seasons* have this patter down. There's less and less of a reason for *Harvest Moon* to continue to exist these days, beyond ever-fading nostalgia for what that name once meant. So it's of little surprise that Natsume has announced it will be taking things in a new direction for *Harvest Moon: One World*, a Switch exclusive coming later in 2020. No details beyond some blurb were forthcoming at the time of writing, but it sounds like this will be a bit of a departure – figuratively and literally – as players will toddle off on an adventure spanning the globe, rather than just being stuck in a town or farm. It could be the shot in the arm the franchise needs.



### PsyHotel Simulator ↑

Well, *PsyHotel Simulator* brings together hotel management with psychopaths, meaning you have to look after those patronising your establishment to keep them happy, as you might expect given the hotel is yours and you're keen to keep these people around so you can stalk and kill them. Oh right, you're also an undercover killer, so you're

tasked with keeping these guests happy *and* murdering them. It's about paying attention, learning routines, planning action, building traps, and more. And it sounds absolutely phenomenal. With an absurdist tilt to everything and a mix of genre styles, we're hoping developer RG Crew are onto a winner here.



### ↑ Foregone

We're getting a lot of '2D pixel art' (they're called sprites), side-scrolling skill-'em-ups recently, and that's still a good thing. *Foregone* is yet another addition to the pile, but it's backed by that impossible-to-define quality we're going to call: looking well good, like. Gorgeous animation backs up fluid, quick-paced action as you flit about a detailed world battling creatures both big and small. It's a mix of that action, loot, upgradeable skills, boss fights, and a general air of cool, and we have our eyes firmly planted on this one.

### Tony Hawk's Pro Skater 1 + 2 ↴

Vicarious Visions has done good by Activision, it seems, as the publisher has turned once again to the remaster-masters behind both the *Crash Trilogy* and *Crash Team Racing* do-overs to handle another beloved franchise: *Tony Hawk's Pro Skater 1 + 2*. Seems the Birdman couldn't stay away from Activision for that long, as the lanky plank-spinner has once again put his name to a remastered version of his early games. This time around things will hopefully go a lot better than they did in the shonky 2012 HD re-release of the first two

games. Most of the soundtrack has already been confirmed, though, so things are already looking up.



# The changing face of MOVIE TIE-IN VIDEO GAMES

They rose, fell, and returned in a new form.  
Dan charts the movie tie-in's evolution

WRITTEN BY DAN COOPER

**A**vengers: *Endgame* crashed into cinemas in 2019, and quickly became the highest-grossing theatrical release of all time. It was everywhere, yet the officially licensed tie-in video game, synonymous for decades with blockbuster movies, was nowhere to be seen. Sure, there was a brief appearance in *Fortnite*, but even the *LEGO* series of games, for so long a movie tie-in stalwart, hasn't yet made a game based on *Endgame*.

For some time now, this trend has been growing, so are we richer or poorer for the disappearance of the movie tie-in? To find out, we spoke to the developers who worked on memorable movie tie-ins, some of which are still celebrated today. This is what we found.

## AUSPICIOUS BEGINNINGS

Developer Howard Scott Warshaw was present at the point in history when movies and games first crossed over. As a programmer for Atari in the early 1980s, Warshaw created a trio of games, comprising *Yars' Revenge*, *Raiders of the Lost Ark*, and *E.T. the Extra-Terrestrial*, that encompassed both the meteoric success and swift downfall of Atari and its 2600 console.

As a pioneer, Warshaw enjoyed an unfettered development cycle on *Raiders*, and recalls that the film's director Steven Spielberg couldn't have been more helpful. "That *Raiders* was a licensed game really didn't impact the development at all," he says. "With the singular exception that every once

in a while, Spielberg would come by and we'd get to hang out, and I'd show him some of the game."

*Raiders* was a critical and commercial success, and incorporated some innovative ideas, such as its use of one controller for player movement and the other for interacting with the inventory. Spielberg, a keen gamer himself, was a fan of the adaptation. "He really liked it, and that got me *E.T.*," remembers Warshaw.

The development of *E.T.*, by contrast, was infamously rushed. Warshaw had just finished a ten-month development cycle on *Raiders*, and was then given the task of programming *E.T.* in just one month to get the game out for Christmas – a pressure further intensified by the enormous \$22 million licensing fee paid by Atari.

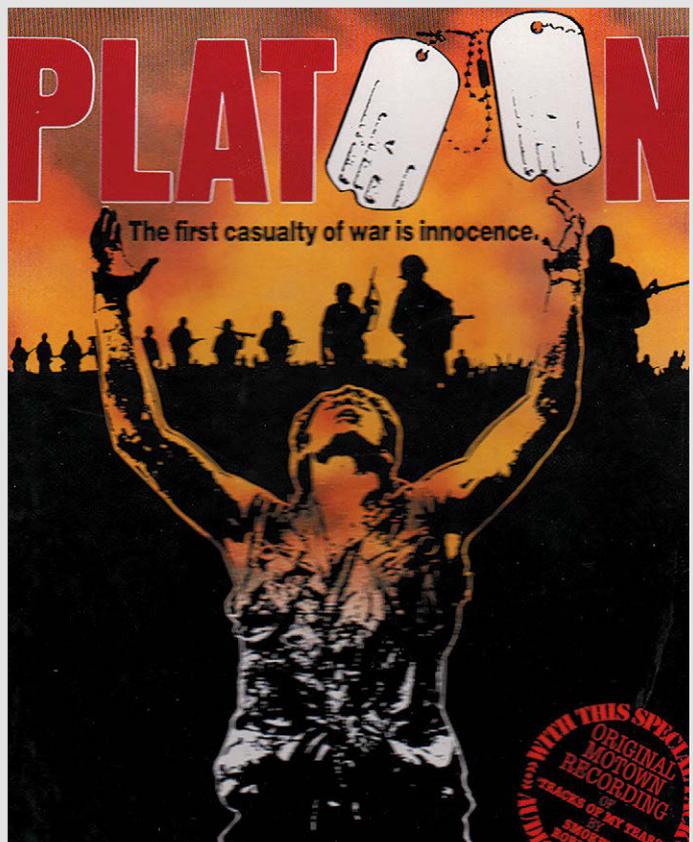
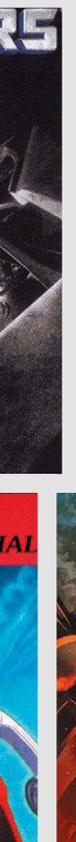
Still, if that licensing price tag added to the pressure, it was insignificant compared to the expectations Warshaw placed on himself. "*E.T.* wasn't a barrel of laughs, that's for sure," he recalls. "There was tremendous pressure, but it wasn't about the licence – that didn't really mean anything. What I cared about was that I wanted to deliver a quality product, and I wanted to do it in record time. That made everything else totally disappear."

The 2600 adaptation of *E.T.* was, of course, commonly cited as one of the factors behind the 1983 North American video game crash. For Warshaw, the game was a case of short-sighted thinking from those handling the intellectual property. "It was an early time in movie licensing," he says. "I think they thought to themselves, ▶





**Interface**  
Movie tie-in video games

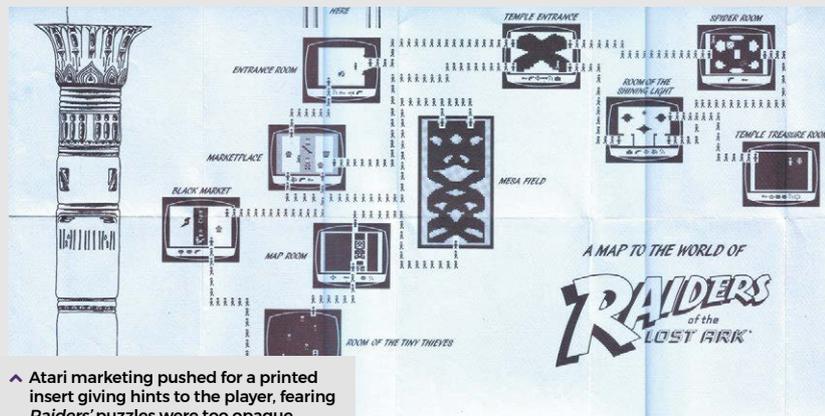


## Interface

Movie tie-in video games



▲ *Raiders of the Lost Ark* on the Atari 2600 used an innovative two-controller configuration.



▲ Atari marketing pushed for a printed insert giving hints to the player, fearing *Raiders'* puzzles were too opaque.

‘Here’s a way we can make millions of extra dollars’. I don’t think they were worried about defending the integrity of their property.”

### WIDE BLUE OCEAN

In the UK, meanwhile, the home computer market was thriving, and licensed movie games were a key component in that success. Ocean Software, based in Manchester, had found a foothold in the industry in part thanks to shrewd licensing deals – in particular, movie licences. Their first breakthrough came in 1987 with a tie-in game based on *Platoon*, director Oliver Stone’s acclaimed film about the Vietnam War. No other publisher but Ocean saw the potential in converting such adult-themed content into a computer game aimed at kids – but when it succeeded, Ocean suddenly found itself regularly receiving scripts from Hollywood.

The ability to seal licensing deals during a film’s pre-production gave Ocean the space to release a tie-in game at the same time as the movie’s cinema or home release – a potentially lucrative marketing opportunity. This happened with *RoboCop*, a side-scrolling shooter released around the same time as the movie’s home video, at Christmas in 1988.

Ocean was also canny with its handling of the *RoboCop* rights: after buying them from Orion Pictures, Ocean then sublet the licence to Japanese studio Data East, which turned it into an arcade game. Ocean then exercised its option to convert that game over to home computers in the West. It sold in record numbers, and the ZX Spectrum version topped the charts for a year.

Programmer Peter Johnson worked on the Atari ST and Amiga version of the game. Working on the project from home, he was given some useful pieces of reference material: the Data East arcade game supplied by Ocean, built into a handy portable suitcase, alongside a finished build of the Spectrum version. One asset Johnson didn’t have access to, though, was the film itself, since

it hadn’t yet emerged on home video. “The movie wasn’t available,” Johnson tells us. “I’d seen it in the cinema, but the game release was timed to coincide with the film’s VHS release...”

For years, Ocean played out a similarly astute strategy with licensed titles; games based on such films as *Batman: The Movie* and *The Untouchables* were hits, while its adaptation of *RoboCop 3* came out ahead of the delayed film, which deftly avoided association with its subsequent critical mauling.

Ocean’s success with movie licences, and the potential profits, brought the practice into sharp relief for the rest of the industry. Over the next decade, tie-in games became synonymous with movie merchandising. But with publishers eager to streamline development costs after shelling out for huge licences, and with development cycles shrinking to meet film release schedules, the quality of the games dipped in the mid-nineties. Titles such as Probe Software’s *Batman Forever* and Capcom’s *Street Fighter: The Movie* (essentially a game adapted from a movie based on its own arcade hit) lowered the bar significantly.

WayForward Technologies developer Austin Ivansmith – who’s no stranger to working on tie-in games – can sympathise. “When I go back and watch a speedrun of *Batman Forever* on the Super Nintendo, it’s easy to say the movie components don’t make any sense,” he says. “But having done

Dream movie adaptations:

## HOWARD SCOTT WARSHAW

“I’d adapt *Bombshell* (the recent biopic covering the Fox News scandal). Your quest is to uncover the injustices within an organisation while maintaining your position in order to have enough standing to uncover the abuses. I think that would be a very interesting game.”

▼ *E.T.* was designed in about a month, foreshadowing the tight development cycle of some later tie-in games.



▼ Ocean got their 3D tie-in game of *RoboCop 3* out first when the film was delayed.





▲ Far more difficult to target, choosing the pint-sized Oddjob in multiplayer mode was considered the ultimate breach of gamer etiquette.

a number of licensed movies, I'm watching it thinking, 'OK, I can see what the developers tried here; they don't know what Robin's costume actually looks like, and probably haven't been provided with pictures of his costume, so they have to move forward with the design from the original TV show.'

By the late nineties, Howard Scott Warshaw had long since left Atari, and regarded the games industry with frustration.

"I wasn't happy about it. I understood it. With a degree in economics, I really had a sense of the industry.

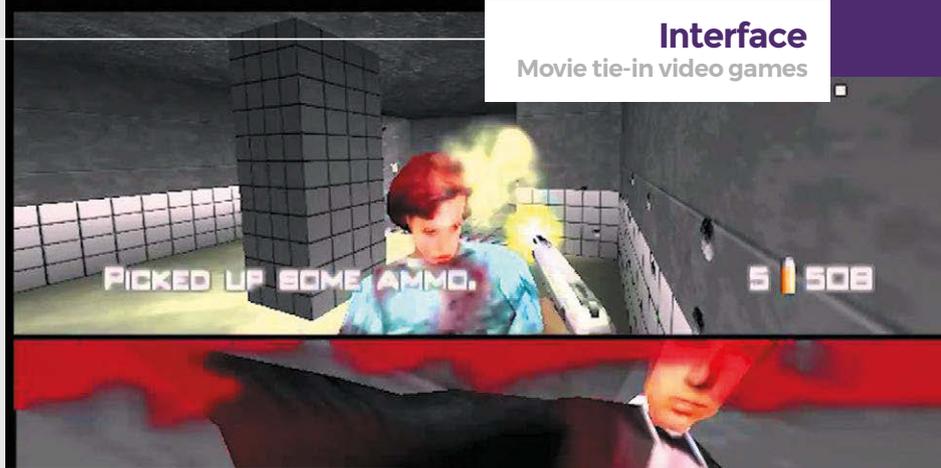
Every new medium matures. Finances drive all of this. The investment in creating products always increases, and so the amount of risk investors will tolerate decreases: you stop seeing innovation."

### A LICENCE TO THRILL

There were still developers that wanted to make inventive games from movie licences in the nineties, however. Enter *GoldenEye 007* on the Nintendo 64: Rare's genre-defining shooter was so successful that it even challenged the original movie in terms of sheer profitability.

*GoldenEye 007*'s success was, according to game director Martin Hollis, down to a talented, hard-working team of developers, as well as their publishers, Nintendo, and *Bond* rights holders EON Productions, who were generous with both the licence and access to the film's assets. "Nintendo gave us a broad scope – they gave us a document detailing everything we could use, and it was pretty much every single thing in the *Bond* universe," Hollis tells us. "Quite a bit later, I think they realised that... they'd gone too far!"

EON was similarly generous. "We'd seen some footage, we'd been around the sets, we'd seen the model-making and the gadgets, so because of that high-level access, we were less likely to be



▲ *GoldenEye*'s multiplayer was added late in development – and proved to be era-defining.

surprised," Hollis says. "Seeing the film had very little impact on the game – it was more just a case of confirming prejudices."

The film appeared in cinemas in November 1995, yet the game suffered multiple delays, and eventually launched in August 1997. "There was pressure," Hollis says of the period. "It wasn't relentless. It was reasonable, studied pressure. We missed one Christmas, and Howard Lincoln [then-chairman of Nintendo of America] wrote me a fax explaining how important it was to meet the interests of buyers and schedules. My attitude was it simply wasn't ready."

Hollis also credits Rare for shielding the team from the might of their publisher, Nintendo. "Nobody at Rare ever told me it came close

to being cancelled, but I have a suspicion that Nintendo stopped paying money to Rare. There was some kind of arrangement, and they were so concerned, they stopped the flow of money. But this was never communicated to me."

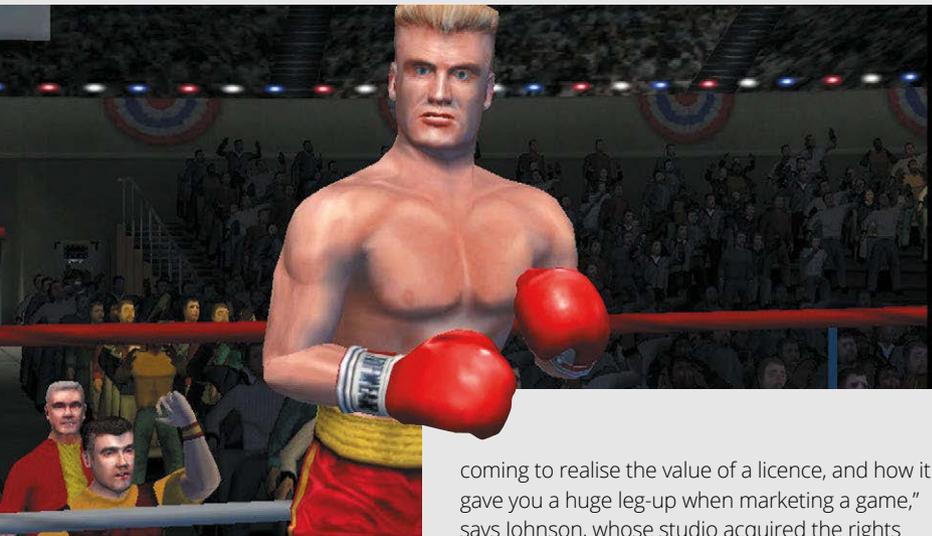
Being freed from a schedule based around the *GoldenEye* movie's release meant the team were able to iterate. One result of this was the game's popular multiplayer mode, which didn't appear until late in the development cycle. But despite the success of *GoldenEye 007*, Hollis had little interest in making another movie adaptation. "I love films, so it would seem like an obvious thing for me to have a career developing games based on them," he says. "In somebody else's universe, you have less freedom. If you're going to do a faithful job, and I think you have to show respect and honour, you mustn't abuse the source material. When you do that, you're inevitably tied down in a thousand ways, and your creativity can't run riot."

### A KNOCKOUT SUCCESS

Like *RoboCop*, *GoldenEye 007* gave the industry a reminder of how lucrative a licensed game could be. Peter Johnson, by this point the studio head of Newcastle-based Rage Games, elected to direct resources in this direction. "Rage were ➔

### Dream movie adaptations: AUSTIN IVANSMITH

"I'd make a game with an established universe and visual style – my dream would be to make a *Super Star Wars* series of games based on all the recent Disney-owned films. Every one of them."



▲ Getting to take on the hulking Drago in 2002's *Rocky* was the perfect amalgamation of a gamer and film fanatic's dream.

### Dream movie adaptations:

## ANDREW BURROWS

"If I could make any movie licence, it would have been *Aliens*. I would have loved to have made *LEGO Aliens* – that would have been amazing. You'd have been Newt surviving from the moment it all goes bad until the moment Ripley rescues you."

▼ Traveller's Tales *Transformers* was ambitious, offering two campaigns, depending on your predilection for good or evil alien robots.



coming to realise the value of a licence, and how it gave you a huge leg-up when marketing a game," says Johnson, whose studio acquired the rights to make games based on the *Rocky* films. "It was something my game designer, Mark Sample, had wanted to do for years. He'd almost designed the game in his head before we'd even got the licence."

Rage's 2002 *Rocky* made creative use of its licence, since it told playable back stories for several of the movies' key characters. Rage was clever with the parameters of its licensing deal too, since it allowed them to use clips from the original films as cutscenes. Remembers Johnson: "We were allowed to use the film clips if it was promoting the film itself – which is why there's a DVD advert at the end of one sequence of clips, and I think there was a double pack where you could get the film with the game."

As the 2000s progressed, movie tie-ins became increasingly popular, and occupied a bigger share of the market than even in the days of Ocean Software. Ultimately, though, it was a growing trend in Hollywood that inadvertently sparked the decline of the tie-in game. As the film industry became increasingly enamoured with the multibillion-dollar opportunities afforded by franchise-driven titles such as *Harry Potter* and *Transformers*, film studios not only became increasingly protective of their properties, but continual cinematic instalments meant even shorter development cycles for game designers.

### MORE THAN MEETS THE EYE

For Andrew Burrows, developer at UK studio Warthog Games, working on the tie-in for *Harry Potter and the Philosopher's Stone* gave him his first taste of the complications that could accompany working in somebody else's universe. "That was the first time I got to design [a tie-in game], and then dealing with the [film] studio putting their foot

down and pushing back," Burrows says. "I know some people could get frustrated, but for me, those restrictions just offered another opportunity to go back and look at how it should work."

With film studios becoming increasingly protective of their properties, Burrows also encountered the difficulties of pitching for movie licences – studios were often secretive about their projects due to fears of scripts leaking onto the internet. This proved to be particularly challenging when Warthog began early work on a game based on the 2002 Vin Diesel action movie, *xXx*. "We made a concept for *xXx*," says Burrows. "You get a brief script and then you're reading books trying to find out who this character is. We'd heard there was a plane in [the film], so our whole concept was about trying to stop a plane from being hijacked. The game didn't get picked up."

There was no such plane sequence in the final movie – an illustration of the difficulties developers faced when pitching to tight-lipped film studios. It was all a far cry from the 1980s, when Ocean Software were sent entire scripts to consider.

It was while working at Traveller's Tales, however, that Burrows would find himself steeped in movie tie-ins. There, he worked on *LEGO Star Wars*, the 2005 tie-in *The Lion, the Witch and the Wardrobe*, and led the design of 2007's *Transformers: The Game*.

### "Michael Bay was deeply suspicious of game companies"

Things had changed since the Atari days, however, and the likes of Steven Spielberg – who executive-produced the *Transformers* movie – were no longer interested in the design process. In fact, quite the reverse. Recalls Burrows: "Michael Bay [the film's director] was deeply suspicious of video game companies, and wouldn't actually share any of the robot designs. And we didn't know what the plot was. We were quite a way into development before we even started getting assets."

To complicate matters further, the studio was working against the clock. "We got *Transformers* just over a year before the film came out," remembers Burrows. Nevertheless, Traveller's Tales was renowned for making games to tight deadlines, which is why it became the go-to studio for movie adaptations. *Transformers* shipped on time, and also launched for a then-new generation of consoles that had been announced mid-development – no small feat, considering the compressed development schedule. "We could get it on the shelves before the movie came out, so



▲ Sega encouraged the numerous studios developing different versions of *Thor* to share assets, in the hope of easing workflow.

you don't lose a ton of marketing and momentum," says Burrows. "It really helped sales, and it's a testament to all the people involved, because we worked crunch on those games."

Things had changed, however. Secretive productions, movie studios protective of their IP, harsh development cycles, and the emergence of a highly critical internet fandom ("The community can be pretty ruthless in their feedback," says Burrows) meant the movie tie-in game became unsustainable in its established form. Quality would eventually suffer – the *Harry Potter* titles came under fire from critics – and so film studios, publishers, and developers had to figure out how to change their approach.

### A WAY FORWARD?

This brings us to WayForward Technologies, a studio that has successfully pioneered a new approach over the past decade. Austin Ivansmith, director of WayForward's well-reviewed *Thor: God of Thunder* and *The Mummy Demastered*, has perfected a less direct approach to movie tie-ins. They're based around a property's story, but less beholden to the whims of the film studio that owns them. Says Ivansmith: "Working with Marvel [on *Thor*] was awesome – they gave us visual assets early. We couldn't contradict the movie... but we [tapped into] a few other worlds from the comics, and created some characters to build on the lore."

Expanding beyond the world of the film was a freeing step, and gave the developers back some creative license. Similarly, publishers began to consider methods of easing the development cycle for developers. "Sega – who were publishing the game using six different developers for six separate platforms – put on a series of PR events, bringing someone from each of the developers," Ivansmith recalls. "Sega shared pre-approved assets, and a lot of the concepts for the trolls and for the boss from the Asgard level came from the

studio which did the Xbox version of the game. It really helped us define our look early on."

When adapting Universal's *The Mummy*, the first film in a planned *Dark Universe* series, WayForward used the same indirect approach, choosing to make the game's protagonist a faceless soldier in the ranks of the monster-hunting organisation, Prodigium, rather than Tom Cruise, the movie's hero. Says Ivansmith: "As there was a series of movies planned, it just made sense. It gave us the opportunity in the case of sequels, such as *Bride of Frankenstein* or *The Invisible Man*, to tie all of the games together with a single squadron with a unified playstyle across all the games. Tom Cruise is a big star performing most of the action in *The Mummy*, but in *Bride of Frankenstein*, Angelina Jolie's character may not be doing all that running and jumping."

Studios such as Universal and Marvel have been quick to adopt this approach. Ivansmith notes how film studio support in general has been positive in this era of licensing games, even if it means missing the potentially lucrative double whammy of a simultaneous game and film release. "Universal liked our game so much, they wanted to decouple it from the movie release and give us the development time we needed, so it could be as good as it needed to be."

The licensed movie game, then, hasn't gone away – it's simply evolved, as rights holders have recognised the folly of pushing poor products onto the market on the strength of a movie title. That might mean we don't see blockbuster tie-ins on the scale of *Avengers: Endgame* as frequently as we used to, but maybe that's just the price we pay for better-quality licensed games. 🍷



▲ The developers elected not to use Tom Cruise on *The Mummy Demastered*, figuring that a faceless Prodigium soldier could reappear in sequels and spin-offs, even if Cruise didn't.

# Epic trouble in the North



## LOTTIE BEVAN

Lottie's a producer and co-founder of award-winning narrative microstudio Weather Factory, best known for *Cultist Simulator*. She's one of the youngest female founders in the industry, a current BAFTA Breakthrough Brit, and founder of Coven Club, a women in games support network. She produces, markets, bizzes and arts, and previously worked on *Fallen London*, *Sunless Sea*, *Zubmariner*, and *Sunless Skies* as producer at Failbetter Games.

**"I love a bit of chutzpah, and you need a lot of it to wage war on a titan"**

**P**hilip II of Macedon invaded Greece, won a lot of fights, and trembled lustily on the borders of Sparta. He sent the Spartans a threatening message asking if he should come as friend or foe. The ephors responded: 'Neither.'

This wasn't the sort of thing Philip II of Macedon usually heard. So he fired off another message telling them they'd better submit to him, pronto, 'for if I bring my army into your land, I will destroy your farms, slay your people, and raze your city'. The ephors responded: 'If'.

There's a lot of lusty trembling going on right now at Epic. Devs are abuzz with their steady flow of tasty, dev-friendly inducements, and on paper, Epic's deal is great. Devs get a higher revenue cut than they would on Steam: usually, it's 88% versus 70%. Devs also compete with fewer games on the Epic Games Store, meaning they're more likely to get high-visibility featuring and it's easier for consumers to chance on them while browsing. I can't find any official data about how many games are currently on the EGS, but they confirmed they had 'over 100' games in July 2019 and some friendly people with browser scripts estimate it's now just under 300. That's a decent number, but not when compared to



▲ Epic Games' Tim Sweeney, played here by Val Kilmer in 2004's *Alexander*.

Steam's 30,000. Or their 51,000, if you include DLC, software, and video.

I'm not dunking on Epic. Its store is the most impressive, pragmatic, and tenacious challenge to Valve's supremacy there's ever been – great news for developers. But this is the fly in the ointment: Epic give you a bigger slice of the pie than Steam! 18% more pie! But please note the pie is many times smaller than that one over there.

Take this from another angle. In April 2020, the EGS saw roughly 72 million visits. That lands the EGS a #391 ranking in global internet engagement. There are 1653 external pages linking in to the store, and the largest percentage of the store's traffic – a whopping 21% – comes from, you guessed it, people Googling 'Fortnite'.

In the same month, Steam saw around 148 million visits, ranked #301 in global internet engagement, and is linked by 22,178 external pages. The largest percentage of their traffic is a teensy 1% where people have just Googled 'Steam'.

These numbers tell us what we already know. Steam has been around forever, is *the* place people go to buy PC games, and is currently the untouchable PC king. And this is why Epic are trying so hard. They're being so generous with revenue split, refunds, and publishing money because they need devs and consumers to come to them *before* they actually have a comparable offering to Steam's. People go to Steam because it's Steam. Right now, people go to Epic because they want to play *Fortnite*, or because they've been paid for an EGS exclusive. I'd expect the generous developer incentives to tail off as the EGS gets bigger and more successful.

Epic's approach is ambitious and aggressive. I love a bit of chutzpah, and you need a lot of it to wage war on a titan. But right now, Tim Sweeney is Philip II, sending threat after threat. Valve recline at home, on wheeled chaise-longues. And they're thinking: 'If'. 🐼

# WIN A 34-INCH IIYAMA G-MASTER RED EAGLE GAMING MONITOR

Here's a chance to get your hands on a 34-inch gaming monitor, courtesy of the lovely folks at iiyama. One lucky Wireframe reader will get an iiyama G-Master GB3461WQSU Red Eagle monitor, which has a 3440 × 1440 resolution and 144Hz refresh rate, sent direct to their home.

Worth  
**£400**

Here are some more juicy tech specs:

- **34-inch IPS panel**
- **144Hz refresh rate**
- **FreeSync Premium support**
- **1ms MPRT response time**
- **3440 × 1440 resolution**
- **2 × HDMI (120Hz) and 2 × DisplayPort (144Hz) inputs**
- **Stereo 5W speakers**
- **USB 3.0 hub**



You can enter at  
[wfmag.cc/compo](http://wfmag.cc/compo)

The 34in iiyama G-Master GB3461WQSU Red Eagle features a massive 3440 × 1440 resolution, which allows gamers to see more of the battlefield without constantly having to switch the view. The IPS panel also offers a 1ms MPRT response time and 144Hz refresh rate.

Meanwhile, FreeSync Premium support provides dynamic adjusting of the monitor's vertical refresh rate to the frame rate of the graphics card.

However, the real game-changer is the low frame rate compensation (LFC), which effectively removes the minimum refresh rate boundary, putting an end to virtually any tearing or stuttering issues.

Covering 100% of the sRGB colour range, the IPS panel provides outstanding colour accuracy and wide viewing angles, guaranteeing high fidelity and vivid battleground scenes.



Competition closes on Friday 3 July. Prize is offered to participants worldwide aged 13 or over, except employees of the Raspberry Pi Foundation, the prize supplier, their families or friends. Winners will be notified by email no more than 30 days after the competition closes. By entering the competition, the winner consents to any publicity generated from the competition, in print and online. Participants agree to receive occasional newsletters from Wireframe magazine. We don't like spam: participants' details will remain strictly confidential and won't be shared with third parties. Prizes are non-negotiable and no cash alternative will be offered. Winners will be contacted by email to arrange delivery. Any winners who have not responded 60 days after the initial email is sent will have their prize revoked.

VIDEO GAME

# Italia

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From the opening of Ubisoft Milan to a wave of lively indie studios, the Italian games industry has seen huge growth over the past 25 years. We spoke to a dozen studios to get the inside story

# 34BIGTHINGS

Valerio Di Donato is CEO of this 30-strong studio, based in Turin. Its first game, *Redout: Space Assault*, won Best Game at the Italian Video Games Awards 2017



Me and two friends from the IT University of Copenhagen founded the studio in 2013. We headed back to Italy for a short stay before moving to San Francisco, or at least that was the plan. We started working in the sitting room of our apartment in Turin, and managed to meet some incredible people, veterans from the triple-A industry, who craved for an interesting environment to work in.

## DISCOVERABILITY

I think we're on the verge of experiencing exponential growth in the local industry. Today's industry is larger, but also significantly more mature and open towards the future. There's no such

thing as competition: with enough understanding of the creative industry, it's easy to discern why products like *Super Mario Bros.* and *Celeste*, albeit covered by the same 'platformer' umbrella, are too different to be competitors. But there is a discoverability problem where it's getting harder and harder to get players' attention. This means game studios need to push research and development and marketing resources together to innovate and communicate properly.

› "We moved from three people working in a sitting room to 30 professionals in a real office in two years," says Valerio Di Donato, head of the studio behind *Redout: Space Assault*.



# CORDENS INTERACTIVE

Matteo Marzorati is the co-founder and art director of Cordens Interactive, based in Milan. It's currently working on its first game, the atmospheric platform-puzzler, *Dusk: Awakening*



The most difficult turning point to reach for the company was to find investors for the game, to find people that strongly believed in us and our first project. We managed to do it thanks to an already established network we made in university, and thanks to several opportunities we

had to go abroad and to participate in different international showcases, hosting publishers and investors all around the world. Setting up the company itself was a small issue compared to [finding investment]. But things are getting easier, and opening an innovative start-up in our

country is facilitated by the government, thanks to laws enacted almost five years ago.

## CHANGES

Compared to six years ago – when I started my university course – the situation in Italy is pretty different. There's now a wide range of game development courses throughout Italy – students can choose to get a deeper specialisation in different topics such as 3D modelling, game design, development, and concept art.

As a company, we're really happy with how things have unfolded, because right now there's a wider choice among work candidates and a stronger focus on skills that really matter while developing a video game.



▼ Currently in development, puzzle-platformer *Dusk: Awakening* is the first game from Cordens Interactive.

# GUARINI DESIGN

Massimo Guarini is a veteran designer who's worked at Ubisoft Montréal and Grasshopper Manufacture. In 2012, he founded indie studio Ovosonico in Milan, and set up concept house Guarini Design in 2020



I started as a game designer back in 1996, and got hired by Ubisoft Milan in 1999 – I was the first game designer being formally hired with the title in Italy. Passing the long, three-step interview with Ubisoft was mainly a matter of convincing my future leader that I was creative and prepared enough to take on such a varied and difficult role.

After being promoted to lead game designer on several projects, in 2004

▼ After working for Grasshopper, Guarini returned to Italy to make more personal games like *Murasaki Baby*.



I moved to Canada to join Ubisoft Montréal, [where] I worked my way up to game director on *Naruto: Rise of a Ninja*. I eventually landed the game director role at Grasshopper Manufacture, after having convinced [CEO] Goichi Suda that I was the right guy to direct *Shadows of the Damned* along with Shinji Mikami and Akira Yamaoka. We were probably both drunk when we had that conversation.

I also survived the nightmarish Fukushima earthquake in 2011, and moved back to Italy soon after to start my own, very personal studio, Ovosonico.

## NEW CONCEPTS

Guarini Design is a concept house – a company which creates new intellectual properties, manages its licensing rights, and provides creative direction, but is set up as outsourcing, thereby involving various external [developers] in the creation of the final product. I believe game directors,

writers, and authors can still be valuable as individuals, and capable of directing without being part of a big structure [like a traditional game studio]. It's designing without the burden of structures; like an architect who designs and supervises, but then hands off the project to a construction company.

The Italian game industry is growing stronger as time passes, but still suffering a notable delay compared to the rest of the world when it comes to new business models.

Concept houses are no new thing. Japan was one of the first nations where established creators quit big companies to found their own creative house and provide services as authors on different productions. One of the reasons nobody in Italy has considered following this path before is the lack of international experience, and the mindset talents have here. There's probably five of us, as Italian designers, who have proven experience abroad.

# INVADER STUDIOS

Tiziano Bucci is the president of Invader Studios, which began as a small team making an unofficial *Resident Evil 2* remake. Its first commercial game was 2019's *Daymare: 1998*



The first time [we visited Capcom], in 2015, we were just a group of friends, not a company, and we'd just had success with some videos of our *Resident Evil 2* unofficial remake in Unreal Engine 4. Capcom called us asking to stop the project and meet them in their headquarters in Osaka.

The experience was incredible. We met Capcom producers Jun Takeuchi, Hiroyuki Kobayashi, and Tsuyoshi Kanda, and they treated us amazingly, showing us secret stuff from the *Resident Evil* series, talking about our future and our possible game. We got some really good tips and feedback about the early version of *Daymare: 1998*

we showed them. We decided to found Invader Studios and focus all our energies on the game.

## PRESSURES

Being smaller, you can focus on less mainstream [game ideas], because your break-even point is lower and you don't need to sell millions of copies. You're able to make a game following your tastes for fewer people and a specific genre market. At the same time, you can't fail, because if you're small, you have salaries, taxes, and expenses.

The Italian [government] is still not ready to manage software houses' needs and risks.

This is the first thing we need to change in Italy: the taxation approach to this new kind of industry. Video game development should be treated like any other kind of commercial or artistic sector.

▼ Invader Studios has gone from a group of Capcom fans to making its first commercial game – the *Resident Evil*-inspired *Daymare: 1998*.





## MILESTONE

Luisa Bixio is the CEO of Milestone. One of the largest studios in Italy with a headcount of around 200 employees, it specialises in racing games, such as last year's MotoGP 19

^ Milestone is one of Italy's biggest studios, and it specialises in realistic racing sims, like MotoGP 19.

Milestone was founded in 1996 as a work-for-hire development studio for publishers, like Virgin, Atari, or EA. Around [2012], we decided to start self-publishing our games; from that point, everything happened faster – we grew both in terms of revenues and number of employees, since we started taking care of publishing by ourselves.

### RACING SPECIALISTS

I think racing is part of Milestone's DNA. I mean, we're Italian: we love cars, motorbikes, and all racing sports. If you look at the Italian industry there are so many racing studios – we're not alone! I think, for

a medium-sized studio, focus and expertise are extremely important.

### A PROPER INDUSTRY

I started working in this market in 1994 before the PSone's launch, and the industry has changed dramatically. I don't remember many studios in Italy before 2000. But then mobile, PC, and digital distribution changed the industry a lot and opened up new opportunities.

Today, we have an association that supports us, creating favourable conditions for the development of the industry, while eSports are becoming more and more

popular. We're now a proper industry: before 2000, there was almost nothing. Gaming was basically just a niche hobby.



## Lockdown

Italy has been greatly impacted by the ongoing coronavirus outbreak – a healthcare crisis that has seen the cancellation of numerous game expos and other events, and forced studios to continue their work from home. Developer Massimo Guarani, who was in the middle of starting up his new business as the country's lockdown began in March 2020, believes the outbreak will almost certainly change the industry for many years to come. "I can certainly foresee that this outbreak will change the

industry, how we work and how we live," he tells us. "I strongly believe this is going to be the future of the game industry: a sea of freelancers and a few major studios. It's happened already with films and television. The coronavirus is forcing our way towards this inevitable transition."

In late May, the Italian government introduced the First Playable Fund – a €4 million initiative designed to help the industry through the crisis. You can read more at [ideassociation.com](http://ideassociation.com).



# STORMIND GAMES



Antonio Cannata set up Stormind to make *Remothered: Tormented Fathers*, written and directed by co-founder Chris Darril. They're now working on its sequel, *Remothered: Broken Porcelain*

Video games have always been a love of mine. I started playing when I was three – and my uncle gave me a Commodore 64, and never stopped cultivating my passion, but always as a gamer. When people asked me what I wanted to do when I grew up,

I never imagined I'd end up on 'the other side'. When I was a kid, the games industry was for the few – you needed to have significant economical resources, and the engines that are around now, such as Unity and Unreal, didn't exist, so it was really complicated if you didn't already have a big team.

I met Chris Darril in 2012, but the time then wasn't ripe: he was uncertain about how to structure the game, and I wasn't ready from a business point of view. Then, when we met again in 2015, all more experienced, the development of *Remothered: Tormented Fathers* started. I immediately

recognised the potential of Chris's idea, and I'm grateful he chose us to transform it into reality.

So in January 2017, when the game was announced, Stormind Games was born. We raised the bar [with *Tormented Fathers*], which has always been our main purpose, and *Remothered: Broken Porcelain* is going to keep raising it. We've also been working for a while on a new game – which hasn't been announced yet – that is perfectly aligned with our aim to always set a higher standard.

There are now more opportunities for those who work in Italy: people don't need to move to the UK or Germany or France anymore, far away from their families and friends.



Released in 2018, *Remothered: Tormented Fathers* drew – at least in part – on Italy's rich history of horror movies.



# STORM IN A TEACUP

CG artist Carlo Bianchi set up the Rome-based studio Storm in a Teacup in 2013. Its most recent game was first-person horror title, *Close to the Sun*, which Bianchi directed

I studied computer graphics, and after unpaid job after unpaid job, I finally found a paid job in the games industry. I had the chance to work for some major studios around the world – until, in 2013, I felt I had to get back to my home and my family.

That's why I created Storm in a Teacup in Rome – to make a living in the games industry in my own city. The studio's an

expression of what I believe is needed to create good games: passion and hard work. Since 2014, we've been creating games designed to make players feel like they're part of the stories we're telling. *Close to the Sun* has been the most successful step on this path so far, but we're always trying to go a step further.

## BEING THE BOSS

Being a CEO is a real nuisance I had to accept when I opened Storm in a Teacup. I was born an artist, and that's what I really love to do, but since the responsibility for the company is mine, I had to accept it together with all the compromises this kind of activity brings with it. The company is still small, and it's normal for me to have different roles in it, but in the past two years, I decided to resign from many responsibilities and started hiring

managers and other different responsible figures. I don't control everything now, but it's better for my mental health.

Creating video games in Italy is a real challenge. The industry's growing and there are some good studios creating interesting stuff, but making a business out of a passion here is more difficult than in other countries. Game development isn't yet fully recognised by institutions and investors – there's a lack of understanding and commitment, so that only those who are strong and prepared enough are able to survive the first title they develop, and grow to create a proper company.

Since the salaries here are lower, you can eventually start your business project more easily, but then it's hard to keep the most talented artists and developers, since they're usually attracted abroad.

Although comparisons with *BioShock* were inevitable, *Close to the Sun* was an ambitious and impressively polished game from Storm in a Teacup.



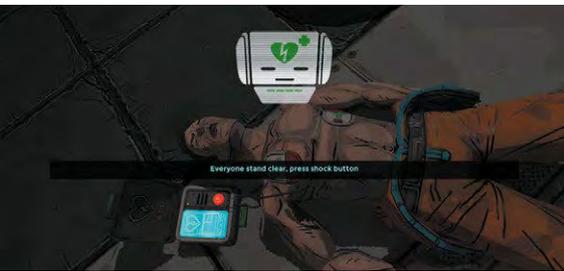


## STUDIO EVIL

Luca Marchetti is the CEO of Bologna-based Studio Evil, which specialises in business-to-business software and educational games like *Relive*, an adventure that teaches players about CPR

We decided, back in 2012, that we wanted to be totally independent and build our games on our own. This, for us, means also that we have to provide a stream of income to invest in our games. So we made the choice

▼ A sci-fi adventure that also teaches you the basics of CPR? That's *Relive*, developed by Bologna's Studio Evil.



to keep both B2B [business-to-business] and B2C [business-to-consumer] sides. Also, a lot of our game development skills are not so common in the B2B world we work in, so we have a competitive advantage in fields like VR/AR, and everything that involves real-time graphics.

This makes us competitive, keeps our dev skills sharp, and our income steady.

### CREATIVITY

The only concept that links our projects is they 'must be a game we'd play'. We like the idea of working on something new every time... we like to preserve our creative flow, where everyone in the studio is encouraged to throw ideas in the stack and help the studio choose the one we like the most. This

is our way to be creative, and I don't think it will change in the future.

### COMPETITION

The Italian industry is now larger and full of very creative teams – there are more opportunities for game developers, for sure. The quality of Italian games has raised incredibly, and now we're facing some new challenges: getting the attention of the international industry is the most important one.

The competition I feel here in the [Italian] industry is of the positive kind – it keeps you trying to raise the quality of your production, because everyone in the industry is making interesting games. This competition is a drive for us to move forward.

## TRINITY TEAM

Gerardo Verna co-founded Trinity Team in Bologna in 2015. Its first game was *Slaps and Beans*: a brawler based on the spaghetti western movies of Italian stars Bud Spencer and Terence Hill



Trinity Team's philosophy is to make the video games we want to play. This philosophy often goes against the logic of following the market trend and can be very risky, but in our opinion, it's the only way for a small team like ours to emerge in a market saturated with titles that are often too similar to each other. Making video games is a complex and risky job, but we do it with pleasure because, unlike other jobs that are more 'safe', in addition to technical and organisational skills, it has a fundamental ingredient: passion.

### NARROWING THE GAP

All the members of Trinity Team have been working in the sector for over ten years, and certainly, since the beginning of our career, the Italian situation has changed a lot. In the last two to three years, it seems to me that

things are further improving even if the gap with other countries remains.

In particular, I think that those who want to enter the industry are becoming more aware of the complexity and difficulties of the sector, and this makes the approach more professional and less amateurish.

Today, there are certainly many more possibilities thanks to the spread of engines, such as Unity and Unreal. But also the greater ease of access to platforms, not only mobile, but also consoles, such as Nintendo Switch, that were once only intended for large development teams.

▼ *Slaps and Beans* is a game that could only come from Italy.



# UBISOFT MILAN



Dario Migliavacca is the managing director at Ubisoft Milan, founded in 1998. Now an 80-strong studio, its more recent claim to fame was *Mario + Rabbids Kingdom Battle*, released in 2017

All Ubisoft studios share the same vision and working culture: develop original and memorable gaming experiences, working together with talented colleagues from around the world. In Milan, we're totally aligned with that philosophy and, like other Ubisoft studios, we also have our own identity, expressed through creativity and craftsmanship. We do our best to excel in this huge creative workforce.

*Mario + Rabbids Kingdom Battle* is the perfect example of who we are –

particularly the first prototype of the game. It was created by our game design team using cardboard, glue, miniatures, and dice, in order to test the turn-based mechanics as early as possible.

## HOLY TRINITY

I joined Ubisoft Italy in 1996 as a sales manager, and I've been leading the Milan studio since 2003. Back in those days, the Italian industry was in its infancy, with only a few teams and no schools or university

courses that could prepare students for this kind of career.

Now we're definitely catching up, even if we still have some gaps to fill: more teams are popping up every year, and the quality of the games developed in Italy is rising. Moreover, schools and universities now offer art and coding courses so the new generation of students can achieve better skill levels.

There are definitely more opportunities, but I'm not afraid of the competition; quite the opposite! My dream is to welcome another big publisher opening a studio in our country. That would mean that our industry is able to foster a thriving ecosystem, leading to even better training courses and a greater pool of local talent, and attracting investment from both the private and public sectors.



▼ A rare example of a game featuring Super Mario, but made outside Japan: it's *Mario + Rabbids Kingdom Battle*, developed by Ubisoft Milan.





## UNTOLD GAMES

Elisa Di Lorenzo is the co-founder of Untold Games, which specialises in both developing original games and porting titles for other studios. Untold's latest project is TerraMars, a resource management sim

I used to play with my dad's Commodore 64 as a child, so I've always been interested in programming. I remember the exact moment years later when I first saw *Command & Conquer* at a friend's house and thought I wanted to work at Westwood Studios. In high school, I found like-minded people who eventually became my co-founders. There weren't any specific schools for game development in Italy at the time, so we studied computer science with a specific curriculum on computer graphics. Then we realised that the industry was so small in Italy that if we wanted to work in games, we would have had to move abroad, or create

our own jobs. So we set up a small studio called Foofa Studios, and [made] our first steps in the industry [by] making our own Flash games and providing development services for third parties.

### CATCHING THE RIFT

Untold Games was born when the original team was joined by Italian actor and director Flavio Parenti, who pitched us the idea of working together on VR projects, right after Oculus Rift had finished their Kickstarter

campaign in 2013. We immediately saw the incredible potential in the technology, and how it could open the doors to new types of gameplay and new ways to tell stories. We're a team that has 'narrative' at its core, and we try to put it in everything we work with. Stories are what really move and engage people.

Untold Games is not only about VR games though; at the moment we're working on a 'standard' game called *TerraMars*, which is a mix of resource management and survival that is focused on the lives of the first human crew sent to Mars.

### TAKING RISKS

Bigger studios have the budgets, but they can't really afford the risk that comes with innovation. They can improve on what already exists, but they rarely can afford the risk of doing something completely different. Smaller studios tend to experiment more with gameplay and narrative, because they have faster production cycles and risk less.



▲ Untold Games released its VR adventure *Loading Human: Chapter 1* in 2016. It's now working on the resource management game, *TerraMars*.



## ONE-O-ONE GAMES

Daniele Azara is a partner and head of games at One-O-One Games, a Rome-based studio that recently released the dark adventure game, *The Suicide of Rachel Foster*



One-O-One games evolved out of 101%, a post-production and digital business-to-business company, so we see our [motion capture and software development] services as an opportunity to network and grow together as a development community.

Being an indie studio obligates us to be more scrupulous in order to make [our games] unique, which then results in a more focused creative direction.

### OUT OF THE DESERT

In the last 20 years, Italy's gone from a desert made of individual professionals and a few [studios] focused on racing games,

to a multicoloured environment full of publishers and indie developers, ranging from two-person companies to [studios] working on multimillion-dollar-budget games. In the mid-nineties, Italy lost its competitive edge due to inadequate laws on copyright and IP, not because of a lack of technical or artistic skills. Since 2012, everything has moved very fast. It's exciting to see that people are starting to look at gaming globally rather than focusing on one territory, so there's a great opportunity for Italy to emerge internationally. 🌐

◀ "We hoped to encourage players to think about difficult subjects," One-O-One's Daniele Azara says of *The Suicide of Rachel Foster*.



# Toolbox

The art, theory, and production of video games

**46. CityCraft**  
Using plazas and green spaces in game cities

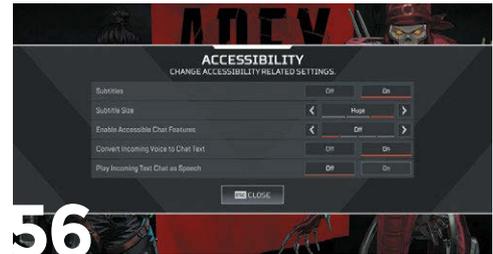
**48. Design Principles**  
The life lessons games can teach us

**50. Battle Beyond the Stars**  
Build a multiplayer space shooter in Unity

**56. Accessibility**  
Making games more welcoming for disabled people

**58. Player Groups**  
How they can help your design decisions

**64. Source Code**  
Recreate Gauntlet's four-player co-op mode



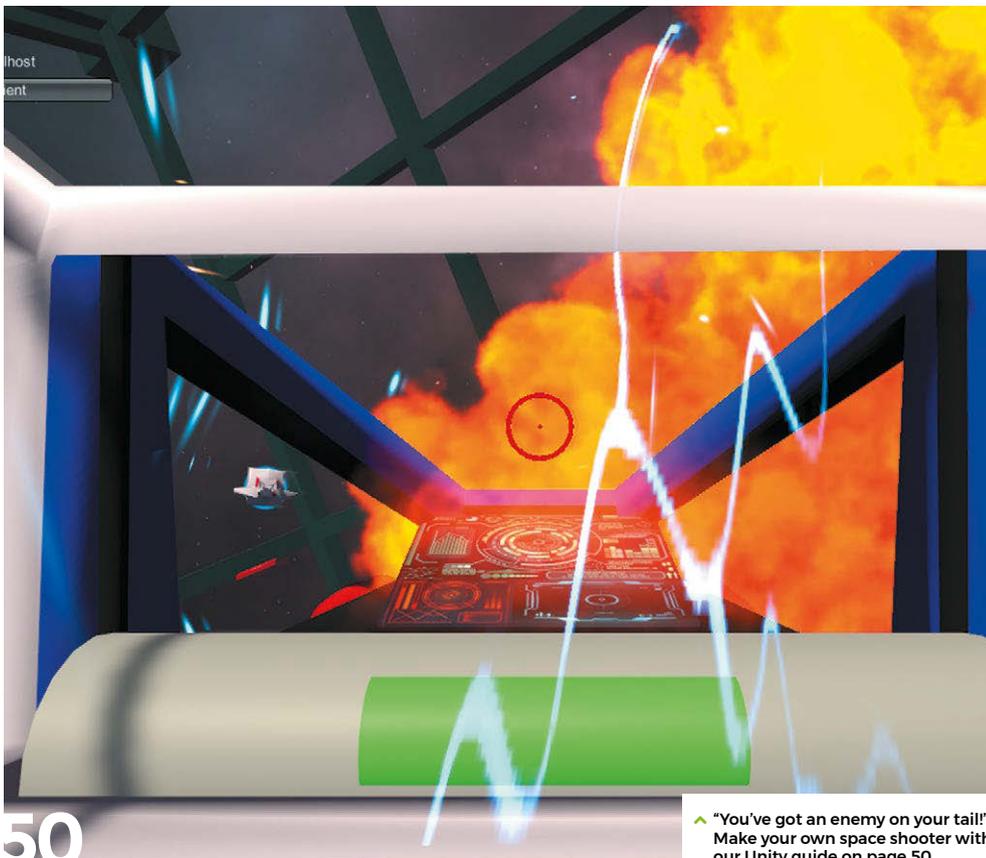
✓ Player groups help you identify audiences and make the right design choices. See page 58.

58



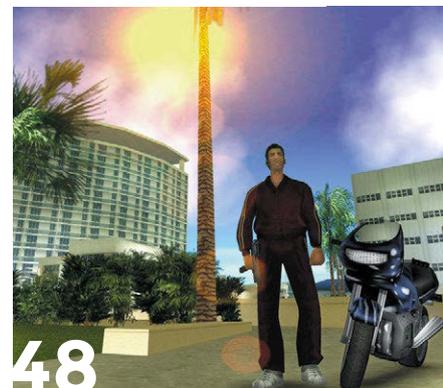
46

▲ Plazas and green spaces can make your cities spring to life. Konstantinos explains how on page 46.



50

▲ "You've got an enemy on your tail!" Make your own space shooter with our Unity guide on page 50.



48

# Game cities and public spaces

Parks, squares, green spaces and more can make video game cities vibrant and memorable, Konstantinos writes



**AUTHOR**  
**KONSTANTINOS DIMOPOULOS**

Konstantinos Dimopoulos is a game urbanist and designer, combining a PhD in urban planning with video games. He is the author of the forthcoming *Virtual Cities atlas*, designs game cities, and consults on their creation. [game-cities.com](http://game-cities.com)

All city areas open to citizens are commonly referred to as public spaces. Unsurprisingly, then, these nodes of mass social interaction have proven to be some of the most enduring, vibrant, and meticulously designed places in urban history. Even in the past century of increasingly private and speedy transportation, places where people gather and interact with each other have lost none of their importance; they're major hubs of life, commerce, culture, leisure, and politics. It's in public spaces

that demonstrations, parades, celebrations, and concerts are held, where people meet, discuss, and gossip, and where some of the most prominent architecture is often found.

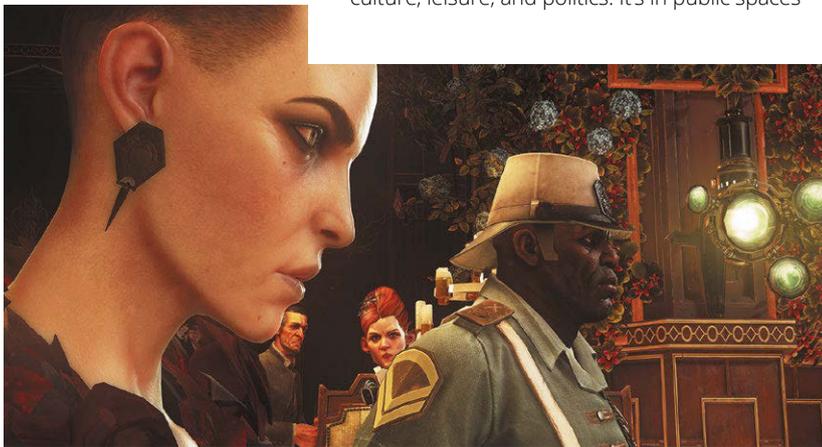
Ironically, the public space is one urban element that video games tend to consistently ignore. Even town and city squares are routinely forgotten, which is something that has always struck me as an odd thing to miss. Here, I'll explain why I strongly advise against leaving public spaces out of your game.

## SPACES FOR THE PUBLIC

Public spaces are essentially defined as areas where the general populace has the right to gather in significant numbers, and they're some of the most characteristic parts of a city. Well-known and popular among locals, public spaces are also the first places a visitor will likely see – they are, after all, designed with spectacle and comfort in mind. Not all public spaces aim to be dramatic, but most dramatic city spaces tend to be inviting and open to the public.

The criteria outlined above describes several types of spaces that can vary wildly in scale, design, and purpose. Interestingly, they also serve as a reminder that a public space can potentially be closed – during, say, a lockdown due to a virus. Granting or restricting access is what effectively defines public space. Whether or not a space is open to the public can change with time, and the perceptions of public space can also evolve. The road, for example, once a common meeting place for citizens, was eventually invaded by horse-drawn carriages and later taken over by the automobile. Similarly, most of Europe's kingly

▼ Opulence and decadence are restricted in the private spaces of the great city of Karnaca in *Dishonored 2*.



## Public and Private Spaces

Playing with spatial restrictions, access rights, accepted activities, and contrasts can lead to fascinating dialogues between different types of civic spaces, which can in turn enrich both the core of the gameplay and the overall experience a game offers. In *Dishonored 2*, for example, how people behave changes drastically depending on whether they're in a private or public space. The *Hitman* games, meanwhile, allow players to effortlessly stroll through public areas, but demand they employ stealth or wear a disguise to enter a private space.



parks were eventually opened up to the masses, and redesigned to cater to the needs of the many instead of the whims of a single monarch.

Today, we instantly recognise a grand plaza, an urban forest, a bus stop, or a waterfront esplanade as public space, but the same can't be said for a temple, theatre, or shopping centre. Things like access rights and questions of ownership – whether a space is public, state, or privately owned – create a fuzzy spectrum between the obviously public (for example, a pavement) and the strictly private (say, somebody's home). In semi-public, privately owned spaces such as theatres or bars, an entrance fee might be charged, or a purchase could be required.

Of course, in video games, we could keep things simple by ignoring the matter of ownership altogether, and by treating all accessible space as public. This would, however, rob us of the opportunity to play with the tension loose borders can provide, or the chance to explore shared and transitional spaces. The effects of imposing restrictions on virtual public space shouldn't be ignored, either: a government restricting access to a square, or forbidding a demonstration, could all make for effective moments in your narrative.

**“Public spaces are the first place a visitor will likely see”**

## EXEMPLARY SPACES

Even a simple square can breathe life into a virtual space, enrich it, and make it resemble a real settlement more closely. In video games, public spaces provide countless opportunities for environmental storytelling and mood setting – just think of the little plaza outside the train station in *Half-Life 2*'s City 17. That plaza also provides interactive crowds to mingle with and act stealthily in, as well as meeting points and tense combat arenas.

*XCOM* allowed us to hide behind fountains and devise ambushes between benches – an idea that could work equally well in other, more elaborate urban settings. *Assassin's Creed II* or even *Bus*



▲ The stunning Piazza San Marco, wonderfully captured in *Assassin's Creed II*.

◀ A mostly empty public space effortlessly conjures a feeling of unease in *A Place for the Unwilling*.

*Simulator 18* would have suffered heavily without their public spaces; the episodic adventure *Dreamfall Chapters* and its Propast district offered players a chance to experience daily life and understand the political gossip influencing the metropolis. *The Legend of Zelda: Majora's Mask* put a narratively important square at the core of its world, mimicking the logic of many Renaissance urban planners.

Real life also brims with amazing squares and plazas that could be used as inspiration for your game. From the vast Zócalo in Mexico City and the instantly recognisable Place Vendôme and its famous column in Paris, to New York City's Times Square and the stunning, enclosed Grand Place in Brussels, the variety on offer is impressive.

Squares, in their variety of sizes, types, architectural evolutions, and designs have been a staple of urbanism throughout most of history, and across much of the globe.

Other contemporary types of public space include ceremonial roads, playgrounds, parks and pocket parks, gardens, pedestrian roads, open-air places of worship, and the occasional beach, whereas once-crucial but now extinct formations such as the Roman forum and the Greek agora shouldn't be forgotten. Not only were these the absolute urban and political centres of their respective cities, but they could easily serve as the inspiration for your own sci-fi or fantasy urbanism. 🌐

✓ Designing monumental public spaces was at the core of baroque architecture and city planning.



## Monumental Public Space

Public space is, by definition, meant to be visited, and thus offers some of the finest positions in the urban tissue for the display of significant ideological edifices, important landmarks, and propaganda monuments. It is, after all, no accident that massive basilicas, great cathedrals, and opulent palaces have all been built on carefully designed and spacious squares.

# The principles of game design

From the perils of avarice to existing in the moment, video games offer some valuable life lessons, Howard writes



**AUTHOR**  
**HOWARD SCOTT WARSHAW**

Howard is a video game pioneer who authored several of Atari's most famous and infamous titles. [onceuponatari.com](http://onceuponatari.com)



▲ *Burnout 3* provided extra boost for players willing to drive on the wrong side of the road or narrowly avoid vehicles, which raised the likelihood of a nasty crash.

▼ Do you just finish the maze or boost your score by going for the fruits? Greed really could kill in *Pac-Man*.



**A**t Atari, games were our life. Our passion was so intense, we had to protect the poor coin-op machines in our game room by adding kick barriers and padding. Just like you child-proof a house for a toddler, we player-proofed the arcade games to avoid damaging them whilst pounding out our frustrations as the last precious life flickered away. We were totally lost in the depths of the maze... and looking to go deeper.

The psychotherapist in me is fascinated by this phenomenon, but this isn't about pathology. There's a big upside to being crazy about video games, and I'm down with the upside. Such intense focus and engagement is frequently sought in life yet rarely achieved. I believe art imitates life, therefore I can learn about life from the art of video gaming.

One major lesson of video games is simple and classic: greed kills!

Most games offer players a basic strategy that works fine and allows them to progress safely through the game. But playing it safe gets boring – sometimes I want more adventure and excitement. That's when well-designed games offer a special reward opportunity for the price of increased risk. They dangle a carrot (or a fruit) in front of me, and now I must choose: maintain basic strategy or abandon it and go for the gold. Naturally, being a maximiser at heart, the call of the cherries is irresistible. In a flash, I concoct a strategic deviation to grab the bonus and...

The allure of easy money or novel side quests yank me out of my safe strategy and into higher-risk scenarios. More excitement. More

vulnerability. Am I nimble enough to nab the booty and make my escape? Occasionally yes, but frequently that's when I lose lives in video games (and time/money/relationships in real life).

Nothing ventured, nothing gained is true, but nothing ventured, nothing lost is an equally valid (and lesser touted) corollary. Learning to balance the risk with experience, skill, and wisdom is an ongoing process both in and out of games.

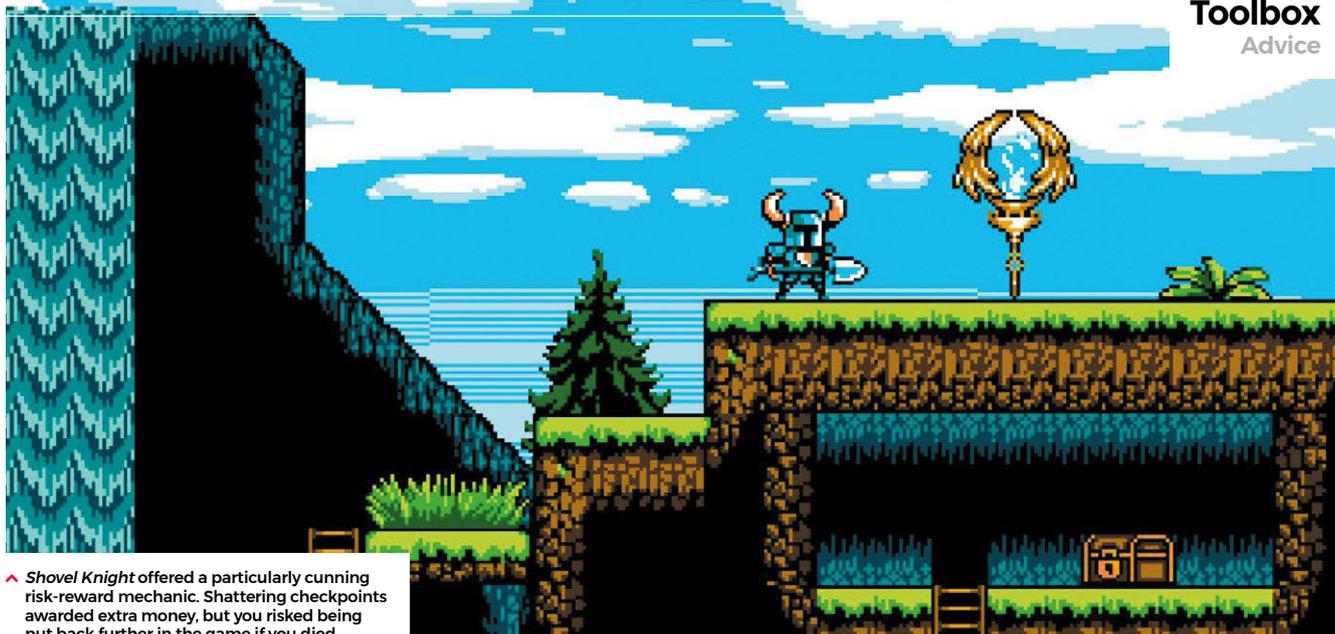
What if Atari management had spent more time playing the games they sold? Might they have learned the 'greed kills' lesson? Could this have altered Atari's destiny? Unfortunately, video games constantly remind us of another big lesson: life has no replay button.

## IN THE FLOW

The next lesson starts with a question: do you know what it feels like to perform at peak potential? Most likely you do not. Here's why.

Did you ever 'wake up' from a video game to a new high score? You realise you've been playing so well for so long and suddenly you are so busy noticing how well you've been playing that you are no longer playing so well. In video games, this situation is usually summed up by two words: Game Over.

The big question is, what does 'wake up' mean in this context? What did you wake up from? It's not like you were sleeping. 'Waking up' means transitioning from one state of consciousness to another. It usually refers to the transition from sleep to wakefulness, but it applies to other transitions as well. In the moments before you 'woke up', you were playing so intensely that no part of you was paying attention to how well



▲ *Shovel Knight* offered a particularly cunning risk-reward mechanic. Shattering checkpoints awarded extra money, but you risked being put back further in the game if you died.

you were playing. This is total concentration. This is Flow.

Flow is that quality of being totally undistracted. When I'm in flow, I am *fully engaged*. I'm devoted 100% to what I'm doing, and 0% to observing myself being 100% devoted to what I'm doing. When I'm in flow, I am too busy being myself to judge myself.

That's why you don't know what it's like to do your best. If you are truly doing your best, there is nothing left to comprehend the experience. You can look back and appreciate the results afterwards, but you can't watch it or feel it in the moment. Flow is the moment of performing at maximum capability.

In video games, flow is where your best play occurs. As soon as the player wakes up a little and recognises how they're doing and sees how great they're playing and how wonderful it's all going, then it's over. Because that tiny bit of consciousness that's now paying attention to how well I'm doing is no longer devoted to doing it. However minuscule it may seem, that little bit of consciousness can be the difference between living or dying in a video game. It can be the difference between succeeding or failing in any endeavour.

Your consciousness is a precious resource that you allocate, and the more effectively you allocate it, the more effective you are. A human being that is 100% focused is an awesome force, capable of amazing things. Of course, living in a high-stimulus, distraction-laden world, it's incredibly difficult to allocate 100% of myself to anything.

At times I may feel totally focused, but in reality, I'm only using a small portion of my consciousness and capacity for the task at hand. Most people are capable of being a lot more awesome than they



▲ Rockstar's hugely immersive *Grand Theft Auto: Vice City*. Just try not to accidentally fall off any buildings.

**“One major lesson is simple and classic: greed kills!”**

currently are. Anyone can do it, but opportunities to practice are rare. One thing about video games, they have the potential to absorb 100% of our attention. That's not only a pleasurable experience, it's also one of life's teaching moments.

I always try to factor 'greed kills' into my play strategy, as well as finding flow whenever I can to max my potential. These video game lessons carry far beyond the controller – they can improve your play in life as well. Some of the things that make me a good player have made me a better therapist. Represent! Be proud of your gaming!

There are people out there who look to demonise video gaming. As a therapist, let me leave you with this: the next time someone tries to pathologise your play, remind them that no one reports higher scores than the obsessive-compulsive (except the pathological liar, of course). 🌐

## Fall Guy

How do you register your game experience? Are you just sitting there pushing buttons? I will never forget the time I was playing *GTA: Vice City*. In the middle of an intense sequence, I accidentally jumped off a building... and felt like I was physically falling. Thanks to my dedication to the mission (and an assist from my mirror neurons), I had the visceral feeling of weightlessness in my stomach. Crossing the mind-body barrier is another lesson explored in my upcoming Atari book. Also considered: If I'm actually *feeling* the experience, am I having the experience?



Download  
the code  
from GitHub:  
[wfmag.cc/  
wfmag39](https://wfmag.cc/wfmag39)

# Make a multiplayer space shooter in Unity

Create a multiplayer space battle with ships, missiles, and lots of explosions



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If we have any use for outer space at all, it's as a glorified battle arena for frustrated star pilots. Here, I'll show you how to build a multiplayer space shooter in Unity using resources you can either make yourself or download free. We'll assume you have some knowledge of Unity; if you don't, then head to our kart game tutorial in issue 38 to get familiar with some of the basics.

## GETTING STARTED

When running a single-player game in Unity, there's only one instance (or copy) of the game running, and that's the one the player sees on their screen. All the objects and data associated with the game are contained in that active program. With multiplayer games, several

instances of the program will be running on different computers, and each program will need to synchronise its data to make sure the game environment and events seen by one player are also seen by all the others. The way this is achieved is to run one program as a host, which is the controller of all the data, and each player runs the program as a client or end-user.

If we were writing an online multiplayer game, we'd want to have the host program running on a separate server which players would log into. For this example, though, we'll make a local area network (LAN) game, as this is easier to set up and can be demonstrated on one computer running multiple instances of the game. You can also use this method to play the game on separate computers, but they must be able to see each other on the local network using an IP address.

## SETTING UP NETWORKING

Until recently, Unity had its own internal networking system called UNet to handle multiplayer. UNet has now been discontinued, but an external studio has made a plug-in called Mirror, which improves on the old system and is available in the Asset Store as a free download. Search in the Asset Store for Mirror from vis2K, download the plug-in, and then import it into your project. When that's done, you should see a new folder called **Mirror** in your **Assets** folder.

The Mirror plug-in provides quite a few new components – the first one we need to use

♥ We're hit, captain.



is the Network Manager. Create an empty game object and name it Network Manager, so you remember what it's for. Then go to 'add a component' in the Inspector for the object and select NetworkManager from the Network section. This component will do all the background multiplayer work for us. We also want a way to control some of the things the Network Manager can do, so if we also add a NetworkManagerHUD component, we'll be given some information and buttons when the game's played. Try pressing the play button, and you'll see three buttons appear at the top left of the game window labelled 'Host(Server + Client)', 'Client' and 'Server Only'. If you select the first one, you will see some information about the network game server and a button to 'Stop Host'.

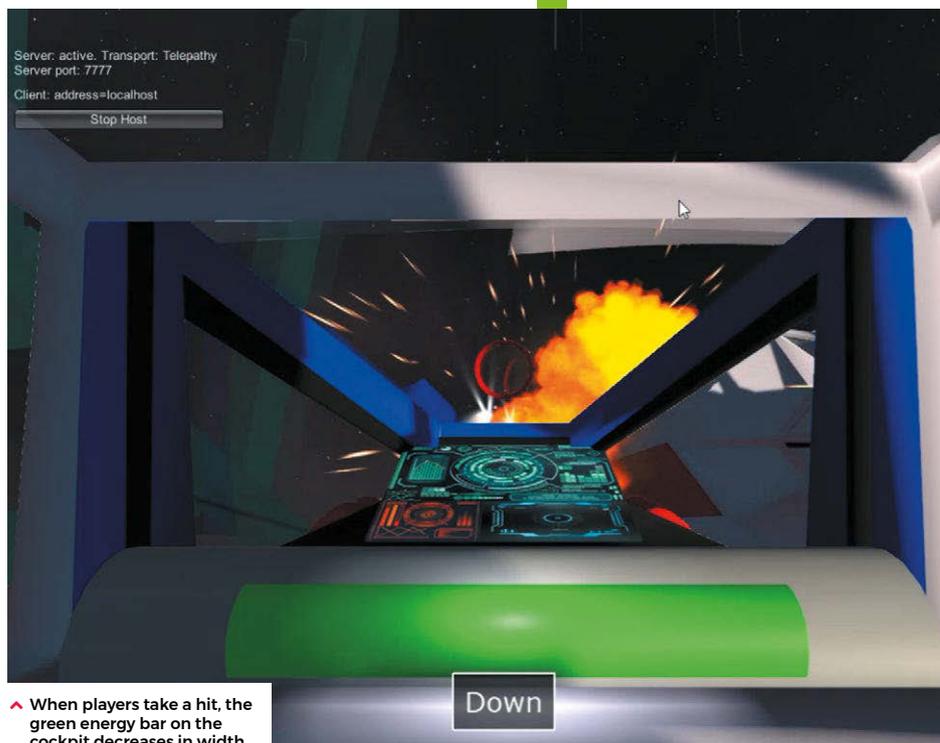
This means we can run the game as either a server, client, or both. To get a multiplayer game going, one game (and only one) must be the server, or server and client, and all the other participants must run as clients. The server game will keep everything in sync and be the source of information about the status of all the elements in the game.

### SPAWNING PLAYERS

Next, let's make a placeholder game object so we can make sure the spawning works. From the GameObject 3D Object menu, add a capsule to the scene and name it Player. To convert this to a prefab, create a new folder in your **Assets** directory called **Prefabs**, and from the Hierarchy panel, drag the new Player object into that folder. Once you have a copy in the **Prefabs** folder, you can delete the original from the scene or Hierarchy panel.

To set up our player prefab as a networking object, double-click on the Player prefab, and from the network section, add a NetworkIdentity component. This allows the Network Manager to keep track of the prefab. Next, add a NetworkTransform component – this is so we can keep track of the player's position over the network. For this example, you'll need to select the Client Authority checkbox in this component. When this is done, save the prefab and go back to the main scene.

If we now go back to our Network Manager object and drag the Player prefab into the Player



▲ When players take a hit, the green energy bar on the cockpit decreases in width.

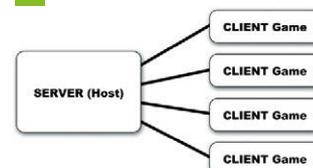
Prefab field under the Player Object section of the NetworkManager component, we can run the game again, and when we press the Host(Server + Client) button, we'll see our player capsule appear in the centre of the screen (assuming you haven't moved the camera). What the server part of the game is doing is creating a new client instance, and then creating a new instance of the player prefab to associate with that client.

While the game is running, you should see an object called Player(Clone) appear in the Hierarchy panel.

Now we can work on the multiplayer aspect. If we build and run the game (you may want to set the game as 'windowed' in the build settings), and also press play in the editor to run a second copy of the game, we can set one to be the Host and Client, and the other to be just a Client; we should then see in the Hierarchy panel two clones of the Player prefab. We'll only see one capsule on each window, though, because both players currently spawn at the same position. We'll fix this shortly.

### MAKE A SPACECRAFT

You can build one yourself, or download the BLEND spaceship model from our GitHub ([wfmag.cc/wfmag39](http://wfmag.cc/wfmag39)). To import a Blender ➔



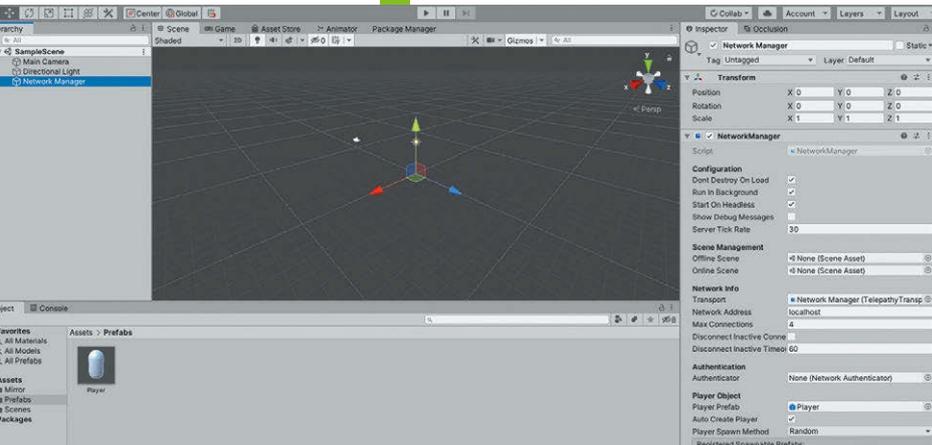
▲ The server or host controls the data that joins the client games together.

### UNITY VERSIONS

If you haven't used Unity before, download the latest version from **unity.com**. At the time of writing, there's an alpha release for 2020, but if you want a more stable version, the latest 2019 install is probably your best bet. Unity provides an install manager, Unity Hub, that allows multiple versions of the system to be used on the same machine as there can be significant differences between one version and another.

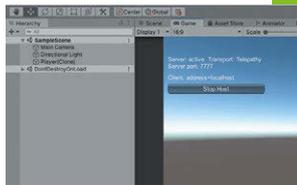
# Toolbox

Make a multiplayer space shooter in Unity



Setting up the Mirror Network Manager.

Our capsule appears when we start the game.



model into Unity, drag and drop the BLEND file into your **Assets** folder. I'd advise creating a **Models** sub-folder just to keep everything organised. If you then drag in any textures you applied to the model, Unity should be able to pick them up automatically. If it doesn't, you can add the textures manually by using the **Remap Material Fields** function, or extract the materials and edit them from the Inspector panel.

To replace our player's placeholder capsule with the imported spaceship, we need to edit the Player prefab and drop the spaceship into the Hierarchy as a subobject, then we can stop the capsule rendering by unchecking the Mesh Renderer component. Now, if we save our Player prefab and run the game as before, our ship spawns in the scene instead of the capsule.

Next, we want to ensure all our player ships spawn in different locations.

## DEFINING SPAWN POINTS

Spawn points can be any object, visible or invisible, but for this example, let's make four platforms out of a Cube game object and call them PlayerStart1, PlayerStart2, and so on.

We're going to need a bit of script to control what happens to each player, so make a folder in **Assets** called **Scripts** and, in there, you'll need to create a new script called Player. Here's the Player script we write to allocate a ship to a starting point:

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using Mirror;

public class Player : NetworkBehaviour
{
    private GameObject thisPlayer;
```

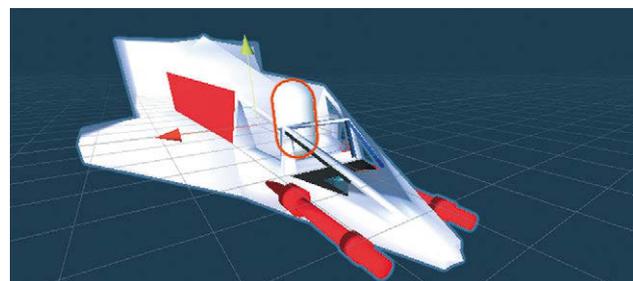
```
private static int playerNumber;

private int getCurrentPlayerNumber(){
    playerNumber += 1;
    return playerNumber;
}

void Start()
{
    thisPlayer = gameObject;
}

// Update is called once per frame
void Update()
{
}

public override void OnStartClient()
{
    base.OnStartClient();
    int thisPlayerNumber =
    getCurrentPlayerNumber();
    gameObject.name = "Player " +
    thisPlayerNumber.ToString();
    Debug.Log("Player Created: " +
    gameObject.GetInstanceID().ToString());
    if(isLocalPlayer == true){
        thisPlayer = gameObject;
        Transform startPoint = GameObject.
        Find("PlayerStart"+thisPlayerNumber.
        ToString()).transform;
        thisPlayer.transform.
        position = startPoint.position + new
        Vector3(0.0f, 2.0f, 0.0f);
        thisPlayer.transform.rotation =
        startPoint.rotation;
    }
}
```



We replace the capsule with our spaceship in the Player prefab.

Note that we've added `using Mirror;` at the top of the script, and we've changed the class from `MonoBehaviour` to `NetworkBehaviour`. We then override the `OnStartClient()` function and send our Player object (if it is the local player) to one of the start points. Make sure when you edit scripts you save them before going back to the Unity editor. This script now needs to be attached to the Player prefab, so with that selected, drag the script into the Inspector panel of the Player prefab. At this point, look at the `NetworkTransform` component in your Player prefab and make sure you have Client Authority checked. That will let the client relay the position of the ship to the server so that all clients see the ship in the same place. When we create a new player in the game, we should see a player ship appear over one of the start points (make sure the camera is looking towards it).

## SPACECRAFT CONTROLS

There are several ways to control an object in Unity. You can map different keys to directions or use a gamepad, mouse, or joystick, and all of this can be configured in the Build Settings under Player Settings in the Input Manager. All we need to do is to capture the mappings, which are named things like Horizontal and Vertical. We can write a short script to capture the input from the player, but we must make sure that we only change the position of the ship that corresponds to that player, and that the movement is then seen in the other client games that are connected to the host. Here's the code to add to the `Player.cs` script inside the `Player` class (the `Update()` function replaces the existing empty one):

```
private float speed = 0;
private float drag = 0.3f;
void Update()
{
    if(hasAuthority){
        transform.Rotate(new Vector3(Input.
GetAxis("Vertical"), 0.0f, -Input.
GetAxis("Horizontal")) * Time.deltaTime * 30);
        float acc = Input.GetAxis("Fire1")
* 5;
        speed += acc * Time.deltaTime;
        if(speed > 10){
            speed = 10;
        }
        if(speed > 0){
```

```
            speed -= drag * Time.deltaTime;
        }
    }
}

private void FixedUpdate()
{
    if(hasAuthority){
        transform.Translate(0,0,speed *
Time.deltaTime, Space.Self);
    }
}
```

## CAMERA MOVEMENT

At this point, there's only one camera in the game – and it doesn't move – so let's install a camera in the player's ship. Open up the Player prefab again, and create a new camera in the Hierarchy panel. You'll see a Camera Preview pop up. Position the camera so it's inside the cockpit, and uncheck the Audio Listener component on the new camera as there should only be one audio listener in the game. Save the prefab and go back to the `Player.cs` script. We need to add some code to set up the camera when the ship's created. First, add a `public Camera` variable so that we can link the camera to the script, and then in the `Start()` function add code to enable the camera if it is the Local Player, and if not, disable it.

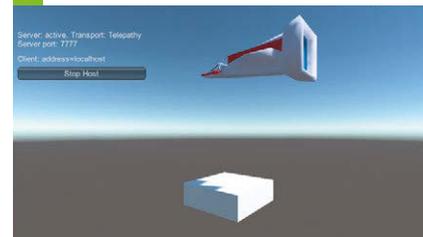
Here's the code we need to add to the `Player` class:

```
public Camera playerCamera;

void Start()
{
    thisPlayer = gameObject;

    if(isLocalPlayer == true){
        playerCamera.enabled = true;
    }else{
        playerCamera.enabled = false;
    }
}
```

Now go back to the Unity editor, and in the Player prefab, drag the player camera from the Hierarchy panel into the new field called Player Camera in the Inspector panel under Player (Script). When we run the game and spawn a player, the camera view changes to inside the ship. You should also be able to see ➔



▲ The player ship now appears over the starting point.

## USING BLENDER

If you already have a 3D modelling program you're familiar with, the chances are that Unity will be able to use the models that it creates. If you haven't done much (or any) 3D modelling before, it's worth considering Blender ([blender.org](http://blender.org)) to create your models for Unity. It's free to use and offers plenty of tutorials and a friendly community to guide you. This tutorial will assume you're creating our models in Blender.

other players in the game if you have more than one client running.

### ADDING A SKYBOX

Next, we need a space back-drop, which we can get by setting up a skybox from the Asset Store – we’ve gone for the Starfield Skybox. Import this into your project, then go to the Lighting setting under Rendering in the Window menu. From there, you can drag and drop your skybox into the Skybox Material field in the Scene tab. The skybox will now be applied to any cameras in the scene, giving the impression of endless space.

### SHOOTING MISSILES

Our game wouldn’t be much of a space battle without projectiles. We first need to make a prefab that will be created as a shot, so create a sphere in the scene, call it Shot, scale it down so it’s proportional to your player ship, add a Rigidbody component to it (unchecking the Use Gravity flag), and then drag the object from the Hierarchy panel into your **Prefabs** directory in **Assets**. You can then delete it from your scene.

We’ll also need an object (or objects) in our Player prefab to indicate where the shot is going to start from when it’s fired. These can be empty game objects, and should be positioned at the end of your ship’s gun.

The next stage is to add a bit of code to our **Player.cs** script to fire the shot. We need to hand over control of the shots to the server part of the game as it will determine what happens to the shot and if it hits any other players. We do this by calling the **shoot** function as a Command to the server. From then on, the shot will be controlled as a server object rather than a client object. Here’s the code we need to add to our **Player.cs** script:

```
public GameObject gun1;
public GameObject gun2;
private float shotTimer = 15.0f;
public GameObject shotPrefab;
void Update()
{
    if(hasAuthority){
        // Fire guns script after the
        movement code
        float fire = Input.
       .GetAxis("Fire2");
        if(fire > 0 && shotTimer < 0 &&
        isLocalPlayer){
```

```
        CmdFireShot(gun1.transform.
        position, gun1.transform.forward);
        CmdFireShot(gun2.transform.
        position, gun2.transform.forward);
        shotTimer = 15.0f;
    }
    shotTimer -= Time.deltaTime * 30;
}

[Command]
void CmdFireShot(Vector3 gunpos, Vector3
gundir){
    GameObject thisShot =
    Instantiate(shotPrefab, gunpos, shotPrefab.
    transform.rotation);
    NetworkServer.Spawn(thisShot);
    Rigidbody rb = thisShot.
    GetComponent<Rigidbody>();
    rb.velocity = gundir * 100;
    Destroy(thisShot, 5);
}
```

We can now assign our Gun and Shot objects to the Player prefab and test our firing. What we’ll find is that the shots can be seen on the host game, but not in client games. For that to happen, we add a NetworkIdentity and a NetworkTransform component to our Shot prefab. We also need to add it to the list of server spawnable prefabs in the Network Manager. Run the game again, and you should see shots on both host and client games.

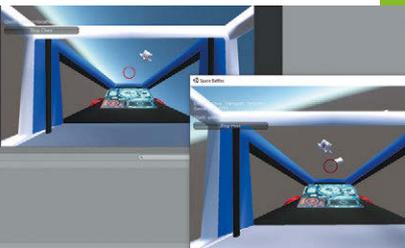
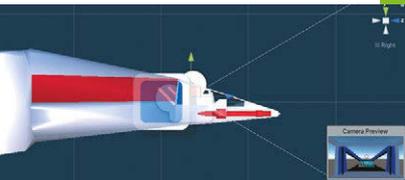
### DETECTING A HIT

We now need to detect when a shot hits an opponent and deal them some damage. For this, we need another script to attach to the shot. Create a new script in your **Scripts** folder called **Shot.cs**. We need to have a reference to the Player object at the top of the class so that we can call a function to do damage on the ship, and we’ll also need to add a box collider to our Player prefab for the shot to detect. Here’s the code for **Shot.cs**:

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using Mirror;

public class Shot : NetworkBehaviour
{
```

▼ Position the camera in the cockpit of the ship to provide a good view.



▲ If you run two games on the same computer, you can see the other players in the game.

```

public GameObject playerObject;

void OnCollisionEnter(Collision col){
    Player myPlayerScript = col.gameObject.
GetComponent<Player>();
    myPlayerScript.RpcApplyDamage();
    DoExplode();
    Destroy(gameObject);
}

void DoExplode(){
    // Explosion goes here
}
}

```

You will notice the function `DoExplode()` has nothing in it yet – we'll cover that in a bit. The other piece of code we need is the call to a function in the `Player.cs` script. We name it `RpcApplyDamage` because it's a remote procedure call (RPC), which means we are making a call from the server part of the game (the shot) to a client part of the game (the player). Here's the code we need to add to the `Player.cs` script. You'll see that we mark the function as a client `Rpc` function by writing `[ClientRpc]` before it.

```

private float health = 0.3f;

[ClientRpc]
public void RpcApplyDamage(){
    health -= 0.01f;
    if(health < 0){
        // Player is destroyed
        Destroy(thisPlayer);
    }
}
}

```

## SHIELDS UP!

Currently, players can't see whether they've been damaged or not, so let's add a display to show the status of their ship's shield. We'll incorporate the shield display into the cockpit by making a white cylinder on the dashboard and another smaller green cylinder on top of it. Then we alter the length of the green cylinder in the `RpcApplyDamage()` function by passing in the `Healthbar` object into the `Player.cs` script, by writing `public GameObject healthBar;` and when damage is applied write `healthBar.transform.localScale = new Vector3(0.1f, health, 0.1f);`. Then when a shot hits our player ship, the health bar will reduce in size.

## ADDING EFFECTS

One thing our game still lacks is explosions and particle effects. Looking back at the Asset Store, there are several explosions we can download, import, and add to our `Shot.cs` script. We already have a `DoExplode()` function, so have a look at the code below to see what we need to add to that to make an explosion when a shot hits a ship:

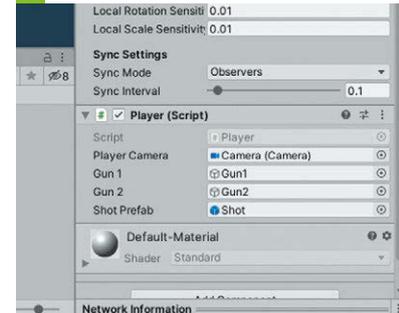
```

void DoExplode(){
    GameObject thisExplosion =
Instantiate(explosionEffect, transform.
position, transform.rotation);
    NetworkServer.Spawn(thisExplosion);
    Destroy(thisExplosion, 2);
}

```

We'll need to drag an Explosion game object into the new `explosionEffect` field we made in the Inspector panel. You can also add some effects to the ship engines – adding a point light at the back of the ship and a Trail Renderer component will give a good tail as the ship moves. A Halo component can also be added, and there's a light flicker script (`GlowFlicker.cs`) in the `Scripts` folder in our GitHub. Finally, you might want to add a Trail Renderer to the shots to give a good missile effect, and just for good measure, some blue smoke in the cockpit when a hit's registered.

There's one last thing you may want to add: a sort of arena for the ships to fly around in. For this example, we've created a massive cage with some coloured markers so that players can get a sense of their position in space. The look and size of the arena in your build is, of course, entirely up to you. 🌐



^ Drag and drop the Gun and Shot objects into the script inspector.

✓ You can make a shield or health gauge with two cylinders.



# How can game creators improve accessibility?

Accessibility allows more people to enjoy games, but there's still room for improvement



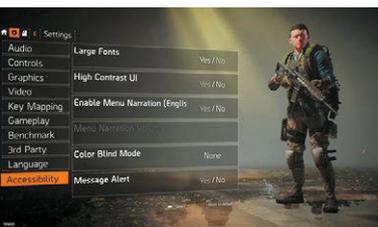
**AUTHOR**  
**BEN BAYLISS**

Ben is a freelance writer with a passion for good subtitles and the belief that everyone should be able to enjoy games.

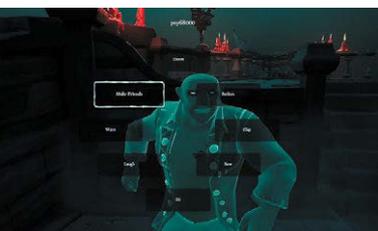


▲ **Apex Legends** features a dedicated accessibility menu right from the starting screen, allowing players to apply their preferred settings before jumping in.

▼ **The Division 2** offers a menu purely dedicated to accessibility features.



▼ **Sea of Thieves** has intuitive radial wheels for quick chat and emotes, making communication easier for those who can't speak or type.



**T**he games industry has a diverse audience, but for deaf players like myself – and those with other disabilities – there are still obstacles that commonly spoil our enjoyment. It's estimated that over 2.5 billion people play video games, and according to Ubisoft's Annaig Antoine, in an internal interview held in 2018, "around 20 percent of players have some kind of disability." This is, of course, where accessibility features come in.

Accessibility features are undoubtedly becoming more widespread in video games. There are subtitles – which benefit deaf players and also those who aren't hard of hearing – or assist modes, which make potentially difficult game mechanics a touch easier to interact with. But I'd argue the industry is still far too quiet and reactive – rather than proactive – about accessibility.

## RESEARCH HELPS

From what I've experienced as an advocate, there are two ways the industry can improve accessibility: early research and online communications. Research needs to go further than simply reading up on disabilities, and instead include disabled players as much as possible. Cloud Imperium Games, for example, is working with deaf players to implement American Sign Language in *Star Citizen*. Ubisoft also listens to third-party feedback, and improves accessibility features in its existing games as well as pushing its developers to implement similar features early on. In 2016, Microsoft began an 'Inclusive Design Sprint'

programme, which saw them bring in players with varied disabilities to speak with designers, researchers, writers, and programme managers from different areas of Xbox.

I've spoken to developers and researchers in specialist meetings, where I felt like I mattered and was being listened to; I could see first-hand that the team cared and wanted to learn more. One of my specialities in these meetings is subtitles. While it may seem straightforward, there are plenty of factors to consider in good implementation of subtitles: there's a difference between subtitles (which specifically pertain to dialogue) and captions (which take in both dialogue and the description of sound effects). The distinction is something that can fall by the wayside during development, at least if accessibility isn't considered carefully enough. Having a solid colour behind lines of text can also help with readability; subtitle colours can help players follow scenes with multiple speakers, while font sizes and styles also need to be given careful thought.

Researching in the early stages of pre-production means that accessibility can be a focus through the rest of a game's development, which can in turn reduce the need for post-launch fixes. It also provides developers something that will benefit not only a current project, but also guide future games. For example, *Death Stranding*, *The Outer Worlds*, *Spyro Reignited Trilogy*, and *God of War* launched with a noticeable lack of accessibility features. Weeks after launch, patches added accessibility options. Kojima Productions took a month to improve *Death Stranding*'s UI and increase its



▲ *Wolfenstein II: The New Colossus'* subtitles are far too small, and focus more on style than readability.

text size; Toys for Bob took four months to add subtitles to *Spyro Reignited Trilogy's* cutscenes; and Obsidian increased its subtitle size only slightly in *The Outer Worlds* shortly after launch – nearly all text elements were rescaled a few months later.

While it's good that these features were eventually added, disabled players still had to wait even longer before they could fully experience a game they'd been anticipating for months. Other games, meanwhile, don't improve at all. MachineGames' *Wolfenstein II: The New Colossus* is one that still suffers from tiny subtitles, despite community requests to have them increased in size.

### SHARE INFORMATION

The other way to improve accessibility is to talk about it. One of the problems players face is that they often don't know the state of a game's features until it's launched. This is because accessibility seems to only be talked about in hushed tones away from a larger audience, and most conversations that do take place are usually sparked by disability advocates rather than studios.

This lack of information is a hindrance for disabled players. When games are announced and teased, the general audience usually speculates on how graphically impressive the game will be, or how detailed the story will be. This is still of interest to disabled players, but we also wonder if a game will have any key accessibility options available at launch.

When accessibility-related information is shared, it's usually through a blog post that lists the game's features. There are plenty of other options available, such as videos or press releases, that would be warmly received by gamers with disabilities. Being open about this information could also help make these

specialised updates become the norm across the industry.

A fantastic example is Ubisoft's *Ghost Recon Breakpoint* which, in 2019, had a blog post dedicated entirely to every accessibility feature that would be available at launch. The post went live a few weeks before the game arrived, and detailed information such as subtitles, colour-blind modes, menu narration, button remapping, and more. This information helped different disabled players decide whether the game would be suited to their needs.

The industry is taking bold and welcome steps towards more accessible gaming. The Xbox Adaptive Controller from Microsoft, with the help of third-parties such as AbleGamers and Special Effect, is aimed at players who might struggle with

a standard controller. Subtitles are starting to include options to make text bigger. Respawn Entertainment's *Apex Legends*, Rebellion's *Zombie Army 4: Dead War*, and Ninja Theory's *Bleeding Edge* also include accessibility options right in the main menu.

Nevertheless, accessibility still needs to become an integral part of the development process. Research will give developers the knowledge they need to include helpful features for disabled players. By adopting these practices – and others – in production, accessibility will become more of an industry standard, and in turn, inspire more companies to ensure that everyone can enjoy their games. 🗣️

**“There's a difference between subtitles and captions”**



▼ *The Outer Worlds* has a stylish UI, but some elements blend into the background, making them harder to read.

### Allied Front

A11Y is a group of disabled and able-bodied gamers who spread awareness and advocate for better accessibility in video games. They share information online, speak on panels at events such as GDC, and help companies to understand and implement accessibility features in their work. A simple A11Y Twitter search will bring up industry specialists from companies such as Ubisoft, Sony, EA, Microsoft, and other advocates within the community who support accessibility features.

# Player groups: how they can help you make the right decisions

No game can appeal to everyone. Player groups help you identify audiences and make the right design choices



**AUTHOR**  
**STUART MAINE**

Stuart Maine has been a designer for 22 years across PC, console, and mobile. He helped set up Well Played Games, and is currently working on *Warhammer Combat Cards*.

**B**efore there were MMORPGs like *World of Warcraft*, there were Multi-User Dungeons (MUDs). These online text adventures were often run by enthusiastic players, and one of them, Richard Bartle, noticed that people were only designing games that *they* wanted to play. He wondered if it would be better to create games based on what players wanted, rather

than an individual's preferences. And, because it's impossible to ask each player individually, he needed to group them.

## GAMER PSYCHOLOGY

Bartle created a test – which you can take at [wfmag.cc/bart](http://wfmag.cc/bart) – to group players with similar gameplay preferences. You can read Bartle's work on player groups at [wfmag.cc/hclds](http://wfmag.cc/hclds), but basically, his model divides players into four types, which you can see below and in **Figure 1**.

- Achievers like to 100% complete games and 'do' everything they have to offer.
- Killers like to disrupt by 'trolling' others and breaking the game's rules.
- Socialisers are there to interact with others and form communities.
- Explorers want to see a game's sights and understand its rules and boundaries.

Now, rather than assuming everyone else likes the same things you do, there was a way to design a game targeted at one or more groups.

All this was back in the nineties, and even its creator has acknowledged that you can't just blindly apply his groups to everything, but nevertheless, the concept of player groups is still widely used today. And because it's such a useful tool, other people have taken Bartle's theory and run with it in various directions,

▼ **Figure 1:** One of many example presentations of Richard Bartle's player types available from Google. Image from *Level Up your Classroom* / Theresa Gordon.

## Richard Bartle's Player Types



### Killers

**Defined by:**  
A focus on winning, rank, and direct peer-to-peer competition.

**Engaged by:**  
Leaderboards, Ranks



### Achievers

**Defined by:**  
A focus on attaining status and achieving preset goals quickly and/or completely.

**Engaged by:**  
Achievements



### Socialites

**Defined by:**  
A focus on socializing and a drive to develop a network of friends and contacts.

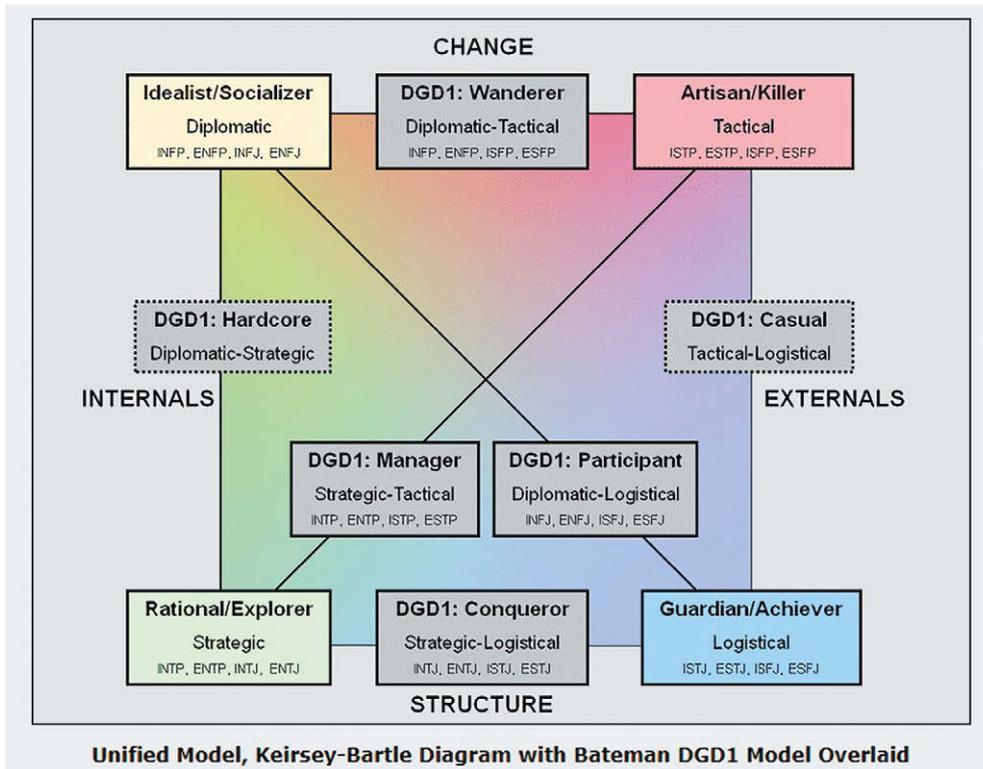
**Engaged by:**  
Newsfeeds, Friends Lists, Chat



### Explorers

**Defined by:**  
A focus on exploring and a drive to discover the unknown.

**Engaged by:**  
Obscured Achievements



◀ Figure 2: As you can see, player groups get pretty complicated if you keep digging! Image from 'Personality And Play Styles: A Unified Model' by Bart Stewart.

leading to detailed psychological breakdowns of player behaviour and articles which attempt to unify those various models (see Figure 2).

### PUTTING IT INTO PRACTICE

So how can you use all this to help you make better games? If you're making a game purely as a fun project, then as long as you're happy with the end result, it's a success. But if you want to sell the game, then it's no longer enough to say 'Well, I like it' – you need to think about other players, because you're asking them to pay for your game.

### “Explorers want to see a game’s sights and understand its rules and boundaries”

There are thousands of decisions involved in making a game, from the small (what colour should this button be?) to the huge (can the player die and what happens if they do?). Every one of those decisions pushes your game towards a particular type of player and away from others. For example, if you choose a pixel art style, players may assume the game will feel retro or have a hardcore difficulty level. Or, in a multiplayer game, whether you can or can't

harm other players will make a huge difference in the audience you attract.

All these decisions, whether made consciously or 'accidentally' by your personal preferences, send a message saying either, 'This game is for you,' or 'This isn't a game you're going to enjoy'. This is important for several reasons:

- If parts of your game appeal to certain player types but other parts are aimed at different player types, then you can end up with a confused playing experience that doesn't suit anyone. Whereas if you've identified your target player types, then you can laser-focus all your decisions on making a game for them.
- Once you've chosen your ideal player types, you can ensure your marketing material (screenshots, GIFs, movies) clearly communicate this. For example, if you're making a game for Hardcore Loremasters (such as *Dark Souls*), then you could highlight challenging fights and intriguing lore in your material.
- Finally, knowing who your potential audience is allows you to work out where that audience hangs out online and take your game there. For example, a game aimed at Hardcore players is more likely to be of interest to 'core' news sites like Eurogamer →



▲ Sam Barlow's *Her Story* let players track how many scenes they still hadn't watched, making it perfect for Achiever players.



➤ FromSoftware's games are interesting because they appeal to a range of player types, but above all, I'd say they're focused on Hardcore Achievers.

than a Casual-focused game. Basically, once you know who your players are, you can engage with communities, streamers, and sites that that audience loves, rather than spreading your attention across every site and hoping for the best.

### GETTING OUT THERE

If you're deep in development, it may seem strange to think about marketing and social media, but these are essential for the success of any modern game. Sharing your work-in-progress with the right audience can build up a community, which is ideal if you want to solicit feedback and tweak as you develop. Also, if players see a game that appeals to them, they may share it, doing your marketing for you. Finally, being able to show public excitement about your game can make it easier to land a publisher to help you release it (if that's the direction you want to go).

So, we've established that players can be divided into groups based on their preferences, and that games can be made to appeal to those different groups. Let's dig into how to do this using two approaches; 'player first' and 'gameplay first'.

### PLAYER FIRST

This approach revolves around selecting player types (see the examples at the end of this article for some ideas) and then designing a game that has a good chance of matching what they like.

There are several advantages to this approach, such as immediately knowing who the audience is for your game, and helping to avoid the 'blank page' problem of trying to come

up with an interesting hook. For example, you might decide there's an untapped audience of Explorer Loremasters and so design a game like *Outer Wilds*.

### GAMEPLAY FIRST

Alternatively, you can make enough of the game you already have in mind to be able to test it with players and find out which types it appeals to. By first asking your testers questions to establish their preferences, you can group them by player type, and therefore work out which types your game suits. For example, if you work out most of your testers are Casuals, then if they don't like your game it may not mean it's 'bad', just more suited to Hardcore players, so try aiming at them.

Finding out your testers' preferences can be as simple as making notes each time someone plays your game ("Before you try our demo, what's your favourite game?"), up to using companies like PlaytestCloud, which let you specify an audience and watch videos of them playing your game.

### RIGHT FEATURE, WRONG GAME

Let's look at *Diablo III* as a case study of a game which failed to align with its players, specifically the in-game auction house that Blizzard made a big deal of. I think *Diablo's* audience is made up of Hardcore Achievers, plus some Loremasters and Socialisers. None of these player types is looking for a way to buy and sell equipment – indeed, it takes away a lot of the fun of searching for that perfect loot drop. After all, if you can just buy what you need, how can you show off the epic gear you've fought hard for?



➤ *Outer Wilds* is interesting because it has very few 'mechanical' rewards to give players; instead, your rewards are learning about the game's universe and story.

### WATCH THIS

Check out the documentary *The Cost of Joy* on YouTube ([wfmag.cc/costjoy](http://wfmag.cc/costjoy)), which covers the making of *We Happy Few*, and how the team struggled to explain to players what sort of game they were making. The game's strong world-building and narrative conflicted with the survival gameplay, ending up with a game that fell between the needs of two groups of players.



➤ *The Cost of Joy* and documentaries like *Playing Hard* show the difficult balancing act of passion and publishing that characterises making big games.



- ◀ **Animal Crossing's** stylised, cartoony aesthetic is aligned with its low stress gameplay, and appeals to (or at least doesn't drive away) a broad audience.
- ✓ Many news sites picked up on the auction house's removal in *Diablo III*, demonstrating how important it is to work out which sites your audience uses.

In the end, Blizzard dropped the auction house altogether, illustrating what happens if you make a game for audience A but focus on features for audience B (bear in mind there's nothing inherently wrong with an auction feature – Casual players would have loved it).

### PERFECT FOCUS

*Animal Crossing*, on the other hand, is a series which has nailed its core appeal. I think it appeals to Casual Philanthropists, plus Achievers. There are no fail or end states to upset these players, and no arbitrary time limits or twitch skills to get in the way. They don't even have a definition of success beyond 'make a cool home'.

Amusingly (and possibly deliberately), their 'let other players into your game world' features mean that the Bully player type can enjoy these games too, chopping down other players' trees, designing rude clothes, and teaching their villagers comical things to say.

### CASE STUDY

As an example, let's look at a project where understanding and targeting the right player types was a challenge. A while back, our studio began work on the prototype of a racing game where, instead of directly controlling your car, it drove around the track on its own – your job was to trigger various weapons and gadgets to destroy your opponents.



**“Animal Crossing, on the other hand, is a series which has nailed its core appeal”**

While an interesting idea, this presented something of a problem. Players seeing vehicles racing around a track were likely to assume this was a driving game, so may have been unimpressed when they discovered it was a tactical battler, while players looking for a tactical game might ignore what they thought was a driving game.

Plus, even within the 'trigger weapons to win' gameplay, there were many directions we could go to suit different player types. For example, if the game was reaction and 'twitch' based, that would suit certain players, or it could be ➔

### FURTHER READING

My article on working with brands in issue 28 of Wireframe talked about how to understand who your audience is and what they may like in their games. Techniques like audience personae and player research are just as valid when your game doesn't have a brand, and can help you track you're making the right decisions for your target player types.

## PROTOTYPING

As part of the vehicle prototype, our studio built a weapons system that allowed us to quickly create all sorts of weapons. We took this approach because we didn't yet know which player types we were aiming at, so the system let us try all sorts of directions, such as weapons that required fast reactions, ones that relied on luck, and ones that could be combined in clever ways by players who wanted to dig down.

## DIG DEEPER

If you'd like to dig further into this topic, here are some interesting books on psychology:

**A Theory of Fun** by Raph Koster is a must for any designer digging into why people enjoy games, and the different sorts of challenges they can present.

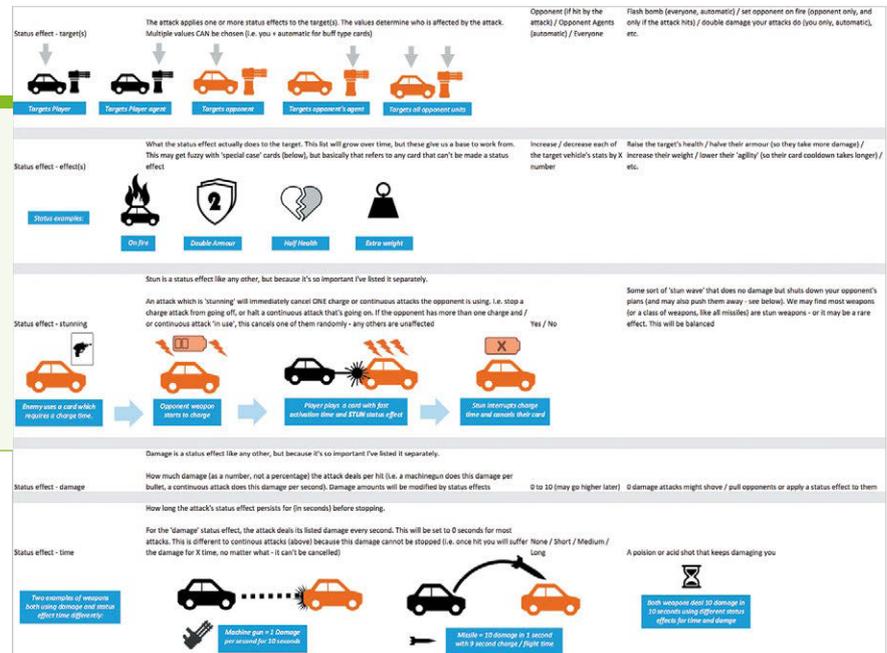
**The Art of Failure** by Jesper Juul is a short, scholarly look at why players enjoy the risk of failing at challenging games, and 'social contracts'.

**Why Do I Do That?** by Joseph Burgo isn't games-related but is a fascinating delve into psychology, biases, and mental models.



**Spelunky**  
by Derek Yu

▲ Another interesting book I ran out of space to mention is the making of *Spelunky* by its creator, Derek Yu.



slower and more considered (all the way down to being a turn-based game if we wanted), which would mean we were aiming at completely different player types.

In the end, the game didn't go ahead, partly for business reasons, but also because it was so difficult to demonstrate to any one audience type that this was a game they might enjoy. The driving angle appealed to one player type and the tactics another, leading to a confused game that suited neither. This is why it's important to think about how you'll present your gameplay as much as what that gameplay is - if the two align, it makes it much easier to attract players who might enjoy the game.

## PUTTING IT INTO PRACTICE

Let's sum up what we've covered:

- You can either build a game from the ground up to suit certain player types, or test the game you're making to see which types it appeals to.
- This lets you ensure the gameplay, graphics, audio, difficulty, and so on are aimed at those player types instead of trying and failing to appeal to everyone.
- I recommend working out which player types you're going to take into account with this specific project, and potentially include player types you're *not* going to appeal to so you can track you're not accidentally adding features for them (for example, Sam

Barlow's *Telling Lies* doesn't include a way to track how many of the scenes you have/haven't seen, deliberately pushing away Achiever players).

- You'll find some example player types I commonly use later in this article, but you can easily add or remove some types to suit your game (if nothing else, you can start with Richard Bartle's Killers, Achievers, Socialisers, and Explorers).
- Finally, understanding which player types are likely to enjoy your game makes it easier to find and engage with those types, rather than employing expensive or time-consuming 'mass-marketing'.

## SUMMING UP

Hopefully, this article has illustrated why it's worth thinking about who will be playing your game. You can apply this in broad strokes ("I'm going to make a game for player type X") or in the fine details ("Let's tweak this feature so that it's better-suited to player type X"), and over time you'll find yourself looking at other people's games and thinking 'But who is this for?'

Player types are not meant to be a straitjacket forcing you into certain decisions. They're about helping your game have the best possible chance of landing with an audience, about having the confidence to go in direction A over B, and about helping to go out and tell the right audience that your game exists.

## EXAMPLE PLAYER TYPES

As discussed, Richard Bartle divided players into four types, and since then, other people have expanded that list or presented their own types, meaning there are many ways to classify players. It's up to you if you embrace one person's player groups, adapt their theory, or create your own list – you need to go with

whatever lets you evaluate a feature against enough groups to be useful but not so many you become overwhelmed.

In case it's useful, the following list covers the player types I've most commonly used, encompassing Bartle's groups plus a few that keep coming up on projects. [W](#)



### Explorer

These players explore game worlds to find secrets and shortcuts, but also to experience life on an alien planet. They also like to explore game systems and figure out how things work, so they like games with 'deep' gameplay. Bethesda are the masters of this – their worlds are endlessly fascinating to explore.



### Philanthropist

Philanthropists like to help others so you can appeal to them by including support classes (such as healers) or mechanics that allow them to contribute (such as being able to help in *Minecraft*). Not explaining everything in-game also means this player type can enjoy helping other players with guides, tutorials, and so on.



### Bully

Also known as Killers, these players like to disrupt and break rules, not to be the best (see Hardcore or Achiever) but so they can enjoy 'trolling' other players. Choosing whether to accept or to moderate these kinds of players will have a big effect on the other player types who embrace your game.



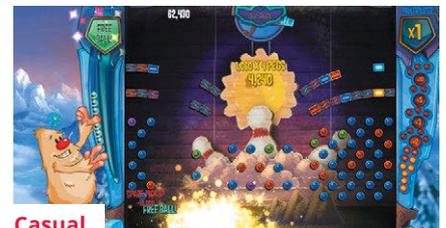
### Socialiser

Socialisers are there to be part of a community, using the game as an excuse to hang out with friends while taking part in a shared activity. Games like *World of Warcraft* and *Destiny* were explicitly designed around social play. Games can also appeal to socialisers with a strong community, such as CCP's *EVE Online*.



### Achiever

Also called Completionists, these players want to collect every 'thing', earn every achievement, and master every element. Whether shaving seconds off lap times, mastering combos, or grinding raids, Achievers enjoy the satisfaction of perfecting a game. You can appeal to them by laying your game elements out so players can track them.



### Casual

These and Hardcore players are the other axis on a graph, giving you 'Casual Achievers', for example. They dip into games, so need to be immediately grabbed, and don't read tutorials so systems must be easy to grasp at a glance. Puzzle games appeal to Casuals, but so do big brand games, such as *FIFA* or *Star Wars*.



### Hardcore

Hardcore players dedicate themselves to games and look down on players who just dabble, meaning they can make communities feel unwelcoming. They want games to be 'perfect' and will inform you when they're not! They want a steady stream of content and fixes for their games because they're so invested in them.



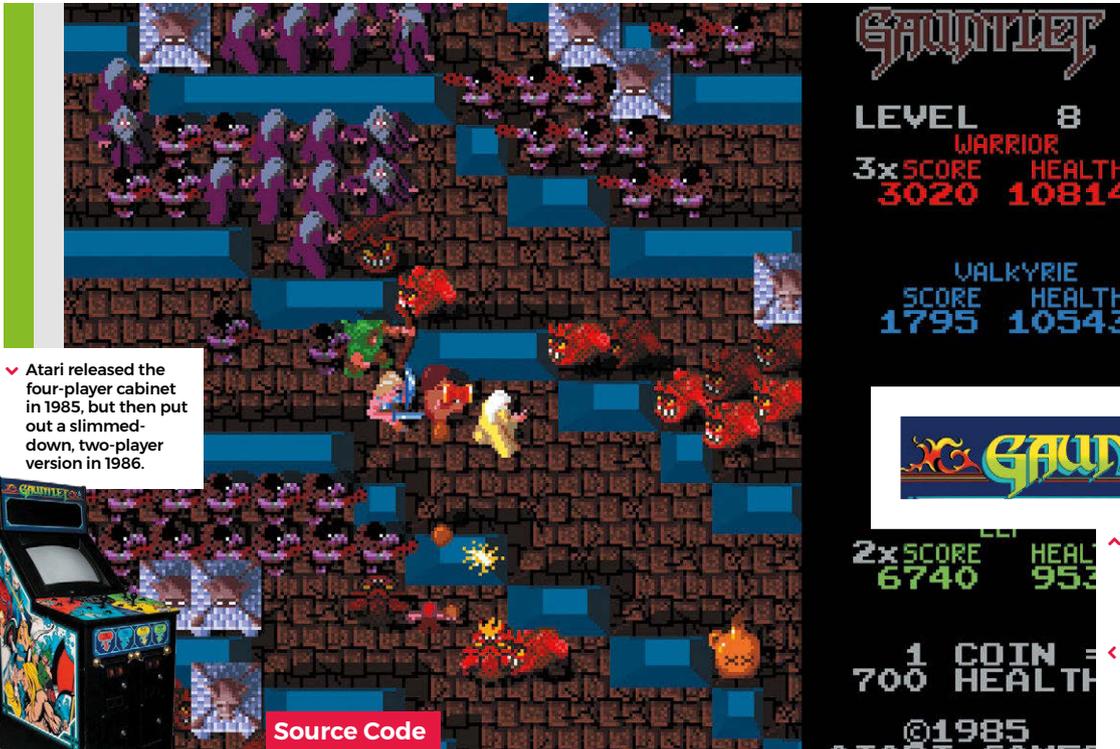
### Chancer

Also known as the Agent of Chaos, this player type enjoys games where they can take gambles that achieve spectacular (positive or negative) results. There's an argument that these players embrace randomness to insulate themselves from the sting of losing a game, but their behaviour can upset players trying to play 'properly'.



### Loremaster

Players who are really into world-building. Even if you don't present much information about your game's world to players, it's important to Loremasters that everything feels consistent. Studios like FromSoftware and Bungie make use of this, weaving snippets of lore through their games so even they feel like 'real' places.



✓ Atari released the four-player cabinet in 1985, but then put out a slimmed-down, two-player version in 1986.



↗ *Gauntlet* was originally going to be called *Dungeon*, but that name was already taken by the time of release.

↖ Players collected items while battling their way through dungeons. Shooting food was a definite faux pas.

Source Code

# Code Gauntlet's four-player co-op



AUTHOR  
MARK VANSTONE

Four players dungeon crawling at once? Mark shows you how

**A**tari's *Gauntlet* was an eye-catching game, not least because it allowed four people to explore its dungeons together. Each player could choose one of four characters, each with its own abilities – there was a warrior, a Valkyrie, a wizard, and an elf – and surviving each dungeon required slaughtering enemies and the constant gathering of food, potions, and keys that unlocked doors and exits. Designed by Ed Logg, and loosely based on the tabletop RPG *Dungeons & Dragons*, as well as John Palevich's 1983 dungeon crawler, *Dandy*, *Gauntlet* was a big success. It was ported to most of the popular home systems at the time, and Atari released a sequel arcade machine, *Gauntlet II*, in 1986. Atari's original arcade machine featured four joysticks, but our example will mix keyboard controls and gamepad inputs. Before we deal with the movement, we'll need some characters and dungeon graphics. For this example, we can make our dungeon

from a large bitmap image and use a collision map to prevent our characters from clipping through walls. We'll also need graphics for the characters moving in eight different directions. Each direction has three frames of walking animation, which makes a total of 24 frames per character. We can use a Pygame Zero Actor object for each character and add a few extra properties to keep track of direction and the current animation frame. If we put the character Actors in a list, we can loop through the list to check for collisions, move the player, or draw them to the screen. We now test input devices for movement controls using the built-in Pygame keyboard object to test if keys are pressed. For example, `keyboard.left` will return `True` if the left arrow key is being held down. We can use the arrow keys for one player and the **WASD** keys for the other keyboard player. If we register *x* and *y* movements separately, then if two keys are pressed – for example, up and left – we can read that as a diagonal movement. In this way, we can get all eight directions of movement from just four keys.

For joystick or gamepad movement, we need to import the joystick module from Pygame. This provides us with methods to count the number of joystick or gamepad devices that are attached to the computer, and then initialise them for input. When we check for input from these devices, we just need to get the *x*-axis value and the *y*-axis value and then make it into an integer. Joysticks and gamepads should return a number between -1 and 1 on each axis, so if we round that number, we will get the movement value we need. We can work out the direction (and the image we need to use) of the character with a small lookup table of *x* and *y* values and translate that to a frame number cycling through those three frames of animation as the character walks. Then all we need to do before we move the character is check they aren't going to collide with a wall or another character. And that's it – we now have a four-player control system. As for adding enemy spawners, loot, and keys – well, that's a subject for another time. 🐉



Download  
the code  
from GitHub:  
[wfmag.cc/  
wfmag39](https://wfmag.cc/wfmag39)

## Four-player movement in Python

Here's Mark's code for a *Gauntlet*-style four-player mechanic. To get it running on your system, you'll need to install Pygame Zero – full instructions are available at [wfmag.cc/pgzero](https://wfmag.cc/pgzero).

```
import math
from pygame import image, Color, joystick

myChars = []
myDirs = [(0,1),(-1,1),(-1,0),(-1,-1),(0,-1),(1,-1),(1,0),(1,1)]
collisionmap = image.load('images/collisionmap.png')
joystick.init()
joyin0 = joyin1 = False
if(joystick.get_count() > 0):
    joyin0 = joystick.Joystick(0)
    joyin0.init()
if(joystick.get_count() > 1):
    joyin1 = joystick.Joystick(1)
    joyin1.init()

def makeChar(name,x,y):
    c = len(myChars)
    myChars.append(Actor(name+"_1", (x, y)))
    myChars[c].name = name
    myChars[c].frame = myChars[c].movex = myChars[c].movey =
myChars[c].dir = 0

def draw():
    screen.blit("colourmap", (0,0))
    drawChars()

def drawChars():
    for c in range(len(myChars)):
        myChars[c].image = myChars[c].
name+"_"+str(((myChars[c].dir*3)+1)+math.floor(myChars[c].
frame/10))
        myChars[c].draw()

def update():
    checkInput()
    moveChars()

def checkInput():
    if keyboard.left: myChars[0].movex = -1
    if keyboard.right: myChars[0].movex = 1
    if keyboard.up: myChars[0].movey = -1
    if keyboard.down: myChars[0].movey = 1
    if keyboard.a: myChars[1].movex = -1
    if keyboard.d: myChars[1].movex = 1
    if keyboard.w: myChars[1].movey = -1
    if keyboard.s: myChars[1].movey = 1
    if joyin0:
        myChars[2].movex = round(joyin0.get_axis(0))
        myChars[2].movey = round(joyin0.get_axis(1))
    if joyin1:
        myChars[3].movex = round(joyin1.get_axis(0))
```

```
myChars[3].movey = round(joyin1.get_axis(1))
```

```
def moveChars():
    for c in range(len(myChars)):
        getCharDir(myChars[c])
        if myChars[c].movex or myChars[c].movey:
            myChars[c].frame += 1
            if myChars[c].frame >= 30: myChars[c].frame = 0
            testmove = (int(myChars[c].x + (myChars[c].movex
*20)),int(myChars[c].y + (myChars[c].movey *20)))
            if collisionmap.get_at(testmove) == Color('black')
and collideChars(c,testmove) == False:
                myChars[c].x += myChars[c].movex
                myChars[c].y += myChars[c].movey
                myChars[c].movex = 0
                myChars[c].movey = 0

def getCharDir(ch):
    for d in range(len(myDirs)):
        if myDirs[d] == (ch.movex,ch.movey):
            ch.dir = d

def collideChars(c,xy):
    for ch in range(len(myChars)):
        if myChars[ch].collidepoint(xy) and ch != c:
            return True
    return False

makeChar("warrior",60,60)
makeChar("valkyrie",500,450)
makeChar("wizard",460,180)
makeChar("elf",100,400)
```

### Finding sprites

If you want to reconstruct a retro game like *Gauntlet*, you can often find sprite sheets online – these are bitmaps with all the frames of animation for a character on one sheet. A good source of these files is [spriters-resource.com](https://spriters-resource.com), where you'll find sprite sheets for a wide range of retro games. Some coding systems can use the sprite-sheets as they are, but for this example, we have cut them up into separate frames. You can do this with Sprite Sheet Slicer, available at [wfmag.cc/slicer](https://wfmag.cc/slicer).

> Our four-player homage to the classic *Gauntlet* arcade game.



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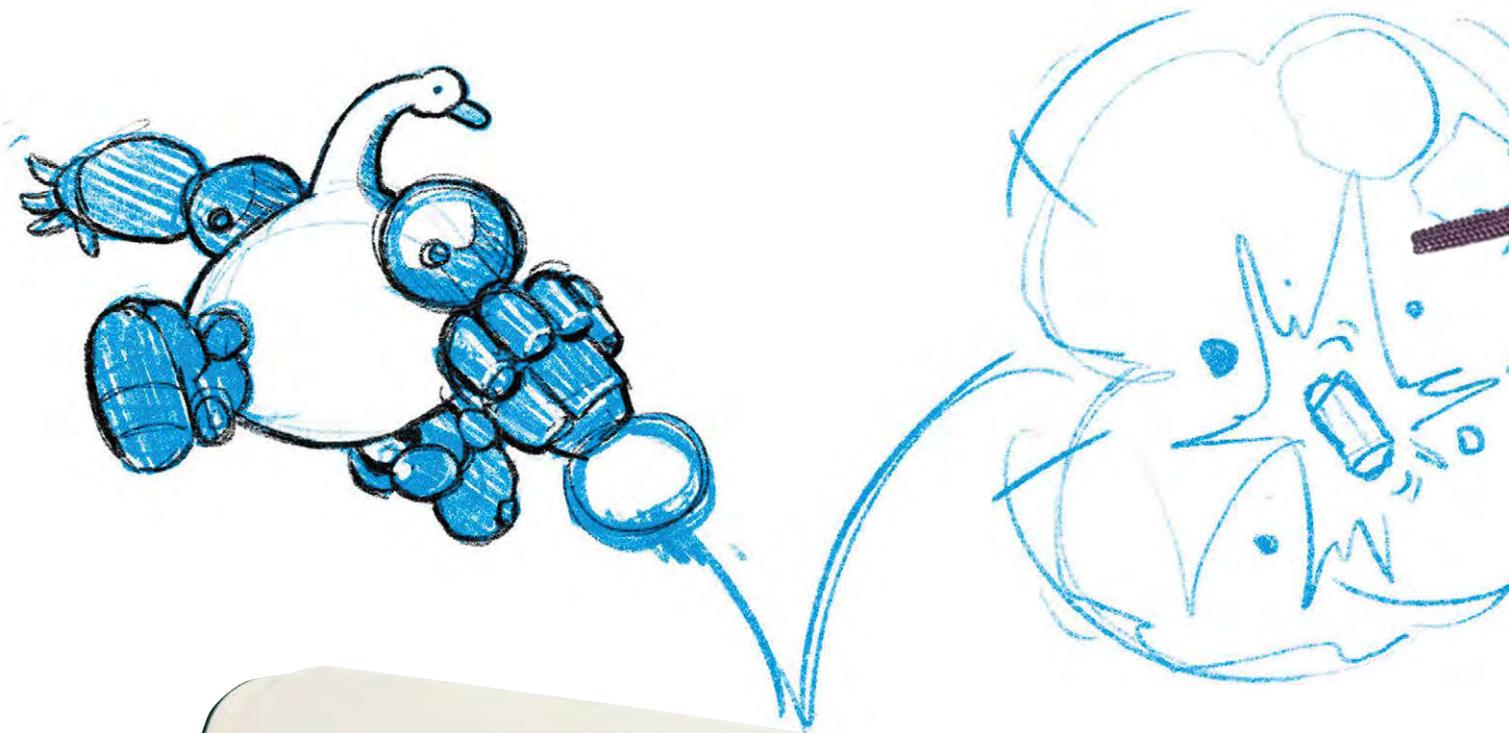


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# Attract Mode

Gallery



**GAME**  
Mighty Goose

**ARTIST**  
Richard Lems

**RELEASE**  
TBA 2020

**WEBSITE**  
blastmode.games



## Mighty Goose

Dutch indie studio Blastmode's upcoming run-and-gunner *Mighty Goose* (see page 12) may draw on the arcade adrenaline rush of *Contra* and *Metal Slug*, but what separates it from those earlier, testosterone-fuelled titles is the charming artwork of its developer, Richard Lems. The game's waterfowl protagonist began life as a drawing in one of Lems's sketch-books, so it seems only fitting to properly showcase some of that work in these pages. "I love using animals as game heroes," says Lems. "There's something really satisfying about combining their silly appearances with the classic archetypes of the stories we all know. It's the magic combo for me."

# LIGHTING

---

Gareth Coker's score for *Ori and the Will of the Wisps* set the tone for a much-anticipated sequel. We catch up with the British composer to find out more

WRITTEN BY **MATTHIAS SUNDSTRÖM**

**A**nticipation is a funny thing. It can create excitement and buzz, which can in turn enhance the final product. Alternatively, it can generate a level of expectation that simply can't be delivered. For fans of the *Ori* franchise, the prospect of a new chapter was a hugely exciting prospect. For its creators, however, fans' lofty expectations came with pressures all of their own.

Released in 2015, Moon Studios' 2D platform adventure, *Ori and the Blind Forest*, quickly went on to become one of Microsoft's most revered new IPs, setting a new genre benchmark and raising the bar for the wealth of 2D action-adventure titles that followed in its wake.

Scored by British composer Gareth Coker, *Ori's* soundtrack was a lush, beautiful, sweeping orchestral affair, widely praised for its uplifting tone. Critics and fans alike warmly embraced Coker's work, and when its sequel, *Ori and The Will of The Wisps*, was announced in 2017, he soon found that he had a lot of expectations to live up to. ▶

A whimsical illustration of a blue creature with a white face and a long, curved neck, holding a small white rabbit in its mouth. The creature is standing in a lush, green forest at night, with a large, glowing blue light source illuminating the scene. The background is filled with various shades of green and blue, suggesting a magical atmosphere. The text 'THE WAY' is written in large, white, stylized letters across the middle of the image, and 'SCORING ORI' is written in smaller, white, stylized letters below it.

# THE WAY

SCORING ORI



▲ The game's lush new environments and characters offered Coker the chance to build on the emotive groundwork laid by the first game.

"Just seeing in the comments: 'The soundtrack will be good,' Coker laughs. "It's great to have that vote of confidence, but you don't actually know that because it doesn't exist yet."

As it turned out, he had little to worry about. On the game's release in March 2020, Coker's work was lauded for building on the series' buoyant sound with its exploration of darker tones and themes while still remaining true to the spirit of the first game.

But while the views of fans were important to the game's director, Thomas Mahler, and Moon's wider creative team,

they didn't allow those views to colour the creative process.

"Thomas, in particular, is unbelievably hard-nosed and single-minded, which

**"The tone of the game is slightly heavier and darker. It's not just Ori that's grown up"**

is a good thing to have in a director," Coker notes. "He knew the game that he wanted to make from the outset. When you have those core pillars in place, it then gives you room to add some stuff in between, but you've got

to know what game you're making and not have that core idea be influenced by anything else."

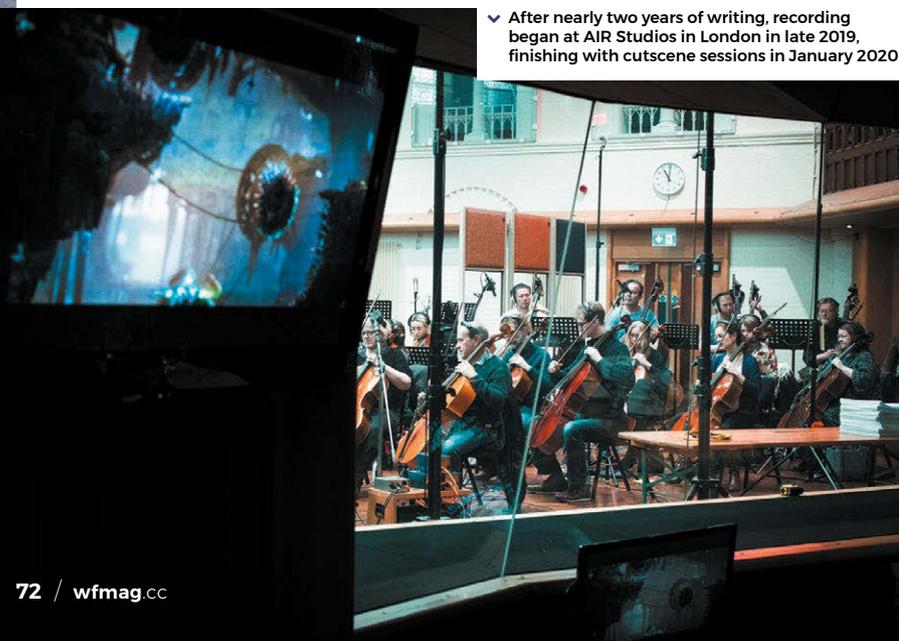
When it came to a game as beloved as *Ori and the Blind Forest*, however, Coker was all too well aware that he was never going to please everyone the second time around. "For a soundtrack that is so loved, there are going to be people who cannot move on from what that soundtrack is – and that's totally fine," he concedes. "I became quite comfortable with that quite early on. I'm going to do what I think is best for the story of this game, and nothing else matters."

### BREAKING NEW GROUND

A five-year gap between games effectively saw the team at Moon dissecting the mechanics of *Ori and the Blind Forest* and rebuilding them from the ground up. Changes were made to improve all aspects of the game, ranging from combat, right through to visuals and the story itself. Meanwhile, Coker set about building on the framework of *Ori and the Blind Forest's* score to reflect the new world that Ori would inhabit.

"The tone of the game is slightly heavier and slightly darker," he says. "It's not just Ori that's grown up. The studio has grown

▼ After nearly two years of writing, recording began at AIR Studios in London in late 2019, finishing with cutscene sessions in January 2020.





^ Coker was responsible for editing the score into a standalone soundtrack album, which he later cut down further for its 80-minute-long vinyl release.

up and, honestly, as a composer, I've grown up, too."

## BACK TO THE START

Coker's involvement with the *Ori* franchise began in 2011 when he scored an initial prototype for the then-fledgling Moon Studios, before Microsoft Studios snapped up the project in 2012. "I did the prototype for free," he recalls. "The director said that if I did a good job for them and their pitch was successful, I could do the music for the game. And it was pretty awesome that they held that promise, because it's been a good relationship."

Coker began work on *Ori and the Blind Forest* in earnest in 2013, with recording sessions taking place in October 2014. Moon afforded him a great deal of freedom in developing initial sketches for the game's score, and aside from providing steer around the game's content and narrative, he was largely left to his own devices with regards to crafting a score. "The thing about Moon is they're iterative when they need to be, but if something works the first time,

basically no news is good news," he explains. "They gave me pretty much carte blanche right from the very beginning of this project to just build whatever the musical DNA is from the ground up, and that's not something that's very common."

Working with references to the likes of film composers James Horner, Thomas Newman, and James Newton Howard, the game's directors otherwise set Coker free to explore sounds that he felt best suited the material. "It gave me an idea of the rough kind of sound – especially with the Horner reference," he says. "They were very emphatic from the beginning that they wanted melodic content and for the first game, we did that. The second game features more themes, and we were able to use the themes from the original game as well, so that's always been cool."

## THE WOOD THROUGH THE TREES

Work on *Will of the Wisps* began for Coker at the end of 2017, working to a projected release date of 2019, which

## FEEDBACK

"One thing we were asked at the beginning was, 'How do you make your department better, and what does 'better' mean?'" Coker says. "People like the first soundtrack a lot, so how do you make that better? And these are questions that aren't immediately easy to answer... I remember getting one bit of feedback that I was trying to show that I was a better composer, but I think we needed to get that out of our system to be able to start answering the question."

later shifted to March 2020. That year-long delay sparked a great deal of discussion online, which Coker and the rest of the team at Moon weren't oblivious to.

"I always chuckle when I see fans online saying, 'Oh, it's a 2D platformer. It's a simple game. Why does it need another year?'" Coker laughs. "With a *Metroidvania*, I feel like your goal is to build the most stable house of cards possible... Everything has a domino effect. Each department is so heavily dependent on the other for the [game's] overall flow."

That process starts out with the game being constructed as grey boxes, which contain no artwork, sound design, or additional detail – a playable blank ➔

### EARLY REACTIONS

"I'm not going to lie," Coker says. "I've been looking through comments, and most people who start playing the game aren't sure about the soundtrack – especially those who played the first. By the time they get to the end, they kind of get it, and there are a few people who said that once they got their preconceptions and biases out of the way, they were able to enjoy not just the soundtrack, but the game for what it is."

canvas on which the rest of the creative team would develop their work.

"They try to make those levels fun to play, and they *are* incredibly fun to play," Coker explains. "But of course, when you put artwork in, all of a sudden you're overwhelmed because there's too much for your brain to process. You're like, 'Look at all of this amazing art', but then there are 20 enemies to fight and a whole bunch of platforming to do."

During this process, all departments were invited to feedback on the project as a whole, providing notes on one another's work. It was during this phase that Coker and the rest of the team were able to critique the design elements that would ultimately give the rest of the creative aspects of the game room to breathe.

"One of the things that Moon is really good at is getting everyone playtesting as often as possible. The whole team playtests every major milestone, and that's the point where, if you're going to give feedback on any other department, everything is on the table," he explains. "I don't think they'll kill me for saying this – the first draft of the game was pretty intense and I'm like, 'Where's the open space? Where's the chance to take the art in?' What we have now is a game that flows amazingly well because you have

the pockets of platforming interspersed with the enemies, but there's never too much to do. There's just enough to keep you going."

### NEW TRICKS

As the game itself approached completion in late 2019, Coker began the recording process with two sessions at London's AIR Studios taking place in December 2019 and January 2020, respectively. These sessions saw Coker working with a much larger team of musicians than he had previously, which correlated with the game's own increase in scope and scale.

"The orchestra is bigger because a lot of the themes of the game have more weight," he says. "We have a real choir this time, which we didn't have on the first game. There's something about multiple voices that just has a natural

▼ Coker's previous scoring credits include the likes of **ARK: Survival Evolved** and the **Minecraft** series.





▲ The introduction of villainous spider Mora marks the series' first exploration of overt horror themes.

weight and gravitas to it that a solo voice doesn't quite have. There's a lot more solo voice on the first soundtrack, and I feel that represents a little more of the charm, naivety, and innocence of Ori. This is a much darker world in general."

*Will of the Wisps'* new environments also saw Coker developing themes for a cast of newcomers. While the likes of Ori's companion, Ku, and his own themes afford the score moments of levity and a familiar sound for returning players, the introduction of more sinister characters like Shriek, the game's main villain, and Mora the spider, encouraged Coker to explore darker themes and palettes. Perhaps most excitingly, the latter gave him the chance to delve into uncharted musical territory for the series.

"We'd never really done the dark horror element in *Ori* before, so I think most

musicians, especially composers, can tell that I'm having fun while making that track," Coker laughs. "I wanted to make a super-tense and eerie track, but not in the typical atonal dissonant horror way that a lot of spider music tends to be done – you've still got the *Ori*-esque piano, but then there's a bunch of what I like to call 'tonal dissonance!'"

Coker presents Mora's theme in several different variations throughout her in-game appearances, starting out as a more subtle melody, before building

**"The orchestra is bigger because a lot of the game's themes have more weight"**

to a more aggressive theme used for the inevitable boss battle against her, which then resolves to a lighter variant of the theme.

It's an approach replicated for each character throughout the game's score, and the various thematic variations would go on to inform the process Coker undertook when consolidating his score into a cohesive soundtrack. The end result: a sprawling 60-track album that works as both a standalone listening experience and something closely reflective of the journey the

player undertakes in the game itself – something that often isn't possible with game soundtracks.

"With a game like this, where music is pretty central to the player's experience... these are all core environment cues, core boss fight cues, or core cutscenes that everyone will hear," he explains. "When players listen to the music after they've finished the game, they're going to want to experience the environment track exactly as they heard it. Woe betide you if you tweaked or edited a track."

When it comes to cutting these tracks into standalone experiences, Coker regularly turns to a surprising reference – the pop song format. "This is something that I've been doing for years," he says. "Generally, you'll hear a verse, chorus, verse, chorus, bridge, chorus format... I think that makes the tracks listenable, which is another reason I don't cut".

Clocking in at just over three hours in length, the game's full soundtrack is a testament to the years of work that Coker has put into the production. "I wouldn't do this for every project," he laughs. "Some require curation more than others, but for this, I thought, 'Well, you know what? Let's put it out there and see if anyone complains'. And no one has... or they're just being very polite." 🎧

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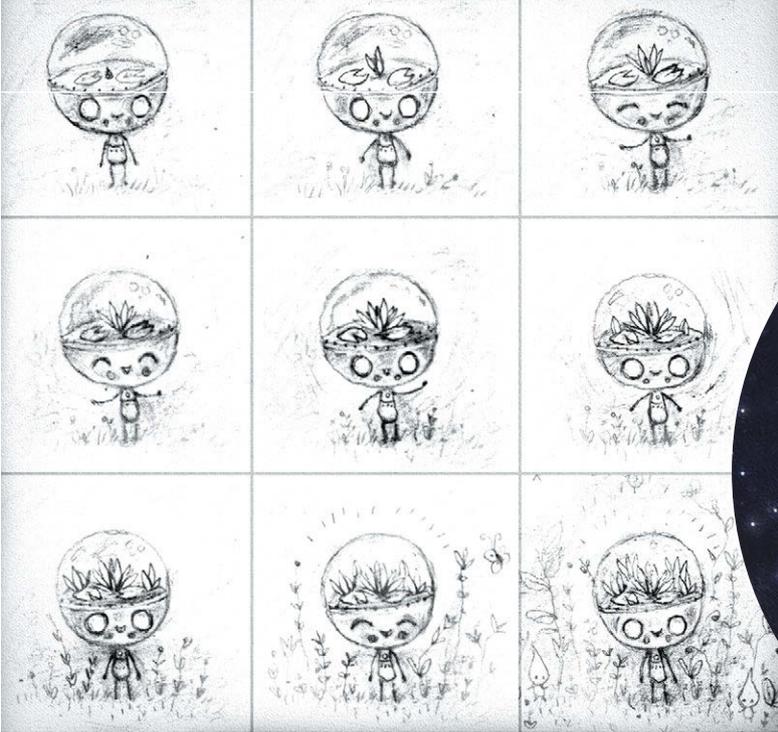


**GAME**  
Growbot

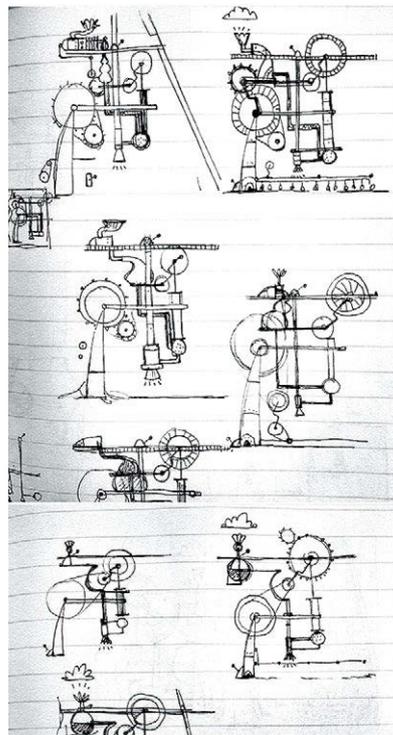
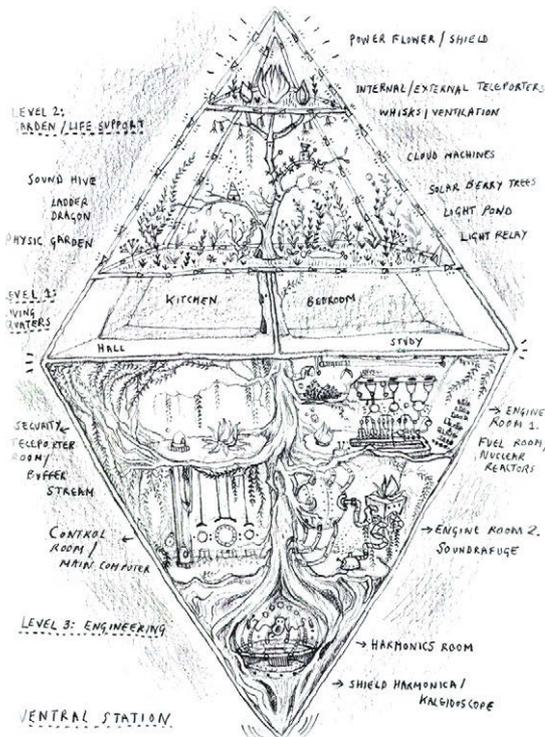
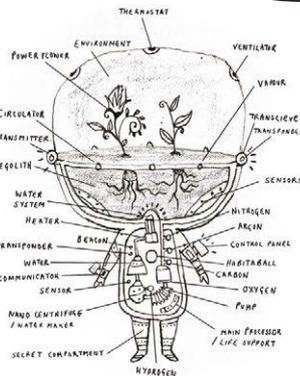
**ARTIST**  
Lisa Evans

**RELEASE**  
TBA 2020

**WEBSITE**  
[growbotgame.com](http://growbotgame.com)



GROWBOT / AUTOPHOSIS



## Growbot

Bristol-based illustrator turned game designer Lisa Evans has conjured up a bewitching world in her debut game, *Growbot*. It's a point-and-click adventure that brings her lush artwork to life – a sci-fi fantasy about a plucky robot and her first day as the captain of an incredibly strange space station. "Growbots are mascots from an asteroid mining company," Evans explains. "They get abandoned on an asteroid called Kew, only to be discovered and brought to life by aliens called geologists using strange space flowers. All of the technology onboard the space station the game takes place on is part organic, part machine."

To find out more about *Growbot's* eccentric brilliance, turn the page. ➔



# Interactive

## Growbot

Lisa Evans tells us about making the leap from artist to game designer with her point-and-click debut

Are you a solo developer working on a game you want to share with Wireframe? If you'd like to have your project featured in these pages, get in touch with us at [wfmag.cc/hello](http://wfmag.cc/hello)

So much of game design is about making the inherently mechanical feel organic. Whether it's creating characters that appear to live and breathe, crafting environments that feel dynamic, or coming up with puzzles that feel logical and of a piece with everything else, making games is at least partly about wrapping up mathematical systems and rules in a blanket that feels human and enticing. And that's exactly what illustrator Lisa Evans is doing with her debut game, *Growbot*: it's a point-and-click adventure that provides the perfect showcase for her warm, tactile art style.

**"I love science fiction that's about modification of the self, and the merging of technology and biology"**

Set aboard a space station called Kew, *Growbot* is a whimsical sci-fi tale about a dome-headed robot named Nara, and her efforts to save her home from a crystalline alien threat – a quest that requires exploring the cavernous station, solving puzzles, and interacting with its strange inhabitants. "I like the contrast between the vast emptiness of space and the deep greens of a lush garden floating through it," Evans says of her game's art style, which she dubs 'bio-punk'. "I enjoy the impracticality

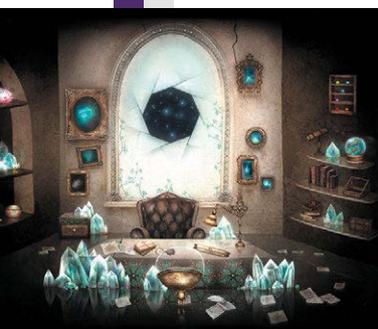
of it, the awkwardness when something is out of place. Maybe that's the punk part. I also love science fiction that is about modification of the self, and the merging of technology and biology."

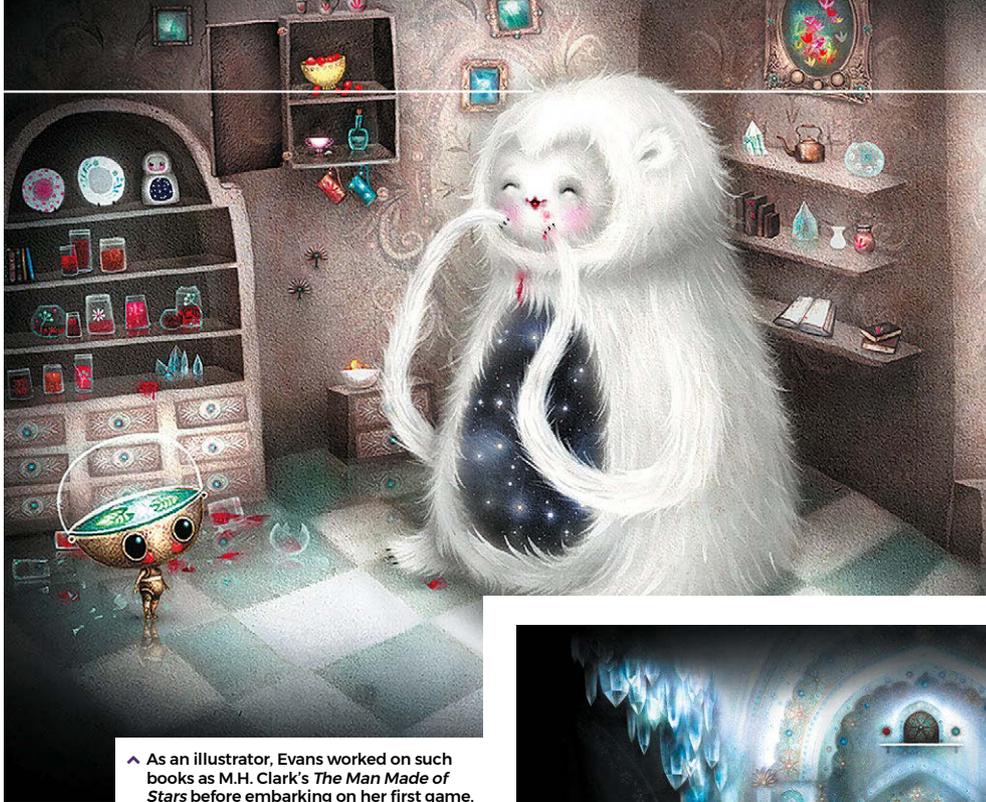
The seed for *Growbot* was first planted when Evans played *Machinarium* – Czech developer Amanita Games' dreamlike point-and-click adventure from 2009. She wasn't a huge gamer up to this point, but experiencing *Machinarium* unfold made her think about making the leap from illustration to game design – a path *Machinarium* developer Jakub Dvorský had followed himself.

"I loved *Machinarium's* atmosphere and its

non-verbal storytelling, but I think it was the pacing in particular that made me start thinking about making a game myself," Evans explains. "I enjoyed being able to dwell in a world without pressure; and being able to explore all the little environment details. Those are also things I like about children's books, and I could start to see how the ways in which I designed a children's book could also be applied to an adventure game."

Before work on *Growbot* could begin, though, Evans first had to learn how to use Unity and





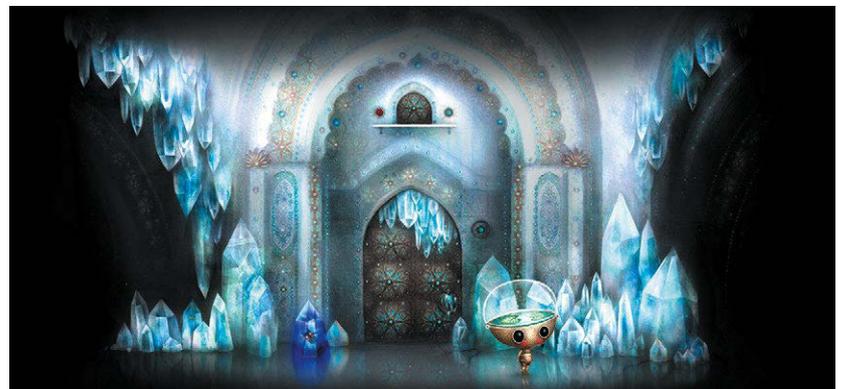
▲ As an illustrator, Evans worked on such books as M.H. Clark's *The Man Made of Stars* before embarking on her first game.



▲ "A lot of the puzzles involve fixing technology to bring the space station back online, which often causes its flora and fauna to come to life in the process," Evans says.



▲ Although *Growbot* is a solo project, Evans has regularly used player feedback to guide development: "It's been useful to see what people respond to, what they don't understand, and where they get stuck."



the Adventure Creator plug-in, which "handles a lot of the basic systems of an adventure game – inventories, dialogue systems, that sort of thing," she tells us. "I spent a lot of time Googling and looking at tutorials in the early days of using Unity and Adventure Creator, but not so much for game design. I think in part because it can be overwhelming to focus on how other people do things, at least when you're starting out. I did attend GDC one year, and that was useful, but otherwise, the learning process has mostly been driven by player feedback."

## WEIRD SCIENCE

Evans initially pitched *Growbot's* concept to the Wellcome Trust, a biomedical research charity based in London. That pitch was ultimately unsuccessful, but it still provided the creative jumping-off point for the game's themes and story. "I wanted to make a game about exploring altered states of consciousness from

a scientific perspective," says Evans. "The reason the growbots have large dome heads was that the player could drop different things inside them, and the environment would change around them to represent their conscious experience. The pitch was unsuccessful, but I decided to have fun with the character and see what else I could come up with. The game started to grow from that character and the artwork that I was creating, with the story coming afterwards."

It's the spontaneity of Evans' work that makes *Growbot* so enticing, both visually and in its storytelling. The game's surreal sci-fi world feels like one where almost anything can happen, and where the tone constantly hovers between gentle whimsy and something faintly unsettling. Says Evans: "I love the original stop-motion cartoon *The Moomins*, and animations by [Soviet/Russian animator] Yuri Norstein, like *Hedgehog In The Fog* – I love the sense of unease and longing in the music and visuals; the worlds are both beautiful and creepy. The characters in *The Moomins* are usually highly neurotic: you see their vulnerabilities, vices, and virtues. Exploring the ways nature and people are unpredictable, that is scary, funny, exciting, and sad all at the same time. I don't think I'll reach those heights with *Growbot*, but I do want to try to make something similar." 🐾

## THE BUFFY CONNECTION

"I've been inspired in big and small ways by sci-fi and fantasy," Evans tells us. "My favourites are usually science fantasy, which finds ways to marry big ideas and heavy feelings with lots of silliness. I was a big fan of *Buffy the Vampire Slayer* at university, for example. At one point in [*Growbot*], the protagonist Nara needs to go inside the mind of one of her crewmates in order to break her out of a negative feedback loop, which is directly inspired by a particular episode of *Buffy*. "But there are lots of other more general inspirations in the game. I like antagonists that are really just misunderstood protagonists of their own story, and there's a little of Frankenstein in *Growbot's* main villain. One of my favourite books is Arthur C. Clarke's *Childhood's End*, and a bit of the existential crises at its core has seeped into the game."

## Online Diary

# GITTIN' GUD

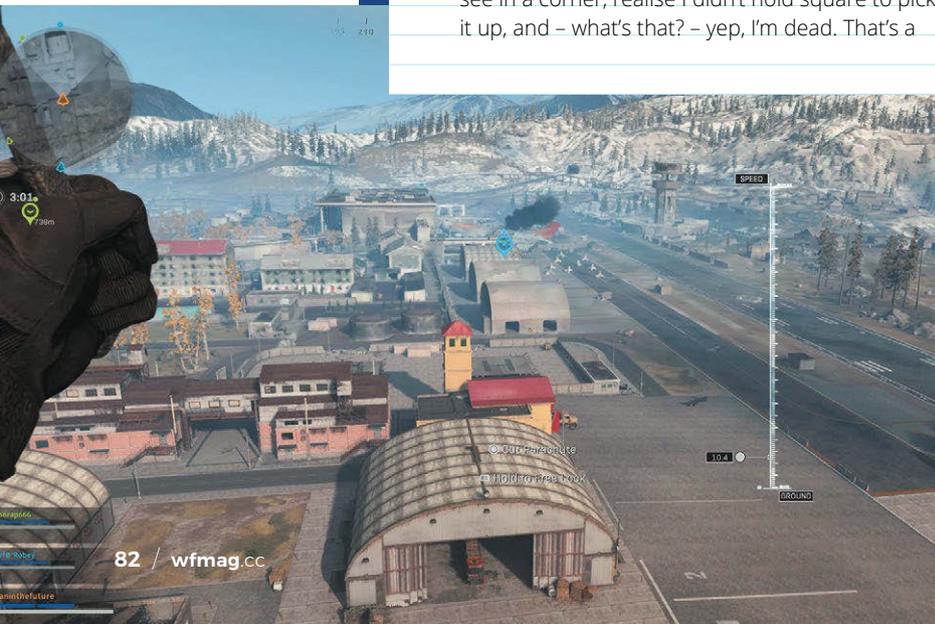
Honing skills in the challenging world of competitive online gaming. This month: Call of Duty: Warzone

WRITTEN BY IAN 'I'LL JUST HIDE IN A BIN' DRANSFIELD

▼ When you don't know what you're doing, it's always handy to follow the people who do look like they know what they're doing.



▼ Landing in popular areas like this... might not be the best idea for beginners.



Three of us, bathed in a red glow as we await the beckoning finger of fate. Comrades in arms, being sent on a mission to an island riddled with echoes of a past; one that reflects the present very little. Our goal? Survival. Our enemy? Numerous. Stepping to the edge of the lowering cargo bay door, we ready ourselves to jump – to leap out above this unwelcoming, abandoned landscape and make our way... somewhere? Anywhere. Away from the gas. Towards survival. The time is here. We jump. There's no going back.

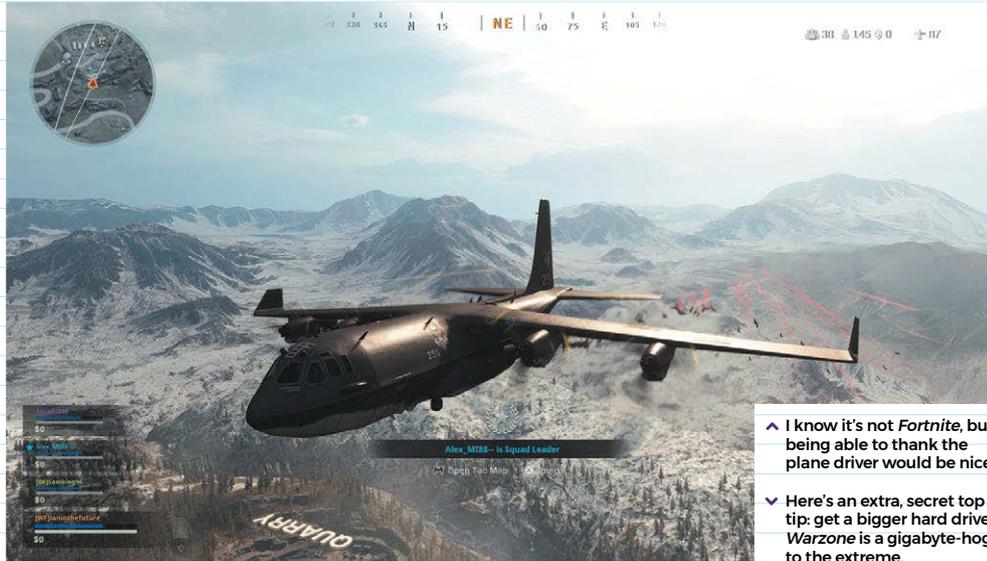
I'm given squad leader status on that very first jump, so I press square to get rid of it. I then ignore where the newly elected squad leader tells our trio to go, instead landing in the middle of an abandoned airport. I land, scuttle towards a gun I see in a corner, realise I didn't hold square to pick it up, and – what's that? – yep, I'm dead. That's a

grand total of about seven seconds' boots on the ground before death. 'An auspicious start it might not be, but it at least could be developed into some kind of satire of warfare', I think to myself, as I quit out to the lobby and reload *Call of Duty: Warzone's* BR Trios mode.

It didn't continue like this. That would have been a fun joke to spread out across two pages, don't get me wrong – the plodding, tense build-up before the sudden, inevitable, *spectacular* failure. But something a lot better happened: in my second game, I was placed in a team with two people who were a) good at *COD: Warzone*, and b) actually understood the concept of working as a team, and so went out of their way to help me in the small ways people do when they aren't screaming/playing music/being twelve and racist down a headset.

Playing with friends is always the preferred way of doing things, but when you're with a couple of people who you've decided will be your friends for life, who help you, who throw guns at your feet, who heal you when you pop your head out to check out what that twinkle was on the horizon and get your face shot in – *Warzone* is special then, too. We're moving as a squad, checking our 'sixes' (I know the lingo now); we're discussing the best guns to hold onto (one short/medium-range, one long, basically); I'm learning the wonderful importance of pinging things – highlighting items/enemies/anything on screen for other players (itself nicked from *Battlefield*). It's... *fun*. I'm useless, of course – I make a kill, somehow, but am taken out soon enough afterwards. We finish fourth (!), I get a bunch of XP, and it's on to the next game

*Wmccormack*



## Lessons from Warzone



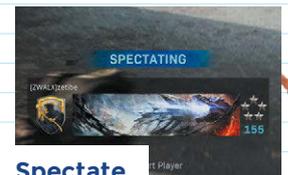
### Try Blood Money

There's another mode all about grabbing as much money as possible, and it's a fantastic distraction. The map doesn't shrink, you respawn, and tactically it's a whole different beast to vanilla *Warzone*. It's not quite as good – there's too much holding up for my liking – but it's a great alternative.



### Stick together

It's consistent with any team-based game, sure, but this is what I learned from my time with *Warzone*. You stick with your team, there's safety in numbers, *plus* you're able to find more weapons and gear to share with more eyes on said prizes. Or play alone and lose alone. Your choice.



### Spectate

I left the game running after I'd inevitably died, and by crikey, that teammate of mine was a *beast*. Duck-move-turn, duck-duck-aim, duck-turn-aim-duck – a constant flurry, always in a position where they're hard to hit but capable of aiming. Vomit-inducing? Yes. Useful? Absolutely.

without my new-found friends. I immediately feel lost without them... but at the same time, there's a new-found confidence. Maybe I *can* do this.

A few games down the line I've got an element of confidence about me. Not quite swagger, but something. I take on the role of squad leader, ready to try and help our trio to glory – or at least a top ten finish. My team ignores all of my commands and goes off on its own as a duo, and I die, alone and forgotten, on the other side of the map. Maybe leadership isn't ready for me quite yet.

There's an admission to make here; I am averted in the world of the battle royale. The concept of dropping into a large-but-enclosed space with 100-plus

other real people and trying to be the last one standing is something I've done extensively in *PlayerUnknown's Battlegrounds* (*PUBG*) and, less extensively, *Fortnite* (*FNNT*... wait, not that). And here's the real secret: I am a fan of this genre. I get why it's popular. I've enjoyed more intense moments in *PUBG* than I have in most other games of the last few decades. It's a brilliant sub-genre of the first-and-third-person shooter worlds, if an oversaturated one.

But with that saturation comes those differences, those subtleties that stop everything from blending into one giant whole. And *Call of*



*Duty: Warzone* features a selection of just those subtleties that put me off and mean, regrettably for my burgeoning friendships with those people I don't know and will never meet again online

or off, I won't be returning to hone my craft here next month. The game is good; the mechanics fine-tuned; the community healthy. But tonally it's never been my bag to play as and celebrate

a hyper-realistic soldier, there's zero tongue wedged in a cheek or anywhere else through all of *Warzone* and, really, I just can't be bothered trying to get the perks and killstreaks and other such subtleties of the game.

One game down, oh so very many to go. Moving on from this one isn't a failure, it's a realisation writ large: not every online game is for every online person, even if the online genres have a lot of online overlap. And regardless of the online game, this online person will continue to online die in it. For it is online written, so shall it online be. 🐾

**“We’re working as a squad; I’m learning the wonderful importance of pinging things”**

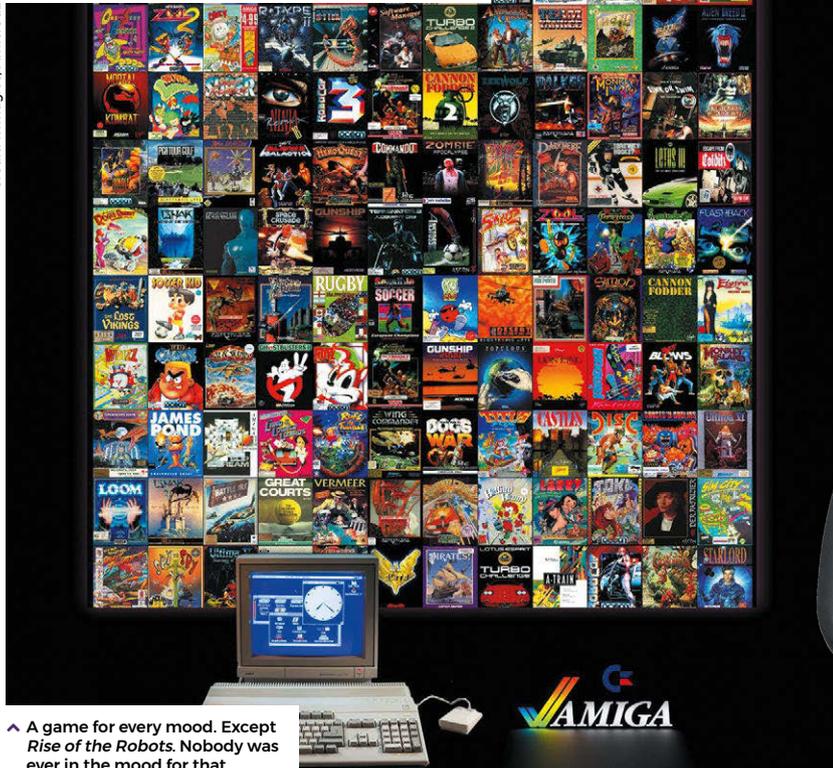




## Interface

System Profile / Commodore Amiga

Credit: wfmag.cc/Amicred2



^ A game for every mood. Except *Rise of the Robots*. Nobody was ever in the mood for that.

It's difficult to imagine late eighties and early nineties gaming in Europe without the Amiga. It seemed everybody had one – most with the trusty old Amiga 500, some picking up an A500 Plus if they felt a bit fancy, while the rich kids had the A1200. Spare a thought for the poor lot with the A600. Dozens – hundreds – of games poured in from developers big and small around the world, backed up by a robust and inventive Public Domain (PD) scene, piggybacking off the success of the previous generation's bedroom coders. Choice. Always choice. That's what the Amiga was.

It was never the best. Even though PCs of the day weren't their best as gaming machines, they still had more oomph than Commodore's machine, the latter mainly based on the 1985 A1000 original. Strategy games and simulations ran faster, smoother, *better* on PC than on Amiga. The Mega Drive and SNES had quick-paced platformers and action games nailed, meanwhile, offering a fluidity of motion and breadth of control the Amiga just couldn't, in the most part, keep up with. The Amiga was batted about between these rival formats, mastering none.

But it was a hardy machine. Robust. Well aware of the limitations of its 7MHz 68K CPU and 512KB RAM,

developers would nonetheless tinker and push, bringing far more out of the stock machine than one would think possible. Early on in the Amiga's life, the majority of its games were straight ports from rival format the Atari ST. It made Commodore's machine look like it couldn't do much beyond the competition. Thoroughly *un-special*. But as focus moved away from Atari's

### “Technically, the Amiga is still going... But for all intents and purposes it died back in 1996”

similar, but not quite as powerful machine, the Amiga came into its own.

If you had an interest, you were covered. *Zool* for your console-like, quick-paced platformers. *Body Blows*

▼ *Body Blows*: a *Street Fighter II* killer? No.



► The CD32 was meant to compete in the console market; instead it presented itself as a feature-lacking A1200 and promptly died.



for the one-on-one fighting, or maybe *Shadow Warrior*. *Sensible Soccer* and its follow-ups for football – maybe *Dino Dini's Goal* if you wanted a change of pace. Or even *Championship Manager* if your required change of pace was to 'glacial'. *The Chaos Engine*, *Speedball 2*, or any other Bitmap Brothers game if you wanted to bring the cool. The *Turrican* trilogy for *that* soundtrack. *Formula One Grand Prix* and myriad flight simulators to marvel at the 3D graphics capabilities. *Frontier: Elite II* to travel the universe. *Syndicate* to journey through entire, living cities (and kill everyone there). It might have rarely been the outright best, but the Amiga always had your back, always had you covered with some other game to play.

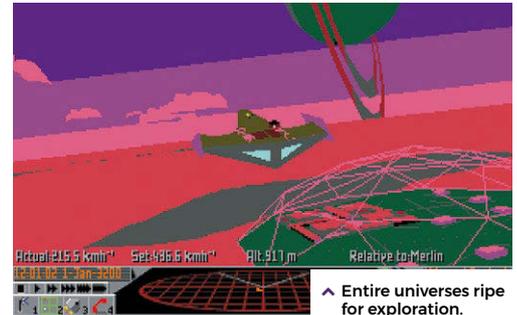
And that's part of what made its death so tragic, at least in relative terms. Mismanagement at Commodore saw the Amiga's market share dwindle. The CDTV was a joke. The Amiga 600 was a failure, with the machine displaying a host of easily avoidable flaws and faults in its design (no numerical keypad? No flight sims for you!). The next big hope for the brand, the CD32 console, was dead on arrival. Nothing Commodore did could push the Amiga any further than it had got itself through sheer inertia. In fact, everything just seemed to work against the format.

Technically, the Amiga is still going – a split in owners after Commodore's death



in the mid-nineties mean *pure* ownership of the format is a confused bag. But it's still there. There's an AmigaOS. Every now and then a new company threatens to put out PCs badged up with the Amiga name. But for all intents and purposes, the Amiga died in 1996. And it shouldn't have. A machine backed by so many developers, beloved by so many across Europe, with so much adaptability shouldn't have withered on the vine, it shouldn't have been superseded by repeat failures. It's been the war cry of the Amiga fan for about 25 years now, but it stands true: the Amiga shouldn't have died. But it did. And it was Commodore's own fault.

Later on in the Amiga's life, well after most of its fans had moved on to other things, *Doom* did come to the machine in a couple of variants. It required accelerator cards; there was no way it would run on a stock A500 – no, not even with 1MB of RAM installed, shockingly. It really didn't matter much by that point; the battle was long lost, the original Commodore just a vague memory. But the community remained. Dogged and determined, committed hobbyists would eke *something* out of those machines to make them hit the heights we all wanted back in the day. So *Doom* happened. Fittingly for the Amiga, it was way too late, with little in the way of fanfare, and did nothing to draw people back to the platform. We wouldn't have it any other way. ☹



▲ Entire universes ripe for exploration.



► There was no lack of confidence from Commodore, as shown by placing this ad right outside Sega HQ. Shame about the execution.

## Final Doom

There is still work going on to try and bring *Doom* to stock Amigas, and one developer – going by KK/Altair – has been showing off his work to get a functional clone of *Doom*'s basic systems up and running on an Amiga 500 with 1MB RAM. The results are already seriously impressive, even in these early days, with smooth scrolling and a convincing faux-3D effect to levels. Check it out here: [wfmag.cc/AmiDoom](http://wfmag.cc/AmiDoom).



▼ Imperfect, but this is on a stock Amiga.

# Miggy Magic

## 10 forever fabulous floppies

Though some were on more than one disc...

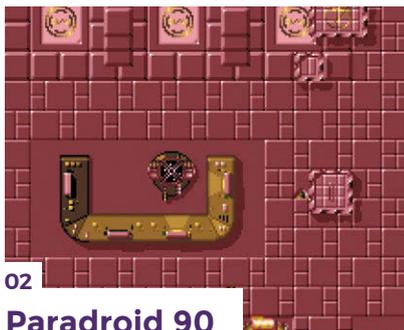


01

### Moonstone: A Hard Days Knight

1991

The controversial thing here is that *Moonstone* was never *that* good. It was clunky, with random difficulty spikes, and unless you were playing with friends, was just a bit dull and unfair. Still, it's an Amiga classic. A moody action-RPG full of gory deaths and accidentally beating the dragon to get all its treasure.



02

### Paradroid 90

1990

A remake of the C64 original, *Paradroid 90* brought visual splendour to a set of solid mechanics. Playing as a little robot with the ability to take over bigger – sometimes heavily armed – bots, you were tasked with clearing out these hostile mechano-folks from a large ship. Playful and open, it was an experience few could forget.

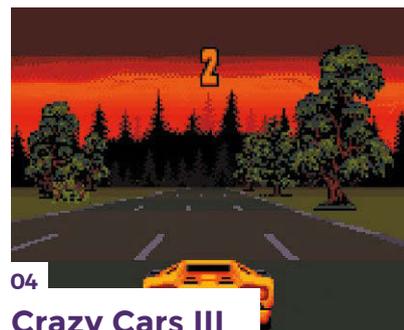
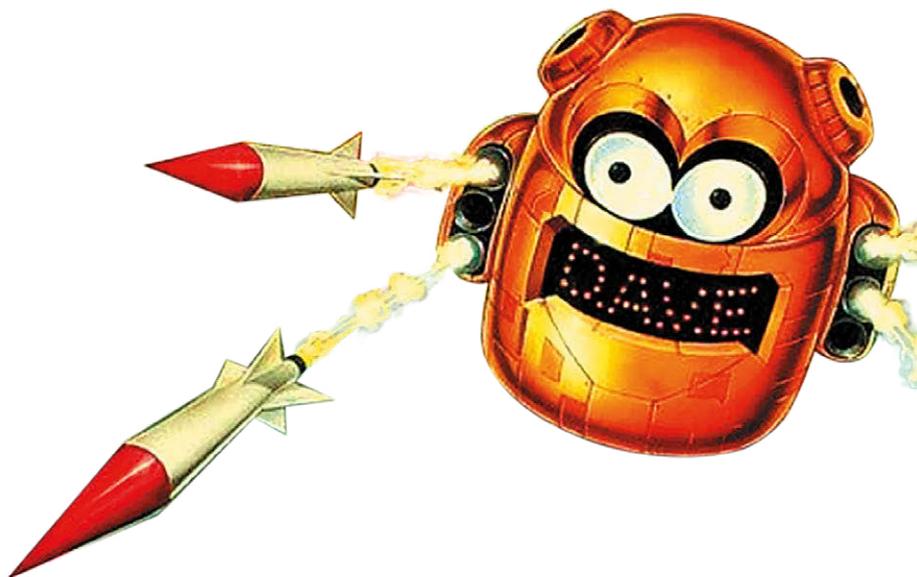


03

### Wiz 'n' Liz

1993

Plenty of the Amiga's life was spent in the shadows of the SNES and Mega Drive, but every now and then a game released to show Commodore's plain old computer was capable of something console-like. *Wiz 'n' Liz*, from Psygnosis, was a fast-paced, raucous platformer very much in the console vein. More than that, it was a brilliant, fun game.

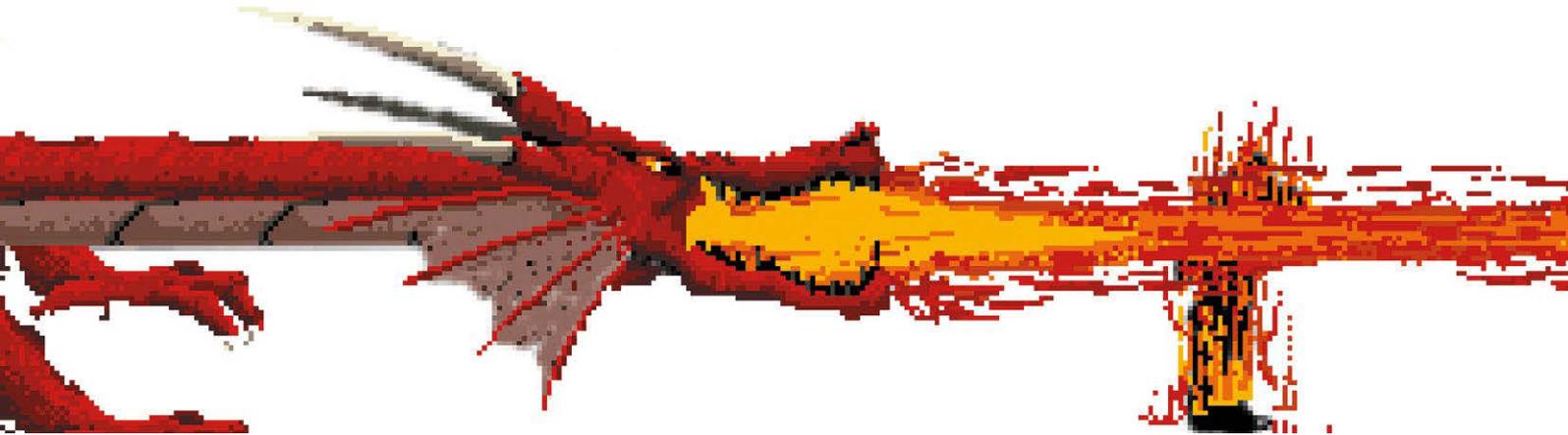


04

### Crazy Cars III

1992

Maybe we should opt for *Lamborghini American Challenge* here, given it was the same game with an added two-player split-screen mode, but it's OG *Crazy Cars III* that gets the nod. It's not like the Amiga was starved of great racers, but Titus' game brought with it that cool factor so many others were lacking, as well as a fantastic gambling gimmick.



05  
**Syndicate**  
1993

Much as this is an effort to steer clear of the obvious choices, it's impossible to do an Amiga list without *Syndicate*. One of Bullfrog's best, this cyberpunk tale of corporate warfare brought with it open cities, vast swarms of civilians, and plenty of nihilistic ultra-violence. It chugged next to the PC version, sure, but *Syndicate* on Amiga was – and is – a stone-cold classic.



06  
**Wings of Fury**  
1990

*Jetstrike* is the popular choice: let's be a bit left-field, then. *Wings of Fury* took players to the Pacific theatre of the Second World War and tasked them with bombing, rocketing, and strafing Japanese outposts across a series of islands. Simple enough, though with a control scheme to wrestle with, it offered many an hour of war-shaped fun in the 1990s.



07  
**SWIV**  
1991

This sort-of *Silkworm* sequel brought jeep-and-helicopter two-player action to the world of vertical scrolling shoot-'em-ups, stepping away from the horizontal original. Gorgeous, challenging, with superb sound effects, *SWIV* went down in history as a) a really good Amiga game, and b) one of the few titles that lost its mojo when ported to consoles. Why? No idea.



08  
**Virocop**  
1995

One of the Amiga's last real hurrahs, *Virocop* was set *within* the world of video games and offered a look at just what happens when a studio – Graftgold, in this case – spent around a decade working on the Amiga, honing its craft and learning the intricacies of the system. It's a bit of a basic shooter, but it's gorgeous, smart, and riddled with character.



09  
**IK+**  
1988

Press T, their trousers drop, you stick the nut on them. What a game. *International Karate +* brought three-person competitive karate to an unsuspecting world and – well, it had quite the impact. Was there anyone who didn't play *IK+*? Anyone who didn't love it? As well as delicately balanced combat and challenging minigames, it also featured a wonderful sense of humour.



10  
**Sensible World of Soccer**  
1994

This is another one not drawn from the un-obvious pile – but how can you do an Amiga list without *SWOS*? One of the best football games ever made, with the added bonus of practically every team anyone would care *to care* about from around the world. There's a reason enthusiasts still update the game to this day.

# Where do you find the time?



## STEVE MCNEIL

Steve has got loads of stuff, but he just wants to do the same stuff again, please.

f, like me, you're a gamer who is also a bit of a nerd (rare, I know) you might be familiar with the website, **howlongtobeat.com**. It's a handy resource which tells you, on average, how long it takes to complete any game.

Until recently, I've just used it when I've been eyeing up a new title, to gauge the commitment it will require of me if I want to do things 'properly', and it's the best site I know of to remind busy people that they will never complete *The Witcher 3* or *Skyrim*.

Given outside is now illegal, I figured it was as good a time as any to think about tackling my 'pile of shame'. The site even allows you to enter your Steam ID to automatically get an estimate. I'm not the biggest PC gamer, as I tend towards consoles, but it turns out my Steam games alone rack up about 70 days of gaming. To be clear, that's 70 24-hour-long days. Yikes.

As my 'job' involves playing games, I have each of the current consoles, and began to plug my collections for them in, too; thanks to my diligent grabbing of every PS+ game for the last few years, I managed to hit 365 days before I'd even got onto the Xbox and its now seemingly unclimbable Game Pass mountain.

To be clear, if I do nothing at all – not even sleep, eat, or poo (unless I poo on my chair, but I don't want to) – it would take me over a year to play just the games I have on PC, PS4, and Switch. Add in the Xbox One, PS3, Xbox 360, Wii U, and pretty much every major title on every legacy system all the way back to the Amstrad

CPC 464 (the best-ever computer) and it's looking increasingly unlikely I'll clear the back-log before the PS5 and Xbox Series X land this winter.

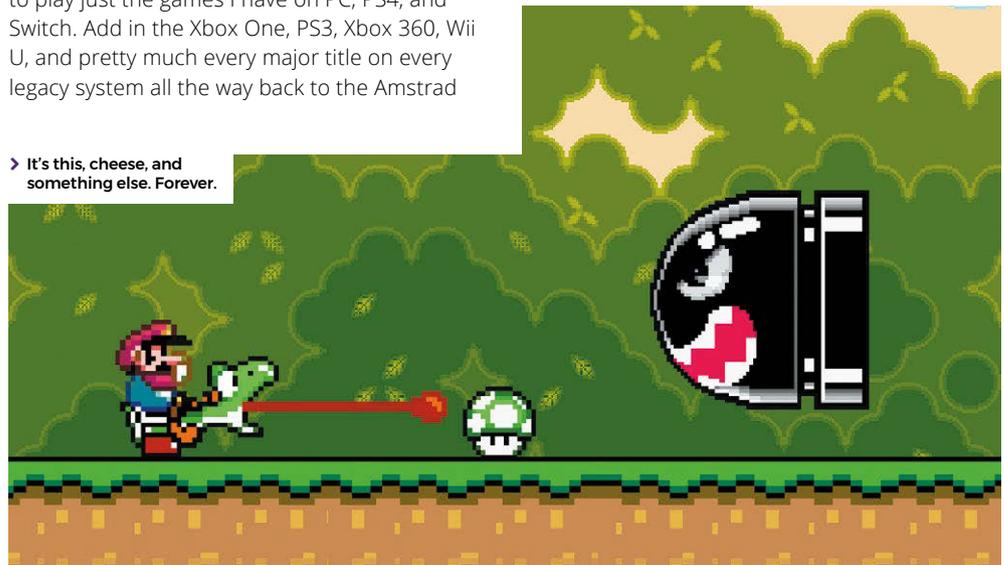
The same is true with TV these days, of course. With seemingly endless new seasons of shows on Netflix, Amazon, Apple TV, and of course traditional TV, it's impossible to keep up with everything. So what do we do?

Well, if you're like me, you watch *Breaking Bad* for the third time because it's familiar, and play the first six levels of *Super Mario World* on the SNES again. What does this teach us? Well, firstly that my non-gamer friends were technically correct when they said my 'hobby' was a waste of money, given the cash sunk on things I will never fully get the benefit from. But secondly, and more importantly, I think it proves that actually, we don't want choice.

In an ideal world, I'd just be playing SNES games on the Switch that I've paid for several times over, while *It's Always Sunny in Philadelphia* loops on repeat in the background on Netflix, interspersed with occasional breaks to eat cheese, and poo. By which I mean I want to eat cheese, and I also intend to poo. I don't want to endlessly eat poo. I've gone 40 years without eating any, and I'm not starting now.

As this article proves, I'm nothing if not a creature of habit. 

> It's this, cheese, and something else. Forever.



**"If I do nothing at all ... it would take me over a year to play just the games I have"**

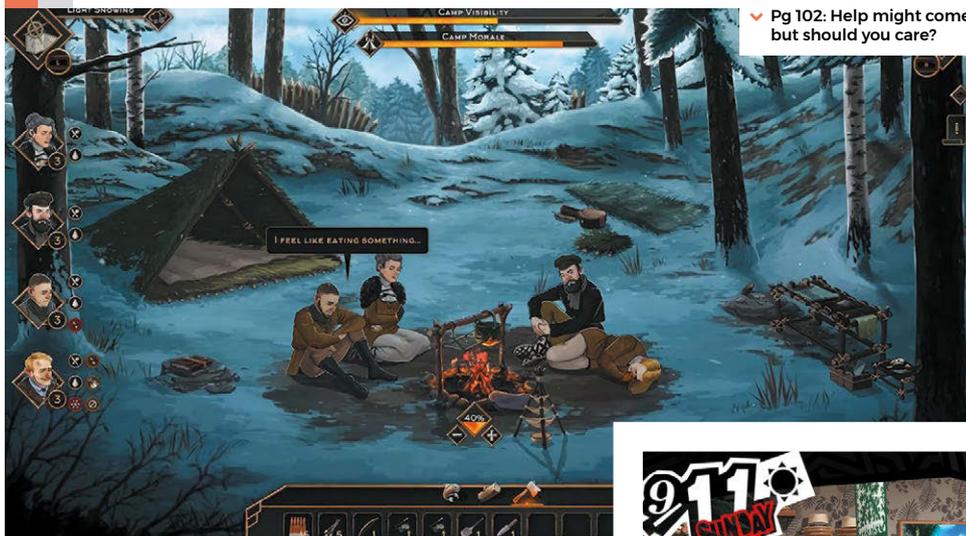
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Reviews, retro games, and lots more besides

- 92. Final Fantasy VII Remake** PS4
- 94. XCOM: Chimera Squad** PC
- 95. Paper Beast** PSVR
- 96. In Other Waters** PC, Switch
- 97. Exit the Gungeon** PC, Switch, iOS
- 98. Tales From Off-Peak City** PC, Mac
- 99. Bloodroots** PC, PS4, XBO, Switch
- 100. Vitamin Connection** Switch
- 101. Haunted PS1 Demo Disc** PC
- 102. Help Will Come Tomorrow** PC, PS4, XBO, Switch

## OUR SCORES

- 1-9**  
Trash. Unplayable; a broken mess.
- 10-19**  
A truly bad game, though not necessarily utterly broken.
- 20-29**  
Still awful, but at a push could be fun for two minutes.
- 30-39**  
Might have a redeeming feature, but otherwise very poor.
- 40-49**  
Adds in more redeeming features, but still not worth your time.
- 50-59**  
Average. Decent at best. 'Just about OK'.
- 60-69**  
Held back by glitches, bugs, or a lack of originality, but can be good fun.
- 70-79**  
A very good game, but one lacking spit and polish or uniqueness.
- 80-89**  
Brilliant. Fabulous fun. Everyone should at least try it.
- 90-99**  
Cutting edge, original, unique, and/or pushes the medium forward.
- 100**  
Never say never, eh?



▼ Pg 102: Help might come, but should you care?

## PLUS

- 104. Backwards compatible**  
The Twin Famicom, adventures in soldering, and more in this month's nostalgia blast
- 108. Now playing**  
Drake's adventures and some back-to-school embarrassment
- 112. Killer Feature**  
Galaga's game-changing power-up



▲ Pg 110: School isn't quite how we remember it...

Info

**GENRE**  
Action-RPG  
**FORMAT**  
PS4  
**DEVELOPER**  
Square Enix  
**PUBLISHER**  
Square Enix  
**PRICE**  
£59.99  
**RELEASE**  
Out now

# Final Fantasy VII Remake

Slumdog Gillionaire

**M**y first playthrough of *Final Fantasy VII Remake* was intoxicating. In its pacing, side content, and creative friction between reverence and innovation, it has problems. But it would be dishonest of me to claim I noticed most of them until some way through my second run. On that first visit to this new Midgar, I was enthralled and grinning like a fool in love at 40 hours of spectacular fan service, right up until an ending that, to be blunt, absolutely cacks itself with the explosive intensity of a firework display at the final hurdle. Fireworks are fitting, though. This is as much celebration as reimagining, though a celebration alive with much less cynical fan service and much more thoughtful iteration than you might expect.

The series has felt self-conscious about its roots in turn-based combat for a while now, and it filled me with relief and joy as a lifetime fan to discover that *Remake's* combat feels like a sweet spot, the series' turn-based past making peace with the obvious anxieties about relevance that resulted in *FFXV's* disappointing battle systems.

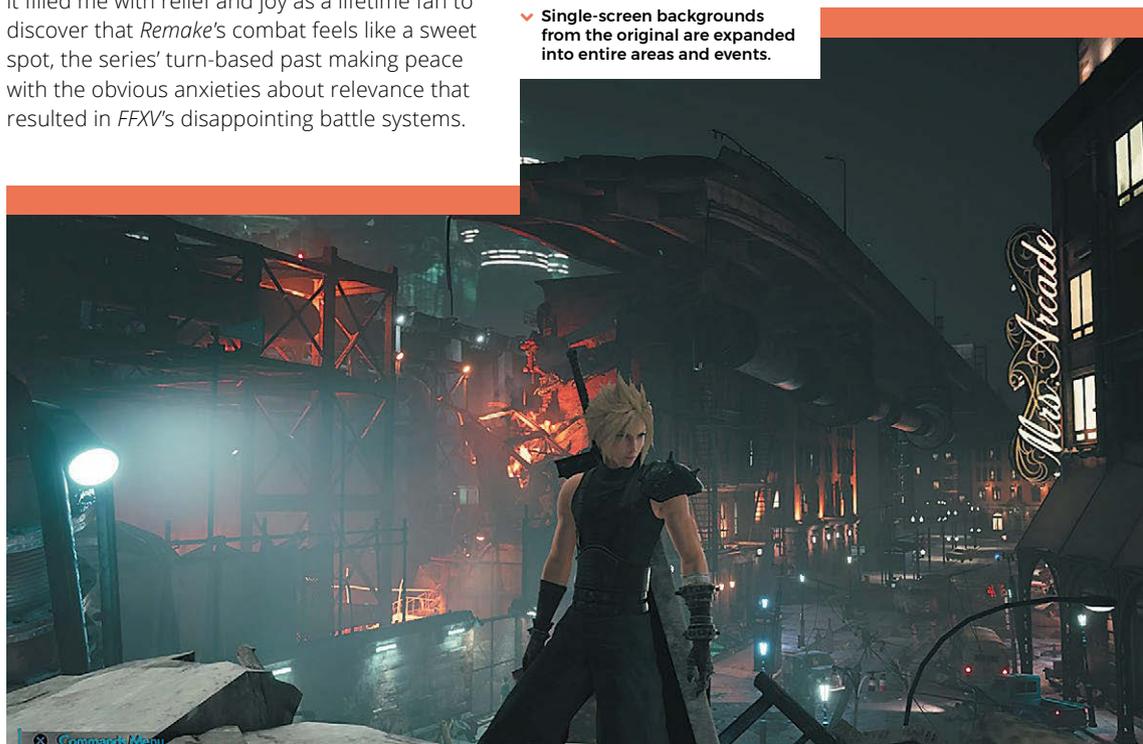
*Remake's* real-time, pausable combat is tactile and electric with absurd, chaotic, impressive visual flair. This, while being demanding and layered enough to make tactical consideration a must for success. It's arguably one of the best systems the series has seen, and engaging enough that I'd love to see the mainline games adopt this style going forward.

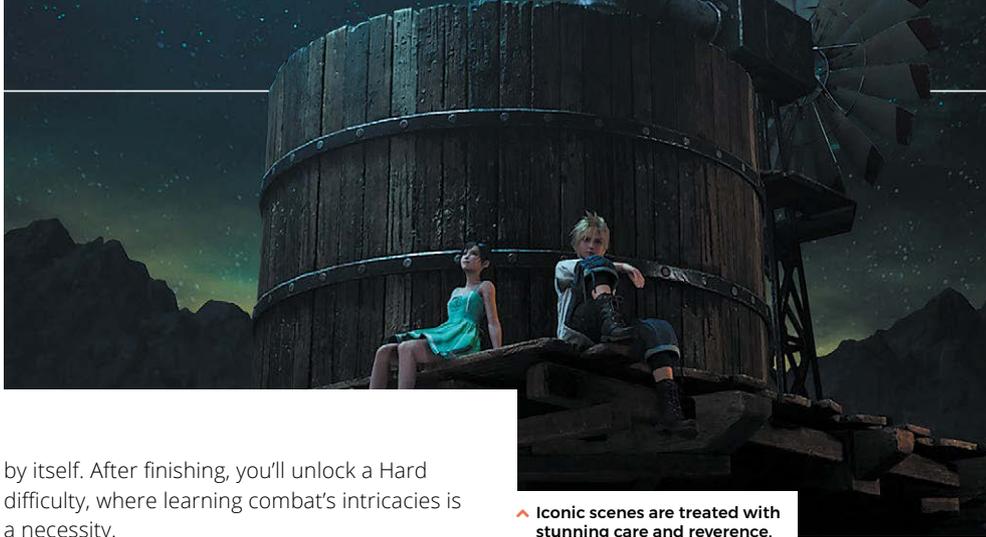
If length or value was ever a concern, I'm happy to report that *Remake* – despite covering a fraction of *Final Fantasy VII's* narrative – is a robust, generous RPG in its own right. A few flat fetch quests aside, the majority of side content serves to give you more opportunities for the excellent combat. Discovering and upgrading new materia (gems that imbue you with different magical powers), and creating builds for some of the game's tougher optional combat encounters becomes a compulsive, enjoyable focus all

▼ Single-screen backgrounds from the original are expanded into entire areas and events.

## HIGHLIGHT

The extended run time means every single main character, and some side characters, are given much more personality, heart, and pathos, and it feels every bit the love letter to long-time fans. There is also a SoundCloud rap remix of the Chocobo theme, and it slaps. Uh, squawks.





by itself. After finishing, you'll unlock a Hard difficulty, where learning combat's intricacies is a necessity.

Perhaps most surprisingly, *Remake* preserves much of the original's idiosyncratic spirit. Not just through the re-creation of plot points, but through tone and direction. Oddly off-kilter conversations, confusing abruptness, and tedious but faithful navigation minigames confirm that *Remake* understands the spirit, not just the machinery, of the original.

Talking of machinery, though, it's disappointing to find that something of Midgar's distinctive look has been lost in the update. While landmarks like Aerith's house and the church are stunning to encounter, aspects of the more industrial areas like the reactors and Sector 7 slums have been scrubbed until dull, losing their beautifully chaotic scrap bricolage and creeping organic-industrial squalor in the quest for clean realism. This is partly a problem of perspective. While fully 3D, pannable environments can still be breathtaking, something of Midgar's atmosphere is lost without its predecessor's bespoke, pre-rendered backgrounds. If the original was a collection of scenes, this is very much a collage of areas. Vaster, but less deliberate and evocative.

If the stages are whitewashed though, the central drama is heightened. In all my numerous runs through the original *Final Fantasy VII*, I have never been this angry at Shinra, or as invested in the fate of terrorist/freedom fighters Avalanche's B-team. *Remake* can be a bloated, self-indulgent slog, but it does some wonderful things with that self-indulgence. Simple story beats are siphoned of their momentum and stretched out over hours, while character moments are given time to breathe, meaning those same story beats hit almost as hard, just in different ways. The context for certain characters or plot elements is abandoned in favour of recognisability or unearned stakes, yet the most minor elements of these characters' personality and visual designs are given much more care and attention. Put simply, and perhaps somewhat heretically, *Remake's* version of these characters' opening arcs is far more

^ Iconic scenes are treated with stunning care and reverence.

human and interesting than the original, even if much of the constant excitement and novelty of that game is sacrificed in the process.

The game's entire relationship with fan service is both strange and unavoidable. In language, clichés have a freezing effect on meaning. Everybody has their own idea of what a phrase like 'swift as the wind' or 'mind-blowing' means, so when we opt to use these phrases as shorthands for complex experiences, the experience itself is shrunk down and simplified to fit in the parameters of the cliché. When Orwell wrote about the reduction of language

for political ends, this is what he meant. Things that are 'iconic' have much the same effect. I am a fan, and I enjoy being serviced. But getting waited on hand and foot

gets uncomfortable after a while, as if you're being denied the opportunity to have your own experiences. Or, in *Remake's* case, to form your own emotional bonds or favourite moments instead of being told what should matter to you.

Still, I genuinely feel that everyone who loves *Final Fantasy VII* should attempt to experience *Remake* at least once. Even when it fails, it serves as a valuable and fascinating counterpiece to the PlayStation classic, one that's sure to evoke conversation and consideration over why the original remains so beloved. 🗨

### "Remake's real-time combat is tactile and electric"

> The socio-economics of the city and lives of the citizens are given much more time and consideration.



Biggs

Folks here must be living off three or four times what I do.

v Eggs and chips.



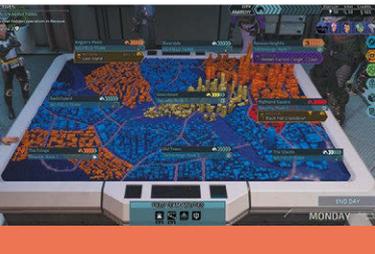
## VERDICT

*FFVII: Remake* is an armoury of double-edged swords. A sacrifice for every improvement, but still, on occasion, sharp enough to cut right to the heart of what made the original special.

# 79%



- > The day-to-day turn-based terror is very much present, with enemies missing shots still providing palpable relief.
- > As in 1997's *X-COM: Apocalypse*, this is about managing a lone city rather than the entire world. It's... not a simpler task.



Review

ENEMY ACTIVITY

### HIGHLIGHT

I may find some of them incredibly annoying – sassy aliens just strike me as weird in a franchise where the non-humans have been nothing other than malevolent – but your squad, and the unique powers each member has, distils the team-building fun of *XCOM* into an easily digestible form, and it's all the better for it.

# XCOM: Chimera Squad

Bringing the sass to turn-based sass-ergy

## Info

- GENRE**  
Turn-based strategy
- FORMAT**  
PC (tested)
- DEVELOPER**  
Firaxis Games
- PUBLISHER**  
2K Games
- PRICE**  
£16.99
- RELEASE**  
Out now

REVIEWED BY  
Ian Dransfield

## VERDICT

A bite-sized nugget of *XCOM* joy, though too limited to be a true great.

76%

**E**ach bite-sized mission in *XCOM: Chimera Squad*, a budget spin-off to the superb strategy series, begins with a 'breach' phase. You line up your squad across different entrances, choosing their place in the queue and setting up special abilities (they might be big and scary, startling enemies within, for example), then you kick the doors in and rush, getting a free shot or special ability before the more traditional turn-based combat kicks in. It's a development of *XCOM 2*'s ambush system and, largely, it works here. *Chimera Squad* does a few of these little tests in its 24-hour campaign.

You play as the titular team, made up of eleven different special forces troops – human and alien – as they try to bring down a conspiracy in City 31. This is done by training and upgrading, getting new gear, choosing from plentiful little missions, and trying to manage the fortunes of a city that seems to fall into chaos. You are *always* on the verge of failure, even if it's harder to lose than it might seem.

In missions, you're met with something that may jar with series veterans: turns are no longer one team at a time. Instead, they're interleaved, with player and hostile units going one then the other. This means you're able to plan more efficiently on the fly, reacting to enemies as and when they place themselves, and there's a much wider focus on interfering with hostile units –

stunning them, forcing them from cover, generally *stopping* them from having their turn. It's one of the biggest changes to *Chimera Squad* over the original *XCOMs* (and *X-Coms*), and... it's really good. It really makes sense. I want it to stay.

There are downsides to this mildly experimental take on things. Failure doesn't feel as present, robbing *Chimera Squad* of the tension of previous *XCOM* games. Rather than death meaning death, you just try again – I get it, it fits the theme of the game (also you can change that by enabling

Ironman mode) – but it's not a positive for me. I want the loss of a soldier to be *felt*; I want to go out of my way to protect my overpowered sniper and scream bloody murder when

they are murdered, bloodily. And while I see the appeal of a prefab bunch of humans and aliens for the squad – expediting the process as it does – I genuinely missed hardening up new recruits over many missions. There's less attachment when you've had no hand in their development.

But for what it is and what it sets out to do, *XCOM: Chimera Squad* is really very good. It's a mildly experimental release bringing together plenty of the classic series elements and blending in creative new aspects for a similar-but-distinctive take on the formula. It's quite obviously a test bed for new ideas, and honestly, if that interleaved turns mechanic makes it to the next *proper* game, *Chimera Squad* will have been an experiment 100% worth it. 🗨

**"It's quite obviously a test bed for new ideas"**

HIGHLIGHT

While *Paper Beast* has a pleasingly ambient score, the inclusion of J-punk rock band *TsuShiMaMiRe* really kicks things up a notch. They're first heard at the beginning via a fictional interactive music app as you wait for the simulation to load up, while they return again to soundtrack a late-game show-stopping spectacle.

▲ The visuals may look sparse and the textures basic, but the game as a whole is never short of astounding.

Review

# Paper Beast

Teleport to another world

**P**aper *Beast* comes from designer Éric Chahi. He's nothing short of a video game pioneer, from his influential cinematic platformer *Another World* to element-manipulating god sim *From Dust*. It's perhaps no surprise that his next step, via new studio Pixel Reef, would be the realm of VR. And the result is a world quite unlike anything else.

At first, *Paper Beast*'s deserts and caves seem sparse when most VR productions are trying to wow you with immersive details, but there's a lot more going on under the surface. The idea is you're inside a simulation where big data has evolved into its own living ecosystem. As you navigate through the story chapters as an invisible, godlike entity, comfortably teleporting about the place, you'll encounter an array of the titular origami organisms roaming the world, evidently inspired by real-life creatures but utterly unique in their own right.

Each has its own distinct behaviour and traits that become core to your progression, via its exploitation, such as a harmless sandworm you

see innocently burrowing through the sand. The execution is ingenious and always playful, perfectly demonstrated by how you use the controller's triggers and motion controls to grab onto flora or fauna, reeling them in or flinging them about like bait on the end of a fishing rod. There's a touch of *From Dust* as you also get to mess around with the elements, from using hot objects to melt ice to throwing balls of sand at a slippery slope so that its surfaces have enough grip for those trying to clamber up it.

There are also moments when you're reminded of *Another World*: not so much from the surreal

landscapes, but because of some obtuse puzzles. While most are intuitive, and ask you to make use of what you have in each self-contained area, there were

points that left me stumped as I experimented with a long-winded red herring, only to realise the solution turned out to be much more basic.

The pace, meanwhile, means you're whisked across each new wondrous location like a tourist. Marvel at a new creature, figure out its quirk, exploit it to get you where you need to go, before unceremoniously leaving them in the dust as you hop on a balloon to the next place. That said, those who want to take their time fully experimenting can do so in a sandbox mode, too. Even if the campaign may be over in a few hours, *Paper Beast* never feels anything less than epic and visionary, as it takes cold data and turns it into a transcendent experience filled with warmth and life. 🐛

**“The result is a world quite unlike anything else”**

✔ To remind you that you're inside a simulation created from big data, you'll occasionally see the elements of the world as numbers and letters.

Info

**GENRE**  
Puzzle adventure

**FORMAT**  
PSVR

**DEVELOPER**  
Pixel Reef

**PUBLISHER**  
Pixel Reef

**PRICE**  
£24.99

**RELEASE**  
Out now

REVIEWED BY  
Alan Wen

VERDICT

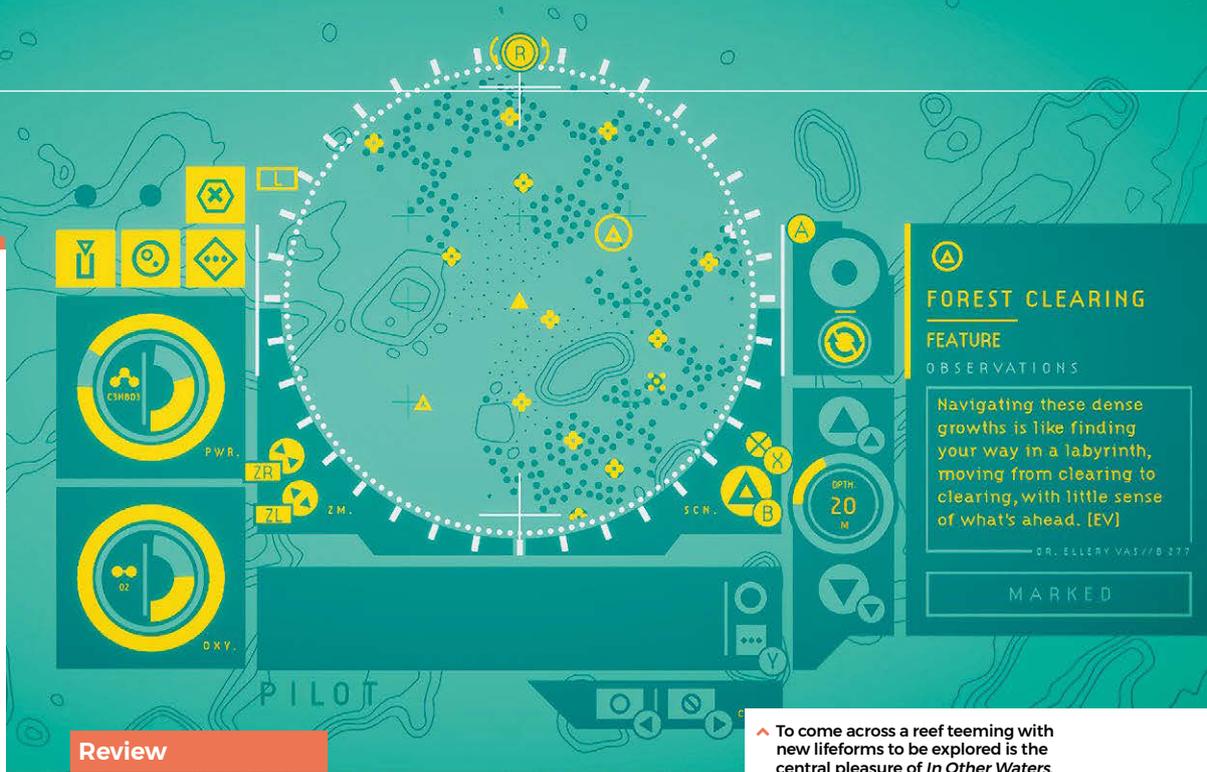
*Paper Beast* is a truly unique experience and one of the best PSVR exclusives.

80%

**HIGHLIGHT**

The UI of *In Other Waters* realistically depicts the feeling of working processes through shifting bars in displays and moving lines of code. The colour scheme is an important tool, since it says a lot with very little. Depending on your conditions – if you dive into a cave, for example – the colours on screen subtly change.

▼ When working in a toxic environment, it's difficult to have patience in uncovering life-saving science.



▲ To come across a reef teeming with new lifeforms to be explored is the central pleasure of *In Other Waters*.

# In Other Waters

Get in the sea

**A** map covered in dots and an inventory full of slightly daunting research utensils is your first introduction to *In Other Waters*.

Soon, things become clear – you're the sentient AI of a diving suit, out in the oceans of Gliese 677Cc. Your task is to assist xenobiologist Ellery Vas, making her first foray into the depths of the alien planet. Ellery, however, is not the first visitor to Gliese 677Cc – she came to find her former colleague Minae Nomura, who suddenly broke off all contact during her own studies. Ellery wants to see what she saw – and hopefully bring Minae back home.

*In Other Waters* makes the journey the destination. At first, you don't know where you are and only have a vague goal in finding anything Minae has left behind, but it's the thrill of the undiscovered that makes you set off. As an AI, it's your job to direct Ellery. You scan your surroundings and mark anything that appears on the map, such as waypoints and different ocean species you come across. If the path is clear, Ellery can move carefully onwards, a tiny dot in a make-believe ocean. Just like in interactive fiction games or tabletop role-playing, make-believe is an important part of enjoying *In Other Waters*. Developer Gareth Damian Martin, aka Jump Over The Age, has crafted amazingly detailed descriptions of Ellery's surroundings, and as a scientist, she takes note of everything she

comes across in vivid detail. Through these rich descriptions and an effective soundscape, the different animals, plants, and even underwater fungi are a joy to imagine. For further study, you can also take samples using the suit's sampling kit and log them back at base.

Soon, a soothing loop of diving, scanning, and sampling sets in, but the game has a way of gently directing you towards your goals using its limited waypoints. That's how you end up finding Minae's research notes and previous projects. Her findings lead to using your samples

in interesting ways – for example, to overcome strong currents or to safely navigate acidic waters. A few times, my task got away from me, mostly because descriptive text for a species and Ellery's

**“Soon, a soothing loop of diving, scanning, and sampling sets in”**

observations display at the same time, and since the map view while you're navigating the ocean is a much smaller portion of the map you see at base, I occasionally found it difficult to pinpoint my own location and ended up going in circles. As fascinating as the research is, it can also be frustrating to uncover the plot – here, you keep asking questions with no answers. We learn precious little about Ellery or Minae, so even though the former's personal logs make it clear she cares, I found it difficult to feel the same way. Creating a whole ocean teeming with life is no small feat, though, and it's this aspect that kept me coming back to learn more. 🐠

- Info**
- GENRE**  
UI adventure
  - FORMAT**  
Switch (tested) / PC
  - DEVELOPER**  
Jump Over The Age
  - PUBLISHER**  
Fellow Traveller
  - PRICE**  
£12
  - RELEASE**  
Out now

**REVIEWED BY**  
Malindy Hetfeld

**VERDICT**

A game of many small mysteries. Perfect if you love the feeling of discovery.

**74%**



Review

▲ A relatively calm moment in the Gungeon, even with the hulking knight about to unleash bullet hell.

## HIGHLIGHT

Keeping the style and humour from the original game is so important; the bosses and NPCs especially carry a wealth of puns and dry wit, but this also works with the guns. Like the guitar which fires musical notes or the letter R whose bullets are letters. A personal favourite is the shell, which fires shotguns, which fire shells.

▼ One of the new bosses to *Exit*. I wonder where he was hiding when we were entering? Having a bad day, judging from this expression.



# Exit the Gungeon

Love in an elevator

**E**xit the Gungeon has a problem with control. This 'escape from everything that came before' suffers slightly from being a port of an iOS title.

*Exit the Gungeon* was initially released for Apple's Arcade subscription service and followed on from the events in the bullet hell original, where a rogue's gallery of characters tried to erase their past by fighting enemies and rolling through bullets to avoid damage and death. The story resulted in the heroes capturing a bullet to destroy their past, but all the time-wiping weakened the Gungeon itself. Everything is now crumbling, the walls are falling down, and we must escape. Via elevators.

This was done on iOS by guiding our hero back and forth while your guns targeted and fired automatically. Implemented because of the limitations of the touchscreen, the game mechanic was designed around that limit, and it worked. In *Exit The Gungeon*, we find ourselves in an elevator moving ever upward, so we now dodge-roll through bullets in all directions on a 2D side view, rather than the top-down view of its predecessor. iOS dodge-rolling was actioned by swiping; here, it's assigned to buttons.

The problem? Too many buttons need pressing at the same time. One for firing, one to dodge-roll vertically, another for horizontal. Then both thumbs are on the sticks controlling movement and aiming. Not to mention firing 'blanks', which erase all enemy shots on screen. It wasn't long before Dodge Roll stepped in and completely overhauled the Switch controls, allowing for a similar setup to the iOS counterpart, making

exiting the Gungeon feel more like what came before. But it's still not tight enough. Even simple item selection in shops – sometimes I press 'Y', sometimes 'A' – is clunky.

These struggles may come down to the concept. Where in the first game you often had a stretch of floor to roll through bullets into a safe space, the cramped elevators in *Exit* leave little room for error. You may often want to dodge bullets coming from above, so you dodge upward, but find yourself leaping onto a new platform, breaking the flow of the combat. This *Gungeon*, then, sorely lacks precision.

The playing field has shrunk, enemies and bullets crowd the already small area. This includes your own bullets, or freeze rays, rockets, even explosive bananas. The new omnidirectional dodge is too unwieldy. *Gungeon* is still bonkers; we still have the cute Bullet Kin enemies – little bullets firing even littler bullets – plus there are sentient grenades and bosses named after weapon-related puns.

When everything clicks into place, or you get the right weapons at the right time – your weapon morphs into a new gun at random points, thanks to a 'blessing' – *Exit* manages to emulate what made *Enter the Gungeon* so great. Its randomness and persistent unlocks open up new possibilities. Credits are earned and spent on more outlandish guns, familiar friends from the past adventure are back, along with some new ones. And all piled together it makes for an adventure that feels like shrugging into an old coat... though the pockets are sewn shut, and it doesn't quite fit anymore. 🙄

## Info

**GENRE**  
Roguelike

**FORMAT**  
Switch (tested) / PC  
/ iOS

**DEVELOPER**  
Dodge Roll

**PUBLISHER**  
Devolver Digital

**PRICE**  
£8.99

**RELEASE**  
Out now

REVIEWED BY  
Daniel Lipscombe

## VERDICT

Platform iterations don't always translate, but when it works, this is a great successor to one of the best roguelikes ever.

70%

## Rated Review

- > Big Mo consulting with his enforcers as Building 35 looks on – better give these ruffians a wide berth.
- > The neighbourhood is abuzz with rumours about Building 9 – is it a haven for the recently evicted or a trap for the unsuspecting?



Review

## HIGHLIGHT

As if its scripted visual splendours weren't enough, *Tales from Off-Peak City Vol. 1* features one of the most engrossing photo modes I've ever come across in gaming, allowing deep but intuitive control of focus, exposure, and a variety of (collectable) filters, capable of further enhancing its already striking images.

# Tales From Off-Peak City Vol. 1

Feast your eyes and ears on Cosmo D's latest jam

## Info

**GENRE**  
Walking sim

**FORMAT**  
PC / Mac

**DEVELOPER**  
Cosmo D

**PUBLISHER**  
Cosmo D Studios

**PRICE**  
£3.99/month  
(Humble Choice subscription)

**RELEASE**  
Out now

**REVIEWED BY**  
Alexander Chatziioannou

## VERDICT

A work of remarkable imagination and humanity, picking up where *Kentucky Route Zero* left off.

# 89%

**O**n the outskirts of the neighbourhood, a train carriage dangles in mid-air, the final moments of a bygone catastrophe indefinitely postponed. Near the

canal, piles of disused automobiles accumulate around a perpetually spinning roulette of gigantic proportions – the unclaimed spoils of some invisible victor? Around the intersection of Yam Street and July Avenue, building façades look suspiciously like heads, with a couple even demonstrating fundamental human traits like a penchant for small talk, or a taste for pizza with an assortment of (mostly) savoury toppings. Welcome to Off-Peak City, the recurring setting for developer Cosmo D's dizzying cocktails of surreal visuals, irresistible jazzy electronica, and unconventional storytelling.

You've been sent here with a task. Infiltrate the business of one Caetano Grosso – a once legendary saxophonist and currently distinguished pizza chef – gain the great man's trust as his kitchen assistant, and find a way to steal the priceless brass instrument he keeps locked in a vault under his busy establishment.

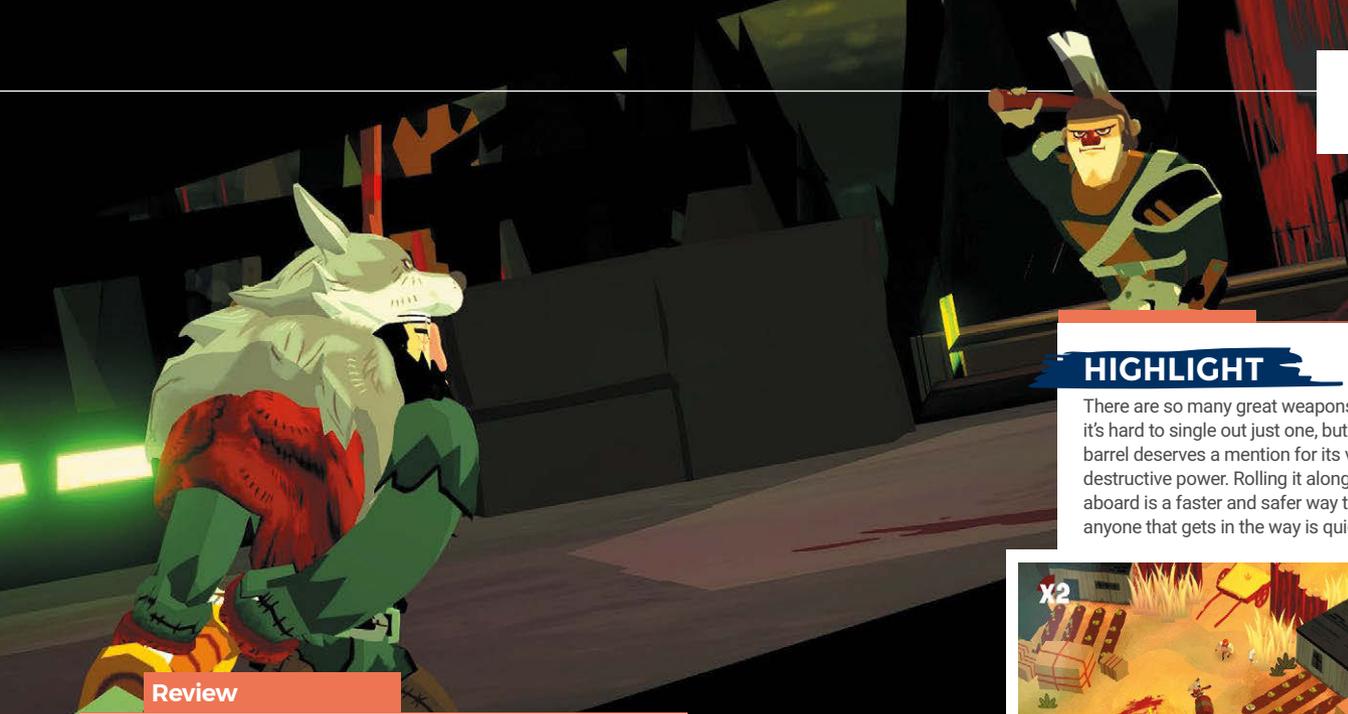
As illustrated by that premise, everything in *Tales From Off-Peak City Vol. 1* revolves around music. It's evident in the way characters tap their feet to the soundtrack, in the variety of intricately designed speakers installed in even the messiest apartments, and most of all in the profusion of trippy sounds which accompany every action in this peaceful corner of an otherwise – judging by the looming corporate towers in the distance – troubled world. Even preparing a pizza for delivery doubles as a

delightful full-orchestra improv session, each drop of marinara a string-section flourish, each slice of mozzarella a percussion beat.

Not that eyes are indulged less than ears. Cosmo D's fluid architecture evokes Gaudi's Basilica seen through funhouse mirrors, with lintels drooping from some unseen weight and frames buckling inwards, almost as if someone put the whole block in a microwave and let all that brownstone melt for a minute or two. There wasn't a single edifice I didn't want to gawk at, then use the game's exquisite photo mode on.

Nevertheless, a neighbourhood is only as interesting as the lives it provides a backdrop to, and the intersection of Yam and July hosts a multitude of fascinating stories, some more deeply explored, others (like the background of our two shadowy handlers) tantalisingly implied. Caetano's own past is unearthed through a series of gradually accessed dioramas, but it's the relationship between landlord/corporate goon/extortionist Big Mo and his rebellious daughter that's most representative of the game's complex moral core.

As for your own role in the cataclysmic changes befalling this part of town, that question remains unresolved. With *Kentucky Route Zero* finished, it was time for another serial adventure to sing the beauty of unheroic lives in a strange world full of familiar hardships. The Empire stands toppled at the end of the two-hour journey, and every aspect of life in the neighbourhood is still controlled by a megacorp – it's not even clear you were working against them. But there's warmth in sharing the struggles of the downtrodden, and maybe that's fuel enough for some future revolution. 🍷



Review

# Bloodroots

Revenge is a dish best used as a weapon

**B**loodroots turns murderous rampage into art. This cartoonish Wild West revenge tale wants you to kill, swiftly and cleanly, but above all, creatively. Protagonist,

Mr Wolf, has one speed – full – and an alarming talent for instant death dealing. Levels are a series of enclosed arenas filled with hapless enemies and stuff to belt them with. It’s an invitation that’s hard to resist.

Everything in *Bloodroots* is fragile. Many weapons, such as tables, vases, and carrots, smash on a single impact. Sturdier gear, like swords and chainsaws, lasts for three strikes. But you only need to hit an enemy once (twice in a few cases), with anything, to make them die.

A fish or a cabbage is as deadly as a spear or a blunderbuss. Even a punch in the face will do, although it’s a last resort since it leaves you exposed, and a single enemy attack will kill you too.

The resulting rhythm is a frenzied rotation of run, grab, and hit, punctuated by quick restarts. It’s simple and immediate, but what’s impressive is how much variety Paper Cult squeezes from its concept. While all weapons are equally deadly, they don’t all work the same way. Some are thrown, some spread fire, some hookshot you towards enemies, some launch you into the air. *Bloodroots* thrills with the huge choice of deadly objects it scatters around its circular, multilayered stages, and never runs out of ideas.

**“A fish or a cabbage is as deadly as a spear”**

In many ways, it’s comparable to *Hotline Miami* and *Katana ZERO*, where the order and manner of your kills are as important as the clinical execution. But there’s more flexibility here, and the level design is more experimental. Environmental features add shortcuts or hazards, while boss stages and the odd puzzle-like area or platform section keep things fresh while maintaining the relentless pace.

Yet unlike those other games, the digital clarity of *Bloodroots*’ rules can get lost in its visual presentation. Lacking the 2D precision of a top-down or side-on view, it’s often harder than it should be to do what you want to do. The camera zooms in and out restlessly, struggling to frame the action in sufficient detail without

blinking your next move. The viewing angle makes it hard to judge distances between yourself and your prey or the exact positions of scenery, and Wolf’s bounding run isn’t conducive to fine control. In a game like this, it matters – too many deaths feel like a result of the game’s clumsiness, rather than your own.

But despite mounting frustrations on some levels, the hilarious, exhilarating chaos is worth seeing through. What *Bloodroots* lacks in finesse it makes up for in exuberance and commitment to its singular vision. Its scoring system and online leaderboards also offer longevity, and it’s easy to imagine wildly audacious runs, trying to maximise speed, variety, and kill chains. Hopefully the game’s imprecisions don’t stop skilled players making them reality. 🐾

## HIGHLIGHT

There are so many great weapons in *Bloodroots*, it’s hard to single out just one, but the humble barrel deserves a mention for its versatility and destructive power. Rolling it along and hopping aboard is a faster and safer way to get around, and anyone that gets in the way is quickly flattened.



▲ The finishing animations at the end of a stage add a stylish flourish to your performance.

▲ The funky-up Old West music is a treat, especially a neat pastiche of a *Hotline Miami* number.

## Info

### GENRE

Kill-'em-up

### FORMAT

PS4 (tested) / PC / Switch / XBO

### DEVELOPER

Paper Cult

### PUBLISHER

Paper Cult

### PRICE

£11.99

### RELEASE

Out now

### REVIEWED BY

Jon Bailes

## VERDICT

**A balletic performance of cartoon violence that’s highly satisfying and infuriating.**

**71%**

## Rated Review

- Using your vitamin beam for too long will see its energy quickly deplete, only recovering when you lay off the shooting for a while.
- ✓ One of *Vitamin Connection's* best minigames sees you follow turning and twisting demands as you move to the beat.



Review

## HIGHLIGHT

Vita-Boy and Mina-Girl's bacteria-busting efforts are all in service of the Sable family, with each chapter seeing you venture inside the anatomy of an individual member in need. This story is told through quirky, animatic cutscenes that are fully voiced to help give the adventure an unexpected extra layer of polish.

# Vitamin Connection

Bacteria-busting makes the body feel good

## Info

**GENRE**  
Side-scrolling shooter

**FORMAT**  
Switch (tested)

**DEVELOPER**  
WayForward Technologies

**PUBLISHER**  
Limited Run Games

**PRICE**  
£15.14

**RELEASE**  
Out now

REVIEWED BY  
Aaron Potter

## VERDICT

*Vitamin Connection* gives a strong shot in the arm to the niche genre of motion-controlled Switch games. Just be sure to pick up and play as a pair.

# 75%

It's taken WayForward Technologies venturing out of its licensed game comfort zone to remind us of what's possible with the Switch's HD rumble and motion tracking capabilities. *Vitamin Connection* is a cutesy co-op side-scroller that largely succeeds as a sugar rush full of precision shooting and minigames that'll have you and a friend riotously liaising out loud.

Casting two players as Vita-Boy and Mina-Girl, it's your job to captain the microscopic capsule ship and eradicate all the bacteria plaguing the bodies of a typical suburban family. The premise might be basic, but I was constantly surprised at *Vitamin Connection's* dedication to story here – especially since it likely could have worked well enough as a linear set of stages. The person playing Vita-Boy takes control of the left-side Joy-Con, handling the physical movement of the ship on screen, while Mina-Girl uses the right Joy-Con horizontally to aim shots and rotate the capsule to dodge enemies and obstacles. This you do across six glitzy worlds that test your ability to communicate and coordinate.

The maze-like levels themselves offer up a good amount of variety, whether it's via spider-like blobs that keep dropping from above or platforms that shift simultaneously with the ship's movements. Getting from the beginning to all of the three vital organs you need to heal always keeps you

on your toes, and your ship acquires new skills – such as the ability to grab and manoeuvre blocks – as challenges grow tougher. Healing is done by completing a handful of minigames that help break up the constant shooting and will test you and your partner's timing. Most, like the one where you must navigate a path without touching the buzz wire, are fun to perform. Others, though, like the simple grabber game, feel like an afterthought. It's a shame that not all are of equal quality.

**“A cutesy co-op side-scroller that largely succeeds as a sugar rush”**

Despite *Vitamin Connection* clearly being built around co-op (the capsule ship itself is the shape of a Joy-Con, for heaven's sake), there is a solo mode included that tries to pose players with its own degree of difficulty. Here, rotating is done using the ZL and ZR triggers while you still watch for traps and deviously placed enemies, but much of the previous challenge is suddenly removed. Navigating around evil bacteria becomes a cakewalk, and minigames that once relied on interaction quickly ring hollow.

Even still, when playing through *Vitamin Connection* as it was originally intended, it offers up a huge helping of charming two-player fun. Learning to handle the capsule ship is challenging but fair, most of the minigames see you contort the Joy-Con in interesting ways, and the strong emphasis on story is an appreciated extra touch. If laughter truly is the best medicine, why not do so with a friend? 🗨

◀ The harvest festival has ended, but why is the train station deserted in *Ode to a Moon's* rural town?

HIGHLIGHT

What if, instead of *Resident Evil 8*, we were eagerly anticipating the next *Dead Heat* instalment? What if the industry had been transformed a decade ago, not by *Dark Souls* but by *Dread Delusion*? The collection's most fascinating aspect is the way it compels you to visualise a radically transformed gaming landscape.

Review

# Haunted PS1 Demo Disc

Postcards from gaming's dark dimension

**Z**ealous gaming completionists may not be the target audience for *Haunted PS1 Demo Disc*. In his preface to *The Book of Imaginary Beings*, Argentinian writer Jorge Luis Borges cautioned avid readers that this was a text "not meant to be read through; rather we should like the reader to dip into these pages at random."

This is worth remembering because, just like the blind fabulist's bestiary, this video game from another timeline – that somehow ended up, all shrink-wrapped, in your mailbox – is meant to be sampled in small doses. Otherwise, its strangeness might overwhelm players and transport them to its own alternate dimension. The value in this anthology of in-development games and half-abandoned projects doesn't come from obsessively playing each one to the end, but rather in following the wild tangents and curious possibilities they present to you.

There are no instructions to guard the player against the compilation's pure otherness. It's a collection held together by the twin principles of antiquated design sensibilities and 32-bit aesthetics. Take the pithy description of each game on the menu screen, for example. They function less as explanatory notes and more as cryptic ramblings, establishing a tone that typically phases between surreal whimsy and mounting unease. "Sauna warming simulator. Feel Finland. Finland feels you," reads the one for Moya Horror's *Sauna 2000*. Let's see that turned into a battle royale game.

Many of these experiments, like *Effigy*, a fast-paced *Quake* homage, and *Killer Bees*, an atmospheric, creepypasta-inspired haunted house

romp, wear the trappings of pre-millennial first-person shooters with distorted audio and textures as flimsy as cardboard movie sets. But there are other guises, as well: *Dead Heat* reimagines *Resident Evil* as a futuristic, noirish adventure; the unclassifiable *Erasure* brands itself onto your brain like a glitchy wetware fever dream; while *Tasty Ramen* is 3D *Pac-Man*, only you're chased around a supermarket by a broth with an acute sense of hearing.

Not everything in here is a diamond in the rough – several offerings cling a bit too warily to familiar video game conventions. But there are also glimpses of true brilliance to be found among the more pedestrian inclusions, the retro shooters, and the moody explorers. The woods around *Ode to a Moon's* rural town are painted in such a dazzling kaleidoscope of otherworldly colour that the game's Lovecraftian apocalypse pulses with sublime beauty. And *Dread Delusion's* imposing fortress holds mysteries that stick with you long after the audio-visual novelty factor has worn off.

In fact, judging each game on their respective individual merits might be missing the point altogether, because the overall impact of *Haunted PS1 Demo Disc* benefits immensely from its variety. It's a poignant reminder of what our industry of sprawling open worlds and 4K visuals has been missing. It's a wondrous artefact from a neighbouring universe where games got stuck in 1999 and Sony, Nintendo, and Microsoft all went out of business, leaving only a few creaky PlayStations and some seriously eccentric developers to cater for these dying consoles. They probably live in lighthouses, too. 🗝

Info

- GENRE**  
Various
- FORMAT**  
PC (tested)
- DEVELOPER**  
Various
- PUBLISHER**  
None
- PRICE**  
Free
- RELEASE**  
Out now

**REVIEWED BY**  
Alexander Chatziioannou

VERDICT

Uneven, like all anthologies, but overall an essential experience for anyone interested in the medium.

84%

Rated  
Review



Characters have traits that make them better suited to certain tasks, or more vulnerable to some conditions.

Review

## HIGHLIGHT

The game builds a fascinating subtext through its historical setting and the melange of political sympathies expressed by its characters. The group's struggles reflect how difficult it is to maintain a society of equals, even with only four people, as internal and external factors disrupt your perfect plans, but also how hopeless it is to stop trying.

# Help Will Come Tomorrow

Desperate struggle in the bleak midwinter

## Info

**GENRE**  
Survival /  
Resource  
management

**FORMAT**  
Switch (tested)  
/ PC / PS4 /  
XBO

**DEVELOPER**  
Arclight  
Creations

**PUBLISHER**  
Klabater

**PRICE**  
£17.99

**RELEASE**  
Out now

REVIEWED BY  
Jon Bailes

## VERDICT

A stressful survival sim that's too gruelling and narratively sparse to sustain enthusiasm.

58%

**H**elp Will Come Tomorrow is depressing, repetitive, and punishing. But that's precisely what it wants to be. The challenge in this Polish-developed resource management roguelike is to endure the extreme austerity of its scenario, which sees a group of train crash survivors stranded in the Siberian wilderness in pre-revolutionary Russia. As a reflection of their hardship, it's highly appropriate, but how much misery can you take?

Each new game dumps four characters, randomly selected from a larger pool, in a snow-coated forest clearing. By day, you meet their needs as best you can, first by directing them to build a campfire and filter water, then by sending them off in pairs to gather fuel, materials, and anything edible. By night, the group sits around the fire to discuss the situation at hand and that of the nation. Dialogue choices affect morale or trigger plans to find a way out.

As days pass, you build shelter and the means to create cooking utensils, clothes, weapons, and medicines. All the time, negative status effects accrue, from cold and hunger to injuries and indigestion, which reduce the work capacity of your charges, or worse, if you fail to resolve them swiftly. Fortunes can shift dramatically, either through random events during excursions or eruptions of foul weather. So even the calmer moments require decisive efficiency, as you stockpile, construct, and raise spirits in readiness for the next setback.

It's absorbing work initially, as you juggle all the variables the system throws up, and the stark presentation, with events played out in

text, evokes a suitably grim mood. But problems soon emerge. First, it's the clumsy interface – controls are convoluted and hard to decipher, despite a clutter of button prompts, while potentially weighty conversations are disfigured by poor English translation and obscured text. Then, more critically, the game's mindless, thankless routine begins to grind you down. Good days are uneventfully dull – you feed everyone, find supplies, and build a new structure – while bad days are hugely demoralising. Sudden twists of fate can terminate steady progress, leaving you facing a drawn-out demise. It's a test of determination rather than ingenuity, and every gain merely delays inevitable punishment.

Then again, perhaps these aren't problems at all. This systematic production of unending despair is, after all, how *Help Will Come Tomorrow* explores its themes, and it would be a betrayal to reduce the emphasis on luck or add excitement to the daily grind. It also creates a feeling of duty towards the characters, as your sacrifice is slight compared to theirs. But then there's no sense of organic progression in their personas and bonds. And after a few weeks of blizzards, hypothermia, and amputations, it's hard to maintain the will to continue, or start afresh. What's that fidelity worth when you just don't want to play anymore? 🤖

There are plenty of risks when you venture outside camp, from wild animals and bandits to simply getting lost.



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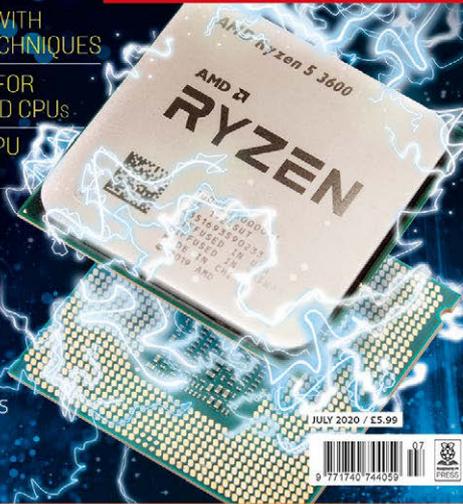
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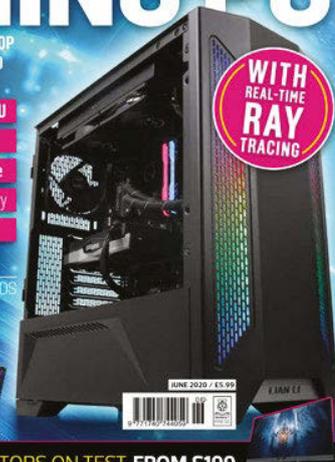
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# Backwards compatible

WRITTEN BY RYAN LAMBIE



## Looking Sharp

There's always an element of risk to buying a second-hand console, especially if it's over 30 years old and has to survive an arduous journey from Japan. Ageing hardware can be fragile at the best of times, and assuming it can get from one side of the planet to the other unscathed, you never quite know whether it'll work until you've unboxed the thing and booted it up. It was with some apprehension, then, that your humble writer purchased a Twin Famicom from a well-known online auction house in early March. Was it really as tidy as it looked in the photographs? Had it really, as the seller claimed, been fully serviced and tested?

Miraculously, the system arrived a few weeks later not only intact, but in full working order. It even loads Nintendo's proprietary 122kB floppy disks without a hitch, which suggests that the seller really has done the fiddly job of replacing the notoriously unreliable rubber belt inside the console's drive.

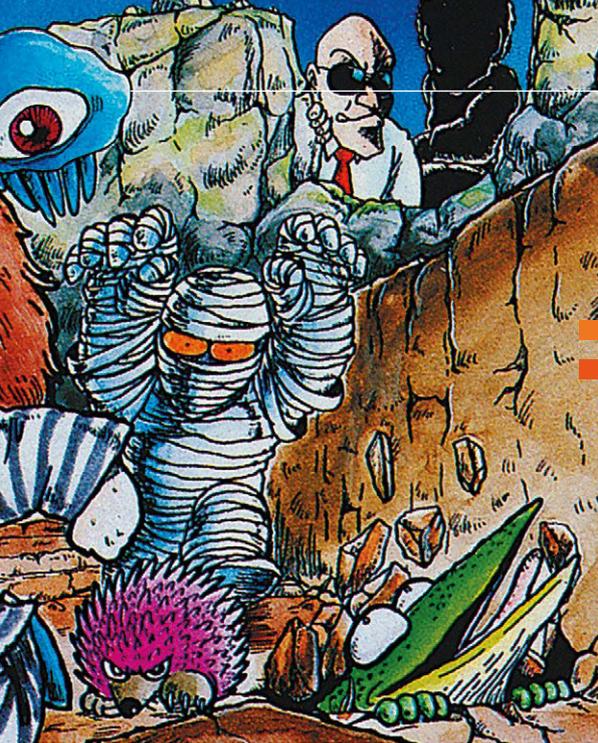
Manufactured by Sharp, the Twin Famicom was originally released in 1986, and was essentially a Nintendo Famicom (the Japanese version of the NES) and a Family Computer Disk System add-on bundled into one tidy piece of hardware. Like the Disk System itself, the Twin Famicom never made it out of Japan, which means that the rest of the world

largely missed out on one of the coolest-looking consoles of the era.

Available in red or black, or a slightly revised edition released one year later, the Twin offered several improvements over Nintendo's own console, which launched in 1983. It could run both cartridges and disks (more on the latter shortly), and offered a cleaner AV output rather than the Famicom's fuzzy RF signal. Sharp didn't produce the Twin Famicom for more than a couple of years or so, possibly because Nintendo had abandoned its Disk System by 1990. Still, the Twin lives on as a charming piece of eighties industrial design; its wired-in controllers are as solidly built as Nintendo's own from the period, and there are some neat touches everywhere, from the chunky round buttons to the oddly appealing switch that flicks between its cartridge and disk modes.

Not every retro collector would necessarily want to go to the hassle of importing one of these chunky old bits of tech, but I'm glad I took the plunge: the Twin's image is far crisper on my CRT television than my old, hastily modded Famicom, and its drive means there's a whole library of Disk System games suddenly open to me. That is, of course, until that rubber belt eventually breaks again...





## Monty Got A Raw Deal

One of the most enjoyable things about delving into the Famicom Disk System's library is uncovering all those games that barely got a mention outside Japan. The FDS got around 200 games released for it over its four-year lifespan, and some of them are delightfully strange: see, for example, *Monty's Great Heart-pounding Escape*, a port

of Gremlin Graphics' quintessentially British platformer, *Monty on the Run*. Adapted by Jaleco, this Japan-only incarnation replaces its mole hero with a gun-wielding, bearded escaped convict who, if we're being honest, looks worryingly like a serial killer. Why such a radical change? Our hunt for answers has so far been in vain.

## Fun with floppies



If those old Famicom disk drives are a bit unreliable, there's the media itself to consider. Nintendo first began producing its 71 mm × 76 mm Disk Cards in 1986, with the idea being they could be sold at a far lower price point than cartridges, which were time-consuming and expensive to produce. Disk Cards were convenient, too, since they were rewritable; this meant that users could go to their local store and write new games to their disks from one of Nintendo's jukebox-like kiosks – for a small fee, of course.

The downside? Disk Cards were built to be affordable, but not necessarily for long-term reliability: the magnetic media isn't covered by a sliding shutter like other kinds of floppy disk (though

later Disk Cards, coloured blue, did have these), which means they're easily damaged by dust and greasy fingers if not looked after carefully.

Just to add to the collector's uncertainty, Disk Cards' rewritable nature means you never know whether the floppy's contents will match what's printed on the label. You could buy a copy of *Metroid*, say, and discover that someone wrote *Family Computer Golf* over it years ago. All that aside, though, most Disk System games are still fairly affordable today; I recently bought a copy of Konami's *Final Command* (a port of its 1986 arcade shooter, *Jackal*) for only a few pounds – and, continuing my run of good luck, it actually works perfectly.

## Scuppered by an Oven?

Nintendo's first Japanese console may be widely known as the Famicom, but officially, it was always called the Family Computer. Sharp, meanwhile, quite cheerfully moulded the 'Famicom' portmanteau into its Twin system's case. So what was that all about? If pretty much everyone in Japan agreed that Family Computer was a bit of a mouthful, why didn't Nintendo emblazon 'Famicom' on its own consoles? Because Sharp had already trademarked the word

years earlier. In 1979, Sharp released the Family Convection Oven, which they called the Famicom for short. This meant that only Sharp could officially use the Famicom name on a console – at least until the next hardware generation, when Nintendo could finally christen the Family Computer's successor the Super Famicom. You can learn more about this incredibly niche subject over in this informative YouTube video: [wfmag.cc/famicom](http://wfmag.cc/famicom).



# Backwards compatible

WRITTEN BY IAN 'DYNAMO' DRANSFIELD

## We are the mods

I chat about the hardware side of retro gaming on these pages seemingly more than anything, and I'm not entirely sure why. It's probably just because I have a mild obsession with having the original hardware to run things, instead of relying on emulation and other workarounds. That, or I just don't play any games so can't talk about those. Who knows? Anyway, sticking with the hardware theme, I threw myself feet first (don't jump in head first, kids) to a bit of light retro console modding, and it went... well, the house didn't burn down.

"Modding?!" you cry, shocked I would speak of such things and seemingly unaware we share a Slack channel with HackSpace magazine. But yes, these are nice, pleasant mods I'm talking about: a modchip for the Saturn to open my old PAL machine up to the joys of 60 Hz

play, and a newer little (so tiny) chip for my original PlayStation to allow for an in-game reset function – a combination of controller inputs forces a soft reset, basically. "But why would you need that latter one if you're just playing a single game on a disc, Ian? Surely you could just exit out of the game to the title screen using its menus?" Well, hush, my child, you've asked too many questions. Let's just take it as a cool project to be messing about with and say nothing more on that side of things.

Anyway, with premade, populated, and flashed PCBs/chips available widely online for just a few quid, it was merely a case of trying to steady my hands for a few minutes, enough to be able to solder a few wires to the things that wouldn't make anything explode. Simpler than it sounds, but hey. After way longer than it should take a competent human to do these things, the job was done, and I was the proud owner of some augmented old consoles – once again given a new lease of life in the house, rather than just being boxes of scorn I stare at and demand to know why they don't play *Panzer Dragoon* at an acceptable frame rate.

What's the point of all this? Well, it's to say there's both still some life in your old consoles – they might seem dead after

years in the attic, but there's every chance you can revive them with a bit of cleaning, a bit of replacing capacitors, and a bit of trying not to shake so much when holding the soldering iron. And it's to say that once they're working, there's a host of mods – both good and evil – you're able to pop in there and tinker about with, opening up the possibilities and making the machines of your younger years that bit more than they ever were. Just try not to break stuff, OK? We won't be held responsible for anything.

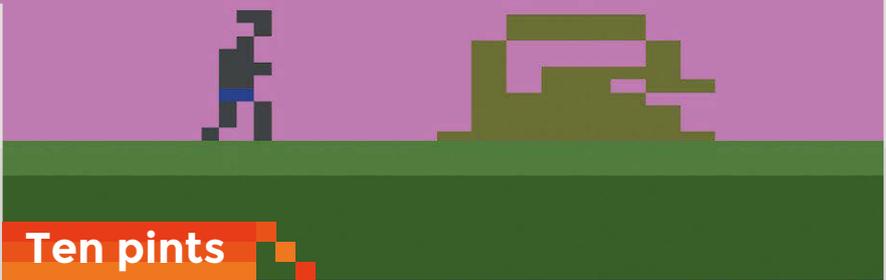


12



Why yes, I am using space in a magazine to recommend you watch a video on YouTube. Ah well. The lovely chaps at My Life in Gaming put out the first of a five-part series a few months ago, and if you missed it – and you like retro gaming – you should probably get on it. Called *Analog Frontiers*, though no apologies are made for the daft spelling, this first vid covers many aspects of retro gaming in the modern world – the formats we can play on, the ways we can connect up to our TVs, the importance of preservation, and much more. Future episodes will go into other areas of vintage gaming – modding and enhancing original hardware, deeper dives on preservation, and so on.

It's a really well-made little docu-show – far beyond what you might expect of YouTube channels if you haven't paid attention beyond the PewDiePies of the world – and oozes love for the world of retro from every one of its like-share-subscribe-shaped pores. I went into it intending to stay for five minutes, and watched the whole three-quarters of an hour in one sitting. Great stuff, check it out here: [wfmag.cc/frontiers](http://wfmag.cc/frontiers).



## Ten pints

*Shadow of the Beast* has been ported, sort of, to the Atari 2600. What started out as an exercise in learning how games for the format are made by indie dev Michael Christophersson, became a (relatively) sprawling project to port Reflections' classic Amiga platformer to a console many times less powerful than its first home.

Written entirely in 6502 assembly language, the port (called *Legacy of the Beast*) loses some of the intricacies of the original – the platforming is gone, for one – but it still offers exploration and adventure in a disconcertingly alien world. You can find more on the project on its page over here: [wfmag.cc/beasty](http://wfmag.cc/beasty).

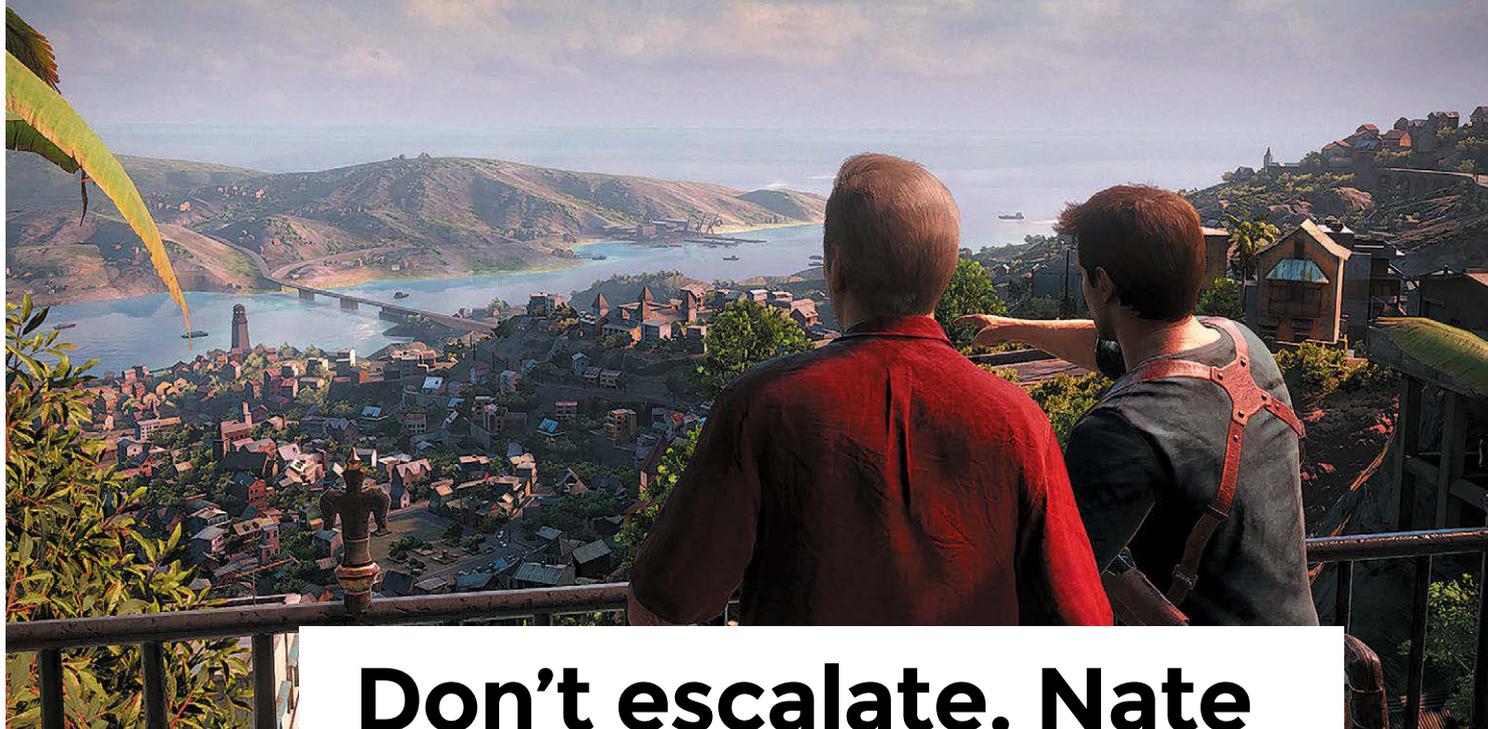
I've also seen mention of an Intellivision version of the game running somewhere, though those leads didn't get far beyond blurry off-screen photos at the time of writing. The hunt for the demake beast continues.



## Sega saviour?

Those looking to replace the ageing lasers on *either* their Saturns or Dreamcasts have an all-in-one solution in the shape of Terraonion's MODE. It's an optical disc emulator (ODE) for *both* formats, meaning you'll be able to back up your legally owned discs to a far more stable SD format for future play. He says, as if anyone thinks that's the intended reason for this to exist...





# Don't escalate, Nate

Swinging around Madagascar in Uncharted 4?  
It's a lovely way to spend the lockdown, Ryan writes

**T**he April appearance of *Uncharted 4: A Thief's End* on PlayStation Plus gave me a second chance to complete a game that I'd only played briefly on its release in 2016. I'd cheerfully blasted, climbed, and puzzled my way through the first three mainline Nathan Drake adventures, but there was something about *A Thief's End* that, for some reason, didn't quite grab me in the same way. Maybe it was because, as breezy and brilliantly produced as the *Uncharted* games have always been, they often have a tendency to drag towards the end; I can still recall wearily blasting my way through the carriages of what felt like the longest train in the world in *Uncharted 2*, and inwardly groaning as yet another bullet sponge enemy came marching towards me in the latter stages of *Uncharted 3*. And so it was that, when I first sampled *Uncharted 4*'s opening stages a few years back, the sense of déjà vu meant that I didn't have much desire to spend another eight-or-so hours ploughing through yet more of the same.

Delving back into *A Thief's End* in 2020, however, has provided some much-needed escapism from an increasingly bleak and

chaotic reality. There's just something about a lockdown – and being stuck in the same dusty house for weeks on end – that suddenly makes the idea of gunning down goons and solving puzzles on exotic, sun-drenched islands seem incredibly appealing. And, really, it's the locations, sense of occasion, and characters that have, at least for this writer, been the *Uncharted* franchise's consistently strongest aspect.

**“It's *The Goonies* with a side order of grenades and light artillery”**

Even when the shooting's felt a bit iffy (*Uncharted 3*, for my money, was a step backwards in this department) and the set-pieces hackneyed (see *Uncharted 2*'s anticlimactic chase around the bough of a magic tree), the games' likeability has shone through; Nolan North's gentle twisting of the antiquity-plundering adventurer archetype into a fragile everyman has long carried the franchise, as has Naughty Dog's increasingly painstaking approach to crafting its digital spaces. Wandering around the Tibetan village in *Uncharted 2* was an unforgettable moment; sure, it was all so much set-dressing in the midst of a linear action romp, but what set-dressing it was.

The same's true of *Uncharted 4*. Nathan Drake's back, a bit older and grey of hair, but still with the same hankering for adventure that

▼ Ah, the conveniently placed crate. Whether you're in the Scottish Highlands or a pirate enclave in Madagascar, you'll find them everywhere in *Uncharted 4*.





After weeks indoors, *Uncharted 4's* exotic environments look all the more inviting. Even if they are full of idiots who want to shoot at you.

draws him into what I'd describe as *The Goonies* with a side order of grenades and light artillery. Prodded into action by his long-lost brother Sam (Troy Baker), Nathan sets off in search of pirate treasure – a trinket hunt that takes in a swanky Italian mansion, a road trip around the wilds of Madagascar, and a spot of mountain climbing in the Scottish Highlands. It all looks, frankly, ruddy gorgeous.

Once the yarn's properly up and running, *Uncharted 4* begins to open out and show off some of its new ideas: hitching your rope to bits of scenery and swinging across chasms – allied to a more detailed and intuitive climbing system – feels satisfyingly slick. Driving around in your jeep, and occasionally using its winch mechanism to pull the vehicle up muddy slopes, or even rip down bits of decaying buildings, is another fun addition. Naughty Dog lets the maps spread out a bit here, too, with environments that offer more than one way of approaching a knotty problem. You might encounter an entire clearing full of marauding soldiers in Madagascar, but you don't necessarily have to mount a Rambo-style assault – instead, you could sneak through the grass, taking out bad guys with stealth kills until their numbers are depleted. (Mostly, I went the Rambo route.)

Overwhelmingly, though, *Uncharted 4* has a story to tell, and so you'll eventually be funnelled to a specific place that triggers the next cutscene.

In the *Uncharted* series, the question isn't so much, "What do I want to do next", but "What does the game want me to do next?" Initially, the beauty of those locations and the sheer variety of what *Uncharted* asks you to do prevents this from becoming too glaring.

But in the latter stages, the churn of activities grows predictable: encounter a cliff face with a load of pale hand-holds dotted up it, and you know you'll be climbing for the next ten minutes or so. Enter an area full of tall foliage and large boxes, and you know you're about to spend the next little while slaughtering an army of villains. (Occasionally, the game will mix things up and ask you to hang above a precipice and shoot people at the same time.) Oh, and once you've pushed your fifth conveniently placed crate off a high platform to give your sidekick something to climb up on, the novelty really begins to wear off.

That's a lot of griping and moaning, admittedly – particularly because, despite the repetition, I still played *Uncharted 4* through to the end, and had a jolly old time doing so. In fact, the game gets even more entertaining once the end credits roll. I've now unlocked an array of post-processing effects, outfits, weapons, and abilities from the post-game menu, which means I can roam a cel-shaded Madagascar, blowing up enemy soldiers with a rocket-propelled grenade launcher, in glorious slow motion – all while dressed in scuba-diving gear. Now that's what I call escapism. 🍷

## Wireframe Recommends



### El Shaddai: Ascension of the Metatron

PS3, XBOX 360

This 2011 action-adventure contains some of the most out-there visuals of its generation, while its mix of fluid hack-and-slash combat and agile platforming mean it's a consistently entertaining cult gem.



### Enslaved: Odyssey to the West

PS3, XBOX 360

*Enslaved* isn't without its technical flaws, but it benefits from the combination of Alex Garland's writing, Andy Serkis and Lindsey Shaw's mo-capped performances, and some terrific character and environment design.



### Majin and the Forsaken Kingdom

PS3, XBOX 360

*Majin* is mostly just OK, but there's a beguiling sweetness to the interplay between your human protagonist and the beast that lumbers along with him. It's a straight-to-DVD cousin of *The Last Guardian*.

Now playing  
Persona 5 Royal



## Remasterclass

Like those nightmares where he's forgotten his timetable, Ian goes back to school in *Persona 5 Royal*

**P**ersona 5 released in 2017 – at least in a language I have a vague comprehension of – and it's been sat in my pile, waiting to be played ever since. I technically still haven't played it, instead craftily waiting three years for an update to come out from Atlus towers. My definitely intentional and not at all accidental plan worked flawlessly, then, when *Persona 5 Royal* popped up on UK shores at the end of March. Perfect! A massive, long, drawn-out

JRPG to sink some time into while not being allowed out of the house. What could be better?

I've racked up about seven hours in total so far, over the course of (at the time of writing) a month and a half. *Royal* has turned out to not quite be the epic, time-dominating tool I expected it to be, and I can't help but be a bit disappointed about that. Maybe I'm not in the right frame of mind, maybe my tastes have changed a bit, maybe it's just that I'm still having so much of my time eaten up by perennial favourite *Stardew Valley*, or that I'm still chipping away at *Divinity: Original Sin 2*. Or maybe... it's the lack of commute?

See, a few years ago I got well into *Persona 4 Golden* on PS Vita. Living and working in the Big Smoke, London, I was victim of a ridiculous commute (as are most who a) live there, and b) aren't rich). But with that enforced downtime came the chance to play games, as well as the impetus to be distracted as yet another wall of city-folk rushed the train and buffeted me about like I was a bag of meaty ballast put there with the sole intention of getting in the way. *Persona 4 Golden* was ideal for that point in time; I played it for upwards of 50 hours in one playthrough, then started again and hammered out another 70 or so. I still idly hum tunes from the game and have that low-burning fondness for it that comes

✓ I will also admit to being jealous of these kids' school uniforms, because they are decidedly natty.



Wireframe  
Recommends



Persona 4 Golden

PS VITA

The update of an already-great PS2 RPG added one key factor: portability. The PS Vita's ability to go wherever meant this tale of murder mysteries and metaverses could be picked up and put down at will: a key to the appeal of the Switch's library these days, but less common in 2013.



Final Fantasy IX

SWITCH, PC, MULTI

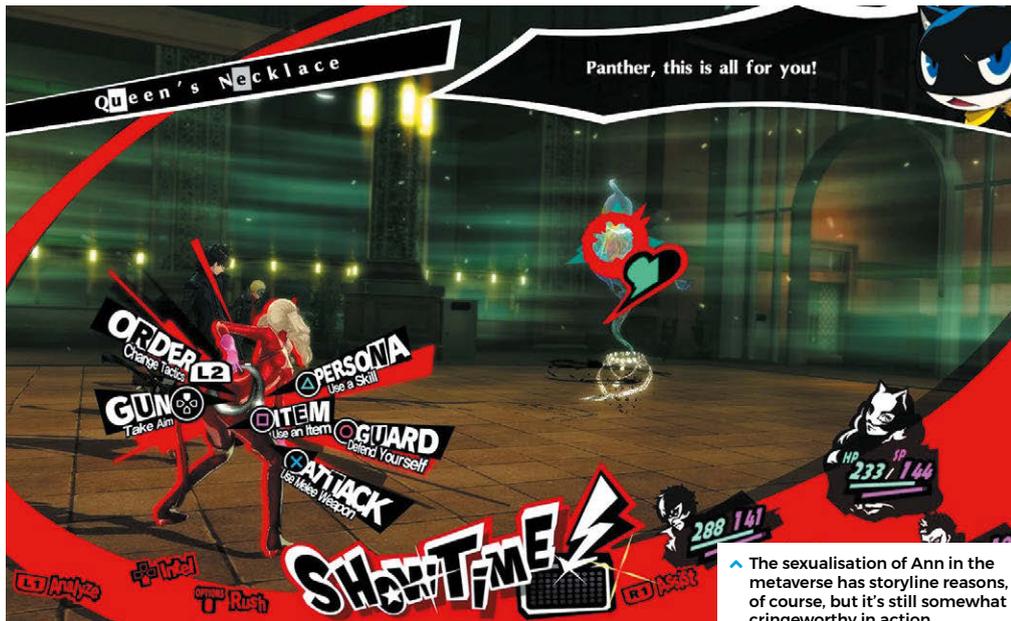
This specifically refers to the modern re-releases, I have to point out. Being able to switch off random battles and speed the game up, as you can in Square's modern port of the 2001 classic, means the game is forced to respect your time a bit more.



The Elder Scrolls III: Morrowind

PC, XBOX

Morrowind shows its age. Less so if you mod the heck out of it on PC, but still. That doesn't stop it from being a potential mega-timesink should you give it a chance to wrap its slimy tentacles around you.



▲ The sexualisation of Ann in the metaverse has storyline reasons, of course, but it's still somewhat cringeworthy in action.

with those truly *special* experiences. Not to get too Medium-post-y, but it was a genuine help in a time I found difficult from a mental health perspective.

So when a big part of *Persona 5 Royal* ends up being the actual use of crowded public transport, you may see why I swiftly wander away from what the game is offering. Whereas before Atlus' game of teenagers coming to terms with some surprisingly mature concepts brought a glimmer of hope to overcrowded public transport, now Atlus' game of teenagers coming to terms with some surprisingly mature concepts is bringing overcrowded public transport to my living room. It's... suboptimal.

Regardless, there's your classic *Persona* setting underneath that very personal angst. That being: a bunch of teenage angst. Kids in school with 'kids in school' problems given a fantastical twist – the expectations thrust on the younger generation, the necessity of conformity, abuses of power from above, and the apparent lack of power to deal with or even cope with it. It's presented in a way that sometimes makes me want to throw the TV out of the window if my wife happens to be looking at the screen (I'm talking about you, Ann's metaverse outfit), but the

**"I'm bored, excited, embarrassed, and amazed by the game"**

underlying narrative is one I can feel slowly taking root in the all-important back of my mind. I'm simultaneously bored, excited, embarrassed, and amazed by the game – and that, at the very least, makes it interesting enough to continue to bother with.

Despite my attempts to crystallise exactly why *Persona 5 Royal* hasn't quite got its hooks

in me as I expected, I'm still playing it – obviously, otherwise it wouldn't be in this section of the mag. But my progress is slower, with sessions measured

in minutes, not hours. I hoped the upgrade of a sequel would fill a gap I didn't know needed filling, as its predecessor had. It's not done that. I'm not quite as keen as before. But there are embers; flickers of something still threatening to burst out and engulf my attention. I've not quite figured out what it is, but there's *something* about *Persona 5 Royal* that's making me want to play it more. Those seven or so hours will number higher by the time you read this. It won't be many more, and maybe I won't end up throwing in 130-or-so hours in total. But I will keep playing. Maybe I'll get numb to the crowded public transport as I did in real life, though hopefully this time it'll be *without* the associated mental health issues. 🗨



# Galaga

Namco's addition of a pioneering power-up system changed the shoot-'em-up genre for ever, Ryan writes

NAMCO / 1981 / GALAGA, LOADS OF HOME SYSTEMS

Look back over the early history of arcade games, and you can see the back-and-forth conversations between designers that led to a whole generation of innovative ideas. "What if those bricks could fire back at the player?"

wondered Taito designer Tomohiro Nishikado when he looked at Atari's *Breakout*. It was a question that, in time, gave us the seminal *Space Invaders*. Over at rival Japanese firm Namco, designer Kazunori Sawano evidently looked at *Space Invaders* and thought, "What if those aliens didn't just move back and forth across the screen, but broke off in little formations and attacked the player?"

Thus 1979's *Galaxian* was born.

Designed by Namco's Shigeru Yokoyama over the course of about eight weeks, *Galaga* sprang from a similar line of thinking. Charged with the task of making another fixed-screen shooter in the *Galaxian* vein, Yokoyama looked at that earlier game's swooping enemies and thought, "Rather than just firing bullets at the player, what if the enemies could use a tractor beam to suck up their ship?" It was the seed that ultimately gave us one of the first – if not *the* first – power-ups in a shooting game.

Once the alien had snatched the player's ship away – an act that cost the player a life – the alien would scuttle back to the top of the screen, holding the ship behind it. With a bit of practice, the player could take out the alien and retrieve their ship, which would then sit next to their current one

and effectively double their firepower. It was an ingenious idea that gave novelty and drama to an already well-established genre.

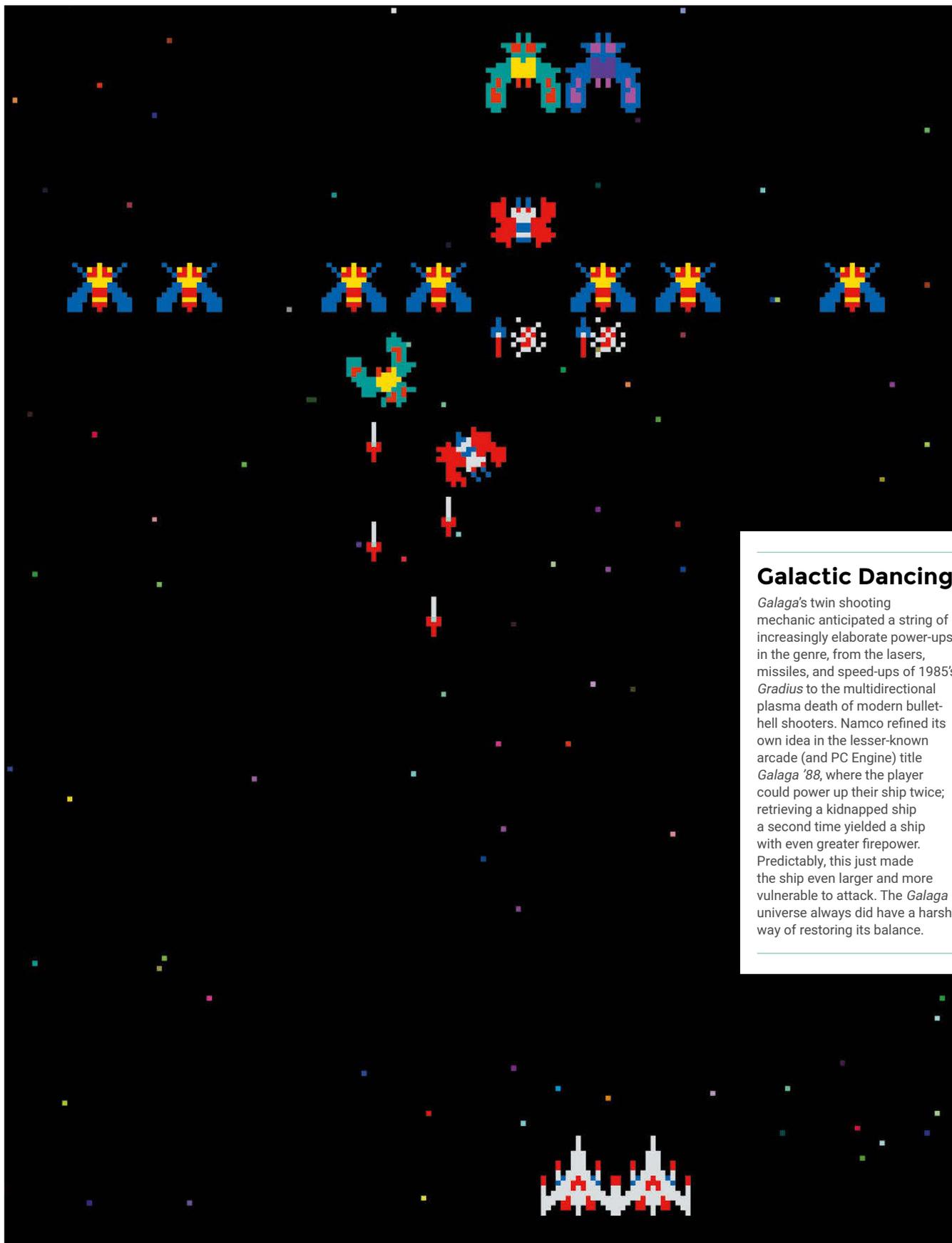
Retrieving a ship took more than a hint of skill, and established a teasing risk-reward element (read Howard Scott Warshaw's piece on page 48 for more on those). The player could willingly sacrifice one of their lives to the aliens' tractor beams in exchange for extra firepower, but there was always the possibility that they'd mess things up – most commonly by accidentally shooting their stolen ship rather than the alien that pilfered it. Actually having two ships also presented a

risk: you had double the firing power, which meant you could rack up higher scores, but your hitbox also doubled, which made it far more likely you'd quickly lose one of your ships to a dive-bombing invader.

Interestingly, Yokoyama didn't immediately think about dual ships or

power-ups when he came up with his tractor beam idea (a mechanic inspired, he later revealed, from watching a sci-fi movie whose name he could no longer place). Instead, he thought that retrieving the ship would simply give the player an extra life; something he quickly realised wasn't massively different from simply earning a 1UP by scoring points. Eventually, though, Yokoyama arrived at what would quickly become an unforgettable moment in eighties arcade gaming. After *Galaga*, shoot-'em-ups would never be quite the same again. 🗨

**"Retrieving a ship took more than a hint of skill, and established a teasing risk-reward element"**



## Galactic Dancing

*Galaga's* twin shooting mechanic anticipated a string of increasingly elaborate power-ups in the genre, from the lasers, missiles, and speed-ups of 1985's *Gradius* to the multidirectional plasma death of modern bullet-hell shooters. Namco refined its own idea in the lesser-known arcade (and PC Engine) title *Galaga '88*, where the player could power up their ship twice; retrieving a kidnapped ship a second time yielded a ship with even greater firepower. Predictably, this just made the ship even larger and more vulnerable to attack. The *Galaga* universe always did have a harsh way of restoring its balance.

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## EVERSPACE 2

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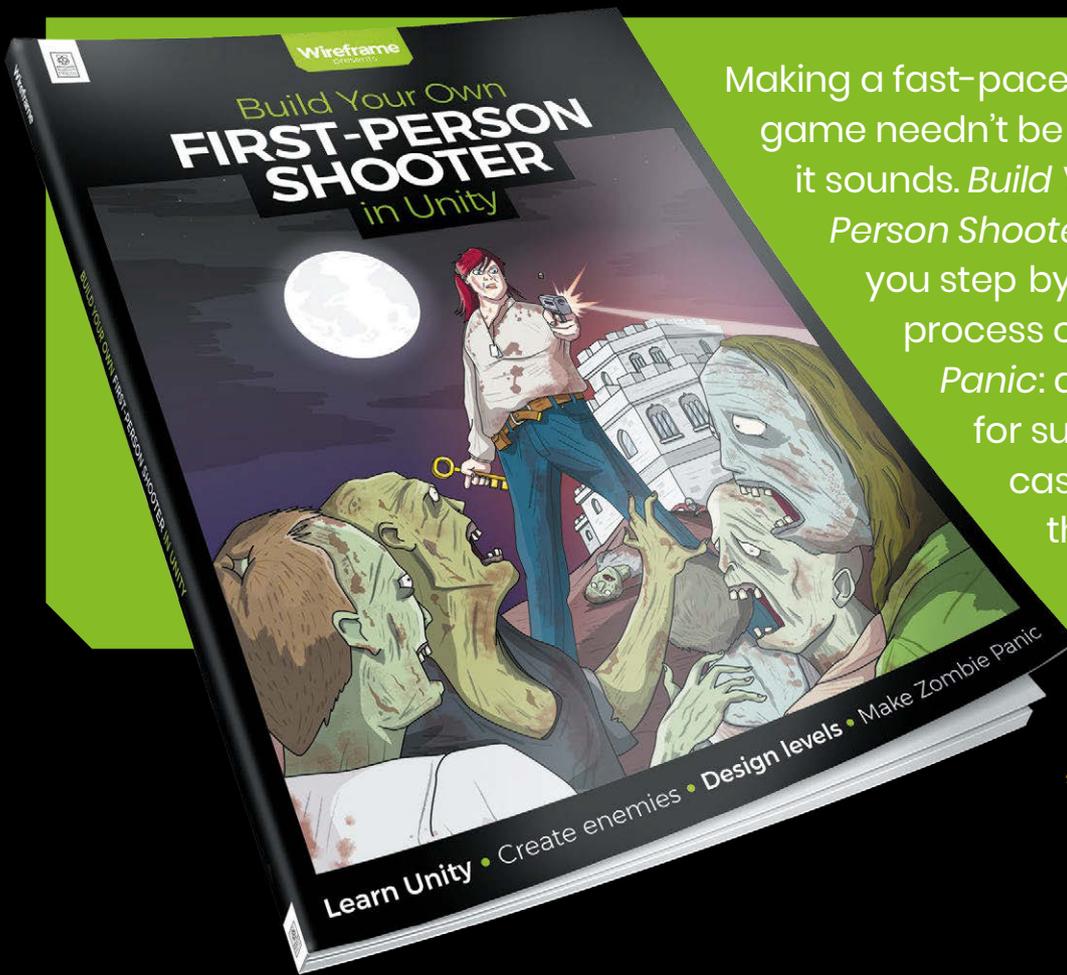
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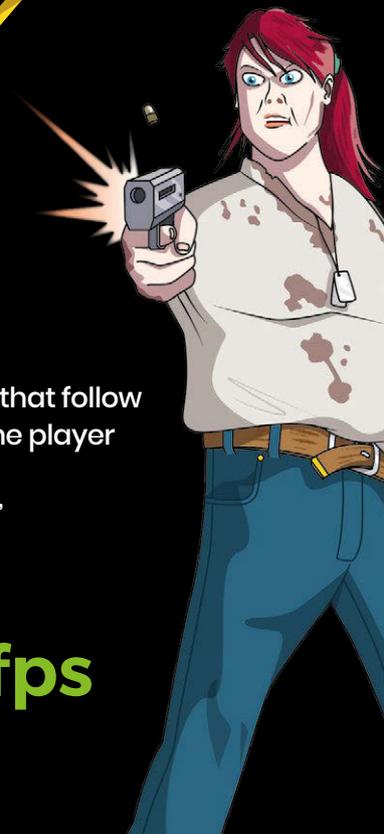
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