Wireframe

LIFTING THE LID ON VIDEO GAMES

THE LEGACY OF
WIPEOUT

THE RETURN OF
FMV GAMES

Raspberry Pi PRESS

YOU SUCK AT PARKING ™

Motorised multiplayer mayhem
in **You Suck at Parking**

To buy or not to buy? That is the question

"**N**ever pay more than 20 bucks for a computer game." Guybrush Threepwood, mighty pirate, imparted these words of wisdom in LucasArts' *The Secret of Monkey Island*. If we adjust for inflation – $43.79 USD as I write this, likely more by the time you read it – it remains a serviceable rule of thumb to help gamers navigate an increasingly crowded, ever-pricier marketplace.

Of course, it's not 1990 anymore. The industry has transformed in the past three decades as development costs have soared and distribution methods have evolved. In a world of subscription services like Xbox Game Pass and PlayStation Plus, biannual Steam sales, Epic Store giveaways, and massive itch.io bundles, should anyone pay full price for anything anymore? What if the most reasonable number of bucks to pay for a game is zero bucks?

No, I'm not advocating piracy (sorry, *Monkey Island* fans); rather, I'm highlighting a dilemma many of us have already faced. Does this sound familiar? The hot new game everyone's talking about finally hits shelves. You purchase it at full price on release day, only to find out three months later that it's been added to GamePass. Buyer's remorse ensues. The kind of rational actor imagined by economists would presumably learn a lesson from this experience. Why buy the cow when you can get *Marvel's Guardians of the Galaxy* for "free" with your GamePass subscription?

Marketplace uncertainty is bad for consumers, and it's not great for game companies either. Yet, buying a new game today is fraught with ambiguity. What if the game you just bought shows up on a subscription service in a few months? What if it almost immediately goes on sale for 40% off, or if, a year from now, an online store is giving it away for free? What constitutes a reasonable gamble when all you want to do is play this year's *Assassin's Creed* now instead of later?

Considering these asymmetries of information, when should you buy a new triple-A game at full price with real money? That depends. Do you really, really
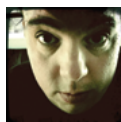
JESS MORRISSETTE

Jess Morrissette is a professor of Political Science at Marshall University, where he studies games and the politics of popular culture.

#66

want it? Are you OK that it might go on discount before you get a chance to finish the main campaign? Then go for it! At least Nintendo has the decency to make this choice easy; its first-party games aren't coming to a subscription service anytime soon, and they're never going on sale. Pre-order *Breath of the Wild 2* with confidence, gamers!

And what about that quirky new indie game everyone's tweeting about? Since there are only so many triple-A games to go around, smaller titles tend to be the bread and butter of subscription services and game bundles. If you can play it cool for now, odds are you'll be able to experience that new indie hit at a discount in the near future. Of course, if you want to make sure indie devs keep creating the games you love, you need to support them now. Buy it at full price! In fact, buy it three or four times and leave a trail of glowing reviews in your wake. It's the least you can do. After all, when gamers sit on their wallets in anticipation of future discounts, it leads to market failures. They don't get to play the hot new release right away, and publishers don't make the immediate profits they need to develop the next hot new release. Sure, games are making money from their inclusion in subscription services and bundles, but nothing spends quite like cold, hard release-day cash.

To buy or not to buy? It's a question we all have to answer for ourselves. Value is more than a mathematical proposition; it's not just 'fun had' divided by 'money spent'. There's a certain ephemeral value in being part of a game's release-day hype. It's a delightful experience to play a game at the same time everyone else is playing it, streaming it, and memeing it. Who can forget when the whole world was whisked away to *Animal Crossing: New Horizons* at the beginning of the pandemic or grinding away together at *Elden Ring*? If we stop buying new games altogether, the well's eventually going to run dry. So, if there's a game that's grabbed your attention, slap your $43.79 on the counter and enjoy the ride. Consider it money well spent. In the meantime, never pay more than 20 bucks for a monthly video game subscription. That's just ridiculous. Ⓦ

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WELCOME

To reflect this month's arcade racing theme, Aaron delves into the impact of *WipEout* on page 28. With its trendy graphic design and music, and timed to make the most of the then-new PSone's hardware, it was easy to see why *WipEout* was such a hit in 1995. But this got me thinking: while it was arguably a pivotal release, *WipEout* wasn't the first futuristic arcade racer. Nintendo used *F-Zero* to showcase the pseudo-3D prowess of its own new console, the SNES, in 1990. But that game was preceded by Atari's half-forgotten *S.T.U.N. Runner*, a racer-shooter hybrid that saw you hurtling around high-tech tracks that bore more than a passing resemblance to those in *WipEout*. It emerged as a coin-op in 1989 before getting ports of variable quality to computers and the Atari Lynx handheld. Is there an earlier example of the futuristic racing genre than *S.T.U.N. Runner*? There was *Moto Roader*, a top-down racer for the PC Engine released just a few months before *S.T.U.N. Runner* in February 1989, but its pace was slow and it didn't make much of its futuristic setting.

There was also the odd post-apocalyptic driving game released in the 1980s, like *Mach Rider* and Atari's *RoadBlasters*. So was *S.T.U.N. Runner* the first true futuristic racing game, with sci-fi vehicles, an absurd turn of speed, and courses that defied gravity? Quite possibly, but it was also pretty forgettable. Which just goes to show: being the first isn't necessarily as important as being the best.

Enjoy the new issue!

Ryan Lambie
Editor

CRASH COURSE

Micro Machines meets crazy golf? Happy Volcano
introduce us to its one-of-a-kind arcade racer,
You Suck at Parking

When Belgian studio Happy Volcano set up its stand at London's EGX in September 2021, there must have been at least a hint of apprehension in the air. With the world only just emerging from the pandemic, it was the first time Happy Volcano's work-in-progress, *You Suck at Parking*, had appeared in public. The team may have enjoyed the process of building the arcade racer up from a quick, physics-based prototype, but how would British gamers take to it?

Fortunately, as players eagerly gathered around the pair of laptops running the game, designer and studio co-founder David Prinsmel realised that he and his team were on the right track. "We constantly had ten people around the booth," Prinsmel recalls. "People were waiting to play the game. After two hours,

we already had hardcore fans who'd just come by each day, multiple times a day, just to check the leaderboards and see [whether they could] shave a few seconds off their best times. We felt like, 'OK, we have something good here'. We came out of our cave, showed it to the crowd, and they liked it."

Having got our hands on *You Suck at Parking* for ourselves, we can see why the game caused a stir. Unlike most arcade racers, the goal isn't simply to beat your opponents to the finish line; as the title implies, you're asked to guide your tiny vehicle around a twisty, hazard-laden track and bring it to a halt on one of several parking spaces. Get one car parked, and you'll start again at the beginning with a fresh car; you get points for every car you successfully park in a space, and the player with the most points wins the round. With races quickly devolving into shouts and ➤
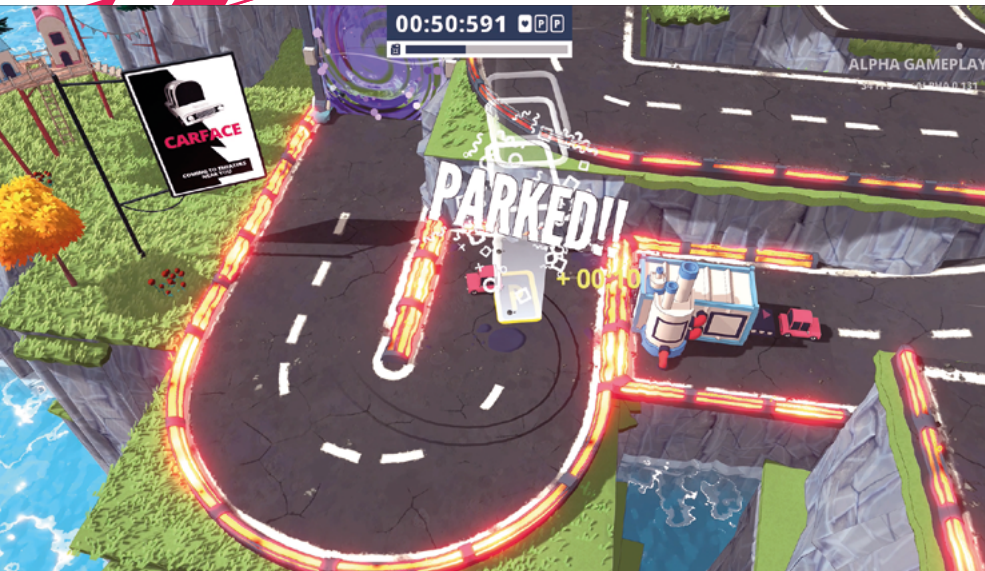
▲ In single-player or multiplayer, there's a certain satisfaction to skidding around a bend and stopping precisely in a parking space.

gasps of horror, as opponents knock each other off the track or succumb to one of the deadly hazards you'll find dotted around the place, *You Suck at Parking* feels so natural as a competitive game that it's hard to believe it was originally programmed as a single-player experience.

For *You Suck at Parking*'s multiplayer mode, we have Games Workshop legend Ian Livingstone to thank. When his investment firm, Hiro Capital, agreed to back Happy Volcano and its arcade racer in February 2021, it was on the condition that it be reworked into a bigger, online multiplayer game. That cash injection – an investment worth $2.2 million – helped Happy Volcano grow and make a far more ambitious racer, but it also meant completely overhauling the physics engine to cope with eight remote players all hurtling around the same track. As you're about to discover, this was no easy task.

▲ Courses are regularly packed with hazards, ranging from magnets to fans to deadly cannons.

To tell us how *You Suck at Parking* emerged as a fun antidote to the studio's previous game, the thematically weighty puzzler *The Almost Gone*, and why it has as much in common with crazy golf as racing, here's David Prinsmel and fellow co-founder (and managing director) Jeroen Janssen with the full story.

"The cool thing we found is that our approach was more like a golf game than a racing game"

How much has the game changed since the project began – was it an iterative process, getting it to where it is now?
David Prinsmel: Yeah, definitely. Our previous game, *The Almost Gone*, was a real struggle in terms of finding the mental power to finish it. It was a heavily story-based game with a very difficult subject. The studio was in desperate need of something light-hearted, and just a change of mental state, I think. We were playing a lot of *What The Golf* and *Untitled Goose Game* – some really great indie games. I thought, 'We should do something with little cars'. I thought of *Micro Machines*, and just having fun building a prototype. So we set a brief that basically said, 'Build a little car that drives on a funny little track, and let's see what we can do'.

Soon after that, we had the idea of not just racing but stopping in different areas with your car. And you didn't have just one car – you could litter the track with your cars. The idea of *You Suck at Parking* was born.

The thing we found pretty fast was that our approach was more like a golf game than a racing game. An area will have obstacles, but the goal is to clear the level, not to race to an endpoint and get a time. We built a prototype and found out that it was fun straight away. So we had something really simple, and over a couple of days we kept iterating on it, and just following the fun in the design. There wasn't really a big plan laid out. That's basically a studio's or game designer's dream: you find a mechanic that's fun to play, and then you can build on top of that and make the game more interesting, give it more depth without making it too complex.

What's interesting is that in the first prototype, your car stayed on the track. We even have an old demo that still does this: you get this mayhem of previous wreckages or cars that you parked in the wrong spot. So you'd actually make it harder for yourself when you were struggling with the track. It was to look at and was a fun gimmick, but eventually it didn't serve the player experience; we were actually punishing players that were struggling instead of making it gradually easier for them if they played longer. So we decided to kill that mechanic and just have you pick your car and customise it. It also gave us options of having a car customiser and having items you can unlock for your car and cosmetics, so you could build your own setup.

Basically, the idea's still the same: you drive a car, if it doesn't work out for you,

▲ There are over 100 single-player courses in *You Suck at Parking*, some of them almost maze-like in their complexity.

grab a new one. The threshold to get into a game is really low. That's what makes it so strong: it's instant, there's no delay, there's no waiting, there's no thinking – it's just pure fun.

One of the mechanics I like is where you can crash your car, but it still rolls on, so you can still score points if your wreck lands in a space. Was that a bit of serendipity, or was that actually designed in?
DP: That's actually funny because I think it was the playtesters or people playing the demo who figured it out. 'Hey, I don't need to drive my car to actually [score]'. Because we had leaderboards, everyone was competing for the fastest time, and obviously you win a lot of time by just letting your car gently roll into a parking spot while you start driving the next one.

So it was like, 'Oh, this is [flipping] . Let's just keep this in and even use it in certain levels'. You learn the mechanic, and if you really want to get good, then there's this other level [of skill] where you shave off hundredths or thousandths of a second on a specific track by finding shortcuts, and by basically getting the feeling you're breaking the game or outsmarting the designer.
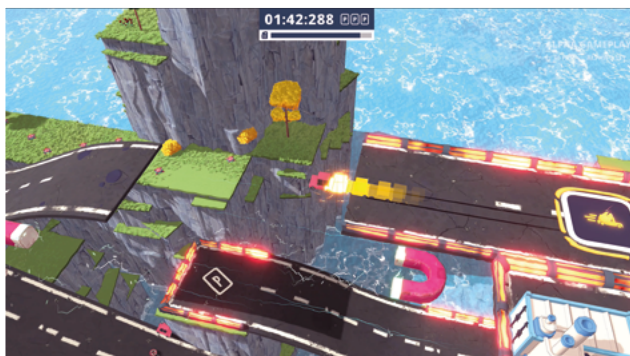
When actually we just left it in there so you can figure out for yourself how you want to finish the track.

So, in terms of the car physics and how they handle, how much work has gone into that? It must be quite a difficult, fine line to strike, between physics that feel fun and arcadey, but aren't so floaty and skittish that they're frustrating.
DP: Well, that's a bit of a long story. We knew that the game was simple, so the driving had to feel great. It just had to be spot on. But in terms of getting there, it was a struggle, because we kept on improving the driving mechanics and the feel of driving the car. Eventually, we had a very good driving mechanic and we built all the single-player levels. So we tested them all, we had 100 levels ready, and then – funny story – we got an investor that really wanted us to make a multiplayer game.

So, we took the investment on the terms of making a multiplayer game as well. Meaning that the Unity physics we were using were really bad at being deterministic for all players in the lobby. What would happen is, my screen wouldn't show the exact same thing as what was happening on your screen. Unity's physics couldn't handle that, so we came to the tough conclusion ➜

ERUPTION

Following Happy Volcano's deal with Hiro Capital, the studio has grown to around 18 staff, and plans to hire another handful of team members by the end of the year. It's a marked contrast to the studio's beginnings in 2013, when co-founders Janssen, Prinsmel, and programmer Peter Maasen were all working at the same advertising agency. "We got together and said, 'Let's make a game'," Janssen recalls. "And we started making *Lava Fever*, a small action mobile game. 'Let's just make a small-ish game, and do it in three months, before we go onto a bigger-scope game'. Turns out that making games, if you've never done it before, is quite hard. That three months turned into a year and a half before we could release the game, and it failed tremendously on a commercial level."

While *Lava Fever* didn't sell brilliantly, it still proved to Happy Volcano one thing: it could develop a commercial game and get it into the market. Says Janssen: "From there, we started working on *The Almost Gone* while still working at the advertising agency, and we only started the full proper studio in 2017. We released *The Almost Gone* in 2020, and during the QA period, started prototyping *You Suck at Parking*. That's how we ended up here, I guess."

YOU SUCK AT LANDING?

Given that *Micro Machines* is cited as an influence, and Codemasters' classic racing game series featured a number of vehicles, might we see things like boats and planes come to *You Suck at Parking* in the future? Could *You Suck at Landing* be a thing one day? "It's funny, because of course we're already thinking about the next game, and a *You Suck* franchise is a possible route," Prinsmel says. "But it turns out that just replacing cars with planes isn't gonna do the trick, because what makes this so cool is that you're stuck on a track and have to follow a route. But if you do it with planes, then it's not as fun – you don't have any restrictions, so it's hard to build a challenging track when you can go anywhere. Boats are the same thing. So I think the best approach is to go back to the drawing board and prototype something new. If we can fit it in the franchise, we will, but if we can't. then we won't."

that we had to rebuild the whole physics engine in Quantum physics.

[Created by Photon, Quantum is an engine specifically built to provide accurate physics simulations for multiplayer Unity games – Ed.]

So we just spent eight months or something completely rebuilding the game to get to the same point as we were at before, just so we could make the multiplayer version of the game. It's a touchy subject to say the least!

Oh my god.
DP: Yeah, it was a stressy time for us.
Jeroen Janssen: We always wanted to do [single-player], but there was no money to do it. So we started out with single-player, hoping the game would sell well enough for us to bring a multiplayer mode later. But yeah, then [investor] Ian Livingstone got involved, and that's why we're here now.
DP: The plan was that we were gonna release packs of levels, like *What the Golf*, and be a single-player game. That was the initial idea, but then it became something completely different.

Is it easier now for a smaller team to make a multiplayer game because of things like Unity and physics engines like Quantum?
JJ: I guess that's more of a technical question. The problem with Unity is

▲ Happy Volcano got its start with mobile app *Lava Fever*, and heartfelt puzzler *The Almost* Gone.

that during our development, they were balancing between two different multiplayer engines. One which would have suited our needs but wasn't ready for production yet, and we needed to be ready for production. Then the other choice for us was to work with an external engine, Photon's Quantum, which is deterministic and has all that stuff we needed. We made a choice to do that. Like David said, it took us a little while to rebuild the whole game into it.
DP: When we had the Unity physics and were porting it to Quantum's physics, we had two windows open on one desktop. And one of our devs did a really good [trick] of completely mimicking the previous physics with different code and different systems. You could drive two cars at the same time – they were kind of ghost cars, one with Unity physics and the other with Quantum physics, and you could see the ghosts overlapping.

In the beginning, they weren't really in sync, but at the end, they were almost behaving the same way. So we knew, 'OK, it's taking the jumps as far as previously. It's taking the speed boost the same, it's landing the same. So we know that most of the levels will probably work'.

That was a relief. We didn't have to create 100 new levels. And then yeah, in the meantime we started working on the multiplayer maps, which was also trial

▼ With eight players all vying for the same parking spots, races often devolve into glorious chaos.

and error and serendipity, because we were working on them but didn't have the multiplayer lobbies and stuff running yet. So it was a bit of guesswork there. It's been – how long since – a year and a half?

Since then, we've started making the multiplayer levels, and we've learned so much. We came from having really elaborate maps, really far, and long, and crazy, and it looked really good. But once you start playing it, you don't meet other

"We spent eight months completely rebuilding the game to get to the same point we were at before"

players. There's not a lot of interactivity. So we had a couple of design rules that helped us make the ideal multiplayer map: it should be compact, so you meet each other all the time. We also figured out that we needed to make the levels in multiplayer a bit easier, because in single-player, the star of the game is the track – you need to master the track and get to know the route and the corners. But in multiplayer, you have other players messing with you as well. So we made the tracks easier because there's this extra component where players try to be faster than you, and you bump into each other or make the track harder to navigate.

In terms of the elements on the tracks, you've got cannons, magnets, half-pipes… What was your process for coming up with all those ideas?

DP: We had the team spread out ideas and we reviewed them, made a shortlist and started prototyping the top five ones. What was really fun was when we discovered we didn't need that many obstacles because even if you have five, it's a physics game. It's about the way you combine them, make them act differently, or the player can interact with them differently. So some obstacles you could also use as a means of making a shortcut. For example, you have the fan which will blow you off the track if you're not careful, but you could also use it to push you back onto the track. What's interesting is that all these obstacles work in tandem. If you place them in a smart way, there's endless possibilities, so you can build a track with just two road pieces and have the rest as fans and magnets.

What's left to do on the game, and do you have post-launch plans or a roadmap for the future of *You Suck at Parking*?

JJ: At the moment, it's getting through certification. That's the most important thing: getting all the bugs fixed. Then we have a day one patch with some stuff in it. And there's a plan for at least a year and a half on the updates – it's too early to share
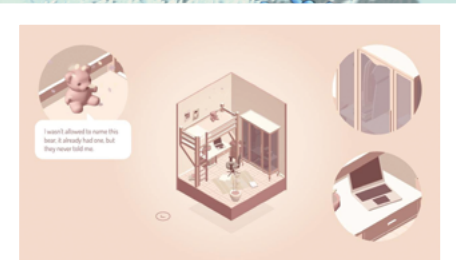

▲ Happy Volcano's debut title, *The Almost Gone*: a very different tempo from *You Suck at Parking*.

that because first we want to take the time to get to know our players, see what they like and don't like about the game, and then reshape that plan to what they expect from us and not what we think they need. But the idea is to keep it alive for a long time.

DP: There's definitely a roadmap for the future. We have a schedule where we'll release big things every three months, and we have a schedule that will release content in two-week periods of time, and we have a different schedule that will bring something new every day.

So, those things will definitely be in the game, but [it depends] if the community will be more of a competitive type of player or a more exploration or challenge type of player. That will define what stuff we will bring to the game. We'll listen to what people like the most about the game and play into that, and just keep building on top of it. Ⓦ

You Suck at Parking **is scheduled for launch later in 2022**
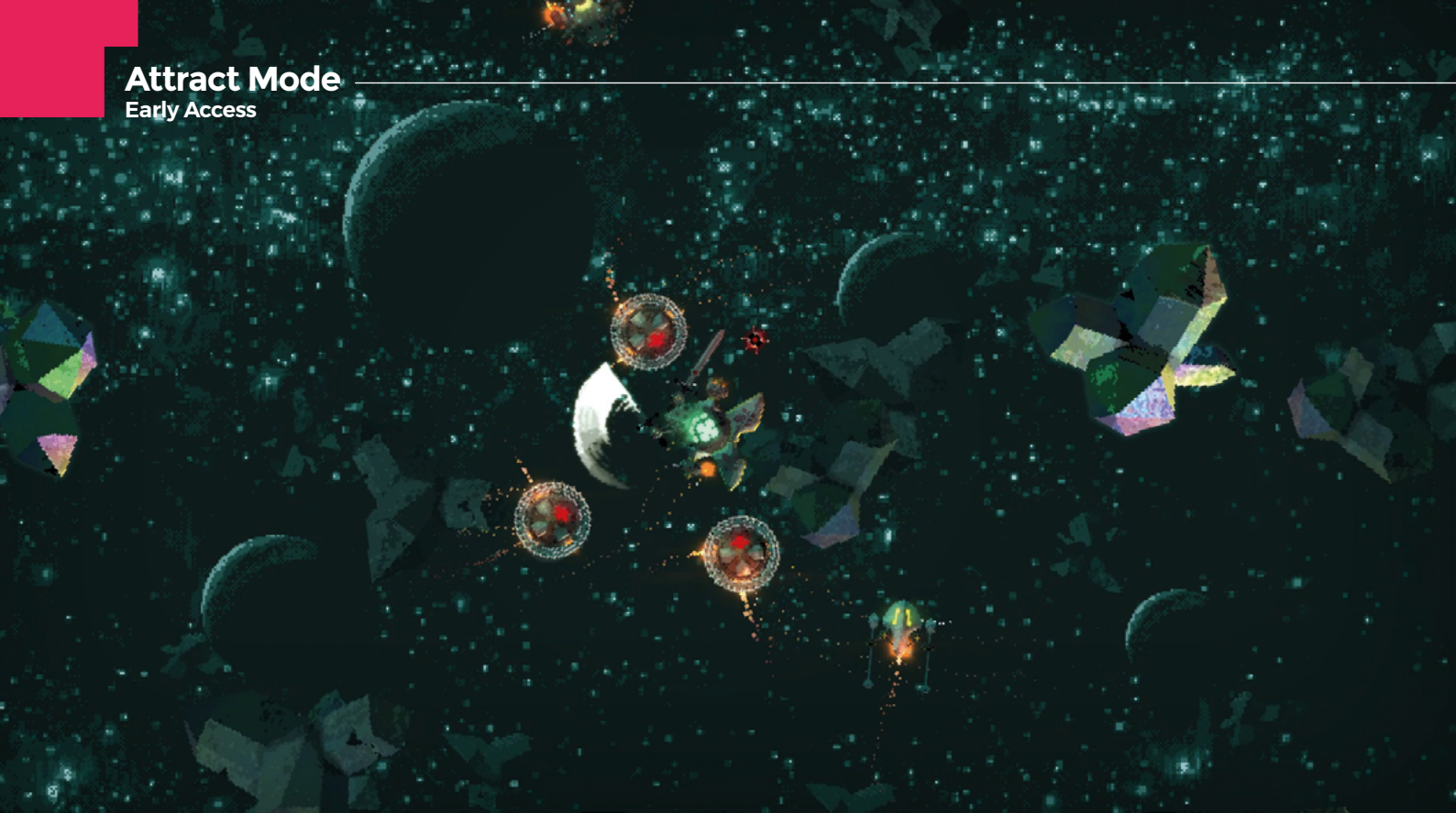
A medieval kind of future

The futuristic and fantastical collide in Fabular: Once upon a Spacetime,
a new roguelike action-RPG aiming to be a fairytale set in space

Info

GENRE
Action, RPG, roguelike

FORMAT
PC / PS4 / XBO

DEVELOPER
Spiritus Games

PUBLISHER
Prismatika

RELEASE
Q3 2022

SOCIAL
@FabularGame

Another day, another action indie roguelike vying for people's attention. But at least *Fabular: Once upon a Spacetime* looks to provide some intriguing spins on the genre's typical trappings. For instance, it isn't set in either a ye olde fantasy land or far-off distant future, but rather a combination of both. Casting you as a chivalrous space knight on a quest to save your intergalactic kingdom from destruction, doing so means traversing a procedurally generated universe while engaging in top-down melee combat, all in the effort to loot better gear useful for upgrading your ship. Developer Spiritus Games calls this mixture of swords and stars a "techno-fantasy roguelike".

"The initial creative spark that ignited everything for us was that we wanted to make a medieval folk tale in space," says Spiritus Games designer and artist Milan Batowski. "We started from there and slowly constructed the entire universe around that core idea. On a base level, everything we add to the game must adhere to that core concept for the world to be believable.

"We really love contrasting opposing ideas and concepts together, things like big versus small, cute versus scary, archaic versus modern. So with *Fabular* we aimed to portray these antagonistic juxtapositions in an environment that has its own consistent ruleset, as together, they create the perfect level of tension for the player while constantly providing a fresh experience. The real challenge in content-making is finding the right balance of archaic and modern. Our starting point is the Middle Ages, and we're trying to 'invent' futuristic things into that era while imagining how medieval people would design its form and function. We really enjoy this thought process and find the resulting objects of fantasy very entertaining."

∧ The top-down combat in *Fabular* might primarily be melee-based, but some enemies will be able to damage you from afar using chains and missiles.

❯ The throne room acts as your hub area in *Fabular*, playing host to companion characters that will sell you helpful boons.

<Any ship can have up to eight upgrade slots, which you can fill using lootable gear acquired after a successful battle.

Being a studio comprising just three people, having procedurally generated levels seemed logical; however, that doesn't mean *Fabular* won't also benefit from a handcrafted touch, namely thanks to a lot of emphasis being placed on story – something often absent in a lot of modern roguelikes. Most importantly, this universe's lore can be found in everything from the companion characters you purchase boons from in your throne room between quests, right down to how the first boss you'll encounter, Dax the Deserter, is a turncoat from the King's army.

"Small scale indie game development can be likened to cooking with what you've got in your kitchen cupboard," continues Batowski. "When we first opened our cupboard, we found an art director [Peter Meszlenyi] who happened to be a classically trained pen-and-paper artist with a talent for world-building and a passion for chivalric culture. Together with a programmer and a designer, a graphic artist, and an all-rounder, we began to create a game that played to the skillsets of the three of us. This is why our game prominently features strong visuals and a pretty comprehensive lore."

Being set in the zero-G floatiness of space gave Spiritus Games a unique opportunity to imbue *Fabular* with a different style of combat, one that's primarily physics-based. Because in addition to attacking rival ships using all manner of melee weapons, winning these encounters also requires a good degree of planning and tactics. Players will need to think about positioning, the distance between themselves and enemies, and what potentially dangerous

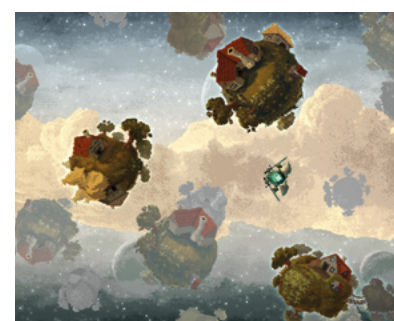equipment they might have that lets them deal damage from afar.

Choosing between one of three classes – Paladin (warrior), Manticore (rogue), and Salamander (mage) – at the start of the game will go some way to influence your playstyle, but battles in *Fabular* will still test your mettle, due to how ships handle. Batowski cites the physics-based combat system as "a very distinct and unique characteristic of the game". He also admits that it'll take some time to get used to. "You have to feel and figure it out on your own. However, when you've got to grips with the system, you begin to realise there's a lot of depth there, more so than a traditional shooter or brawler. Having momentum and inertia during combat helps us more accurately depict chivalric duels in outer space. You really feel the weight of the armour and the clash of steel against steel."

"Having momentum and inertia helps us depict chivalric duels in space"

With dialogue choices, ship upgrades, companion characters, gear looting, and multiple ship classes, *Fabular: Once upon a Spacetime* is juggling a lot of systems. A prologue chapter available on Steam, however, indicates that Spiritus Games has so far nailed the balancing act. It helps that much of these different strands will be broken up as players progress, leaping from battle to event encounters to management segments. Systems are encountered one after the other rather than all at once. Regardless of how well the final build can maintain this balance, with a planned release date in Q3 2022, this is one techno-fantasy roguelike unafraid to do things differently. ⓦ

REPEAT BUSINESS

Roguelikes live or die on how motivated they leave you to want to undergo another run after death. In *Fabular* you'll lose most ship upgrades, but these can be countered using boons. "There is a meta-currency called Tokens that you get to keep between your runs, and you can use to buy boons in the throne room from various characters," says Batowski. "These boons are permanent and will remain active in your profile, even between runs. The throne room is basically the hub of the game where you return after runs, and you can unlock more of these boon vendor characters there as you progress in the game."

Burn bright like no other

Creative director Jake Solomon explains Firaxis' ambitious attempt to craft a new kind of superhero experience in Marvel's Midnight Suns

Not every superhero saves the day with a smile, and Firaxis' more strategic spin on the Marvel universe proves it. Taking its name from the nineties comic-book series of a similar name, *Marvel's Midnight Suns* forgoes the squeaky-clean idealism you'd expect from characters like, say, Captain America and Mister Fantastic, in favour of a far grittier tone. Choosing to instead focus on the supernatural side of this world comprising countless heroes, after Hydra revives an ancient evil, it combines cinematic battles and in-depth character progression with a new flavour of the tactical gameplay the studio is known for.

Wouldn't it have been easier to make *Midnight Suns* play like *XCOM* with a Marvel coat of paint? "We actually tried that more *XCOM*-styled gameplay from the start," creative director Jake Solomon reveals. "But it turns out creating a narrative-driven superhero game is very different from creating a tactical sandbox game like *XCOM*. Each game is designed to provide a different player fantasy – in *XCOM*, you have these cadets who can barely aim fighting against a superior foe in a war of attrition. In *Marvel's Midnight Suns*, you're a superhero. The latter means that some mechanics from *XCOM* quickly start to fall apart. Superheroes don't take cover, so we have to remove that system. Oh, and Iron Man shouldn't have to learn how to use his Repulsor Blasts over the course of the game, so we need a way to give you badass moves without letting you spam them."

This realisation inspired Firaxis to make the switch to a card-based tactics system, one where moves and attacks are determined by how strong your deck is, as opposed to the amount of available cover and unknowable hit percentage chances. However, with this new approach still comes a fair bit of randomisation, and Solomon suggests there's good reason. "Every tactics game is essentially a puzzle," he says, "and that puzzle has to be 'unbeatable' or else there is always just one 'right' way to play. To make it 'unbeatable' you need randomisation. Cards are a perfect delivery mechanism for this; all abilities are represented

▲ The Abbey acts as your homestead in between battles, letting you form bonds with other members of your squad.

▲ The Hunter can be played as male or female, being an entirely original character created alongside Marvel.

via cards, and because these abilities are dealt to you at random, we can give you those badass abilities [as] there's no guarantee you can draw them whenever you want." People already being familiar with cards also serves as a shorthand. "Most people know what a deck is, how cards are shuffled, how they're dealt to you."

Every squad member, from Blade to Ghost Rider, has their own set of attack and support cards to deploy, with battles playing out uniquely based on which heroes you've decided to bring with you into any given scenario. Certain situations will see all their slots filled by a recognisable Marvel face, but a lot of the time you'll be using them to support The Hunter, an entirely new player-character Firaxis has created alongside Marvel exclusively for *Midnight Suns*. Watching them transform and grow throughout the course of the game is intended to better-help players role-play.

"One of our pillars in *Midnight Suns* is that we want the player to really feel like they've stepped into the Marvel Universe and live a life like a superhero, making friends with legends like Iron Man and becoming confidantes to heroes like Magik," Solomon says, further hinting at how forming character bonds at your base, The Abbey, between battles will have a surprising impact. "By having an original, customisable hero in The Hunter, the player is able to really make this character their own. In regard to the design of The Hunter, this is where our partnership with Marvel really shines. Would it surprise you to learn that Marvel is really, really good at creating heroes? They were essential in helping us make sure that the design, colour-blocking… everything related to The Hunter allows them to stand toe-to-toe with their fellow superheroes."

Another difference between *Midnight Suns* and *XCOM* is that the narrative is totally linear, free of limited-time events and fail-states, in an

"*Midnight Suns* is easily the biggest game we've ever made"

original story centred on the eponymous group's attempt to thwart Lilith, Mother of Demons. Firaxis not only made this decision to keep the game approachable for a modern Marvel audience, but to also let players tackle the game at their own pace. There's no limit to the number of side missions you can play before jumping into those that are story-critical, and the more time you spend back at The Abbey nurturing friendships, the stronger that hero's passive abilities can become. For turn-based tactics purists, though, the game is set to feature "a ton" of difficulty settings.

So ambitious is Firaxis' first foray into the Marvel universe, *Midnight Suns* has suffered several delays, including one as recently as last month. It's now set to release some time in early 2023. Summing up, Solomon indicates this extra time provided by publisher 2K is being used wisely, letting this tactical, tenacious take on such recognisable heroes live up to its full potential. "*Midnight Suns* is easily the biggest game we've ever made, and this is the first time we've tried to make this type of game," he says. "With such a large game, we have a lot more edges we need to smooth out, and extra time is absolutely essential in making sure we're doing something at a quality bar we feel proud of. We're really appreciative of the community for being patient with us." ⓦ

▲ Every individual hero features unique Heroic, Attack, and Skill cards exclusive to them.

Be**witched**

Metroidvania meets bullet hell shooter? It can only be The Knight Witch

From the moment a gigantic mechanised boss rears up in front of you, firing off a kaleidoscope of burning projectiles, it's clear that *The Knight Witch* isn't your typical Metroidvania. You're just a few minutes into the prologue, and you're fighting Emperor Erebus, the tyrannical ruler whose relentless pursuit of wealth has brought the planet to the brink of environmental collapse. But you're a Knight Witch, a member of an elite band of warriors who have the power to knock Erebus off his perch. Doing so means dodging waves of bullets and returning fire with your standard shots and card-based magic system.

The Knight Witch offers an engaging mix of genres, then: there's the gradual unfurling of new areas and powers you'd expect from a Metroidvania, the pulse-racing action of a twin-stick shooter, and a smattering of the RPG-style progression and strategy seen in deck-building games. Spanish developer Super Awesome Hyper Dimensional Mega Team is no stranger to blending genres – 2016's *Rise & Shine* was a winning combo of shooter and puzzle-platformer – but *The Knight Witch* is arguably its most

ambitious project to date. "We tend to mix genres that supposedly wouldn't work together very well," admits artist and studio co-founder Enrique Corts. "But they usually go together like peanut butter and jelly or beans on toast. I was a big fan of games like *Enter the Gungeon*, for instance, or *The Binding of Isaac*. And I thought, maybe we can mix the top-down, bullet hell gameplay, but without too much [emphasis] on the hell."

Indeed, while the swirling waves of bullets and aggressive enemies might imply that *The Knight Witch* is for hardcore players only, its developers have been careful to ensure that its action remains approachable even for novices – key to this is its targeting system, which locks onto the nearest enemy when you press the fire button. Meanwhile, using the right stick allows you to manually pick out enemies with stronger attacks. It's a system that rewards skilful players without penalising newcomers. "Accessibility is pretty important," says game director Kevin Sardà. "We kind of broke the concept of the twin-stick shooter because you don't need the right stick to play the game... I've seen a lot of people playing the game with the auto-aiming system. They don't need to use the right stick, but sometimes when there's a final boss that's vulnerable, you can use the right stick to increase the damage a little bit. Then you feel like you're putting all your own strength into the shots."

There's a similar flexibility to *The Knight Witch*'s card system, which Sardà introduced when he joined the studio in 2020. In essence, the cards provide a set of special attacks or shields that can be collected and chosen according to your play style. "The deck-building has received the same

⌃ There can be a lot of enemies and bullets flying around in *The Knight Witch*, but your nimble movement and dash ability helps keep you alive.

› Sardà reckons he can tear through the game in about six hours, but that's after two years of practice. It'll probably take nearer twelve hours for the rest of us.
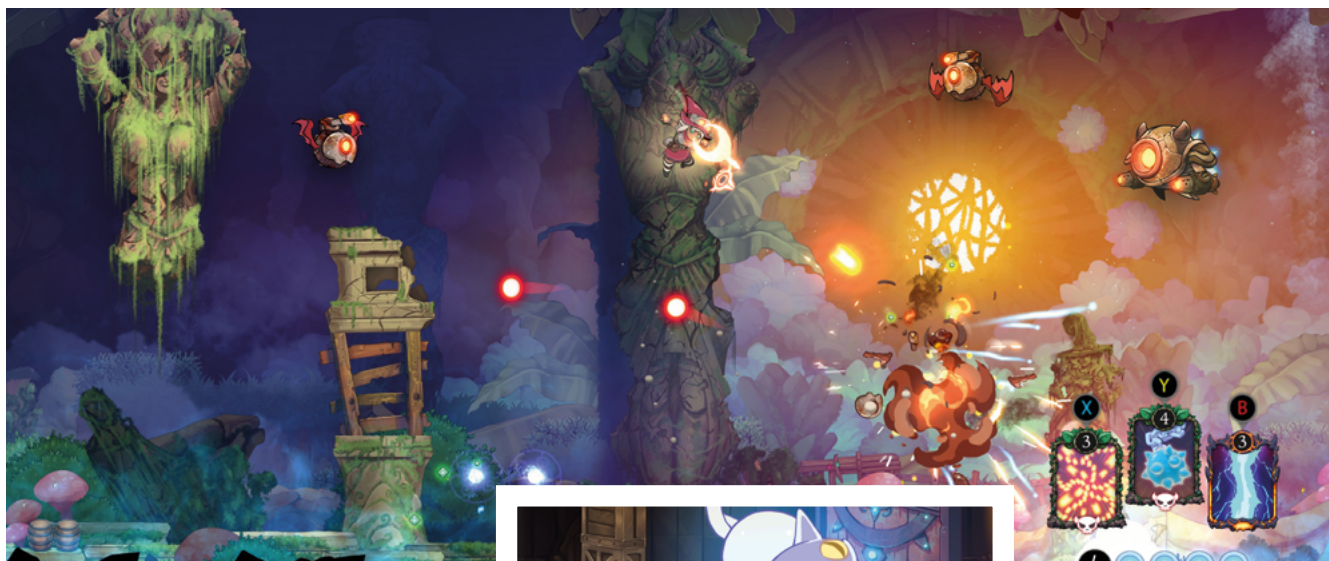
treatment as the bullet hell [mechanics]," says Sardà. "It's been adapted into something that matches the genre, so it's really light. When you use a card, the effect is immediate. It's not like *League of Legends*' abilities, where you click once, and then you have to move an arrow and then click again. There's a little bit of strategy, but it's not slow-paced – it complements the shooting."

Given that card systems aren't exactly a common sight in action games, Sardà and his team have also been careful to introduce the mechanics gradually, so players figure out the rule system as they go. Says Sardà: "When you play a first-person shooter, you know by intuition that clicking on the right stick is gonna be a melee attack – you know what you're playing, right? But in our case, we know we have to teach players how to use the cards progressively, so you can focus only on shooting if you're not comfortable with the cards, and you can equip only cards that change your weapon so you can shoot with different types of bullets. Sooner or later, as you start to get more used to the cards, you'll start to get the most out of them."

Making a Metroidvania where the central character can fly rather than jump, meanwhile, represented something of a design challenge for the team: Sardà points at a game like *Hollow Knight*, where enemies act as natural barriers – if the player wants to exit the room, they'll have to defeat the enemy to get to the door. If the player can fly, then there's always the option to fly straight over them. "When you can't use any of the rules from all the Metroidvanias you've ever played, that's really hard," Sardà says.

> **"We kind of broke the concept of the twin-stick shooter"**
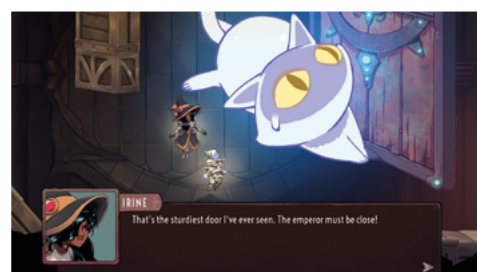
"Yeah, you've been complaining about that for the whole development," Corts observes.

To combat this, the studio came up with ambushes, where the player's suddenly trapped and assaulted on all sides by enemies. "Ambushes aren't a new concept, but it's not used in Metroidvanias often," says Sardà.

Those challenges notwithstanding, it's impressive just how well *The Knight Witch*'s creators have blended all these various mechanics. The Metroidvania genre may have gotten crowded in recent years, but *The Knight Witch*'s hybrid of shooting, exploration, tactics, and sumptuous hand-drawn visuals (read more about those from Corts on page 36) help set it apart. Sardà is certainly aware of how competitive the indie space is in 2022, and his team have worked hard to ensure their latest game is as polished as it can be. "We always feel the pressure," says Sardà. "There are so many high-quality games – I look at YouTube channels and discover indie games I've never heard of. When I see that level of polish, I get scared because you're working really hard on a game that you feel looks good, everybody's trying their best... making games is easier than ever, but making games that can compete is hard. But we've tried to put all our experience on the table. We're really proud of the work we've done." ⓦ

KNIGHT LORE

The Knight Witch is packed with lore, with its central narrative, introducing a young heroine named Rayne, picking up several years after the action-packed prologue. Sardà previously worked on the story-heavy *RiME* and *GYLT* at Tequila Works before he moved over to Super Awesome, and he's brought his affection for narrative with him: *The Knight Witch* deals with such themes as the environment, chasing fame, and the importance of gratitude. The latter came about as the world came out of the pandemic, says Corts. "It's about the importance of saying 'thank you'," he reveals. "I thought, when we were coming out of lockdown, for some reason everybody was angry and rude."

"Grumpy," Sardà agrees.

"...which is understandable," Corts continues, "but it's still like that today, I think. So we thought that being thankful should be part of the gameplay – that you actually level up when someone says 'thank you'."

That was the month that was

01. Dark remake

After mostly sitting out "Not E3" earlier this year, Double-A specialist publisher THQ Nordic had a surprising amount to show recently as part of an hour-and-a-half digital showcase. The headline announcement by far was news that cult classic survival horror series *Alone in the Dark* is set to return, this time via a remake developed by Pieces Interactive. The short trailer gives off some serious *Resident Evil* vibes, right down to the eerie-looking mansion and an ability to play as a male or female protagonist. Fortunately, the 2008 version's incessant blinking mechanic has been blinked out of existence. Phew!

02. Stayin' switching

Rumours of a Nintendo Switch hardware revision or a new console outright are forever swirling. The dream of something like this happening anytime soon has now died, however, with Nintendo president Shuntaro Furukawa highlighting the company's more critical plans in a recent sales report. "Normally, we stockpile inventory in the summer to prepare for the year-end sales season, which is at its peak," he said. "This summer, we are not able to produce as many as usual." Despite these manufacturing obstacles, the report went on to say that Nintendo still aims to sell 21 million units before March 2023.

03. Elden King

Just in case you weren't already aware of *Elden Ring*'s unfathomable continued success globally (it's on course to be 2022's biggest seller), YouTube has since piled on to reveal another staggering statistic. "Gather 'round Tarnished," the video sharing platform's dedicated gaming account tweeted. "Let's look at the breakdown of how *Elden Ring* garnered 3.4 billion video views in 60 days, making it one of the biggest launches ever on YouTube." That places FromSoftware's game well ahead of the previous titleholder, *GTA IV*, which commanded 1.9 billion views in 60 days. There's clearly still not enough players touching grass.

David Cage defends Quantic Dream reputation: "I don't think we had an aggressive attitude"

Marvel's Spider-Man second-best PC launch for Sony, behind *God of War*

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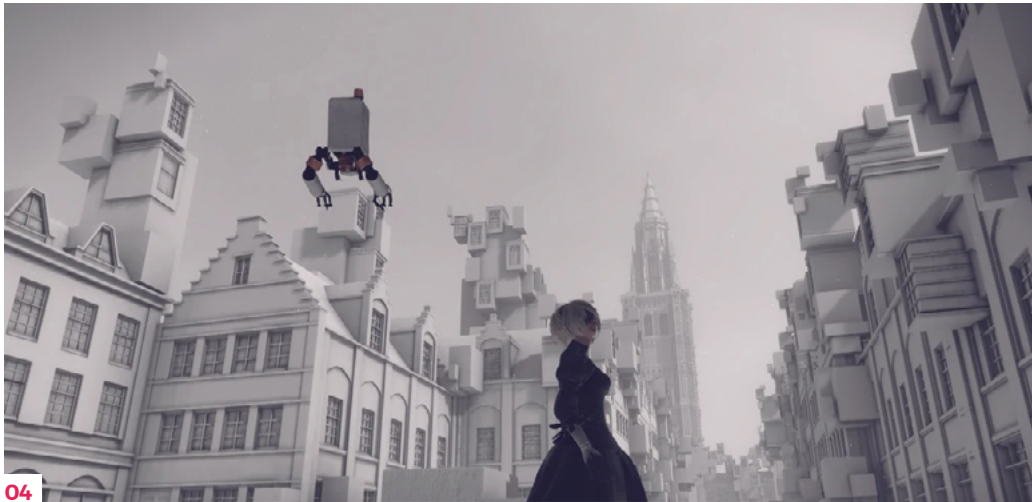
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04. Nier-ly had us

Players were recently sent into a frenzy after a video posted on Reddit seemingly revealed a new, never-before-seen location in *NieR: Automata*'s Copied City. At first it was assumed to be an undiscovered Easter egg left by game director Yoko Taro, until it was revealed to be the work of modders DevolasRevenge, Woeful_Wolf, and RaiderB. Still, so many devout *NieR* fans temporarily being duped speaks to the mod's quality. "Everything we shared has been completely in-game, no editing was used," read the trio's fess-up message. "We have been loving all the discussions and theories – it has been an amazing journey."

05. PlayStation Portable (again)

Since leaving its ill-fated, ill-supported, but no doubt well-made Vita handheld console out to dry immediately after its launch in 2012, PlayStation hasn't really demonstrated a whiff of interest in the portable space. Until now, it seems... The Backbone One – PlayStation Edition controller effectively gives iPhone owners the ability to turn their device into a portable console, very much being styled the same way as previous peripheral models. The difference here, however, is that it has Sony's full support, letting users play PS4 and PS5 games wirelessly via Remote Play streaming. Re-evoking the PSP heydays costs $99.99.

06. Pac-Man pixels

Sonic the Hedgehog's continued box office success was always going to have repercussions, so it's unsurprising to see Hollywood (and its hunger for video game adaptations) set eyes on yet another iconic mascot. Next up for cinematic stardom is Pac-Man, with Bandai Namco teaming up with Wayfarer Studios to get the translation right. Details are scarce, but we do know that the Pac-Man movie will be going the same live-action route as Sonic's outings – as opposed to the fully animated approach Super Mario will soon take. Here's hoping the final film is better than Pac-Man's brief appearance in 2015 Adam Sandler vehicle, *Pixels*.

"That was a super-fun conversation". Konami dev who pulled *P.T.* from stores speaks out

Ghost of Tsushima movie director, Chad Stahelski, wants "a complete Japanese cast, in Japanese"

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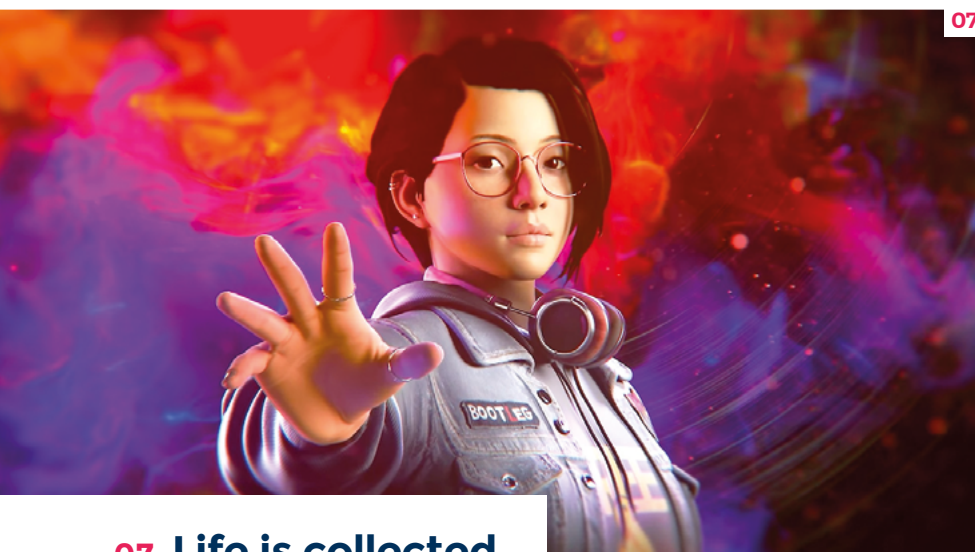
07. Life is collected

Part of the original *Life Is Strange* game's charm was its episodic release structure, letting players chew on all the emotional, timey-wimey decisions they had made in a similar vein to, say, Telltale's *Walking Dead*. However, Philip Lawrence, senior narrative designer on the franchise's latest entry, recently indicated in an interview with RPS that he can't see separately launched chapters returning anytime soon. "I can't imagine we'd go back to the episodic model," Lawrence said. "The reaction has been very positive." Episodes were still segmented in *True Colors*, of course, but developer Deck Nine continues to favour the single package.

08. Duty calls

Microsoft shook the video game world by announcing that it intends to acquire Activision for $68 billion. The deal isn't quite finalised yet, but that hasn't stopped the Xbox giant from clarifying its position on how it plans to handle the biggest first-person shooter franchise in the world. "The reality is that the strategy of retaining Activision's games by not distributing them in rival console stores would simply not be profitable to Microsoft," the company wrote. This came as a response to Sony's recent objections to the deal, which posited fears that *Call of Duty* can't be rivalled.

09. Still alive and kicking

It feels like a lifetime ago since we witnessed that *Beyond Good and Evil 2* gameplay demo at E3, with Ubisoft CEO Yves Guillemot beaming with excitement as it closed out the show. Well, it's been five years since then, but the long-gestating sequel still looks like it's alive, given the studio's hired a new lead writer. Sarah Arellano's most famous narrative work includes Blizzard behemoth *World of Warcraft* and a brief stint at Volition, the studio behind *Saints Row*. Hopefully, this places her in a good position to revitalise the prequel adventure, following creator Michel Ancel's departure.

THQ Nordic Digital Showcase teases a new *South Park* game

PUBG: Battlegrounds boasts an impressive 80,000 daily players since going free-to-play
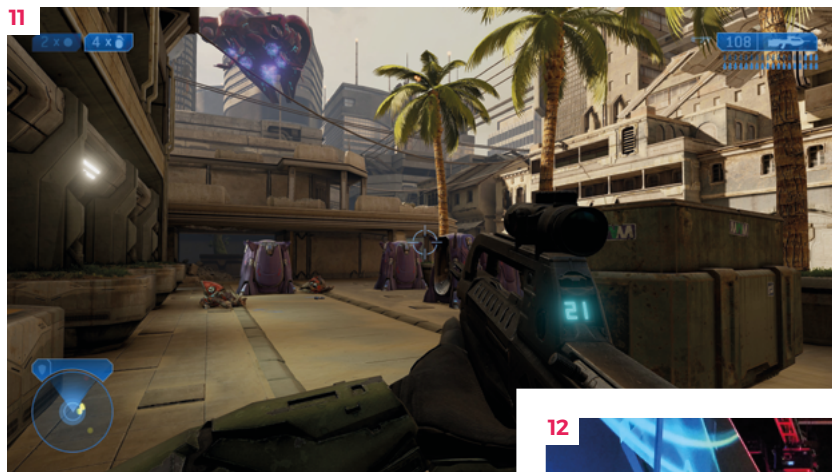
10. The 1% club

Out of its 221 million total members, only 1.7 million subscribers engage with Netflix's games on any kind of regular basis. That's according to a study conducted by Apptopia, whose findings concluded that the streamer's offerings have only been downloaded a total of 22.3 million times since it entered the space. Turns out Netflix isn't doing such a good job at being the Netflix of games, as 1.7 million equates to less than 1% of users. With great games like *Into the Breach* and *Before Your Eyes* recently arriving there, Netflix has the quality, just not the promotion.

11. Bounty hunter

How much in-game agony could you endure to win $20,000? That's essentially what Twitch streamer Charlie "MoistCr1TiKaL" White asked players when he challenged someone to complete *Halo 2* on legendary, with all Skull modifiers on, without dying once. The challenge was set earlier this year, with the prize packet rising from $5000 to $20,000 after no one heeded the call. However, that eventually changed when streamer Jervalin finally completed the task in a final run that took them six-and-a-half hours. As well as the cash bounty, 343 Industries' community manager recognised Jervalin's impressive feat with a tweet.

12. War is over

Newly revealed court documents paint a clearer picture of how the last generation's so-called "console wars" between PS4 and Xbox One ended in terms of sales. It comes as Microsoft defends its upcoming acquisition of Activision in a Brazilian court. Essentially, the documents reveal that PS4 sold "twice as many" units as the Xbox One – a statistic we previously weren't sure of since Microsoft stopped reporting on console sales in favour of Game Pass membership. Sony's last reported lifetime sales for PS4, meanwhile, was 116 million, which would place Xbox One system sales in the region of 50–60 million.
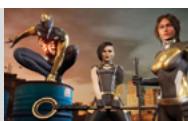
Firaxis' Marvel game, *Midnight Suns*, delayed to 2023 (see page 14)

Call of Duty dog skin pulled after plagiarism claim. Activision apologises

GAMING HISTORY
with Mr Biffo

Driving games are older than you think

MR BIFFO

Mr Biffo, better known as Paul Rose, was the creator of the legendary Digitiser. Check him out on **wfmag.cc/digitiser**

When was the first driving game released? You may be surprised!

What was the first racing game? You probably know this. It was *Speed Race* (known as both *Racer* and *Wheels* in North America), an arcade game released in 1974 by Taito. Designed by a certain Tomohiro Nishikado – he later went on to create a little-known game called *Space Invaders* – it was housed in a bulky cabinet, controlled using an unnecessarily massive steering wheel. It was played from a top-down perspective, *Spy Hunter*-style, making it also the first vertically scrolling game.

Except… *Speed Race* wasn't the first driving game. In fact it was *Gran Trak 10*, released earlier the same year by Atari, and played again from an overhead perspective, albeit with the entire static track viewed on-screen throughout. Though its monochrome graphics were extremely basic, the controls and gameplay were later refined by the likes of *Super Off Road* and *Micro Machines*.

But wait! *Gran Trak 10* wasn't the first driving video game either. In fact, Atari had released *Space Race* in 1973, in which players raced against spaceships, but even then… the first

driving video game wasn't even an arcade game, but appeared on the Magnavox Odyssey. 1972's *Wipeout* (no relation to… well… *WipEout* – see page 28) had players guiding a dot around the screen, beneath an overlay that had to be slapped onto the TV screen. It was pretty bad, but every genre needs to start somewhere, right?

Well… it didn't start in 1972, either. If we want to talk about the history of arcade driving games, we can go back to the electromechanical games of the 1960s. Indeed, Nolan Bushnell had been inspired by 1969's electromechanical contraption *Speedway* when he asked Atari employees to start work on a video racing game. In fact, it was *Speedway* – the highest earning game of its day – which ignited the fire in Bushnell to create Atari. He'd worked at an arcade in the late sixties, and watching customers line up to play it had helped him to see the potential in the gaming business.

ZOO MONKEYS

Except… hang on (pun not intended). *Speedway* wasn't even an original game. It was a licensed version of Kasco's *Indy 500*, released in 1968. Forgotten by history, Kasco was one of the big players of the electromechanical arcade games industry, alongside more enduring brands such as Sega and Namco. One of the company's first products was a type of coin-operated magic lantern. Users would peer through it and look at the slides. Bizarrely, the company even made a version for caged zoo monkeys to use.

Indy 500 was the company's breakthrough hit, selling 2000 units in Japan – but Chicago Coin's version sold five times that in the US. What really set the game apart was that it was played from a first-person perspective. It would be some time before video games managed the same

> **"But wait!** *Gran Trak 10* **wasn't the first driving game either"**

feat, with Sega's *Road Race*, released in 1976. It was later rebranded as a *Happy Days* tie-in for its US release, to capitalise on the popularity of leather-clad fifties greaser, The Fonz. Aside from its groundbreaking first-person view, it even featured some early haptic feedback, causing the handlebar controller to shake violently upon collision with another vehicle. Ayyyyy!

And yet… *Indy 500*, or *Speedway*, or whatever you want to call it, wasn't the first arcade racing game either, even if you're counting electromechanical games. In fact, despite being released over 50 years ago… it isn't even close to being the first arcade racing game. By 1967, people had been playing driving games in the arcade for – wait for it – around 67 years.

Among the bigger examples were the 1954 driving test simulator *Auto Test*, which used back projection film footage to rate a driver's performance; 1959's *Mini Drive*, in which players steered a toy car along a scrolling roadway; and 1941's *Drive-Mobile*, released by the awesomely named International Mutoscope Reel Company.

What's truly insane is that the American company, which had traded originally in peep show-style films and photo booths, was actually inspired by the electromechanical driving games that had long been found in the British penny arcades of the era. Yes: driving games are a British invention. *Drive-Mobile* was big and unwieldy, but its upright cabinet wasn't a million miles from the same configuration many arcade racers could still be found in more than 80 years later.

BELLOWS

We tend to think of the arcade as a relatively new invention – now, sadly, fallen far from its glory days – but the idea of sticking a coin in a slot for an experience you couldn't get at home, such as *What The Butler Saw*, or watching a creepy laughing sailor, dates back to the Victorian era.

Indeed, if Queen Victoria had been quick enough to leg it down to her local penny arcade in the final year of her life, she could've had a go on the first bona fide arcade racing game: *Yacht Racer*, released by London-based Automatic Sports Co. Sitting alongside the company's other games, *Football*, *Cricket*, *Golf*, *Marksman*, and *Shooting Big Game*, *Yacht Racer* had a decent run of life. Insanely, it used real water, as players pumped bellows to race two miniature yachts around an island. Like several of the company's games, it was built atop an ornate, cast iron and brass pedestal in the shape of a mermaid.

By 1912, however, the Automatic Sports Co. had converted most of its *Yacht Racer* units to shooting games. One of these, *Artillery Duel*, was a two-player affair, in which players shot ball bearings at one another. So there you go. The British Empire's legacy isn't all bad. ⓦ

FULL SCALE

Many of you will no doubt recall walking into your arcade to be confronted with a full-size, shiny red sports car. This was Namco's *Ridge Racer Full Scale*, which transformed a Mazda MX-5 (or Eunos Roadster, if you want to use its Japanese name) into what was effectively an absurdly OTT joystick. Players started the game by turning the ignition key, and could feel the wind in their hair via blowers concealed in the air vents. The screen (actually three screens) was a three-metre wide front-projection system. Unsurprisingly, it was one of the most expensive arcade games ever, clocking in at the 1994 equivalent of around £420,000.
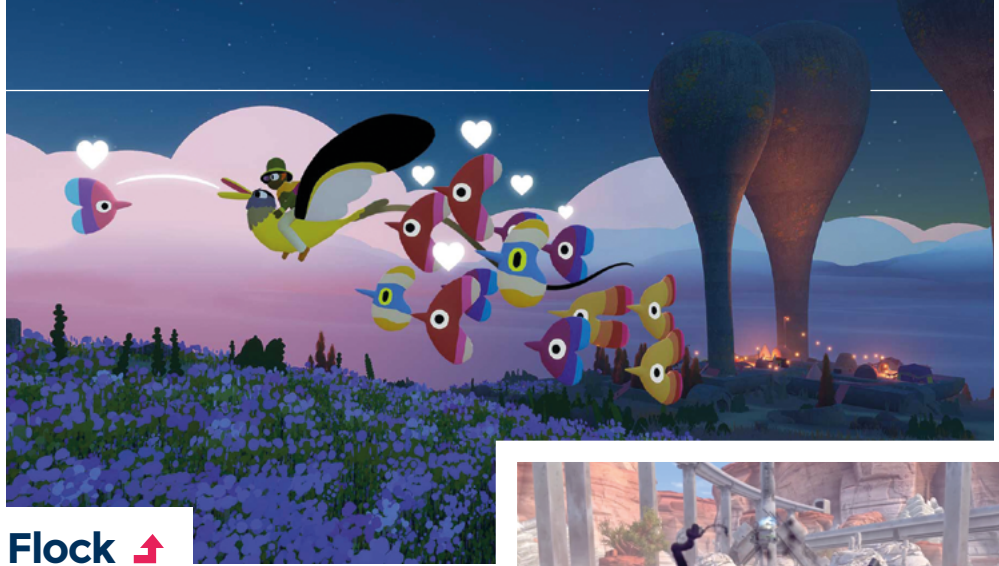
Incoming

Flock

If you're hankering for another meditative game in the vein of thatgamecompany's output – think *Flower* or *Journey* – then the upcoming *Flock* is well worth keeping an eye on. In essence, it's about the freedom of flying – you soar over green fields and through dusky woodland, collecting unusual creatures that will then follow in your wake. It's a bit like Sega's antique arcade game, *Flicky*, where you played a mother bird rescuing her chicks from hungry cats. But here, there are no lives to lose or points to score. *Floc* is from Richard Hogg, the designer behind *Hohokum* and *I Am Dead*, which is another reason to add this one to your to-play list.

Forever Ago

There's a growing sub-genre of games about moving from place to place with a camera, whether it's the eco-fable *Alba: A Wildlife Adventure* or Scavengers Studio's upcoming *SEASON: A Letter to the Future*. *Forever Ago*, developed by Third Shift, strikes a similarly thoughtful tone: it's about a middle-aged man named Alfred and the road trip he embarks on following a personal tragedy. With dog in tow and camera in hand, Alfred travels in his camper-van, making friends, solving puzzles, and documenting his progress in photographic form.

Bounty Star

It's a western, but there are giant mechs. It's post-apocalyptic, but entirely lacking the drab greys and browns the setting usually invokes. Like *Thirsty Suitors*, *Bounty Star* offers an interesting mix of genres, too. When it isn't a third-person brawler, it also takes in mech customisation, base-building, and even a spot of farming. You play Clem, an ex-soldier in a remote and lawless part of America where resources are scarce and gut-wrenching fights with other hulking mechs are common. The debut from developer DINOGOD, it already looks both ambitious and feature-packed.


Thirsty Suitors

Its premise recalling cult comic book (and movie adaptation) *Scott Pilgrim*, *Thirsty Suitors* is a vibrant and imaginative collision of ideas and genres. It's a magical realist comedy-drama, of sorts, about a young South Asian woman trying to sort out her tangled love life ahead of her sister's wedding; the game itself takes in turn-based battles, skateboarding, and even a spot of cooking. Having played the demo (which you can download yourself at **wfmag.cc/suit**), we can safely say this is shaping up to be a real one-of-a-kind treat.

The Lost Wild ⬆

British developer Great Ape Games has spared no expense in bringing us this first-person survival outing, in which you variously run, hide, and cower in fear from a forest environment full of dinosaurs. You could think of it as the *Dino Crisis* sequel we never got. Or maybe *Alien: Isolation*, but with giant lizards and trees in the place of xenomorphs and spaceships. Or, if you're a *Jurassic Park* fan, an Isla Nublar Simulator. From a technical standpoint, *The Lost Wild* looks terrific, with realistically toothsome dinosaurs stalking around a lush, steamy wilderness. There are no weapons to speak of here; just a few flares, perhaps a compass and other oddments, plus what's left of your shredded wits. One of several new titles announced by Annapurna Interactive in late July, *The Lost Wild* is one game we're hoping we'll uncover lots more about in a future edition.


??? ⬆
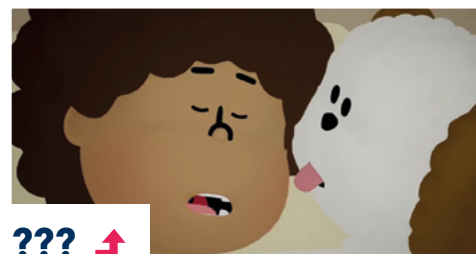
Any project by *Katamari Damacy* and *Noby Noby Boy* designer Keita Takahashi is worth looking forward to – which is why we've included it here, despite its lack of title at the time of going to press. So what exactly is Takahashi's next game? All we currently have to go on is the teaser trailer: a young boy is woken from his sleep by a fluffy dog licking his cheek. And... that's it. Given Takahashi's previous form, we can pretty much guarantee that it'll be unlike anything else we've played before.

The Shape of Things ↰

In today's stress-filled world, relaxing games can feel like a mini-break from reality. *The Shape of Things* certainly looks like a carefree way to while away a few minutes. It's a puzzler where you're presented with ordinary household objects – egg-timers, rubber ducks, teapots, and such-like – which have to be twisted and manipulated back into their correct shapes. These Rubik's cube-esque puzzles can be solved at your own pace, and there's no "punishment system", developer Hyper Three Studio says, because "life is hard enough". We couldn't agree more.
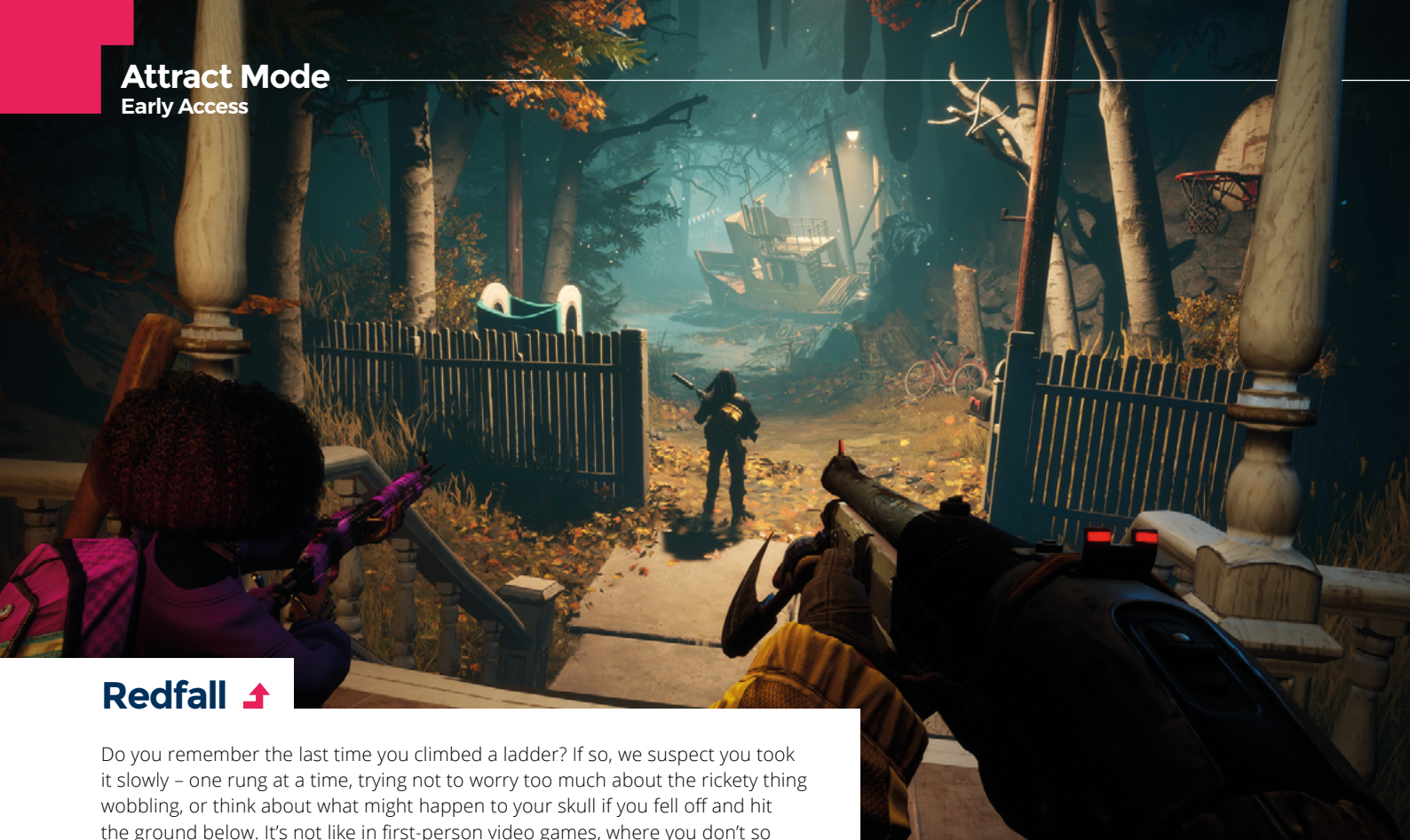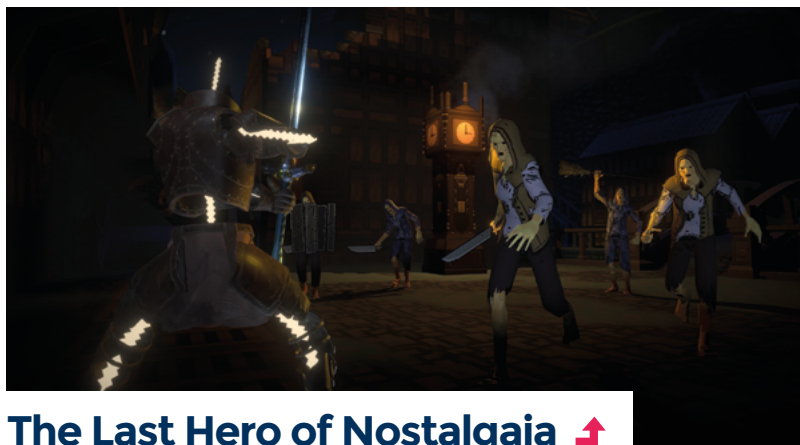
Redfall ⬆

Do you remember the last time you climbed a ladder? If so, we suspect you took it slowly – one rung at a time, trying not to worry too much about the rickety thing wobbling, or think about what might happen to your skull if you fell off and hit the ground below. It's not like in first-person video games, where you don't so much climb ladders as float up them at about 30 miles per hour without a care in the world. You've got a good reason to rapidly ascend ladders in *Redfall*, though: there are fast, kung-fu-kicking vampires everywhere, and it's incredibly hard to wield a shotgun when you have both quaking hands wrapped around metal rungs. Developer Arkane Austin is busily crafting an open-world, co-operative shooter here, packed with lithe ghouls that have an odd habit of daubing walls with gory messages. When we aren't gunning down vamps, will we get to wash off the graffiti, *Super Mario Sunshine*-style? We can but hope.
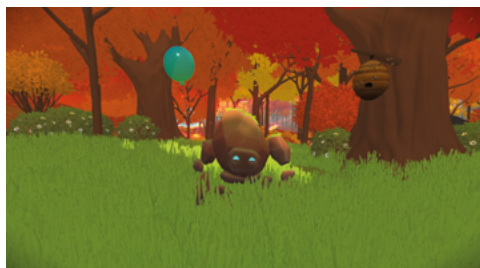
The Last Hero of Nostalgaia ⬆

A long overdue send-up of po-faced fantasy adventures and gaming's obsession with the past, *The Last Hero of Nostalgaia* looks like *Dark Souls* crossed with Monty Python. Cast as a stick-figure knight, it's up to you to save the land of Nostalgaia from a strange malady that threatens to turn the whole place into a retro-looking, pixelated mess. There's 3D hack-and-slash combat, copious items to collect (including armour that gradually turns your stick figure into something more substantial-looking), and a wry narrator that comments on every twist and turn in the plot. We can't wait.

The Texas Chain Saw Massacre ⬆

An asymmetrical multiplayer game based on a well-known horror franchise? Yes, the likes of *Friday the 13th* got there first, but developer Gun Interactive worked on that game, so it makes sense that they'd bring their expertise to another property – in this case, Tobe Hooper's infamous 1974 slasher. The premise is easy to guess: you'll either play as the youthful and largely defenceless Victims, or as three members of the cannibalistic Sawyer family – including the chainsaw-wielding Leatherface. The game's evidently made with an affectionate eye for the movie's low-budget, grungy detail, and while it's still early days for this multiplayer survive-'em-up, we can at least predict that it'll be better than the more recent entries in the actual film series. Yeesh.

Unpetrified

There's a distinctly autumnal, melancholy feel to this adventure about a lumbering rock creature and its solitary journey through the natural world. Taking control of the golem-like character (which also bears a passing resemblance to the robots in Studio Ghibli's *Castle in the Sky*), you interact with plants and animals, solve puzzles, and generally try to make the world a better place with your 'Aura Impulse' abilities. Dreamhunt Studio's debut game is, according to the studio's own blurb, a game where "you help animals in need and can escape your busy everyday life". You can also turn into a gigantic boulder and rumble down woodland pathways. That's rock 'n' roll, we guess.

A Most Extraordinary Gnome

Where some developers merely simulate real-world textures and art techniques, Hungary's Save Sloth Studios has gone further: its 2D action-adventure has been made almost entirely from paper cut-outs, all crafted by hand before being scanned and turned into game assets. The result is a wonderfully tactile-looking world of bold shapes and colours, all married to a heartwarming tale about a gnome's quest to save his forest from destruction. Best of all, the gnome can use his pointy red hat as a projectile to fight whimsical bosses. Instant game of the year.
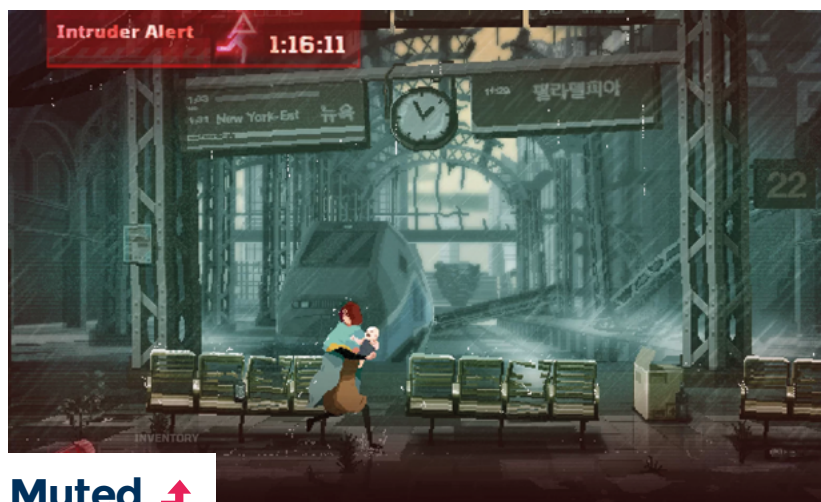
Muted

Just when we thought we'd seen enough cyberpunk games, along comes one with some captivatingly new ideas in it. Rather than the usual hard-boiled detective, the protagonist of *Muted* is a single mother, trying to raise her child in a hellish future city. There's stealth, a branching story, and RPG mechanics, but taking care of your baby could provide the most enthralling – and heartbreaking – element in the game. As well as staying one step ahead of the law (you were never meant to have the baby in the first place, you see), you'll have to craft nappies and generally monitor your child's health.
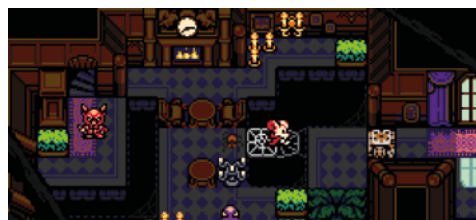
Mina the Hollower

Like Yacht Club Games' *Shovel Knight* before it, *Mina the Hollower* looks like another throwback to the 8-bit era. But where *Shovel Knight* was modelled after NES-era Capcom hits like *DuckTales* or *Mega Man*, *Mina*'s a top-down *Zelda*-like made with the resolution and limited colour palette of a Game Boy Color title. As intrepid mouse Mina, you'll use your burrowing and combat skills to navigate your way across a spooky island packed with traps and deadly monsters. *Mina the Hollower*'s already hurtled past its $311,503 minimum goal on Kickstarter, which means the finished game should be with us in late 2023.

Where we're going, we don't need wheels…

In the wake of WipEout staying absent for a decade, we speak to the indies continuing its legacy by developing their own anti-gravity racers

WRITTEN BY **AARON POTTER**

F ew video game genres exist where you can draw a clear line from origin all the way up to the reputation and prominence it still has today. The anti-gravity racer, however, by nature of it being so niche in its mechanics and distinct in design, is one of them. It was in 1990 specifically, with the launch of *F-Zero* on the SNES, that mass audiences got their first taste of what it could feel like to reach high-octane speeds without the use of wheels, instead using a ship's thrusters combined with the Earth's natural forces to zoom past racing rivals amidst a swathe of futuristic environments.

This baton was eventually picked up and brought into the full 3D space thanks to the polygonal power of PlayStation, when a group of ten or so developers at Psygnosis (later renamed Studio Liverpool) unleashed the very first *WipEout* onto the scene. Praised at the time for its pulsing electronica soundtrack, technical controls, and sleek art direction, players quickly found themselves hypnotised by its fast-paced gameplay and stylised vision of 2052 that saw pilots compete in the fictional F3600 Anti-Gravity Racing League. It isn't hyperbolic to say the game ushered in a completely new sub-genre of racer, resulting in countless sequels and spin-offs – even gracing a Nintendo console in the form of *WipEout 64* in the exact same year as the platform's own *F-Zero X*.

So influential on the racing scene was Studio Liverpool's series, it continued to develop new entries up until the launch of 2012's *WipEout 2048*, aptly as a launch title for the PlayStation Vita. Since then, though, the grandaddy of anti-gravity racers has largely remained silent, with the last official instalment being *WipEout Omega Collection* in 2017, which itself is merely a remastered compilation featuring two previously released titles alongside a polished-up expansion. The series now only exists in the form of a simplified mobile game launched earlier this year: *wipEout Merge*. And while this Sony-licensed spin-off might aim to do the franchise's legacy justice, it can't deliver the high frame rates and crisp visuals *WipEout* eventually became synonymous with. For that, veteran players now have to look elsewhere.

// INDIE UPGRADE

"Our goal has always been to 'race faster than ever', to create the most thrilling anti-gravity racing experience possible [and] the fastest racing game of all time," explains Giuseppe Franchi, lead game designer on *Redout*, an indie-made spiritual successor to *WipEout* in all but name. Its sequel launched earlier this year with a greater emphasis on tight controls, blindingly fast speed, and a bigger effort to hook in genre newcomers. Whereas the original released the same year as *WipEout Omega Collection*, there's a sense that *Redout 2* was finally able to step out of the shadows and come into its own. ➡

Our goal has always been to create the most thrilling anti-gravity racing experience possible

Pacer enables you to make use of a double boost, which comes in handy when deployed on a safe straight section of the track.

R8 Games shut down soon after launching *Pacer*, but designer Carlton Gaunt continues his work at Brighton-based developer Electric Square.

"[We wanted] something that would remind old players, like ourselves, of the excitement they felt when playing the classics. We've definitely achieved something on that front according to how the game was received, and we are very happy with that."

Much like the series that inspired it, *Redout 2* presents players with a litany of anti-gravity vehicle classes to unlock, coupled with the sub-genre's typical bright visuals and seriously fast gameplay. The team at 34BigThings' entire ethos is simply 'faster equals better', as it tries to – literally and figuratively – blow past people's expectations of what a modern anti-gravity racer can be. They're also aware of staying true to the *WipEout* legacy without being afraid to iterate, providing it makes sense. For instance, one area where the *Redout* series makes a signification change is via the removal of weapons and power-ups, allowing them to focus on high-speed racing in its purest form – something that'd be unfathomable in *WipEout*.

One area where you can't compromise, Franchi says, is in how a future-set anti-gravity racer feels to play. "It's a 'simulative experience' that has very loose anchors to reality," he explains. "When making an on-road game, you can have as many references as you want, even physics models pre-packed and ready. With an anti-gravity racing game, you have to work on a driving model that is basically made from scratch, but needs to be believable. With *Redout,* we used mainly drones as a base reference; with *Redout 2,* we integrated elements of airplane flying and also car racing, to make the model a little more familiar for a larger public."

Nailing such crucial elements as the weight of these anti-gravity vehicles, a strong sense of momentum, and the iron-clad controls needed to help players feel confident they can make such tight corners, is crucial for any genre entry. After all, much of the reason why people remember the *WipEout* experience so fondly is due to how distinct it feels compared to racers that keep you grounded on the Tarmac. With no road to worry about, you're not at the mercy of how fast your vehicle's wheels can spin, but games like indie anti-gravity racers prove it's also important to adhere to your fictional universe's own rules.

EXCITING ANTI-GRAVITY

Making a great anti-gravity track is about riding the perfect line between what's believable and also fantastical. "Unusual locations are always interesting and exciting to see," says *Pacer*'s Carlton Gaunt. "Who doesn't want to race along the side of a skyscraper or hoisted above a thick forest? Not working with regular vehicles reinforces the main point of anti-grav; if your track can be driven over in an SUV or a racing car, it doesn't take the concept as far as it could. What makes a road track or rally track great will work in anti-gravity, there just tends to be a greater difference in reaction when a player gets to put their foot down."

// STAY ON TRACK

Sometimes it's the exaggerated nature of the tracks themselves that influence how ships in this type of racer should handle. This is something Carlton Gaunt, lead designer on R8 Studios' 2020 game *Pacer*, knows all too well. "Anti-gravity racing games will routinely have tracks that twist, are shaped unusually, or are inverted for long periods of time, long past the point where momentum

Though quaint by today's standards, 1995's original *WipEout* made piloting a futuristic hovercraft feel noticeably distinct to traditional racers.

would keep your ship on the track," he says. Despite *WipEout* establishing the basics of how physics should function three decades ago, there are lessons still to be learned. "We needed to find out how to make tracks that transition between, say, flat and sideways in a way that players can see and navigate. We also need to find a different way to keep the ship 'on-track' and define where the seams between being on-track and detached from the track – 'in the air' – are and how the transition is handled in a way that makes it fun.

"In an on-road racing game, players bring this understanding with them: if you're at speed and the elevation of the track drops sharply, you'll be in the air. If the track leans too far in one direction, you'll have difficulty staying on and may slide off or fall off. This is less so in anti-gravity racing; these elements are still present, but we need to work out when and where those rules apply, where they don't, and how we communicate this to the player. Once we have those rules established, we need to work out how to break them; we have sections in some tracks that force you to stay 'on-track', which need clear signposting and consistent rules for players to understand and have fun with them."

The reason why so much thought goes into nailing how these indie genre revivals control is because creatives like Gaunt and Franchi recognise just how fervent and detail-orientated anti-gravity racing fans can be. They're fans themselves, after all, and the template for the way factors like speed, boosting, and braking should be presented was forged when *WipEout* first débuted in 1995. *Pacer* pitches itself as an out-and-out anti-gravity racer like a lot of other indie successors, sure, but it maintains the emphasis on weapons and even uses it to focus on the area it's most interested in: player customisation.

"The earlier *F-Zero* and *WipEout* games were improved on by their own developers through

their sequels, [and they] did an incredible job of it," acknowledges Gaunt. "We wanted to explore an alternative which we thought was more fitting to us, given our competitive intentions for the game. It is vital in that context that the player feels like their decisions are deciding the results: that a player's strategy in customising their ship and their weapons, and the actions of everyone racing, are why each player is in their final position. Everything has to feel earned or lost through one's own action or inaction, and if players believe that a lucky Quake weapon that was saved by a player decided the outcome, that does not make for a good, competitive-feeling race."

// INVERTED EXPECTATIONS

Of course, this isn't to say that R8 Studios' way of doing things is better or worse, just that it's more in line with the team's goals for *Pacer*. Because in whatever way you look at it, just as the original *WipEout* was primarily conceived and created by ten people, the development teams being so small and the genre appealing to such a niche audience base means you always have to pick your battles, both in terms of creativity and technology. After rebranding from *Formula Fusion* to *Pacer* and eventually launching the game in 2020, for instance, R8 Studios soon closed down after not being able to muster enough sales to warrant a sequel. This is despite the team having a lot of ideas for the original left on the cutting-room floor. ➡

34BigThings is one of the biggest independent studios in Italy, headed up by CEO Valerio Di Donato.

With an anti-grav racing game, you have to work on a driving model that is basically made from scratch

FOR THE FANS

As one of the rare anti-gravity racing games to receive a sequel, *Redout 2* was quick to make changes to the formula, as per the fan feedback its team received. "We read through everything," says lead designer Giuseppe Franchi. "Steam community, Discord server, Facebook messages, Twitter comments, everything. It has been really interesting to see how perceptions shifted through time, from early adoption to discussing meta. We already knew there were some aspects of the game that we wanted to improve on, and player feedback definitely validated those impressions." Such wide access wasn't possible in the days when *WipEout* dominated.

Giuseppe Franchi serves as lead designer on the recently released *Redout 2*.

Antigraviator makes challenging your friends in competitive matches easy, thanks to four-player local split-screen.

"Ranked Mode, a skins system, statistics-driven community goals, music reactive game elements, and portal racing, to name a few," Gaunt reveals, looking back. "Ranked Mode is probably the largest feature we didn't get to complete: the designs were drawn, the visuals were made, and we had matchmaking in place that worked, but we never got to the player numbers themselves. We had committed during development to try and maintain a stable 60 fps, as we understood that would enhance the sensation of speed and how smooth the entire experience would feel. Getting that with the visuals we wanted meant that we could not increase the racer count much further."

Some *WipEout* successors, like Cybernetic Walrus' *Antigraviator*, is rooted in so much passion (as opposed to the desire to achieve commercial success) that it started out as a student project. "We knew most other students were making platform games, so we thought it would be cool to make something different,"

says CEO Mike Coeck. "Once we started looking into racing games, we quickly realised that anti-gravity racers deserved a game with newer-gen graphics." Much like the other two games discussed, the studio was adamant on retaining the cool aesthetic and design of the grav ships typically associated with the genre, but it wasn't without restrictions. "Sadly, *Antigraviator* was made on a very small budget, otherwise we could have implanted many more cool ship ideas."

// NICE BUT NICHE

This leads us to a wider question: is the anti-gravity racing genre forever destined to be relatively niche and therefore endlessly strapped by budget, or could it ever muster enough excitement and passion from a large enough pool to truly break through and be considered mainstream? Most likely, it's a case of the indies following in *WipEout*'s wake wanting to remain true to the blueprint set by Studio Liverpool, offering up appreciated tweaks without straying too far from what makes the series special. The issue is, despite going some way to educate newcomers on how the anti-gravity racing mechanics work via tutorials and the like, the learning curve for these games has always been extremely steep. Reaching the point where you can blister around corners and down straights at speed without bumping the sides is part of the charm and takes time, but is core to the sub-genre's identity.

"On the whole, though, racing games are niche, and anti-gravity is a further niche of that niche. Outside of *Mario Kart*, *Need for Speed*, and *Gran Turismo*, most other racing game franchises just aren't as well-known or well-sold," says Gaunt. He suggests this needn't necessarily be a bad thing, though. "It allows indie studios to move in and create within an established genre with good reference titles and a fan base in place that want more – this combination is a rare opportunity to create with some mitigation of risk. This means that the genre will be experimented with more and we will see more unusual ideas and concepts implemented."

The lack of sales is something that Valerio Di Donato, 34BigThings CEO and executive producer on *Redout 2*, also acknowledges as a reason why the genre isn't more widely recognised and celebrated. "Anti-gravity racing is a very niche genre, full of real hardcore and

passionate players," he says. "But niche also means low sales numbers, and it's hard to justify something to big corporations [where the potential for] profit comes with a high financial risk." Coeck goes one step further, suggesting that the game's small fan base may be precisely why the *WipEout* and *F-Zero* franchises are nowhere to be seen: "I guess [it's] a big risk to make it a big-budget title for the likes of Nintendo or Sony." Is the remedy as simple as giving developers more money? "As with any game, if handled properly, it could break out into the mainstream," Coeck continues. "But I feel it will need a good-sized budget to do so."

// TO THE FUTURE

By and large, the creators behind *Redout 2*, *Pacer*, and *Antigraviator* concur that the racing games they enjoy making are (mostly) forever destined to appeal to a small, but undoubtedly passionate audience – and going in, they know that. The fact that all three teams are committed to continuing *WipEout*'s legacy despite this sentiment, then, only makes each of their contributions to the anti-gravity racing genre even more impressive, and the result of true collective passion.

It's not lost on them just how much responsibility comes with evoking a series that

means so much to a lot of people, whether that's through super-sleek and futuristic grav ship designs, easy-to-learn but hard-to-master flight controls, or an ever-pulsating techno soundtrack. "Anti-gravity racers have been a hugely successful and loved genre for many generations now, so filling the void left by the franchises that gave birth to it has been a massive challenge for the team," says *Redout* producer Filippo Gabello. "The first *Redout* has been very well received over the years and it cultivated a passionate community that allowed us to feel more comfortable with *Redout 2*."

And regardless of whether *WipEout* or *F-Zero* return and attempt to reclaim the crown for a sub-genre they helped create, it's clear that indie developers – as fans first and foremost themselves – are happy to give back to the genre and audience that gave them so much. "Being able to create in the anti-gravity racing space meant a lot to me personally," sums up Gaunt. "I played a lot of *F-Zero*, *WipEout*, *Rollcage*, and *Extreme-G*, to name a few, when I was growing up. Working on *Pacer* allowed me to understand better why I loved those games, what made them work, what made them fun, to create something in the same space, and then share that creation with others. I am proud of the team we had and the game we made." Ⓦ

Anti-gravity racers deserved a game with newer-gen graphics
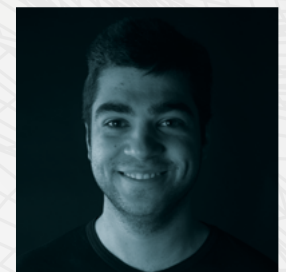
▲ **Producer Filippo Gabello** describes *Redout 2*'s driving system as requiring "practice, skill, and attention.

Behaving like a dick: a condensed video game history

KIM JUSTICE

Kim Justice is a YouTuber, streamer, and writer who specialises in the world of retrogaming. If she isn't making lengthy documentary videos about old games and companies, she's probably chatting and mouthing off about them live to a dedicated handful of people.

They're rare, but games where you can behave like a dick should be treasured. Now, being a dick in a video game is quite a specific thing – it's not the typical murderous rampage you might find in a *GTA*, or the evil path in an RPG, it's more something you can find in gameplay. It's making someone's lunch explode in the microwave in *Half-Life*, getting drunk and breaking things in *Grand Theft Auto IV*, throwing everything at NPCs in *Deus Ex*, or basically the whole point of playing *The Sims*.

The list of great 'being a dick' games is quite unique – it may include full-blown classics, but it also includes *Minority Report* for the PS2, where nearly all the fun comes from being a total prat. No, you haven't got into a massive car chase with a four-star wanted level, but you have slightly irritated one of your colleagues, and doing this is inherently funny.

Back in the days of the microcomputers, we had an early pioneer in this field: a game called *How to Be A Complete Bastard*, based on the book by Adrian Edmondson, where you were somehow invited to a party and the whole point was to cause mayhem and earn 'bastard' points. Scatter people's belongings around like autumn leaves, quaff down lots of curry (but not *too* much) and then unleash a rip-roaring fart to clear a room, put itching powder down the pants of an unsuspecting guest, open an umbrella in the house and turn into a cooker... the possibilities were endless. The game itself was something of a mess and its existence was baffling, but this little sandbox of horrors was a lot of fun to mess around with for a little while. Bonus points for including a computer in the party house that, if you pushed the reset button on it, would actually reset your computer instead... now *you're* the one who's been pranked!

Even a ridiculously odd computer game like this one has a modern equivalent, of course – *Untitled Goose Game*, the Aussie indie title from House House where the whole point is to be a goose and make the lives of various village denizens an abject misery for no apparent reason, honking and flapping as you instigate neighbourly disputes, steal a boy's spectacles and knock him into a puddle, cause old men to fall flat on their backsides, and lots else besides.

It's the successor to *How To Be A Complete Bastard* that certain people had been waiting three decades for, and one can only hope that the love for the game makes more designers include the option to just be a bit of a dick every now and again, simply for the sake of doing so. And not just games where that's the whole point, either – being a dick needs to return to the triple-A sphere immediately, and remain there forever. We'll have a lot more fun that way. ⓦ

▲ When you chase a terrified child into a phone box in *Untitled Goose Game*, it brings a smile to your face as you realise that a small portion of gaming paradise has been regained.

GAME
The Knight Witch

DEVELOPER
Super Awesome
Hyper Dimensional
Mega Team

RELEASE
2022

WEBSITE
supermegateam.com

The Knight Witch

Aside from the mesmerising patterns of bullets flying around all over the place, it's *The Knight Witch*'s vibrant artwork that immediately catches the eye. "I wanted to do something in the vein of *Steven Universe* or *The Owl House* – Cartoon Network shows, something like that," explains art director Enrique Corts. "The 'CalArts style', it's called – very simple lines, and kind of a mix between Japanese and western art styles. I think it's very approachable for people... also, I'm only one artist making the game art, so I had to do something simple."

As Corts points out, though, *The Knight Witch*'s underground city is packed with detail: he and his team have worked hard to ensure there's plenty of variety in the environments, even if it has meant a lot of extra work. "The backgrounds are very detailed – we have two people working on the background art," Corts says. "I wanted to have the city in the game [as] something fun to explore, and not made out of tiles that eventually repeat all over. I wanted to make every room look as interesting as we could. We could have gone even crazier if we'd had the time, but I hope we've actually achieved [what we set out to do], and made exploring the city really [enjoyable]."

Escaping the night trap

The British studios and
filmmakers using homegrown
tech and talent to reinvent
full-motion video games

WRITTEN BY
JON BAILES

Live-action games have only recently begun to escape the taint of history. Whether you remember the 1990s or not, you probably know about the CD-ROM boom and its glut of grainy, schlocky 'Full Motion Video' (FMV) experiences – something now viewed as an awkward phase in gaming's teenage development. And this reputation is far from undeserved, since many such 'interactive movies' barely passed muster on either side of that equation. It would surprise no one to discover them sealed off in a box marked 'evolutionary dead end'.

Nothing stays in its box forever, though, and in the last decade, game designers have successfully rethought the value of live action. Sam Barlow's 2015 classic *Her Story* was undoubtedly the flag-bearer for the resurgence, while its highest profile boost was Netflix's *Black Mirror: Bandersnatch* in 2018, a nostalgic meta-piece about a character who starts to suspect someone is making decisions on his behalf. Crucially, rather than simply revive the past, these titles reimagined FMV with diverse structures or subject matter.

Now, more studios and filmmakers are looking to explore the fresh potential of interactive film, and live action is enjoying a quiet renaissance. Look closer, though, and you might notice something else. While nineties FMV games largely emerged from Hollywood, many modern productions, including *Her Story* and

^ Richard Pring differentiates in Wales Interactive's
library between choice based 'film-games' and
'game-films' like *The Bunker*, which include more
exploration and recognisable game mechanics.

Bandersnatch, are British. The UK is spearheading the full motion revolution, taking live action in fascinating directions.

ENTER THE DRAGON

One name that's become synonymous with this new wave is Wales Interactive, a developer and publisher which boasts a larger catalogue of interactive films than most. That wasn't the aim, however, when industry veterans David "Dai" Banner and Richard Pring founded the company in 2012. Only when they met some filmmakers looking for a publisher for their interactive movie, *The Bunker*, did the pieces click into place. "Me and Rich thought it was really interesting," Banner says, "and we made lots of narrative games anyway, so we thought we could bang heads." It helped that they'd already considered the possibility of revisiting live action themselves. "We'd noticed that there's a really good TV and film industry in Wales," Pring says. "We were wondering why there weren't more of these [games], so when we met *The Bunker* guys, it was a match made in heaven."

Since publishing *The Bunker*, a post-apocalyptic tale about the last survivor in its titular location, Wales Interactive has gone on to release over a dozen live-action games, including virus outbreak drama *The Complex*, an adaptation of the adventure book, *Deathtrap Dungeon*, and crime comedy *Who Pressed Mute on Uncle Marcus?* Yet despite the breadth and success of these titles, the legacy of the 1990s can be hard to overcome. "When we've toured around the world during this rebirth of FMV," Banner says, "[the genre] has been looked on as a bit campy." ➡
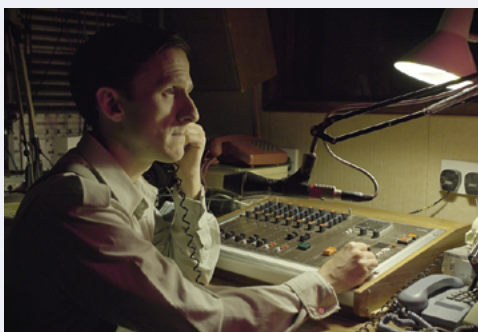
CLASS OF '22

2022 is proving to be a bumper year for live-action games, showing off their increasing range. From Britain, you might try *Not For Broadcast*, a satire about broadcast news, *The Gallery*, from Paul Raschid, who directed *The Complex* and *Five Dates*, and *It's on You*, which explores London's knife crime epidemic. Or, look further afield and you'll find a trio of very different detective dramas: *Underdog Detective* (China), *The Centennial Case* (Japan), and *Agarta* (Turkey). Most recently was Sam Barlow's latest production, *Immortality*, distributed not just through traditional digital avenues, but Netflix too.

⌃ If the motto of storytelling in movies is "show, don't tell," Jack Attridge says, in TouchVideo it's "Play, don't say".

SURE SHOT

One attractive prospect live-action game production offers British filmmakers is that it's a more straightforward process than seeing a movie through to fruition. "The British film industry is in a perpetual state of struggle in terms of homegrown films," says Steven Sheil. "It's really difficult to get funding to get your film made." In comparison, *Who Pressed Mute on Uncle Marcus?* was easy to see through. "It was a really quick turnaround, in terms of developing, shooting, and getting it out there," Sheil explains. "Much quicker than the previous films that I've made."

Crucially, though, Pring believes that the form is still in its infancy, developing its language like the early days of film, so it has plenty of scope to make a new name for itself. To help it along, Banner and Pring are trying to elevate the production values of their products, combining their game-making know-how with that of talented filmmakers. "There just weren't enough [third parties] making interactive movies," Pring says, "so we had to start making them ourselves." They often work with production company Good Gate Media, which takes care of hiring and executing the shoot. By now, they have a smooth pipeline established, with a proprietary tech called 'WIST' that, Pring says, "allows directors from different backgrounds to create interactive movies much more easily".

As for the games, most still focus on branching storylines led by occasional player choices. The more Wales Interactive has made, however, the more it has started to apply its formula to a wider range of cinematic genres. "If you'd asked us four or five years ago whether we would publish an interactive romcom," Pring says, "we would have probably said, 'I don't think that's necessarily the best thing in games'." But then they made the popular *Five Dates*, a game about online video dating during lockdown, which arguably suits Wales Interactive's style better than the more typical horror stories and mystery thrillers.

> **"I'm not going to have any floating words or glowy doors"**
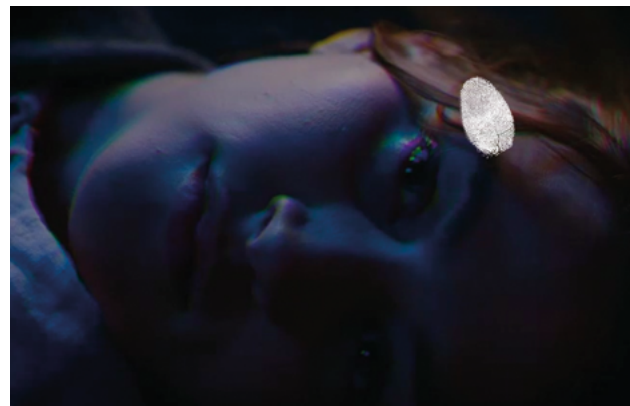
Meanwhile, in London, an alternative line of thinking has emerged from Flavourworks, a studio reappraising how players interface with filmed scenes and actors. Co-founder and creative director, Jack Attridge, set up the company in 2015, having previously worked as an audio and game designer. Flavourworks released its first title, the action thriller *Erica*, in 2019. "I wanted to do something I felt was being underserved," Attridge says. "We felt at the time no one was really thinking about live action and games much."

One of the benefits of film, he believes, is that it provides a much more natural language to engage with than traditional game genres. Games often force us to see the world from a wide view, Attridge explains, looking at the back of a character's head. Whereas in movies, "we're used to looking at the nuance on the front of people's faces," he says. "So I saw some interesting opportunities there in terms of where the focus is."

The stand-out feature in *Erica* is its touchscreen (or PS4 touchpad) controls, which has you make dozens of minor physical interventions into the story alongside textual choices. In the opening scene, for example, you flick open and ignite a Zippo lighter, then place the needle of a record player on the vinyl, with the filmed results streaming seamlessly from your input. Attridge was always intent on differentiating his work from the "ropey" reputation of FMV games, and was clear he never wanted to make "a movie where you click some buttons on top of the screen," he says. "That, for me, feels like playing a DVD menu. I want to interact with the world itself."

For Attridge, Flavourworks' 'TouchVideo' technology is thus the key to moving live-action gaming closer to a cinematic experience. He cites a scene in *Django Unchained* as an example of what he wants to achieve, where the camera closes in on Django's hand slowly pulling his gun from its

⌄ With lockdown over, Wales Interactive has filmed a sequel to *Five Dates* called *10 Dates*, which will focus on face-to-face encounters.

Steven Sheil had no background knowledge of 1990s FMV, and approached the *Uncle Marcus* project with a fresh perspective.

holster as he tries to repress his anger and resist opening fire. "I don't know of a game where the focus is on whether I pull a gun out of my holster and how fast I pull it," he says. "If this [scene] was a game, you'd just point at who you were going to shoot and hold the trigger down." Games are geared towards external conflicts, he feels, and he's more concerned with the internal ones.

Certainly, there are signs of deeper connections in *Erica*, where you tap and drag to perform everyday and plot-changing movements, and Attridge is now building on these foundations. The studio's second game is *Hush*, an anthology of short stories set over a single night. The first episode, *Crane*, was released earlier this year and offers a compact ten-minute experience in which you play a hit-man torn between allegiance to his employers and his mysterious lover. Featuring a range of wildly different endings, depending on your choices you may stumble into a surprisingly tense shoot-out sequence, or find yourself carefully trying to disarm your gun during an intimate moment. "The important thing is that you're interacting what feels like every 10, 15, 20 seconds," Attridge says, "and you're pushing the story forward."

As the likes of Flavourworks and Wales Interactive provide the tech and design chops for live-action games, however, that still leaves the filming itself, and these new productions are attracting a stream of filmmakers into the games industry. One of these is horror aficionado Jed Shepherd, the writer of cult hit lockdown chiller *Host*, and now director of soon-to-be-released interactive experience, *Ghosts*. His philosophy echoes Attridge's: Shepherd wants to create a more organically cinematic experience. "I'm not going to have any floating words or glowing doors," he says, "There's none of that stuff."

Yet while *Ghosts* is the vision of a filmmaker rather than a game designer, it's inspired in part by Shepherd's interest in games, particularly his experience with FMV 'classic' *Night Trap*. His initial thought process, he explains, was "*Night Trap*, but better-written, [with] more to do, and cinematic instead of looking like it was made for 50p."

By coincidence, he was soon contacted by Visible Games, who were interested in working with him. The timing was perfect, and the concept solidified from there.

Ghosts sees you play the producer of a live ghost-hunting TV show, Shepherd explains, sitting in an outside broadcast van in front of a panel of "about 15 different screens". It's your job to direct five hunters exploring a supposedly haunted house, and decide which cameras to screen. The biggest twist, however, and likely most divisive, is that *Ghosts* can only be played at 10pm in your local time zone, as if it really were a live TV broadcast. Leaving your station once you start will see everyone die. "I wanted to bring back some of that group feeling," Shepherd says, "like when you used to watch something on TV when there were only four channels." ➤

Some actors are becoming experienced interactive movie performers after appearing in a number of Wales Interactive's games.
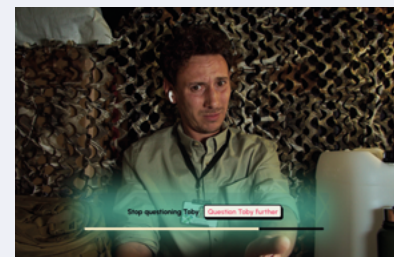
▲ While TouchVideo is all about manipulating the physical world, there are sometimes also textual cues and dialogue choices.

Ghosts is a complex passion project, then. Even for someone versed in movie production, filming a non-linear story is a new experience in many ways. On one hand, Shepherd explains, the long editing process of a conventional film was reduced because here players effectively create the edit as they go along. But on the flip side, so much more footage is required. "This is like doing at least ten separate films," he says, "and criss-crossing [them] with each other."

It's also an uphill struggle to build tension when you're ceding control to the player, but Shepherd adapted by shifting the pieces around, front-loading the game with exposition and breadcrumbs, to create room for ideas that ferment in the player's mind. "The sense of doom you get from that is palpable," he says.

Another director who can empathise with some of these hurdles is Steven Sheil, who cut his live-action teeth with Wales Interactive's *Who Pressed Mute on Uncle Marcus?* This amateur detective farce spans the course of a dysfunctional family's Zoom chat, with players trying to figure out which relative has poisoned said uncle. For Sheil, who has a background in horror and crime films, there are of course plenty of transferable skills, but "also a whole new load of things you need to learn".

It didn't help that the shoot took place during lockdown, so he couldn't meet the actors in person and had to talk them through the process of setting up their own equipment, props, and costumes. "While that was exciting," Sheil says, "I wouldn't want to have to do it again." But filming a branching narrative was a challenge in itself, he adds, due to a huge script and multiple plot threads that have to be juggled all at once. Sheil would explain to actors where their characters are in one scene, he says, "and then the next thing we do is the alternate version, where the thing that just happened didn't happen".

The experience was still a positive one, however, in part thanks to the expertise that Good Gate and Wales Interactive now bring to making these games, and Sheil is keen to dive back into gaming in the future. "Having been through that process, I'd like to look at how you can do different genres," he says. "I think there's something really interesting about how FMV works with time and parallel paths. There are a lot of opportunities there to explore it."

ACCESS ALL AREAS
Indeed, now that live-action gaming is finding its feet, the topic of future potential is a hot one for all these game designers and filmmakers. True, the form currently remains quite niche, and hasn't fully shed its gimmicky reputation, but there's enough happening in Britain alone to suggest this is far from another phase, and will attract and surprise more people in the coming years.

The one bit of potential all our interviewees agree on, in fact, is that live action is perfectly suited to widely appealing, highly accessible games. "The demographic for interactive movies is actually humongous," Pring says. He feels it's important that Wales Interactive's output runs on all kinds of devices and doesn't require huge time

▲ Shepherd says that the horror in *Ghosts* is "very British at heart" and references the 1992 BBC show *Ghostwatch* as an influence.

investment. Sheil adds that today's online culture of sharing theories about TV shows and films feeds into the decision-making processes of interactive movies. "People are used to that mode of thinking," he says. "We're playing into that mindset."

This communicative factor is thus central to Wales Interactive's plans. "Most people watch our films four or five times," Banner says, "and they'll bring in friends or partners to play." That group dynamic has spread online to Twitch, turning film viewing into a mass collaborative activity rather than a passive one. "People like to watch them with an audience, to hold on the decision, discuss what's happening," Banner says. The goal then is to facilitate and improve these forms of participation further, and Wales Interactive has already conducted tests on Twitch and Mixer in which people vote on in-game decisions.

Shepherd similarly sees interactive movies as a means of introducing people to both film and games. "I don't want [*Ghosts*] just to be for horror fans," he says. "Like with *Host*, people have said to us that they don't usually watch horror, but they loved it. I want this game to be either a gateway into horror or a gateway into video games." And for a filmmaker like Shepherd, crossing over into the comparatively gigantic games industry simply makes sense. "I'm in this to tell stories," he says. "Games will make my stories reach a wider audience."

It's no shock then that Shepherd is keen to continue with games as well as film, and even plans to start his own game company. He also believes that the engine and tools created for *Ghosts* are highly reusable. "The most valuable thing about this entire [project]," Shepherd says, "is that we've created an architecture that other people can build FMV games on."

Attridge is also an accessibility evangelist, highlighting how attractive live-action experiences can be to non-players, because no expensive gaming equipment is required. "We've all got incredible machines in our pockets," he says. "We think touchscreens are the most beautiful interface we have." But this doesn't mean home consoles still can't attract new players. "We found *Erica* has fantastic back-seat gaming appeal," he says. "A lot of people tell us it's the first game they've ever played and finished."

With that in mind, Attridge is focused on the storytelling versatility of TouchVideo. The *Hush* anthology, for example, allows players to make plot-changing decisions constantly. "The first ten minutes of a branching game is usually the most branching out," Attridge says. Conversely, he describes his next project as very linear, aiming to create empathy with the story through interaction, suggesting that the same touch mechanics can enhance a wealth of genres and styles.

"The demographic for interactive movies is actually humongous"

Attridge doesn't believe the value of TouchVideo stops there, however. Currently, Flavourworks is experimenting with integrating 3D graphics and creating party games, believing there are wider applications on the horizon, perhaps on social media platforms such as TikTok. "We see TouchVideo as a third category between film and games," summarises Attridge. "As we improve the toolset, we might see future influencers creating incredible content with these tools in ways that we would have never imagined." Ⓦ

CAUGHT IN A TRAP

While other studios want to distance their work from memories of 1990s FMV, Shepherd is keen to give it another chance. "Those FMV games are almost universally derided and hated to this day," he says, "but I always like an underdog story." He familiarised himself with the likes of *Double Switch* and *Night Trap* during lockdown, and was surprised by the latter given its controversial reputation for violence and nudity. "It's incredibly tame," he says. Still, it has some interesting qualities, he believes. "It's not the greatest game in the world, but I am a little bit obsessed with it."
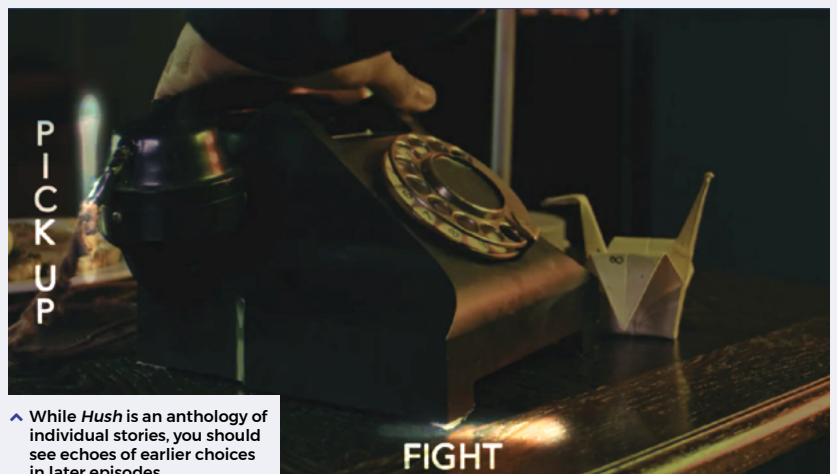
▲ While *Hush* is an anthology of individual stories, you should see echoes of earlier choices in later episodes.

Toolbox
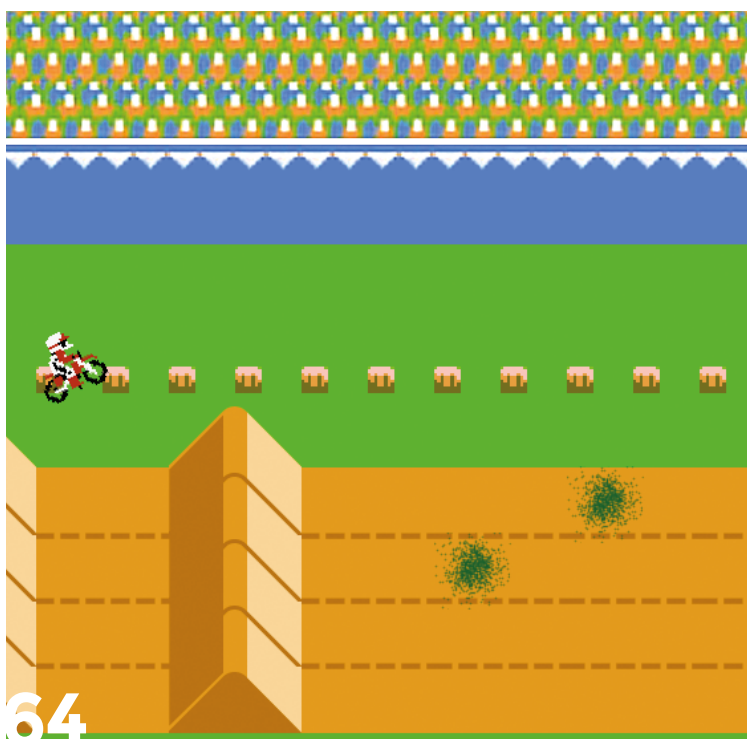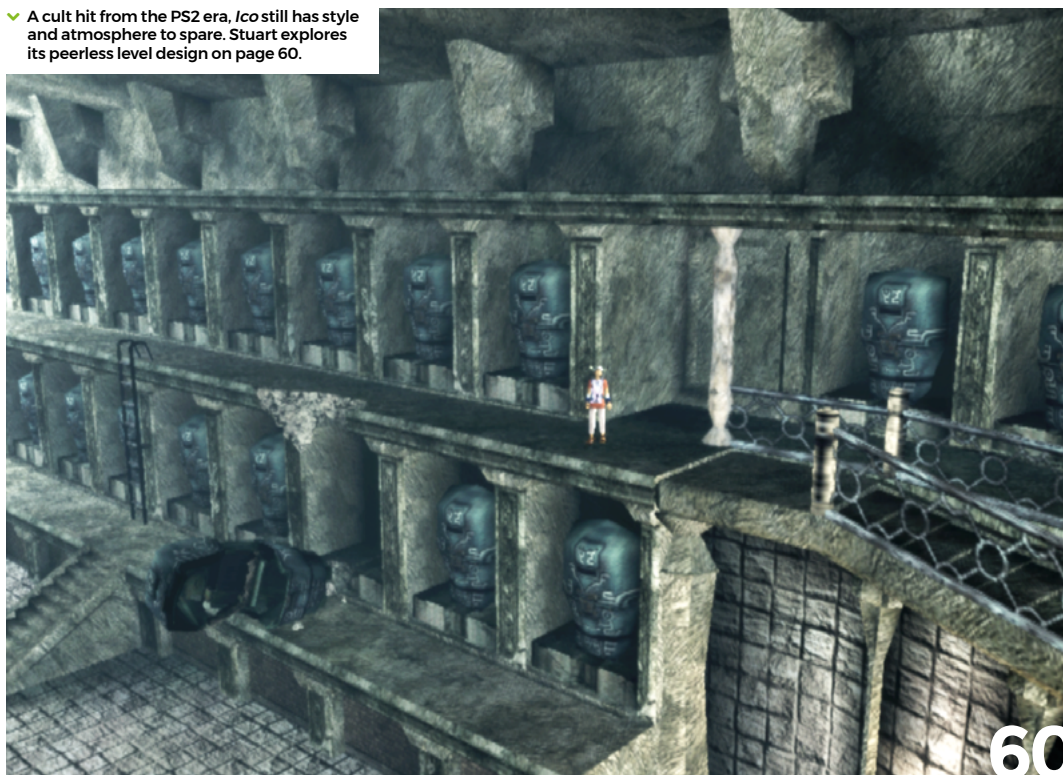
The art, theory, and production of video games

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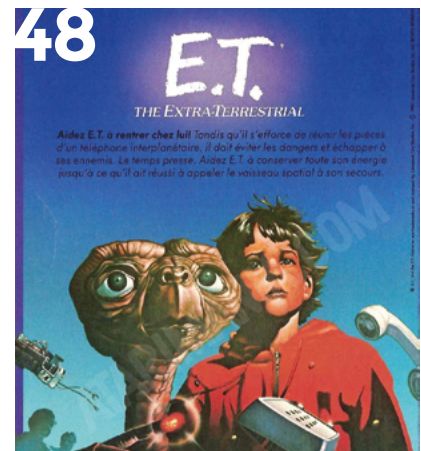
It's 40 years – or about 2000 weeks – since the release of E.T. Howard looks back on page 46.

Get a fully animated character scuttling around a 3D world with our Unity project on page 56.

56

A cult hit from the PS2 era, *Ico* still has style and atmosphere to spare. Stuart explores its peerless level design on page 60.

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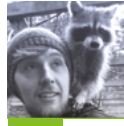
Follow our step-by-step guide and get a racing game up and running in Unreal Engine. See page 50.

You only need a few lines of code to make a side-scrolling motocross racer. See page 64.

The curious mind of the Stray

As a character, and especially as a protagonist, Stray's cat is a weird and thought-provoking case, well worth a deeper look

AUTHOR
ANTONY DE FAULT

Antony is Wireframe's writing and narrative design columnist. He's also a video game storyteller currently at FISHLABS, and you can find his work on **default.games** or **@antony_de_fault** on Twitter.

It's no exaggeration to say that the player avatar in *Stray*, who so fully embodies cat-ness through animation, sound, texture, and game feel, is far beyond any other digital feline we've experienced before. I loved playing her role, and her uniqueness highlights some key narrative design topics. Let's dig into that.

First, there's the issue of how much the cat understands, with the game seeming hazy on whether the cat comprehends the world around her. Many puzzle solutions require the cat to have understood the complex causal relationships between buttons, levers, and electrical equipment, without the affordance of the little robot friend B-12 goading her with a laser pointer or something similar. Several sequences show the cat seemingly understanding what batteries do, comprehending language, and the game strongly implies that the cat understands her own journey to open the sealed city to the Outside. At the same time, the cat is just a cat. It breaks things, wastes time, scratches random furniture, and freaks out when you put a harness on it. I can only imagine the stresses the designers had over the cat's level of cognition, and the result in-game is uncannily uneven at times. The cat is an extreme example, but this isn't a novel problem. Narrative designers must always be thinking about what's in the mind of the player and the mind of their character at any given point, and we work to make sure the difference between those minds is not unintentionally jarring. A tall order in *Stray*, a little imperfectly met.

ANGEL FACE

Second, as a protagonist, she doesn't seem to change or grow, but in this case, this is not a criticism. The cat is a special type of protagonist known as a 'travelling angel', or 'supporting protagonist', but which I prefer to call a redemption angel. A redemption angel is a protagonist who is not truly the story's core, in that they don't experience change themselves; instead, their presence inspires or enables growth in others. In *The Shawshank Redemption* and *Mad Max: Fury Road*, neither Tim Robbins' Andy nor Tom Hardy's Max really change, but they do inspire and enable great redemptive change in Morgan Freeman's Red and Charlize Theron's Furiosa. In films and TV this is somewhat uncommon, but in games this trope collides with

▼ Look deep into those eyes, and ask yourself: does she know that bringing Momo his friends' journals will get him to help unlock a door?

that of the Silent Protagonist and the Game-as-Morality-Fantasy and is therefore more frequent. Classic examples are: Gordon Freeman's redemption of Alyx in Half-Life 2, the player's effect on quest-givers in Bethesda's *The Elder Scrolls* and *Fallout* entries, and all of *Mass Effect*'s companion quests. In *Stray*, the majority of story, change, and expression is contained in its B-plot, about B-12 and the last human scientist, and its C-plot, about robot companions Momo, Clementine, and the Outsiders. The cat either inspires them to action through presence or determination, or enables their change by being in the right place at the right time to get them past a hurdle.

On the other hand, the cat's story *could* (and there should be *lots* of stress on 'could') be interpreted as a cat-specific coming-of-age tale. After all, the titular cat does *look* adolescent, but anyone who's watched documentaries on wild felines, such as the fantastic Attenborough offering *Dynasties*, will know that young cats follow what is, to us, quite a sad pattern. With the sole exception of lions, cats naturally grow to be incredibly solitary creatures. When kittens or cubs are born, they are dependent on the mother for a period ranging from several months to a couple of years, and once this is over, the family unit will split forever. Often, the mother leaves first, and the litter will slowly whittle down for a few weeks or months, splitting off one at a time until all are alone. Accepting aloneness is simply what it means for a wild cat to grow up.

Stray begins with a group of four adolescent-looking cats. They seem to be in a place of safety, but sooner or later, they will have to venture out

into the world. First, one headstrong individual leaves, and then the others follow. Again, this is very much like the behaviour of a real litter soon after the mother's abandonment, and our cats are also still vocal, something the majority of wild cats lose in adulthood. Our cat, however, takes a tumble and is lost to the bowels of a great 'sealed' city before she can leave her siblings willingly, and we human players imply that our goal is to reunite with the group somehow. But the game, from that point on, is one of repeatedly leaving characters behind; Momo cannot follow us into the sewers, Clementine can't join us on the train, and B-12, the game's most prominent speaking character, cannot accompany us Outside. In a moment that *might* show growth, one could argue that when the cat exits the city she is *choosing* to leave B-12; theoretically, if the cat's as smart as it appears to be in certain sections of the game, it could have tried to return B-12 to the city for repair (or, it could simply be accepting the robot's fate). But either way, the cat leaves, and the final shot shows her exiting the city alone. We humans will tell ourselves, 'Oh, she's off to find the others, I'm sure', but if this is a coming-of-age tale for our cat, then the ending is not so saccharine, and rather more profound. The cat has, perhaps, grown out of attachment entirely, as she was destined to eventually, regardless.

In a world full of weird and wonderful characters to play as, *Stray* might be one of the only games to not anthropomorphise the player avatar, to tell a story not intuitive to us humans. Again, a tall order imperfectly met, but a damn respectable thing nevertheless. Ⓦ

> **"Accepting loneliness is simply what it means for a wild cat to grow up"**

> ⌃ During the smoothest part of the narrative experience, B-12 manipulates the features of the city to highlight the way forward.

THIS WAY, PLEASE

Further compounding this issue of how much the cat understands, the game actually provides a pretty good solution during the early 'Dead City' section. Your eventual companion, B-12, guides you wordlessly towards its resting place by manipulating the lights, screens, and security cameras on the way to 'lure' the cat naturally towards itself. This is just subconscious enough that the cat can do it without causing cognitive dissonance in the player: it's easily conceivable that the cat's understanding is very limited.

The principles
of game design

What significance does the number 2000 have
for Atari and E.T.? Howard explains all

AUTHOR
HOWARD SCOTT WARSHAW

Howard is a video game pioneer who authored several of Atari's most
famous and infamous titles. His book, *Once Upon Atari: How I Made
History by Killing an Industry*, is out now. **onceuponatari.com**

T wo thousand weeks ago, I was making
games at Atari. This is significant
because 2K was a big number at
Atari. The original 2600 games had
to fit in 2048 bytes of ROM and 128
bytes of RAM. Squeezing an entire game into
that little space? Good Lord, that was painful!
Which reminds me…

I was in Jerusalem a while ago, and even though
I'd never been there before, the whole scene
was eerily familiar to me. The intriguing thing
about Jerusalem is that everywhere you look,
you're struck by the contrast between the old
and the new, not unlike working in video games.
And if you consider the old temple industry,
well, it was booming for a while, then there was
the great crash, and then it was rebuilt and
resurrected, not unlike the beginning of the video
game industry. Then when you consider Jews,
Muslims, and Christians, you've got three major
factions competing for market share. Then I think
about Sony, Microsoft, and Nintendo… as I said,
it's just eerie.

Now consider that 2K years ago, it was
Assyrians, Babylonians, and Egyptians. It seems
like there have always been three factions
competing for market share in Jerusalem, just like
2K weeks ago there was Atari, Coleco, and Mattel
slugging it out. Astoundingly, none of the tour
guides mentioned this remarkable parallel.

It was also 2K weeks ago that I made another
great pilgrimage east, only not quite so far.
That time I went to London. It was December
1982. I was there for the première of the movie
E.T. and the debut of the (not yet, but soon to
be ignominious) *E.T.* video game. This was the
first movie première I'd ever attended, and it
was very cool. I even got to ride to the theatre
in a limo with my cohorts. We pulled right up to
the theatre. Under a canopy, the red carpet and
velvet ropes beckoned. I responded, traversing
the gauntlet of waiting photographers and
onlookers. It was a resplendent moment indeed.
As I walked up the carpet, I could hear voices

▽ **London: one of Howard's
favourite tourist
destinations. Not pictured:
Howard's smoking jacket.**

E.T.: The Extra-Terrestrial **was one of the most beloved films of the 1980s. The video game? Not quite so much...**

saying, 'Who is that?' and, 'He doesn't look like anybody'. It was a unique and amusing moment, basking in anonymity.

Once inside, we were escorted to our seats. The theatre was lavish and grand; spectacularly appointed. The seats were so comfortable it was all I could do to keep my jet-lagged eyes open. After a little while, I gazed all around to take in the rest of the audience and the ornate details of the room. As I did, I noticed Steven Spielberg sitting three rows directly behind me with his two friends, Prince Charles and Lady Di. I remember thinking to myself, 'There they are. They look just like themselves'. I'm glad I didn't say it out loud. It was an amazing highlight during a magical trip.

Though I came to England as an emissary of Atari, I did find time to visit Harrods of London for my own part. There I managed to acquire a lovely silk smoking jacket which I still have, although I'm afraid it seems to have shrunk quite a bit. It used to afford me a good deal more room for inhaling. I also spent time at Windsor Castle where I had a very special moment with one of the guards.

I was standing behind the line that says '*Do not cross this line*', some 25 feet from a guard standing ramrod straight at his post, gun at his side. I called out to him, and, in proper fashion, he totally ignored me. Then I said to him, 'Look, I'd really like a picture of me standing next to you. If I run over there for a moment while my friend takes the picture, will you shoot me?' He stood

"If I run over there while my friend takes a picture, will you shoot me?"

perfectly still for a moment as if he hadn't even heard me. Then, with the faintest of gestures, he crooked one finger a couple of times, indicating I should do it and do it quickly, which I did. He was a fabulous guard and I hope he never changes. (And in case you are wondering – no, he didn't shoot me.)

That trip to England was one of the highlights of my life. I must confess to being something of an Anglophile in the first place, and a trip like this didn't do much to change that. I've been to England a few times since, but there's nothing quite like your first time. Still, each visit only serves to reaffirm my affection for Great Britain and for great Brits (I particularly enjoy the pubs). Consequently, I'm not only pleased and honoured, but right chuffed as well to be writing for an English publication now.

I do enjoy writing. In fact, 2K days ago I was writing my book, *Once Upon Atari...*, which is a compendium of my experiences 2K weeks ago. This column, however, is a very different animal indeed. It always has a train of thought, and it definitely has a schedule, but I'm not always sure about the destination until I get there. This time, I guess it's about insights and moments. I'm fortunate to have had many, and I'm excited to be sharing more of those with you in the months ahead.

Why am I so excited about this? I can think of thousands of reasons... 2K, to be exact. Cheers. Ⓦ

GAME'S AFOOT

While in Israel, I had the chance to visit a dear friend of mine. When his children heard I was coming, all they wanted to know was if I had any games for them. Video games are huge in Israel. My friend's wife used to be a tremendous *Yars' Revenge* fan back in the day. In fact, she told me she'd become so good at the game that she started playing it with her feet just to increase the challenge. One time, while they were visiting me in California, I set up the VCS and she gave me a demonstration. She placed the controller on the floor and used her right foot to move the controller and her left foot for button hits. I thought I'd seen everything about *Yars' Revenge*, but I was mistaken.

Sure, you may be good at *Yars' Revenge*... **but can you play it with your feet?**
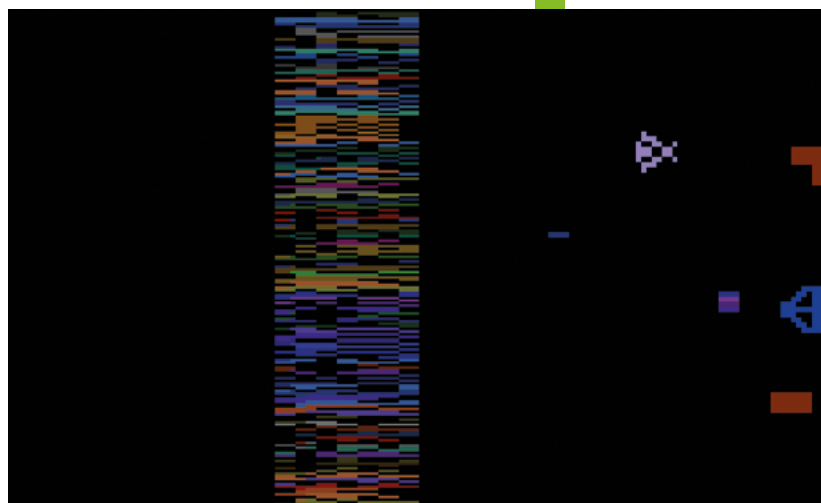
Make a multiplayer racer in Unreal Engine 5

Getting a networked, multiplayer racing game up and running is easier than you think. Ryan shows you how

AUTHOR
RYAN SHAH

An avid developer at The Multiplayer Group with a strong passion for education, Ryan Shah moonlights as KITATUS – an education content creator for all things game development.

Contrary to popular belief, there isn't an Add Multiplayer button in game development, and especially not in Unreal Engine. This doesn't mean it's impossible, though, and in this guide, we'll prove this by remixing UE5's Vehicle example content by adding features and including multiplayer functionality. By the end, we should have a playable race for two or more networked players.

To begin, create a new Unreal Engine 5 project selecting the Vehicle template instead of the usual Blank template. With the new project loaded, we need to do a quick bug fix to ensure we can drive our car and we won't face any nasty errors. This is because some plugins required by the Vehicle example aren't turned on by default.

Head to Edit > Plugins and ensure the ChaosCaching and ChaosVehiclesPlugin plugins are enabled. If you had to make a change, reset your editor to ensure they're enabled (**Figure 1**).

With the project correctly set up, we can focus on our first task: spawning other cars for our players. The GameMode class in Unreal Engine has a built-in event that triggers when a player has connected. As the GameMode only exists on the server, we can use this event to spawn a car for every player that joins the match.

Head into the already existing GameMode (located at Content > VehicleTemplate > Blueprints; it's named VehicleAdvGameMode) and within the full Blueprint Editor, right-click in empty space and find the OnPostLogin event. Click it to spawn the event.

We'll add code to spawn a player shortly, but for now, we have to figure out where we want those players to spawn. One way we can do this is by having a limited number of spawn spots on the map and 'removing' them when one's used – this ensures that a player isn't spawned on top of another. Let's head into the level included with the Vehicle template (VehicleAdvExampleMap located at Content >

Figure 1: You can use the search field to find all of the Chaos plugins instead of having to hunt through the side menus.
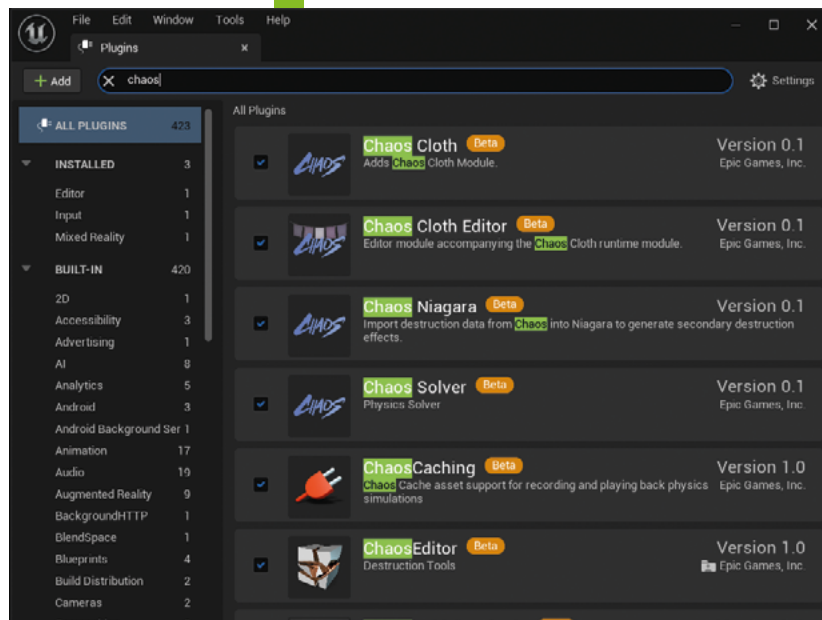
VehicleTemplate > Maps). Inside the level, find the PlayerStart, either by looking in the level or using the search in the Outliner. Click the PlayerStart and make sure the Scale is set to 1.0 on all axes (by default, it's at 0.5 on the Z axis – we don't want squashed cars).

With the correct scale set for the PlayerStart, click it and duplicate it twice, placing one to the left and one to the right (**Figure 2**).

Now we can head back to the GameMode to use these PlayerStarts. First, we want to make sure no car is spawned at the start so we can handle the spawning ourselves. To do this, simply press the Class Defaults button at the top of the window and ensure Default Pawn Class is set to None.

With our Default Pawn Class nulled out, we now have the power to control who spawns as what and where! Let's prep the answer to the Where question by telling our GameMode at the start of the game to save those PlayerStart positions, so that they can be referenced during the spawn process.

Create an Event Begin Play node and connect up a Get All Actors of Class node to it. For Actor Class, select Player Start. Right-click the output Out Actors once this is done and select Promote to Variable. Name this 'Available Player Starts' (**Figure 3**).

Next, go back to the OnPostLogin event we created earlier. This fires when a player has logged in. What's important to note is that it's possible that the server is a player in this match – if so, then they're going to connect before we have a chance to fill in our AvailablePlayerStarts. To combat this, we can add a short delay when a player logs in to
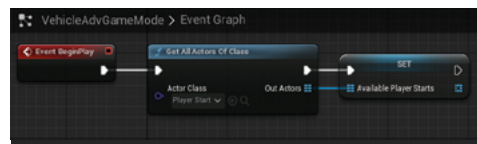
△ **Figure 3: The reason we are storing our PlayerStarts like this is so that we can remove entries as they are 'used' – allowing the AvailablePlayerStarts to only ever contain usable spawn points!**

give the GameMode time to fill in that array if we come in too early.

Create a Delay node now, and for Duration, set it to something small like 0.2 seconds. Once the delay has elapsed, we can then spawn a car for our player to possess. Next, create a SpawnActorFromClass node and hook it to the output execution pin of the Delay. For the Class, select Sports Car Pawn from the VehicleExample (**Figure 4**).

For Spawn Transform, we'll feed in the transforms of one of the PlayerStarts. We don't care which one, as long as no other player is currently using the one we plan to use. Drag ➡
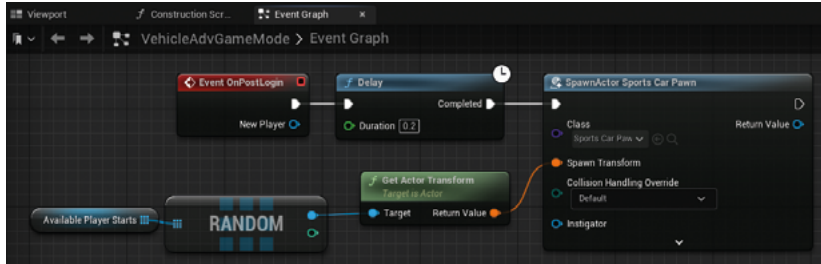
> **"By the end, we'll have a race for two or more networked players"**
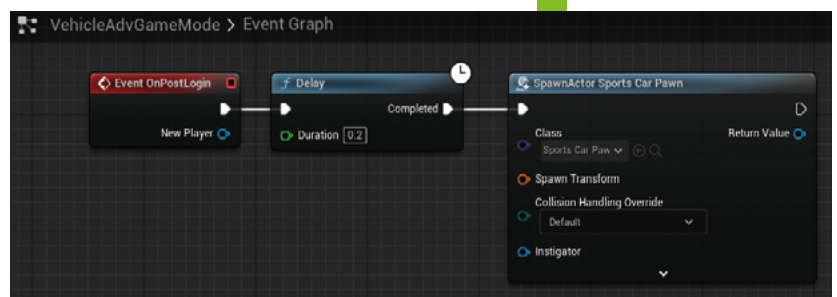
▲ **Figure 5:** Getting a random element from an array is an incredibly powerful tool for situations such as the one we are currently dealing with.
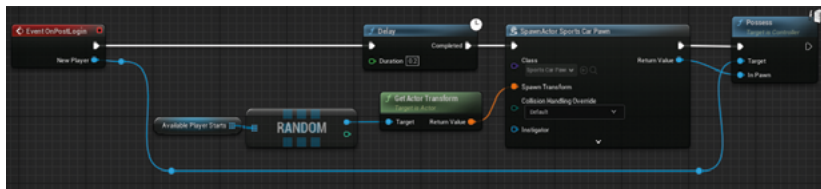
▲ **Figure 6:** You can use Reroute nodes to keep your code as clean and easily readable as possible – Blueprints can become messy very fast.

▲ **Figure 7:** The Finished OnPostLogin execution line. Feel free to increase the Delay if you're experiencing issues locally.

▼ **Figure 8:** This is what your ServerCheckOverlap function should look like.

your AvailablePlayerStarts variable in from the Variables palette and from the output select Random to get a random entry in our array. From the output pin of the Random, create a GetActorTransform node and plug that straight into the SpawnTransform of the SpawnActor node (**Figure 5**).

Now that the SportsCar is spawned and in the correct location, we need to do two things: tell the player to possess the car in question and take the PlayerStart out of the array to ensure no other players accidentally use it. Let's deal with the Possess first. Head back to the OnPostLogin event and grab the blue pin and drag it to empty space. When the palette opens up, create a Possess node. Hook this into the execution line after the SpawnActor node. Notice we need to supply the Possess node with a Pawn, so connect the Return Value of the SpawnActor to the InPawn of the Possess (**Figure 6**).

Finally, we need to remove our entry from the AvailablePlayerStart as mentioned earlier; so head back to the Random node output and drag

into empty space. Select Remove Item, plug in a reference to the AvailablePlayerStarts array, and connect it up to the execution chain after the Possess node (**Figure 7**).

Now we've got our cars set up, we need to create checkpoints for them to follow so we can figure out who's the fastest.

FINAL LAP

For our checkpoints, we need an actor that can tell the server that a player has overlapped with it. From the Content Browser, create a new Blueprint Class with the Actor set as the parent. Call this new class 'BP_Checkpoint'. Inside the checkpoint, in the class defaults, ensure Replicates is set to true as we need replication for this class. With the class created and the replication flag set to true, we need to add a Box Collision component, which you can do via the Components section (usually found on the left of the screen). Next, right-click the Box Collison and select Add Event > Add OnComponentBeginOverlap. We now have an event that will fire whenever this box is touched by an actor in the scene.

Now it's Multiplayer time – what we're about to do might seem convoluted and confusing at first but the more you do it, the more sense it will make, so it's highly recommended that you take what you're about to learn and pull it apart a few times to gain an understanding behind the motivations.

We're going to add a custom event and call it Server Check Overlap. With the event created, select the node, and in the Details panel, set the Replicates drop-down to Run on Server and tick Reliable. With the event still selected, add an input via the Details panel – set it to an Actor variable and call it 'Actor Ref' (**Figure 8**).

While we're making server/client events, head into the PlayerController connected to the GameMode (called VehiclePlayerController,
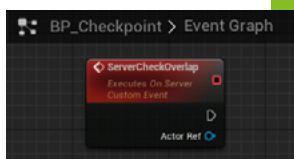
located at Content > VehicleTemplate > Blueprints > VehiclePlayerController).

Within VehiclePlayerController, create two Custom Events; name one 'Server_GivePoint' and the other 'Client_UpdateScore'. Select Server_ GivePoint, and in the Details panel, set replicates to Run on Server and add an integer input called IntToAdd. Next, head to Client_UpdateScore and set the replication to Run on Owning Client and add an integer input called 'I New Amount' (**Figure 9**).

We might as well finish our PlayerController dealing whilst we are in here. In the Variables section of the VehiclePlayerController, create an integer called 'I Total Score'. Select the newly created variable and head to Replication and set it to Replicated. Now click and drag this variable into the Blueprint area three times, selecting Get once and Set twice (one Getter, two Setters).

For Server_GivePoint, add an Int + Int node – plug the output into one of the Set I Total Score nodes. For the inputs, plug in the getter for I Total Score and for the second input, plug the IntToAdd output from the event. Connect the execution pins up then add a call to the ClientUpdateScore node. Plug the output of the Set I Total Score to the I New Amount input. Ensure the ClientUpdateScore call is plugged into the execution line. Finally, the last thing we need to do in this class is plug the second Setter into Client_UpdateScore and ensure I New Amount plugs into the input of the Setter node.

"Now we've got our cars set up, we need to create checkpoints for them"

CAR PAWN

All the required multiplayer functions have now been added, but we need to make some adjustments to our GameMode to be able to support what we created in the PlayerController. What we're about to do is create a look-up where
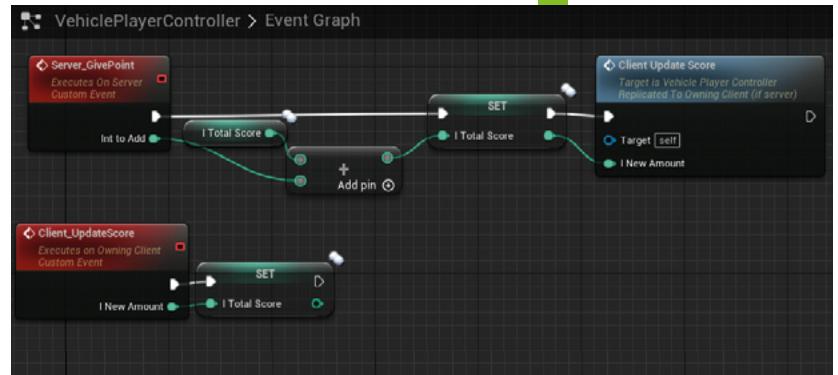
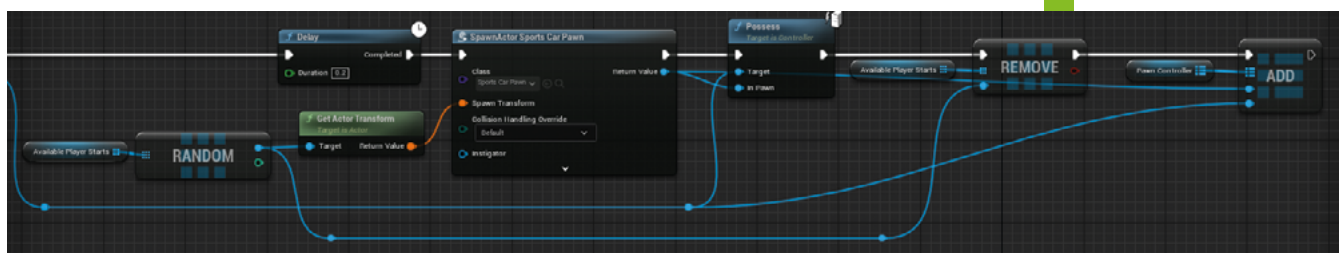we can match a vehicle to a player controller so we can add points to the correct player.

Head into VehicleAdvGameMode and go to the variables area. Create a new variable, name it 'PawnController', and for Variable Type select Sports Car Pawn. Once the Variable Type has been set, click the drop-down to the right of the variable type 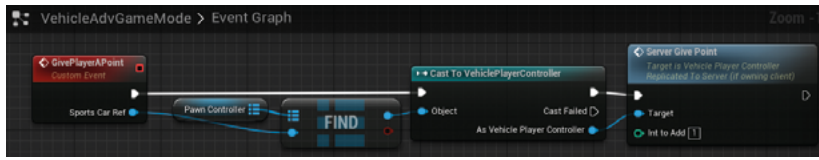and set it to Map. Now go to the OnPostLogin event we set up earlier. At the end of the chain, bring in your PawnController variable (Get) and from the output, create a (Map) Add node. Remember to hook it into the Execution line. For the first input pin, plug in the output of the SpawnActor node we created earlier and for the second input pin, grab the New Player output from the Event OnPostLogin (**Figure 10**).
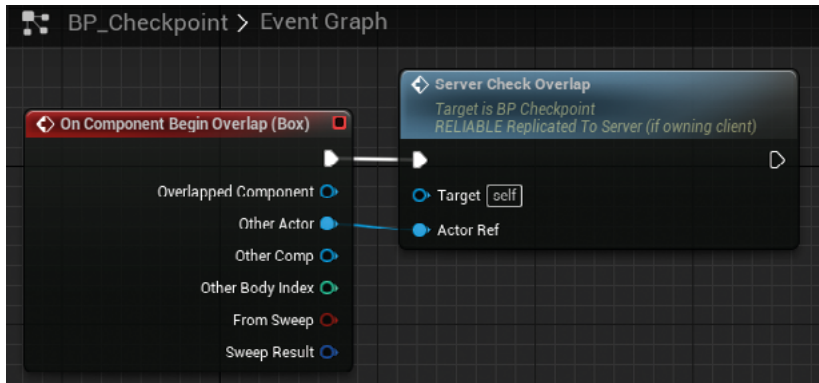
All that's left for the VehicleGameMode is to create a function where we can give the player a point. Create a custom event called GivePlayerAPoint. For inputs of the event, set it to a SportsCarPawn called SportsCarRef. Bring in your PawnController variable again and this time create a (Map) Find node. Plug the output of the event into the input. ➡
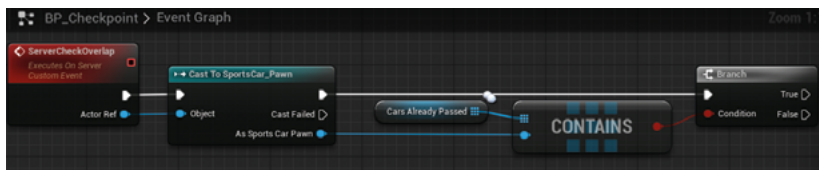
▲ **Figure 11: The finished event line for GivePlayerAPoint.**

▲ **Figure 12: As ServerCheckOverlap is a server event, this overlap will only ever trigger via the server, making it a server authoritative overlap.**

▲ **Figure 13: Checking to see if this car has already passed this checkpoint.**

First, ensure that you create a Server Check Overlap reference and plug it into the Begin Overlap event we created earlier. Ensure Other Actor plugs into the Actor Ref of the call to Server Check Overlap (**Figure 12**).

We need a variable to ensure that a player can't drive through this checkpoint more than once (unless they're in a new lap, of course), so create a SportsCar_Pawn variable, setting it to an array and calling it Cars Already Passed. Ensure the Replication of this variable is set to Replicated.

Now grab the Actor Ref output of the Server Check Overlap event we made earlier. At the moment it's just an actor reference, so let's cast it to SportsCar_Pawn to confirm it was a car that triggered the overlap. Bring in your CarsAlreadyPassed array (Get) and from the output pin, create an (Array) Contains so we can confirm if the car has already been through this checkpoint. Create a Branch node and connect the execution input to the output of the cast. After that, connect the output bool of the Contains node to the input boolean of the Branch node (**Figure 13**).

If this car hasn't been recorded driving through this checkpoint, we need to add it to our array of cars that have now driven past, so bring in your Cars Already Passed variable again and from the output pin create an (Array) Add node – connecting it to the False output of the Branch node. For the input of the Add node, hook in the SportsCar_Pawn reference from the cast now.

Now we've added the car to the Don't add this car again array, we need to tell the GameMode to give the player controller the car a point. In empty space, create a Get Game Mode node, cast it to our VehicleAdvGameMode Game Mode, then trigger the Give Player APoint event, plugging in the SportCar_Pawn reference from the cast into the Sports Car Ref pin (**Figure 14**).

We're almost ready to test. The next part is optional but we are going to add a Print String so we can check our players are scoring correctly.

We need to cast the result of the Find so that we can trigger the event we created in the PlayerController, so from the Find output pin, drag into empty space and create a Cast to VehiclePlayerController node. From the blue output pin of the Cast node, drag into empty space and create a ServerGivePoint reference. Ensure the execution pin is *not* plugged into the Cast Failed but the main execution pin of the Cast. For Int to Add, set it to 1 as we only want to give the player one point per checkpoint (**Figure 11**).

We now have everything we require to set up the rest of our BP_Checkpoint. Let's head back to it so we can finish it off.

> **"With the checkpoints placed, we can now test our game"**

▶ **Figure 14: The completed ServerCheckOverlap event.**
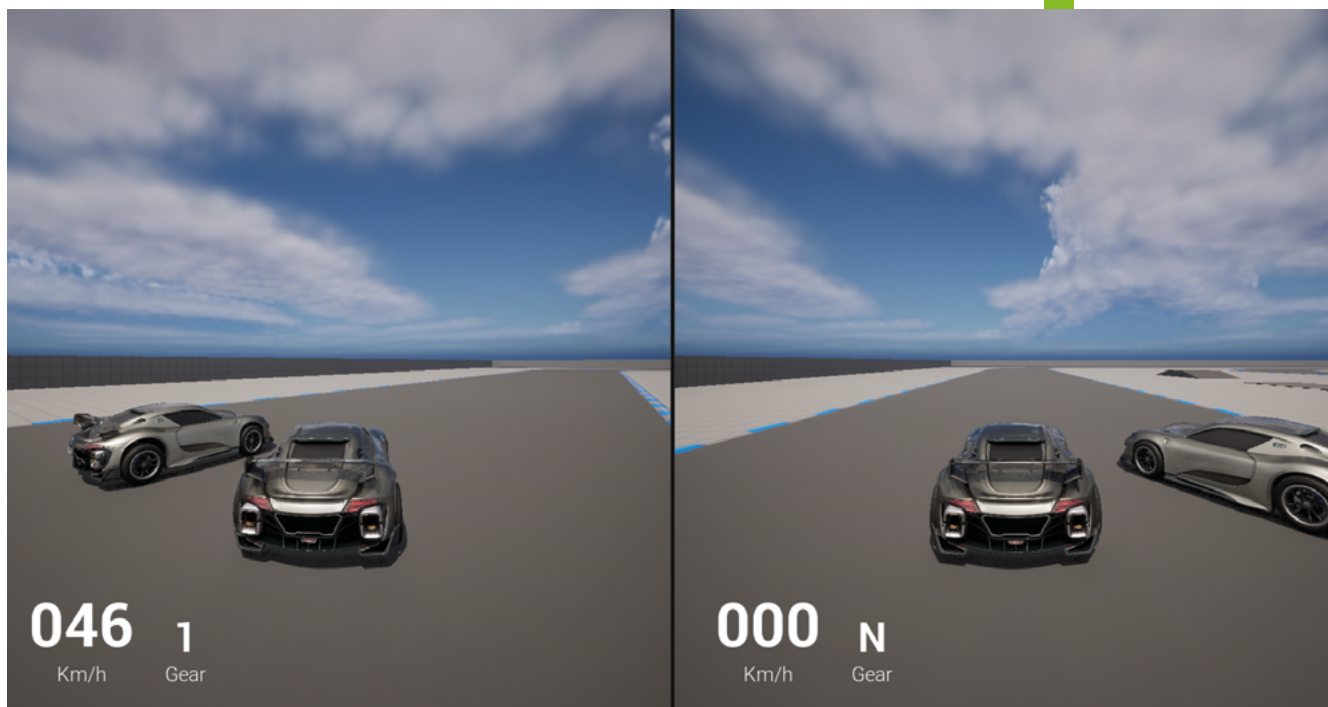
Head into the VehiclePlayerController and find the existing Event Tick execution line. Bring in your I Total Score variable (Get) and place it at the end of the Event Tick line. Create a Print String node and connect the output of our I Total Score pin to the InString of Print String. Before we can test if the multiplayer is working, we need to add some checkpoints to the game. For ease of use, we'll place them directly in front of the starting position so they're triggered by simply driving forward.

Place three BP_Checkpoints in the scene and use these values to position them correctly:

```
Checkpoint #1:
Location: X: -2760.0, Y: -9520.0, Z: 0.0
Rotation: X: 0.0, Y: 0.0, Z: 0.0
Scale: X: 3.5,  Y: 34.0, Z: 9.75


Checkpoint #2:
Location: X: -1870.0, Y: -9520.0, Z: 0.0
Rotation: X: 0.0, Y: 0.0, Z: 0.0
Scale: X: 3.5,  Y: 34.0, Z: 9.75


Checkpoint #3:
Location: X: -1160.0, Y: -9520.0, Z: 0.0
Rotation: X: 0.0, Y: 0.0, Z: 0.0
Scale: X: 3.5,  Y: 34.0, Z: 9.75
```

With the checkpoints correctly placed, we can now test our multiplayer game! At the top of your editor window, you'll see a green Play button. Press the three vertical dots next to it and select Net Mode > Play As Client. Head back into the same menu and set the number of players to two and, when ready, press the green Play button.

Before we leave, it's important to note that due to the way the project is set up before we arrived, there may be some error warnings when you stop playing. This is because the game wasn't set up for the multiplayer environment we've made. These don't affect the gameplay, though, so they can be safely ignored, but feel free to use what you've learnt to see if you can fix the warnings that appear.

We looked at just one method of making a multiplayer racer here – there are many different approaches you could explore, but hopefully, you now have enough knowledge to be able to alter and change the system we created to create a full-blown racing game.

Why not create a visual for the checkpoints, or add a special checkpoint actor that resets the PassedCar variables to create a new lap? The possibilities are endless. ⓦ

Create a 3D world in Unity

You too can get an animated character running around a 3D world in seconds. Here's how

AUTHOR
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Marc Scott manages the creation of informal learning content for the Raspberry Pi Foundation's network of clubs, home learners, and hobbyists.

Y ou can follow this project online at **wfmag.cc/explore-3d** or use the instructions below to create your own 3D world. To begin, open Unity Hub and create a new project, choosing 3D Core from the list of available templates. You'll need to select a location to save your project. Your new project should then open in the Unity Editor.

Next, download and import the set of assets to create your 3D world. These are available to download for free from **wfmag.cc/unity-world**. You'll need to unzip the directory once it has downloaded. To import the assets into your project, click on the Assets menu and select Import package and then Custom Package... then navigate to the folder you have downloaded. Select the **unitystarter.unitypackage** file. Click on the Import button to import all of the package contents (**Figure 1**).

In the Hierarchy tab, right-click on the SampleScene and choose Save Scene As. You can name the scene 3D World (**Figure 2**).

ADD 3D ELEMENTS

Now that you've set up your world, it's time to add some 3D elements. The first thing your world will need is some ground. In the Hierarchy tab, right-click on your scene, select GameObject and 3D Object and then choose a Plane (**Figure 3**).

Now that you have some ground, you can colour it using a material. In the Project tab, click on the Materials folder in the Assets folder. You

⌄ **Figure 1:** The package contents will look like this. Click the button on the bottom right to import it.
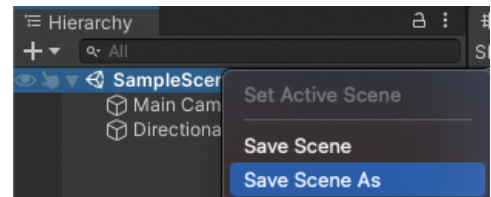

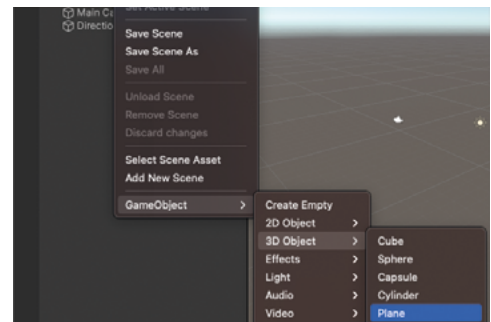⌃ **Figure 2:** Select 'Save Scene As' from the dialog box and save your scene as '3D World'.

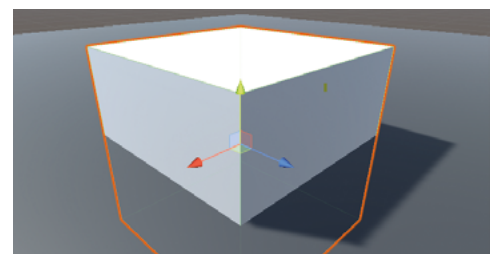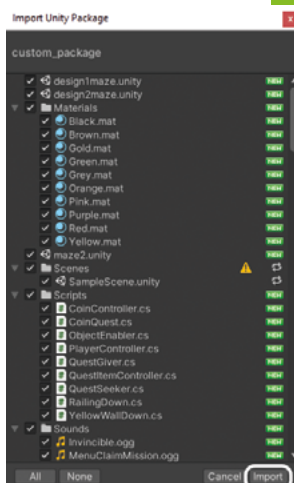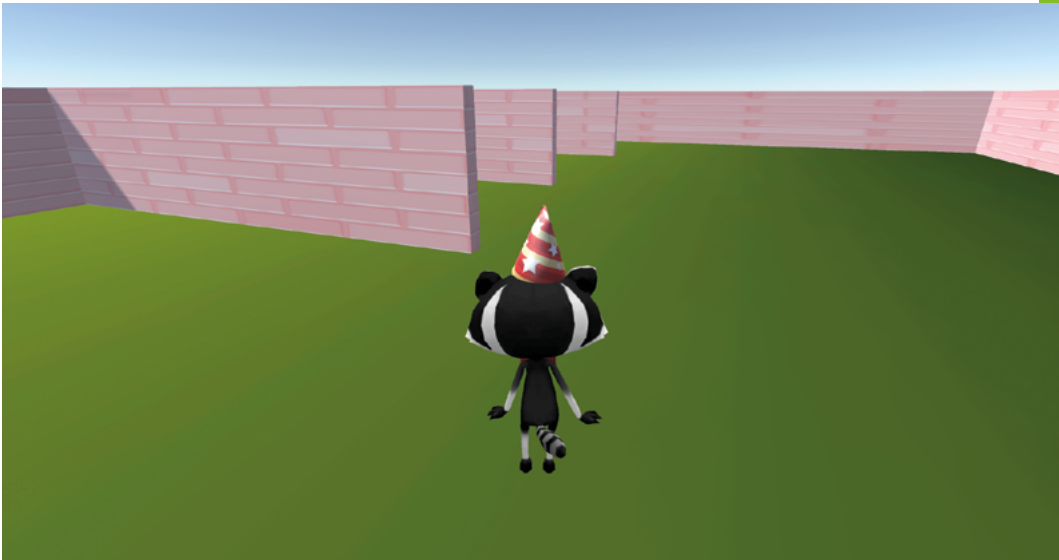⌃ **Figure 3:** We're using a Plane object to create our ground.

⌃ **Figure 4:** Our new cube. The Shift+F shortcut is handy for immediately focusing on a particular object.

should see a selection of materials that you can drag and drop on to the plane, or you can create your own. Right-click on the Materials folder, then click on Create, and then Material from the context menus. You can give your new material a name, then change its Albedo to change its colour, and then drag and drop the material onto your plane. In the same way you created a plane, create a cube for your scene. If you click on your cube and press **Shift + F**, you will focus on the cube (**Figure 4**).

You can click and drag on the red, blue, and green arrows to position your cube, or you can use the Inspector tab to exactly position and size your cube. Change the position and size of the cube, so that it looks more like a wall (**Figures 5** and **6**).

Create a new material for your wall, but this time you can add a texture as well as a colour. Just to the left of Albedo, there's a small circle you can click on, then choose a texture for your material (**Figure 7**) and drag it onto your wall.
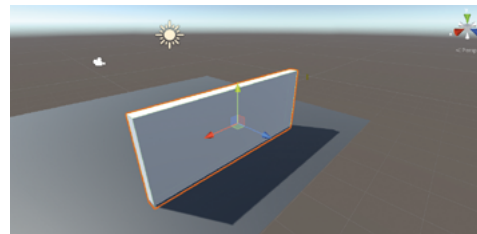
Now right-click on your cube in the Hierarchy tab and select Duplicate. Your new wall will appear in the same location as your previous one. You can move it around using the red, green, and blue arrows. You can also resize it by pressing **R** on your keyboard, or rotate it by pressing **E**. Pressing **W** will allow you to move it again. Alternatively, you can use the Transform options in the Inspector tab. Use the same method to make your plane a little bigger (**Figure 8**, overleaf).

ADD A CHARACTER
At the bottom of the screen you should see the Project tab which contains the Models folder. In that folder, select either the Cat or Raccoon
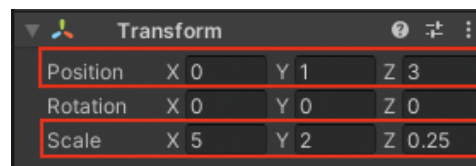
▲ **Figure 5: Enter these values to turn your cube into a wall.**

▲ **Figure 6: Our first wall, ready for texturing.**

models, and drag one of them onto your scene. Click on your character and press **F** to focus on it. You'll notice that your character has multiple costumes. You can select your character in the Hierarchy tab and click on the arrow to see the meshes for that character. Clicking on a mesh will allow you to uncheck it in the Inspector tab, which will hide it (**Figure 9**, overleaf).

Set the coordinates of your character to 0 on the X, Y, and Z axis in the Inspector tab, to place it in the centre of your world. You can also change the name of the character in the Inspector tab to Player.

With your Player selected in the Hierarchy tab, in the Inspector tab you should see a button lower down the screen called Add Component. Click this and then search for the Character ➡

▼ **Figure 7: Creating a brick texture to add to our wall.**
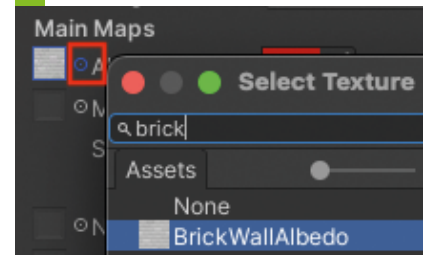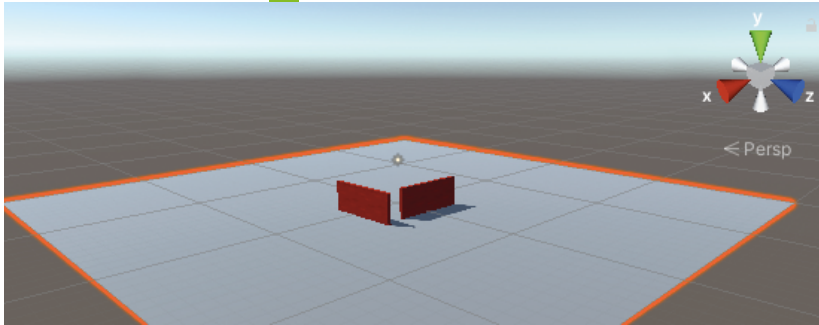
^ **Figure 11: Drag the IdleWalk Animator into the box on the right, as shown.**
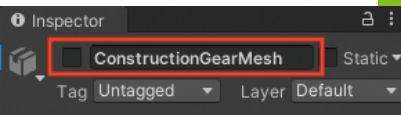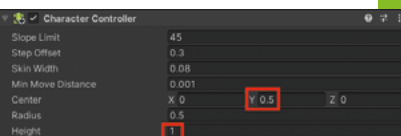
Controller component. The component adds new features to your Player GameObject including a SimpleMove method and a collider. A collider is a shape used to detect when a GameObject collides, or intersects, with another GameObject. It's much quicker for a computer to check for collisions with a simple collider shape than the complex shape of a GameObject. The character controller collider needs to be centred on the character, so change its centre to 0.5 on the Y axis and give it a height of 1 (**Figure 10**).

CONTROL YOUR CHARACTER

Now to add a script to control your Player character. Use the Add Component button again, and this time select New Script. You can call the script PlayerController. Double-click on the Script component within PlayerContoller. You should be asked how you want to open the script, so choose Microsoft Visual Studio, or your preferred editor. You should see some code that has automatically been included in the script. You can edit the `Update` function to allow you to move your character forward or backward. Here's the code to add:

```
void Update()
{
    float speed = Input.GetAxis("Vertical");

    // Rotate around y-axis
    transform.Rotate(0, Input.
GetAxis("Horizontal"), 0);

    // Forward is the forward direction for
this character
    Vector3 forward = transform.
TransformDirection(Vector3.forward);

    // You need the Character Controller so
```

```
you can use SimpleMove
    CharacterController controller =
GetComponent<CharacterController>();
    controller.SimpleMove(forward * speed)
}
```

Save your script, and then switch back to the Unity Editor. Click on the Game tab and then click the Play button at the top of the screen. You can use the **WAS** and **D** keys to move your character, or the arrow keys. Click on the Play button again to stop the game, and switch back to the Scene tab. The speed of your character's movement and rotation can be controlled with a couple of variables. At the top of the `PlayerController` class, add a pair of variables to control speed of motion and rotation using the highlighted code below:

```
public class PlayerController : MonoBehaviour
{
    public float moveSpeed = 4.0f; //The f
means a floating-point number
    public float rotateSpeed = 1.5f;

    // Start is called before the first frame
update
    void Start()
    {
```

Then use these variables in your `Update` class.

```
// Rotate around y-axis
transform.Rotate(0, Input.GetAxis("Horizontal")
* rotateSpeed, 0);

// You need the Character Controller so you
can use SimpleMove
CharacterController controller =
GetComponent<CharacterController>();
controller.SimpleMove(forward * speed *
moveSpeed);
```

You can now make changes to `moveSpeed` and `rotateSpeed` until you're happy with the motion of the character.

ANIMATION

At the moment, your character remains in the T position with its arms outstretched. You can add animation to your character though, so that it appears to run. In the Project tab, click on the Animation folder and then open the Animators folder. In there you should see an Animator called IdleWalk. Drag and drop the IdleWalk Animator onto the Controller for your Player, in the Animator section (**Figure 11**). If you focus on your character in the Scene view, you should now see that your character is going through a walk animation. Now add the highlighted code below into the **Update** function in your script, so that you can change the animation when the player moves forward, from an idle to a walk:

```
void Update()
{
    float speed = Input.GetAxis("Vertical");

    //Set animations
    Animator anim = gameObject.
GetComponent<Animator>();

    if (Input.GetAxis("Vertical") > 0) // Forwards
    {
        anim.SetBool("forward", true);
    }
    else // Idle
    {
        anim.SetBool("forward", false);
    }

    // Rotate around y-axis
    transform.Rotate(0, Input.
GetAxis("Horizontal"), 0);
```

Test your world again by clicking on the Game view and then pressing the Play button. Your character should idle when standing on the spot, but run when you use the **W** key to move forwards.

ADD A FOLLOW CAMERA

The last thing to do is to position your camera so that it follows the player character around the world. In the Hierarchy tab, expand the Player, and then drag and drop the Main Camera into the Player so that it becomes a child object. With
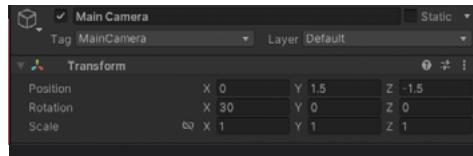
▲ **Figure 12 :** Use the following values for your Main Camera.

the Main Camera selected, change its Transform properties so that it is positioned above and behind the Player, and angled downwards slightly. X, Y, and Z positions should be 0, 1.5, and -1.5, while X, Y, and Z Rotation should be 30, 0, 0, respectively (**Figure 12**). You can also use the Transform and Rotate tools to better position your camera to a position that suits you (**Figure 13**), then test the 3D world in the Game view and click on the Play button.

UPGRADE YOUR WORLD

Now that you know the basics, you can upgrade your project and add more elements to your 3D world. You could also add more 3D objects, make your character larger or smaller, adjust the player's movement, rotation speed, or the camera's position, and more besides. You can see an example of an enhanced 3D world at **wfmag.cc/explore-example**. If you'd like to take your skills a little further, then please have a look at **wfmag.cc/unity-skills** which will help you improve your 3D world and add features such as collectables, non-player characters, and puzzles. Ⓦ

▼ **Figure 13:** Feel free to tweak the height and position of your camera to your liking.
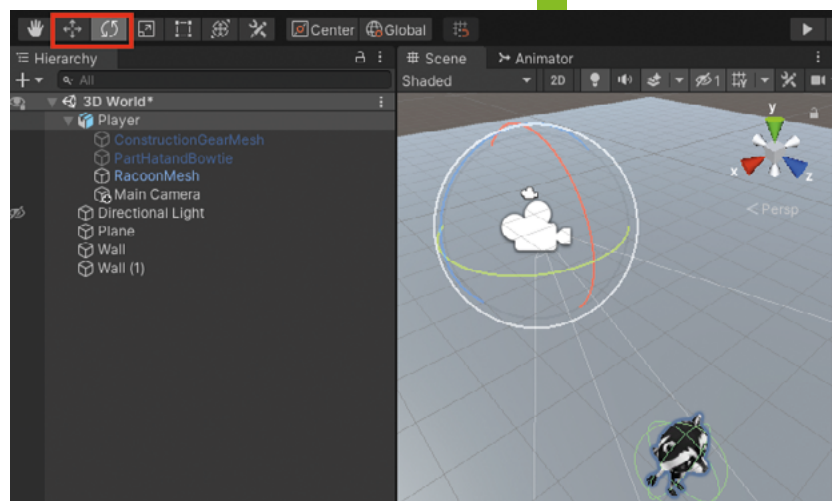
Ico's level design:
when less is more

The castle in Ico delivers a powerful atmosphere, demonstrating that games are stronger when elements are removed, not added

AUTHOR
STUART MAINE

Stuart Maine has been a designer for 24 years, across PC, console, and mobile. He helped set up Well Played Games and is working on an unannounced title.

R eleased for the PlayStation 2 in 2001, then re-released on PlayStation 3 in 2011, it's fair to say that *Ico* (pronounced "ee-ko", by the way) was not a big sales success. But despite that, over time it's become something of a cult classic and is credited with inspiring the developers of games including *Uncharted 3*, *RiME*, *FEZ*, *Halo 4*, *Prince of Persia: The Sands of Time*, and *The Last of Us*. Film director Guillermo del Toro even called *Ico* a masterpiece.

But what makes this game so special? At first glance, it's a simple 3D platformer, with you controlling the young boy Ico as he pulls levers and thwacks shadow monsters in an attempt to free himself and the enigmatic Yorda from a decaying castle. But beyond its accessible gameplay and easily graspable goal, perhaps the biggest key to *Ico*'s success is its incredible atmosphere, and it gains most of that from its environment: the castle in the mist.

STORY THROUGH PLACE

So important is the environment, that while Ico and Yorda are obviously the centre of attention, you could argue that the game's third character isn't the evil queen – you're rescuing a princess, of course there's an evil queen – it's the castle itself. The huge structure is a maze of soaring, crumbling towers and sun-dappled courtyards, all connected to the distant mainland by an impossible bridge.

Most of the castle's dusty chambers are empty, with few signs of habitation beyond the occasional chandelier or torn curtain. But while it's easy to put your developer hat on and rationalise the lack of furniture as a limitation of 20-year-old hardware, the sun-baked textures give everything the feel of desiccated age, making it plausible that the flimsy trappings have rotted away, leaving just stone and metal.

Importantly, there are enough details – a graveyard, a rail cart, prison cells – to give a sense that people must have lived here once, but with the game never neatly laying out its plot, it's left to you to ask questions. Where did the inhabitants of the huge castle go, and why did they leave? Was this place built for the

⌄ **Keeping Yorda's subtitles unreadable makes her seem alien and mysterious, but also avoids the 'why doesn't she just tell you what's going on?' problem.**
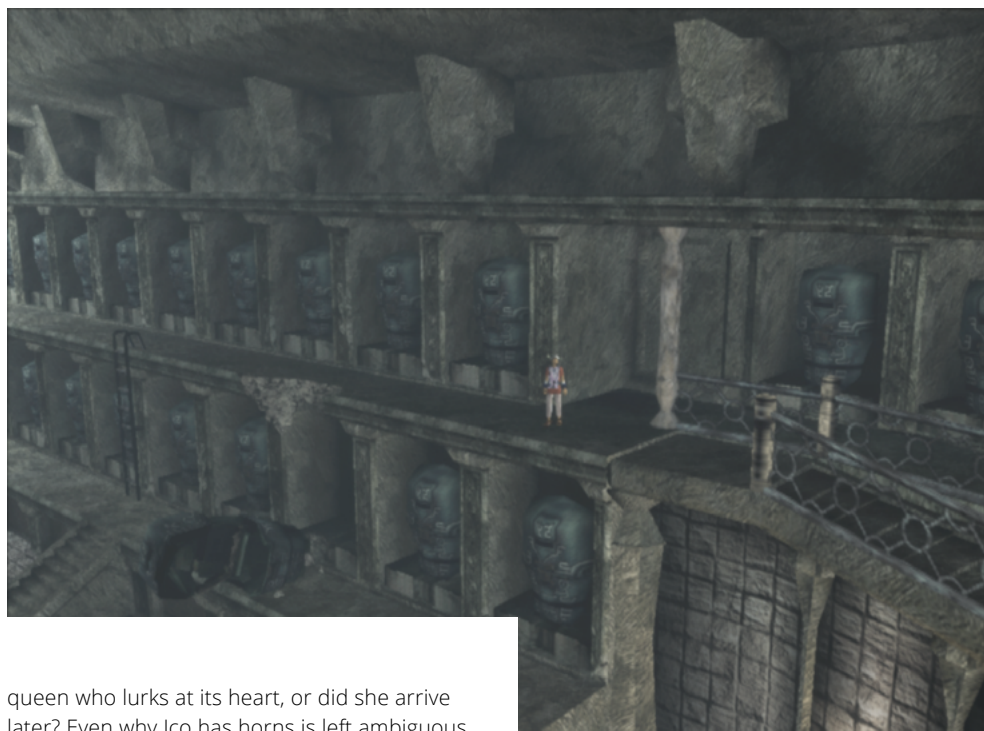
queen who lurks at its heart, or did she arrive later? Even why Ico has horns is left ambiguous (though see the Castle in the Mist sidebar for more about the game's novelisation).

By now, I've described pretty much all of the game's elements; a few characters, some straightforward 3D platforming and combat, and a desolate environment.
But rather than a weakness, this lack of 'stuff' is one of the game's core pillars, and comes from the development approach that Fumito Ueda and the rest of the team took of stripping away as much of the game as possible.

DESIGN BY SUBTRACTION

Design by subtraction means questioning whether each element of your game is important enough that it needs to remain in the game, and cutting it away if not. For example, *Ico* was originally going to feature human enemies, flying robots, and the castle under siege, but all this was removed to bring the game back to its fairytale core of a boy and a girl trapped in a dangerous environment.

While you can use design by subtraction to remove features, enemies, and plot points to help release your game sooner or because they're causing technical problems, the main reason you remove them is to enhance your vision for the game. To this end, *Ico* features no

> **"Design by subtraction means questioning each element of your game"**

HUD, no health, no map, no inventory, and very little explicit storytelling. The goal of escaping the castle is clear but everything else is left for you to figure out, to the extent that fans argue about how much of the game actually takes place in 'reality' and what's in your character's head.

With everything that might get in the way stripped out, you can't help but focus on what remains – the castle. And that castle isn't just a backdrop to the action, it's the embodiment of the evil queen (at one point in the game's novelisation, the queen says, "I am everywhere... The Castle in the Mist is me, and I am the castle"). By linking the two, even without a detailed back story or objective markers, your goal could not be clearer: you need to escape.

DETAIL IS IMPORTANT

While it's obvious that some elements of the castle were designed around a puzzle first, it remains a coherent, 'real' place. The battlements give a distant view of the mainland, there are drainage tunnels, a windmill, grand chambers and fallen bridges, and at the centre of it all, there is of course a throne room. The castle's sense of solidity is enhanced by the game ➜
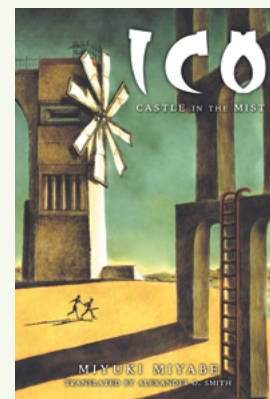
CASTLE IN THE MIST

Written by Miyuki Miyabe, *Ico* received a semi-official novelisation in 2008, which was translated into English in 2011. The novel has an odd structure, swapping between retelling the game's events almost like a guide, and flashing back to the castle before it became deserted. But it strives to fill in what led to Ico having horns, why Yorda was imprisoned, and why children are sacrificed to the castle. The author warns that some elements of the book contradict the game, but if anything, that's in keeping with the game's 'How much of this is true?' ethos.

The game frequently shows you where you've been and hints at future areas, making the castle feel like a real place, not an abstract video game.

TOGETHER BUT APART

One of the game's clever touches is that even though you spend most of the game with Yorda, she doesn't speak the same language as Ico (brilliantly, her subtitles don't appear in English), meaning you can't understand what she's saying. Still, language aside, Yorda clearly wants to escape as much as Ico does, helping cement the bond between them, with each helping the other in their own way. It's also great how Yorda will point and call out the solution to some of the castle's puzzles – if only you could understand what she was saying.

The game reinforces the bond between Ico and Yorda in small ways, such as them needing to sit down together to save the game.

refusing to cheat in its layout, with vantage points often showing locations you've already visited or will do in the future. Super-fan 'Nomad Colossus' even stitched together a map of the entire castle from hundreds of screenshots, showing how it twists back on itself and avoids arbitrarily teleporting you from location to location. The environment is too sprawling and complex to hold in your head while playing, but the team's effort in laying it out like a real place pays off by allowing you to see that you're making progress as you glimpse where you've been and get a peek at where you're going.

Another side effect of this 'everything in the game is there for a reason' approach is that it invites you to wonder about the details of the environment, because the fact that they exist means they must be important. For example, the long staircase up to Yorda's cage is ringed with spikes, but they point inwards towards her, not out towards you. Or that the castle is made from what must be millions of bricks, not carved from the rock it sits on, making you wonder who built it and how long it took. Or that a sword's blade is trapped between the huge doors of one of the arenas, leaving you to wonder who it belonged to and how it became wedged there.

> **"The game strips away any explanation of why all this is happening"**

PRACTICAL EXAMPLES

As an example of how you could apply *Ico*'s 'less is more' approach to your environments, you could ask whether your game really needs a HUD arrow or objective marker guiding players to their destination. While markers are clear and convenient, perhaps players would become more immersed in your game if they have to remember that their destination is damp and swampy, look around, and realise that a particular corridor leading downwards is similarly slimy. Of course, this approach will slow your game down, as players need to spot and figure out these clues, meaning you wouldn't do this in an action game (though if you want a fast-paced game, you're probably better off not asking players to pause and choose a direction at all).

Or perhaps you could leave sections of your game world empty of puzzles and threats in the same way that *Ico* often does (an approach also used in 1997's *GoldenEye 007*), suggesting that you're exploring a real place that was here before you arrived, not an artificial environment set up around gameplay.

Finally, consider how *Ico* removes most of your control over its camera, allowing the developers to have it looking down at you from a distance, giving the game a voyeuristic, 'being watched by CCTV' feel. It also adds stress by making it difficult to see where Yorda is when she wanders away from you.

The game reinforces this tension early on by having shadow monsters close in on Yorda when she's left alone too long, meaning for the rest of the game you're nervous about getting too far away from her.

PARING BACK

It might seem counter-intuitive that removing elements can enhance your game, but when you do so, it means that the elements you

have included gain 'weight' and become *more* important. You see this in the atmosphere built up by *Journey*'s ruins, *Flashback*'s deserted streets, and *The Stanley Parable*'s silent offices, but, in my opinion, *Ico* is the pinnacle of this approach. The game strips away any explanation of why all this is happening to you, how this world works, and even how the game ends, leaving you with questions and theories that linger long after you're done playing.

That said, it is worth pointing out that in interviews, Ueda wondered whether they'd gone too far in stripping *Ico* back, perhaps leading to its poor sales by confusing players looking at screenshots who were left wondering what sort of game this was. It's notable that *Ico*'s follow-up, *Shadow of the Colossus*, included more traditional video game elements, such as a HUD showing your stamina and glowing beacons to help you navigate. Videos, genre tags, and text descriptions all help, but people still use screenshots to gauge if a game might be for them, so you need to ensure you leave enough clues about how your game might play.

All this talk about design by subtraction sounds very dry and (ironically) reductive, but the point isn't simply to remove as much of your game as you possibly can. Rather, it's to question each element and ask if it's helping to tell your game's story, enhance your theme, or give your game a sense of place.

As a final example of removing expected elements, the vast majority of *Ico* is played without music, leaving just Ico's footsteps and breathing, the crackling of torches, bird calls, and the ever-present wind.

Again, the game avoids taking a more obvious cinematic approach in favour of rooting you in the sounds of the environment you're exploring. Still, there are occasional pieces of music, including the end credits track, *You Were There*, a title that I think perfectly sums up the genius of *Ico* and its castle. By removing as many 'video game' elements as possible, the developers did everything they could to immerse you in the lonely and mysterious castle in the mist. You really were there. ⓦ

^ **In the queen's rare appearances, she towers over the children, reminding you just how small and powerless they are in this huge place.**

INSTINCTIVE DECISION

Perhaps the game's most powerful moment is when you only need to cross a collapsing bridge to escape the castle but Yorda falls, sapped by the queen's magic. The developers could have made this sequence a cutscene, but instead they give you back control of Ico just long enough for you to try and jump back to her – into the castle. Just think about that: despite your goal all along being to escape the castle, your bond with an AI character is strong enough that you instinctively go back for Yorda – even though that's putting yourself back into danger.
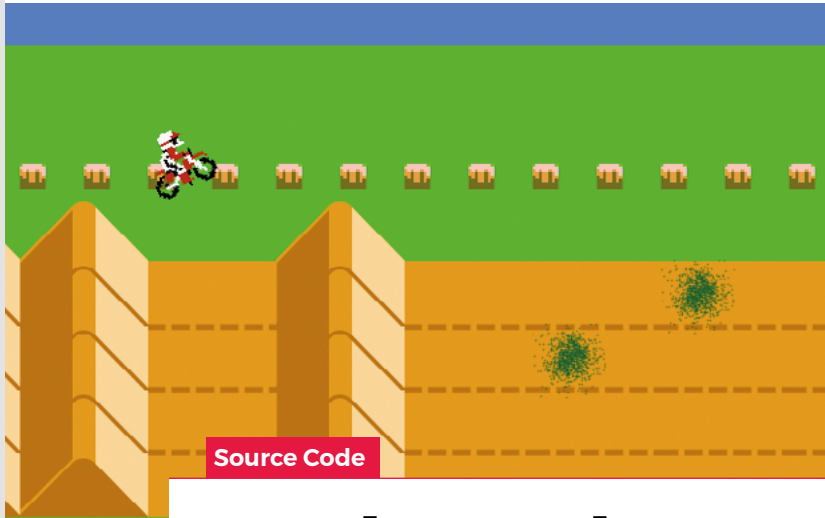
Nintendo's original hit is still wheely, wheely fun today (sorry).

Our motocross racing homage to *Excitebike*.

Source Code

Code an homage to Excitebike

Make your own side-scrolling racer in the vein of the NES classic

AUTHOR
MARK VANSTONE

Most early games started out as coin-ops, but in 1984, Nintendo first released *Excitebike* on the NES. Later that year, Nintendo ported *Excitebike* to arcades as it became one of its best-selling console games. The smooth, side-scrolling motorcycle racer laid the technical foundations for the way Super Mario later moved around his world.

Excitebike allows a player to race against three computer-controlled opponents along a track that has ramps to jump and debris to avoid. The player must try to keep the momentum of their bike going to get the best time. In this example, we'll replicate the scrolling track, which moves faster as the player speeds up. We'll add ramps to jump and bits of debris to avoid.

Using Pygame Zero and the time module for keeping track of our lap times, we need to set up our bike Actor that will stay in the same X coordinate position. The bike's Y coordinate will change as the bike moves from lane to lane or jumps over ramps. We can set up our track data with a list of integers that will represent track blocks. To keep it simple, we'll have 0 representing a plain track block, 1 for a jump block, and 2

for the start/finish line. We also have another list to show where the bits of debris need to be; the numbers represent the track lanes 1 to 4, with 0 being no debris.

The `draw()` function is straightforward and just draws a background, then calls the `drawTrack()` function, draws the bike Actor, and then writes text to show us the lap timer and the last lap completion time. In the `update()` function, we need to capture the left and right keys to slow down and speed up the bike, and then calculate the track position based on the bike's current speed. We can keep the track looping round by detecting when we've reached the end of the data, and then set the `trackPos` variable back to 0 and reset our lap time counter. We want to snap the bike to the four lanes of the track, but we also need to allow the player to move the bike from lane to lane, which we do by capturing the up and down keys in the `on_key_down()` function.

We can set the `bike.direction` to -1 or 1, and the `update()` function will move the bike up or down one lane. We can also make the bike look like it's vibrating a little by alternating between two frames, depending on how fast the bike is going.

The `drawTrack()` function looks at our track list, starting from the block determined by the `trackPos` variable. Each block is 100 pixels wide, and we get the smooth scrolling effect by drawing the blocks at an offset based on the `trackOffset` variable that cycles between 99 and 0. This is the remainder when we divide the `trackPos` variable by 100. We then draw nine blocks across the screen, depending on our track and debris data.

We also need to check if the bike has hit a ramp, and if so, the angle of the bike needs to start turning upwards, and the Y coordinate needs to follow the line of the ramp. Then, when the bike is at the top of the ramp, it needs to fall back onto the track. We tilt the angle of the bike forwards as it falls, and if the angle is too great when it hits the ground, the bike slows down and loses momentum. By judging the speed going into each ramp, the player can get better times on the lap. We also have the debris to test for – if the bike runs over a patch, we slow the bike down.

There it is, our very own *Excitebike* homage. The original game had AI rivals and different-sized ramps, but we'll leave you to add those in. Ⓦ

Easy rider

Here's Mark's code for an *Excitebike*-style racing game. To get it running on your system, you'll first need to install Pygame Zero. You'll find full instructions at **wfmag.cc/pgzero**.

```python
# Excitebike
import pgzrun, time

startTime = time.time()
bike = Actor('bike0',center=(150,350), anchor=('center','bottom'))
bike.speed = 1
bike.frame = bike.direction = 0
bike.laneY = 375
score = trackPos = gametime = lastLap = 0
track = [0,2,0,0,0,0,0,0,1,0,0,0,1,1,0,1,0,0,0,
         0,0,0,1,0,0,1,0,0,0,1,1,0,0,0,1,1,1,0,
         0,0,1,0,0,0,0,1,0,0,0,2,0,0,0,0,0,0,0]
muck = [0,0,0,0,0,0,0,0,0,0,3,0,0,0,0,0,0,2,1,
        0,0,4,0,1,0,0,0,0,2,0,0,0,3,0,0,0,0,0,
        3,0,0,0,1,2,0,0,0,0,0,0,0,0,0,0,0,0]

def draw():
    screen.blit("background", (0, 0))
    drawTrack()
    bike.draw()
    screen.draw.text("LAP TIME: "+str(int(time.time() - startTime)),
(20, 555),color=(255,255,255) , fontsize=50)
    screen.draw.text("LAST LAP: "+str(lastLap), topright = (780,
555),color=(255,255,255) , fontsize=50)

def update():
    global trackPos, gametime, startTime, lastLap
    if keyboard.right and bike.y == bike.laneY: bike.speed =
limit(bike.speed+0.1, 1, 5)
    if keyboard.left and bike.y == bike.laneY: bike.speed = limit(bike.
speed-0.1, 1, 5)
    trackPos -= bike.speed
    if(trackPos < -4800):
        trackPos = 0
        lastLap = int(time.time() - startTime)
        startTime = time.time()
    if round(bike.y/2) == round(bike.laneY/2):
        bike.y = bike.laneY
        bike.angle = 0
    if bike.direction != 0:
        if bike.y <= 375 or bike.y >= 525 or bike.y == bike.laneY:
            bike.direction = 0
        else: bike.y += bike.direction*2
    if(gametime%(int(8-bike.speed)) == 0): bike.frame = 1 - bike.frame
    a = bike.angle
    bike.image = "bike" + str(bike.frame)
    bike.angle = a
    checkBikeRamp()

def on_key_down(key):
    if key.name == "UP":
        bike.direction = -1
        bike.laneY = limit(bike.laneY-50, 375, 525)
    if key.name == "DOWN":
        bike.direction = 1
        bike.laneY = limit(bike.laneY+50, 375, 525)
    bike.y += bike.direction

def drawTrack():
    trackOffset = trackPos%100
    trackBlock = int(-trackPos/100)
    if trackOffset == 0: trackBlock -= 1
    for t in range(0, 9):
        screen.blit("crowd1", ((t*100)+trackOffset-100, 0))
        screen.blit("rock1", ((t*100)+trackOffset-100, 270))
        screen.blit("rock1", ((t*100)+trackOffset-50, 270))
        if track[trackBlock+t] == 0: screen.blit("track1",
((t*100)+trackOffset-100, 300))
        if track[trackBlock+t] == 1: screen.blit("jump1",
((t*100)+trackOffset-100, 300))
        if track[trackBlock+t] == 2: screen.blit("track2",
((t*100)+trackOffset-100, 300))
        if muck[trackBlock+t] > 0: screen.blit("muck1",
((t*100)+trackOffset-100, 295+(muck[trackBlock+t])*50))

def checkBikeRamp():
    tp = trackPos + 25
    trackOffset = tp%100
    trackBlock = int((-tp)/100)+2
    trackheight = 0
    if trackOffset == 0: trackBlock -= 1
    if track[trackBlock] == 1:
        trackheight = (100-trackOffset)
        if bike.y >= bike.laneY-trackheight:
            bike.y = bike.laneY-trackheight
            if bike.angle < 45: bike.angle += bike.speed
        if bike.angle < -25:
            bike.speed = 1
            bike.angle = 0
        if bike.angle >= -25 and bike.angle < 0: bike.angle = 0
    else:
        if int(bike.y) == int(bike.laneY) and bike.angle < -25:
            bike.angle = 0
            bike.speed = 1
    if bike.y < bike.laneY-trackheight and bike.direction != 1:
        bike.y += (2-(bike.speed/3))
        if bike.direction == 0: bike.angle -= 1
        if bike.speed > 1: bike.speed -= 0.02
    muckLane = int((bike.laneY-375)/50)+1
    if muck[trackBlock] == muckLane and int(bike.y) == int(bike.laneY)
: bike.speed = bike.speed/1.1

def limit(n, minn, maxn):
    return max(min(maxn, n), minn)

pgzrun.go()
```

> "These are mostly the concepts from the time we were researching the Necromancer character."
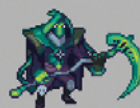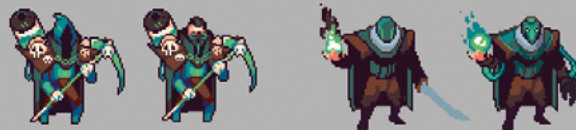
GAME
The Unliving

DEVELOPER
RocketBrush Studio

RELEASE
31 October 2022

WEBSITE
rocketbrush.com

> "This is loading screen artwork – both the early sketch and the [black-and-white] concept."
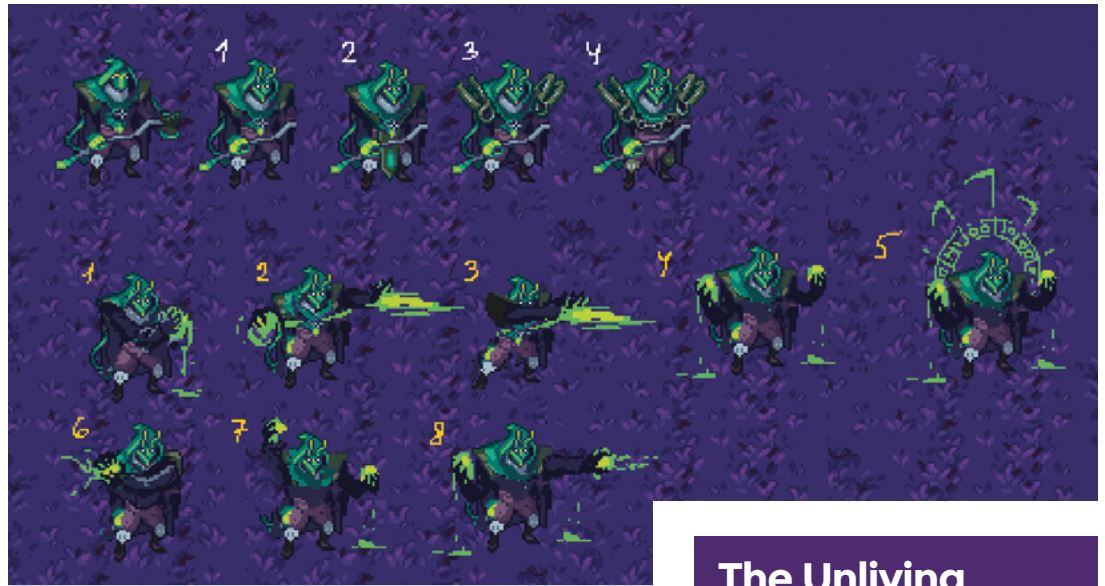
The Unliving

The Unliving is an upcoming action rogue-lite marked out by its epic battles. Cast in the role of a powerful Necromancer, you're capable of building huge undead armies (hence the title) which you'll use to fight your way through a randomly generated world and its bestiary of aggressive creatures. A considerable amount of work went into crafting the game's sumptuous pixel art, beginning with its hooded, spell-casting lead character. "When designing the Necromancer, we referred to the other dark heroes and necromancers from popular culture," a team member from RocketBrush Studio tells us via email. "Our core idea is more about the art of necromancy rather than the Necromancer character in any specific way. We can say that one of the stories that inspired us was Victor Frankenstein's fundamental conflict – from the 19th-century novel of the same name – where the researcher tries to transcend the boundaries of life and curb death but comes across as misunderstood by society."

As you can see from the exclusive artwork published here for the first time, a considerable number of exploratory sketches and paintings were generated before the team started creating each sprite. Here, RocketBrush explains how each piece of art helped them get a step closer to the look we can see in the game itself.

^ "These are storyboard sketches that showcase various ideas we explored to immerse [us] in the game's lore and find additional inspiration."
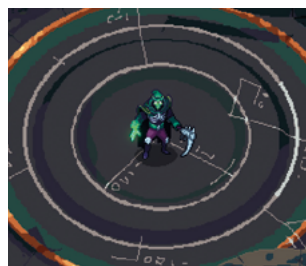
^ "Eventually, we came up with the existing model that you can see here."

Breaking the fourth wall for fun and profit

The developers behind Lair of the Clockwork God, The Procession to Calvary, and OneShot discuss the joys and perils of breaking down the barrier between game and player

T he term comes from the theatre: the idea is that in addition to the three walls on stage, there's an imaginary fourth wall that the audience can see through, but the actors can't. So when an actor breaks that fourth wall, it's an exciting, unexpected event – an acknowledgement of the artifice of it all, a recognition that they're in a play, in a theatre, talking to an audience. A sudden grounding of the suspension of disbelief.

Video games have been breaking the fourth wall almost from the day they were invented. Every time you're told to 'press A to jump' and the like, the game is acknowledging the space outside the game world, breaking the illusion. But some games go further than that, leading to some of the most memorable moments in video game history.

"The one that always sticks out so beautifully for me was *Arkham Asylum*," says Dan Marshall of Size Five Games fame. "You get sprayed with Scarecrow's gas, and then it does a fake game crash and starts the intro again. And your heart stops, and it's horrible, and then the intro plays and it's slightly different, and it just eases you into the

> "It does some freaky things with your computer, and I'm just going to leave it at that"

fact that this is part of the gag. That one always sticks out to me."

For Eliza Velasquez, who coded the fourth-wall-breaking *OneShot*, the indie horror game *IMSCARED: A Pixelated Nightmare* was a standout. "It's a very cheesy horror game, but one of the things that it did was, after you finish playing the game, a minute later there would be a jump scare on your desktop – which is really, really mean, but I thought it was kind of cool," she says. *OneShot* artist Nightmargin, on the other hand, has vivid memories of a game called *Hello Penguin*. "It does some very freaky things with your computer," she says, "and I'm just going to leave it at that."

Whether it's *Undertale*'s acknowledgement of your terrible decisions or the cheeky narrative tricks of the *Metal Gear* games, we've all got our favourite fourth-wall-breaking moments. But what makes them so good?

SIX PAGES?

"The stuff that influenced us quite a lot was all the old LucasArts games and all the old point-and-click adventure games: they always had this paper-thin line between the game world and the real world," says Marshall, who created the genre-defying platformer/point-and-click *Lair of the Clockwork God* alongside Ben Ward. For him, the beauty of fourth wall breaks is that they acknowledge the presence of an actual human ➜

^ The fact that Ben acknowledges he's a character in a point-and-click adventure – and that Dan would rather be in a platformer – is key to *Lair of the Clockwork God*.
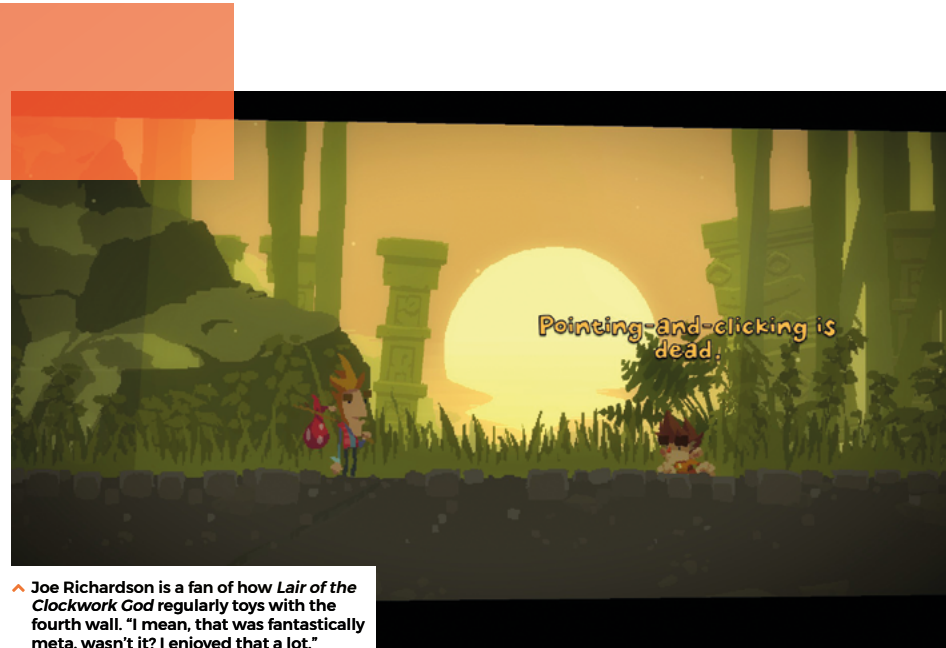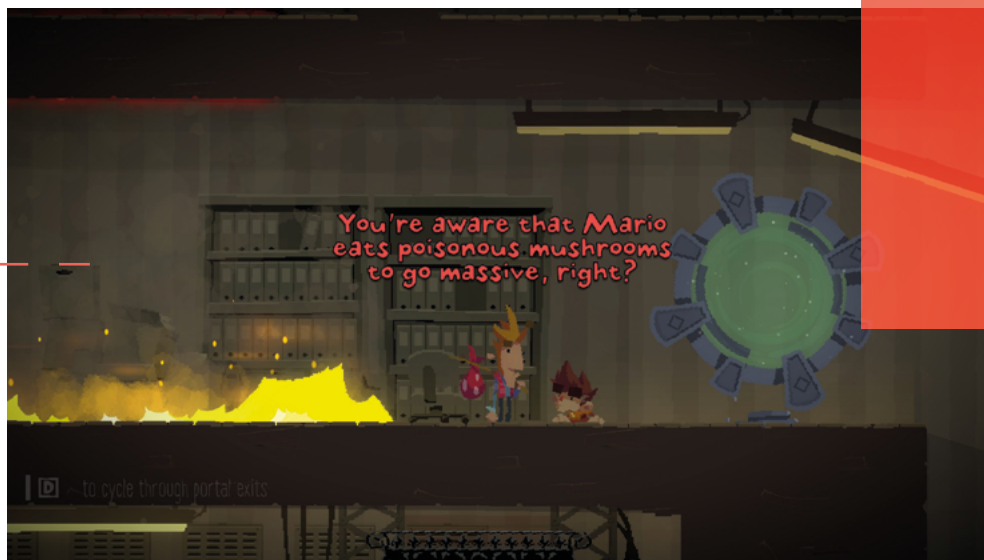
MEMORABLE FOURTH-WALL BREAKS

METAL GEAR SERIES

"They break the fourth wall constantly," says Velasquez of the *Metal Gear* series. Memorable moments span Psycho Mantis in *Metal Gear Solid* reading the player's memory card and making their Dual Shock controller vibrate, to the original *Metal Gear* when Big Boss orders players to abort the mission by turning off the game console.

pulling the strings behind the scenes. "Like in *Sam & Max Hit the Road,* there was a line that always stuck out for me, where you pick up the big piece of twine and he says something like, 'You always need a long piece of rope in games like this'," says Marshall. "I love it when games do stuff like that – it makes you feel that the developers have remembered you, and there's a direct connection."

Marshall says that fourth wall breaks work particularly well for games by indie developers or enigmatic game designers like Tim Schafer, people who players feel like they might already know through social media or by following their work. "You've got that vague, weird connection with the developer, and I think that's why the fourth wall stuff worked super-well for me, because you've got a sense of a link – like this was made for me," he says. "It builds a connection between the player and the developer: you're in on the same jokes as them."

Jokes that break the fourth wall are often the most funny and memorable, simply because they're so unexpected. But Joe Richardson, designer of the point-and-click adventure *The Procession to Calvary*, says that these gags tend to evolve naturally rather than being planned in advance. In *Calvary*, a game stitched together from Renaissance artwork, the fourth-wall-breaking interjections from God came about through circumstance. "I was looking to make a heaven scene," says Richardson, "and so I was looking for paintings with clouds and people being debauched, or whatever, and didn't find much. But I had this God, I had the cherubs, I liked them, and I wanted to get them in there somewhere. I tried to build a scene with God and the cherubs, and I couldn't make it fill the whole screen, because I didn't have enough art. So that's where the idea of panning up to it [came from] – because I couldn't fill the screen with artwork."

God ended up acting as a stand-in for Richardson himself, offering asides and apologies about the making of the game. At one point, the cherubs begin ribbing God about the quality of the animation. "I quite often write bits like that, and then they're not funny so they don't go in," he says. "But I just wanted at all costs to keep the reference to Macromedia Flash MX in there, as a nod to the good old days."

800 WORDS INTO THIS

The fourth-wall-breaking jokes in *Lair of the Clockwork God* arrived through a similarly organic process. "What happens in development is that [me and Ben] go to the pub, and stuff that makes us laugh goes into the game," says Marshall. "And

▲ Early on in *OneShot*, the game acknowledges the existence of the player, which becomes key to the game's plot.

the [redacted] was one of those things that made us laugh, and we were like, 'That's really funny and interesting and unique, and it's a good selling point' – because people would be like, 'You've got to play this game, man, I can't tell you why, but you've got to play it'."

You may have noticed my sneaky censorship there, and that's because the trouble with fourth wall breaks is that they lose their impact if you know they're coming. There are a few dalliances with the fourth wall in *Lair of the Clockwork God*, but one in particular is phenomenally good, and Marshall is keen to preserve its mystique for players who've yet to experience it. "When *Clockwork God* came out, and there were a lot of people doing Let's Plays on YouTube, I would skip to the bit where they found out about the [redacted] and just watch people break down in floods of tears laughing," he says with a grin.

The surprise is key to successfully breaking the fourth wall: whether it generates fear, shock, or laughter. Or, indeed, all of the above, like when Marshall made a game for his girlfriend when he was a teenager. "Right in the middle, I made it cut to black, and I brought up the DOS font and put this thing up about how it was formatting the hard disk. I watched her play it, and she freaked out – and then burst out laughing when she realised," he chuckles. "Watching her experience... that was one of those things that's always left me a little bit keen to implement more of that sort of stuff."

NOT ENOUGH WORDS YET

Then again, less is usually more when it comes to breaking the fourth wall. "It's something I think you have to be sparing with," says Richardson. There's a point where one of the characters in his game starts talking about the fonts for the dialogue. "Part of why it's funny is because it's so surprising that it happens," he explains. "Even doing it twice, the second time... it doesn't

take you by surprise." Indeed, there were a few more fourth wall breaks that Richardson considered for *The Procession to Calvary*, but held back to avoid taking away the impact of the others.

Marshall agrees that it's important to avoid doing it too much. "We were quite careful with *Clockwork God*," he says. "I think I'm worse for [resorting to fourth wall breaks] than Ben is when we write. I suspect he probably took some out when he did his big edits. It's just like any joke: it's funny once, and it's kind of funny twice, and then by the third time it's not funny at all."

Richardson thinks there are some games where breaking the fourth wall wouldn't be appropriate at all, like in the detective game *Paradise Killer*. "That's one where I wouldn't have liked fourth-wall-breaking, because I was quite immersed in its weirdness," he says. "I think the reason it's OK for point-and-click games to do it is because you're not immersed in a point-and-click game: it's so 2D, and the interface is right there. But *Paradise Killer* was one of the few games I did get immersed in, and so fourth-wall-breaking wouldn't have been welcome."

There's also the worry that fourth wall breaks can go wrong, or grow too obtuse. "One of my favourite games is *The Sea Will Claim Everything*," Richardson reveals. "It's a very word-heavy point-and-click game, and it has, I think, just one fourth wall break, [and it] stumped me. I got stuck and I needed to consult a guide. When I saw the answer was that it was a fourth wall break, I was ➜

> **"It makes you feel that the developers have remembered you"**

ETERNAL DARKNESS

2002's *Eternal Darkness: Sanity's Requiem* is a Lovecraftian psychological horror game in which the player has a sanity meter. If sanity falls too low, weird fourth wall-breaking effects ensue, including a fake game crash, the TV seemingly switching to a different input channel, and, scariest of all, the game appearing to delete your saves.

▼ The original 2014 version of *OneShot* would permanently kill the main character if you turned off the game without saving, but this was removed in the later Steam release.

THE STANLEY PARABLE

The Stanley Parable revels in breaking the fourth wall, with many of the most memorable moments occurring as a result of the ongoing war of wits between the player and the game's narrator. Hiding in the broom cupboard near the start, for example, prompts some brilliantly baffled responses from the narrator's disembodied voice.

▾ **The Procession to Calvary** is packed with amusing comments on the game's world, in addition to more overt fourth-wall breaks.

A couple of lads having a good old naked tussle.

very, very annoyed. Not because I didn't like it, but because I didn't get it." Gags that break the fourth wall might require an element of surprise, but if puzzle solutions rely on looking outside the game world, the player needs to be primed to expect it. Marshall was careful to prepare players in *Clockwork God*: the start screen bombards players with a seemingly endless sequence of made-up company logos. "The last one's called Setsa Tone Foundation, because it does," he says. "It makes people, right from the start, [think that] unexpected things will happen."

The great joy of fourth-wall breaks is that they allow for huge leaps of imagination and bursts of originality. "We specifically made things that toy with your expectations," says Marshall. "And we specifically made things that make you question what a game is allowed to do. Putting a solution to a puzzle in an entirely different game I think is great." He's referring to *Devil's Kiss*, a visual novel that accompanies *Lair of the Clockwork God* and that is key to completing a particular sequence. But originally, he wanted to go even further than that. "There was going to be an optional puzzle, [where] there was a door that you needed a code to get through," he says. "I was going to ask indie dev friends to put a graphic in their game somewhere." The idea would be to play these other developers' games to look for codes hidden in the visuals, then piece them all together to unlock the door. Marshall scrapped the idea in the end, but kept the door, which is unlocked by

> **"We specifically made things that question what a game is allowed to do"**

obtaining all the game's achievements and solving a puzzle based on the images of each one.

I'M NOW OVER DEADLINE

Richardson thinks that some people just don't like fourth-wall-breaking in general. "However much it fits in, however immersed or non-immersed they are to start with, they're just against it on principle for whatever reason," he says. "I suppose it's a debate that people like to have: where do you stand on fourth-wall-breaking? I think you have to go one way or the other. You can lean into it, like *Clockwork God*, or you can be a bit more subtle."

In *OneShot*, the game's whole premise is based on breaking the fourth wall. Early in development, Velasquez decided to make the player an integral part of the game world. "What if you and your character are two different people, and you're going to talk?" she remembers thinking. "Then everything came out of that in terms of the way Nico behaves as a character. We wanted somebody [who was] very likeable. You want to like this person and protect them."

Near the start of *OneShot*, there's a moment where Nico becomes aware of the player's presence, who they interpret as a kind of god who controls events. It's reinforced by messages sent from the game to your computer in the form of dialogue boxes – and later by other events outside the game, which I won't spoil here. But the plot's centred on the idea that the game world only exists on your computer, and only when the game's running. Indeed, in the initial 2014 build, closing the game without saving had dire consequences. "In the original one, if you quit without going to bed, Nico dies," recalls Velasquez. "I regret that a bit, because it was super-edgy."

Far from depleting immersion, *OneShot*'s fourth wall breaks heighten it, inviting the player to care deeply about the game world. "Something that I really wanted to push hard on for *OneShot* is that the breaking of the fourth wall isn't anything unique or special," says Nightmargin. "The casual approach to it makes a game like this feel special by, ironically, not treating it as something special." The developers also wanted to avoid the use of fourth-wall breaks to frighten the player, as in horror games like *IMSCARED*. "We wanted to get across that the fourth-wall-breaking isn't here to hurt you, it's here to be your friend – even though

What have you done to my lovely fourth wall!

^ Occasionally, the camera will pan up in *The Procession to Calvary* to show God (aka developer Joe Richardson) literally pulling the strings.

it can freak you out at times. It instils in the player a sense of responsibility, which is perfect because we want the player to feel responsible for Nico, but also [for] the world itself."

One problem, however, is that the fourth-wall breaks in *OneShot* are intimately tied to the functions of a PC – which has caused headaches for developer Michael Shirt while he's been preparing the game for release on consoles later this year.

"The idea we ended up going with was creating a fake desktop," he says. "So everything that would happen on the PC in the normal game happens in that environment." Doing anything quirky with the console beyond the game itself was unfortunately off limits: "The first parties aren't really happy about you messing with files and stuff," he laments.

THANK GOD, NEARLY THERE

Ultimately, video games are the perfect medium for breaking the fourth wall because of their interactive nature, and the intimate tie between the player and what's happening on screen. The very concept behind *OneShot* wouldn't work anywhere else. "It's something you can only do in a video game, which I think is extremely unique," says Velasquez. "A play or a movie can break the fourth wall, but you're very limited in what you can actually do with that."

Richardson, for his part, plans to ramp up the fourth-wall breaks in his next game, *Death of the Reprobate*. In fact, God (aka Richardson) is set to appear in almost every scene. "I've got this world where you're going around looking for good deeds to do," he says. "So I wanted to have some

sort of indicator on the people who are the quest givers." He didn't want to add a clunky UI element, and initially thought about marking the characters with a cloud, with a sad face on it. "But this cloud looked [rubbish], so I decided to put God in there," he says. "These characters now have a big red arrow painted on a bit of wood that hangs above their head. God's hiding in the background with a fishing rod, holding up the sign."

At the game's start, the player asks a quest giver how to find people in need. "And he says, 'The Lord will guide you'," laughs Richardson. "And then you walk into the next scene, and God's there holding up a UI sign. And then potentially, at the end of the game, it could turn out that it wasn't God, it was just some guy. 'You've been following Derek? Derek dressed as God? I meant spiritually God will guide you, you fool!'" Ⓦ

∨ User interface elements like hotspots are sometimes referenced directly in *The Procession to Calvary*.

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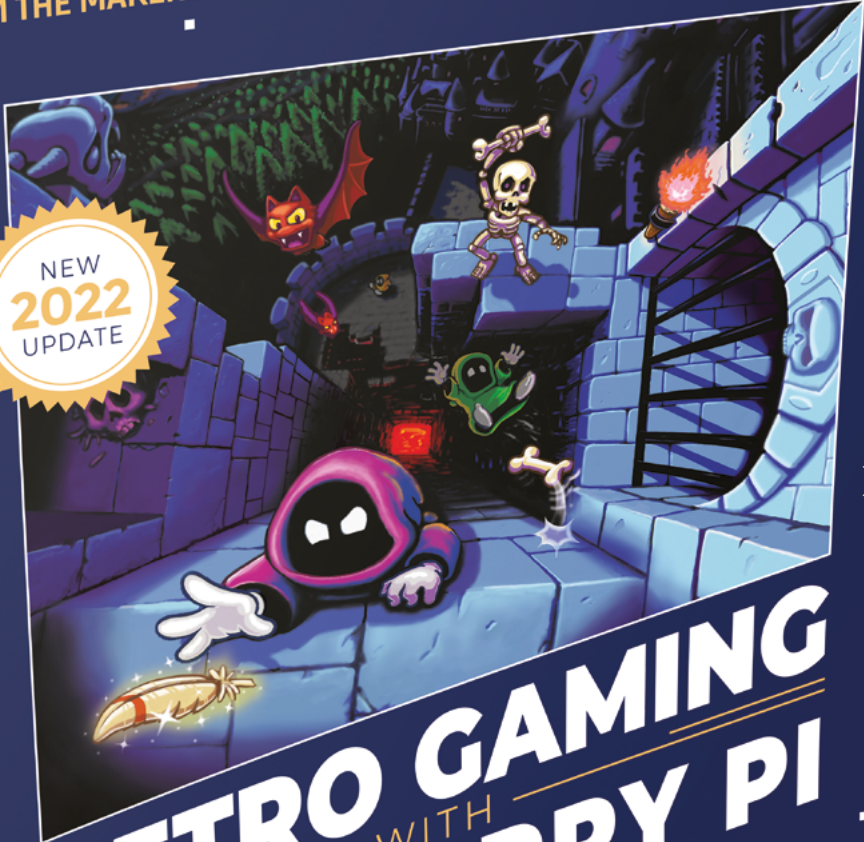
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VIDEO GAME PROJECTS

Interactive / Twin Tiger Shark

Developer Mikael Tillander made his own take on a Toaplan shooter – then set about turning it into a arcade machine...

For just under a decade, Japanese studio Toaplan made some of the most distinctive and innovative shoot-'em-ups around. *Tiger-Heli* (1985) featured video gaming's first-ever smart bomb. The likes of *Slap Fight*, *Flying Shark*, and *Truxton* (aka *Tatsujin*) established a visual and gameplay style that lasted until its closure in 1994: devastating weapons systems; enemies that attacked in elaborate patterns and shot at the player with unnerving accuracy; and unforgettably catchy music, often composed by founder members Masahiro Yuge or Tatsuya Uemura.

The work of Swedish developer Mikael Tillander, *Twin Tiger Shark* affectionately revisits Toaplan's late-eighties heyday, channelling the spirit of its pivotal 1987 military-themed shooter, *Flying Shark*, and its 1989 sequel, *Fire Shark*. Like those games, *Twin Tiger Shark* sees you take control of a heavily armed biplane as you take out a vast army of tanks, battleships, and armoured gun emplacements. Toaplan fans will recognise the style immediately: the snaking flying formations of enemy planes, the tanks that roll out from under cover and take two hits to destroy, and the devastating, screen-clearing smart bombs. "My main interest when playing games has always been shoot-'em-ups," says Tillander, who's been a programmer ever since he received a Commodore VIC-20 in the mid-1980s. "*Twin Tiger Shark* was just another in a long row of shooters I've made. But this was the first time I made an obvious homage to another existing franchise or company."

Although closely modelled on Toaplan's games, Tillander's shooter isn't a slavish copy, however. "*Flying Shark* had a slower-moving player ship and each enemy bullet was a hazard to be taken seriously," Tillander notes. "So you had to take out the enemies as soon as possible. It sure helps to know where the enemies are going to come onto the screen. *Twin Tiger Shark* has a faster-moving player ship, to please players of today, and way faster enemy bullets, but the idea's the same."

Tillander programmed *Twin Tiger Shark* in JavaScript and released an initial build for free in the mid-2000s, and on itch.io in 2014. What he

> Your biplane may be fragile, but its weapons pack a Toaplan-style punch.

⌄ A considerable amount of work went into making *Twin Tiger Shark*'s tiny JAMMA board.

The original *Twin Tiger Shark* was designed for 16:9 monitors, while the arcade JAMMA version had to be revised for 4:3 screens.

‹ *Flying Shark* served as a jumping-off point for *Twin Tiger Shark*, but its bullets and enemies move at a much quicker pace.

did next was truly unusual, though: in November 2021, following a successful Kickstarter campaign, Tillander ported it to a JAMMA arcade board, meaning it could be installed and played like a traditional coin-op shooter. This process required Tillander to port the game itself from JavaScript to C, and also create his own custom arcade boards. "I needed to design all of the hardware, create my own processor, graphics card, and sound cards, as well as all of the glue logic for it," says Tillander. "I did a lot of PCB revisions until I got something working. I still can't believe I pulled that part off."

With the hardware taken care of, Tillander then had to rework the game itself to run correctly. "Since I did my own processor, I couldn't just take a C compiler and start working in C straight up," he recalls. "I needed to make my own assembler that would take the machine code I wrote and convert it to something readable for the processor. I could have gone the route of trying to make a C compiler, but I opted to make the whole game in assembler – true to how [Toaplan might have] made it in the eighties. So none of the code from the Java version was of any use – it was all reprogrammed. Some of the sounds and graphics could be used, but I remade most of that as well."

Tillander's dedication soon paid off, though. His Kickstarter made over £16,000 in pledges – more than four times its minimum goal – and the JAMMA game itself eventually made its way into Japanese arcades, including Tokyo's famous Game Center Mikado. Needless to say, the sight of a Toaplan-inspired game showing up in its country of origin was a big moment for Tillander. "That was unbelievable," he says of that Japanese arcade appearance. "Mikado even

> **"I needed to design all of the hardware... I did a lot of PCB revisions"**

had a super-player, Chantake, play the game live on a YouTube stream. Hearing the commentary reactions and reading the chat during that was rewarding, to say the least."

Despite the stresses of his day job as a programmer at a tech company, and having two lively kids at home to look after, Tillander's been busily making other shooters between his *Twin Tiger Shark* projects. There's space shooter *Broken Pearl*, side-scrolling run-and-gun *Heavy Recoil: Convoy Chaser*, top-down horde blaster *Prison Break: Zombies*, and Mega Drive hack-and-slash, *Tänzer*. His latest work-in-progress is shooter *ZPF*, also for the Mega Drive (see box) – which left us wondering: given that several of Toaplan's titles appeared on Sega's 16-bit console, might we see *Twin Tiger Shark* ported to that system, too?

"You know, I've been thinking about that on and off this year," Tillander reveals. "After I'm done with *ZPF*, I'll see what I can do, but *Twin Tiger Shark* on Mega Drive is a possibility, for sure." ⓦ

⌄ In development for the Sega Mega Drive, side-scrolling blaster *ZPF* is set to appear on Kickstarter in the autumn.

BLAST PROCESSING

Tillander largely worked by himself on his previous games, but for Mega Drive shooter *ZPF*, he's teamed up with two collaborators in the US: composer Jamie "JGVEX" Vance and artist/designer Perry "Gryzor Rozyrg" Sessions. A side-scroller in the heavy metal vein of *Lords of Thunder* for the PC Engine, *ZPF* began as a GameMaker project by Sessions, before he saw Tillander's work on *Tänzer* and the pair started collaborating on making the shooter for the Mega Drive. The trio have been working on *ZPF* for almost two years, and while there have been some challenges along the way, there's now a publisher involved – Mega Cat Studios – and a Kickstarter campaign planned for this autumn. "The game was started a few years ago and had been making steady progress until late last year when we decided to restart the whole thing," Tillander says. "We weren't getting what we wanted out of the current engine, so I redid it all. We're now in a much better position to create a game that we're truly happy with."

Interactive / Gloomy Juncture

Subtales Studio's Filipe Rodrigues on channelling his love of arthouse films and B-movies into a gritty, hand-drawn adventure game

When thinking about 'cinematic' influences in games, the mind might jump to beautifully framed and lit cutscenes, epic action set pieces, and a lavish scope. *Gloomy Juncture* is heavily inspired by cinema, certainly, but it doesn't have any of those – it veers closer to the pessimism and grimness of *Taxi Driver* and *Oldboy* as opposed to Hollywood's conventional blockbuster fare.

In search of that rawness, one-person studio Filipe Rodrigues opted for a sketch-based art style for this first-person adventure. And despite hoping to capture the essence of noir movies of the seventies, its aesthetic is also rooted in

wholesome games. "I always loved the style of *Paper Mario* and the timeless reach of stylised games like *The Wind Waker* and *Jet Set Radio*," says Rodrigues. "However, my initial thought process for the aesthetic was to push my strengths and diminish the impact of my weaknesses. My rationale was something along the lines of, I know how to make some simple drawings – as a kid, I loved to draw characters from *Dragon Ball* – and I definitely want to keep a nostalgic mid-nineties 3D style, and also a bit of 2D animation."

Starting out drawing characters on paper before digitally bringing them to life, Rodrigues has found a midpoint between the polygonal and cel-shaded while also retaining that scrunched-up papery look. "I've reached some kind of reversed pipeline from the classic approach to 3D modelling," he says.

These techniques, combined with some seriously dank and atmospheric lighting, give the game an eerie tone that makes perfect sense for the feverish dream world Rodrigues wants to create. There's no explicit setting or time period apparent in *Gloomy Juncture*, you see, and if there is, such elements are kept hidden. All that's clear from the outset is that you play an ordinary person awaiting your fate in an unknown world, forced to solve riddles and puzzles in the hopes of somehow piecing things together. Events begin with a single gunshot, but who fired it and what it means remains an ever-present mystery.

⌃ You might be performing mundane tasks like pulling levers, but at least you always do so in interesting locations.

❯ Sometimes the solution to a puzzle is as simple as flipping a switch. Just make sure it's the right one.

This electric box seems to be connected to something.

There aren't many NPCs featured in *Gloomy Juncture*. Almost all, however, foreshadow the impending doom plaguing this world.

If you're going to suffer from seven years of bad luck then at least make sure a toilet is nearby.

Gloomy Juncture's inherent obliqueness means it won't be for everybody, especially since much of your time is spent completing mundane tasks like pulling levers and pushing buttons. "While fun is subjective, engagement is certainly not," Rodrigues says. "This is definitely a niche game. But I can assume that the target audience [will] be somewhere among the 'Achievers' and 'Explorers'… That being said, the progression and main hooks are based on 'What's next?' in terms of narrative, visual setting, level design, and game mechanics." Rodrigues is banking a lot on player curiosity, too. "I think I'm always trying to focus on details and world-building. I believe that a work needs that small and unexpected detail that clicks with you at that specific moment, helping to enhance the experience, the story, and the world itself."

Going some way to make proceedings a little more penetrable is the fact that the playable character has a voice. Because unlike a lot of other naturally silent N64-era protagonists, the 'hero' at the heart of this mystery will comment on his actions depending on the various choices and interactions you make. As well as putting you firmly in the same confused position as him, Rodrigues says the narration will help tie the story and gameplay together.

"With a narrative structure that takes sharp turns, the narration provides an important tool to effectively communicate the plot, not only by foreshadowing a bit of the story but also helping to establish the tone to the player," Rodrigues explains. "Furthermore, I'm able to provide some hard-boiled, ridiculous metaphors, Max Payne-style."

And gameplay? "In classic adventures, the player character sometimes helps the player, like in *Grim Fandango* when Manny's head will actively turn to important game objects as a diegetic hint to the player. With *Gloomy Juncture* being first-person, narration lines give the player clues or active aid in response to their actions, saying things like: 'The door's closed, but I know that the cretin usually has a spare key…' It's a cool way to keep a diegetic approach to the hint system."

Finding your feet in *Gloomy Juncture* is all about staying immersed, then, regardless of how strange and shadowy the ensuing events might be. There are so many different cinematic influences at play, yet the game still feels staunchly singular as a result of it being one person's (admittedly unusual) vision. Rodrigues chiefly describes the game as "an adventure with story-driven gameplay that blends the atmosphere of loneliness and hopelessness of *Requiem for a Dream*, with the unease and obsession of *Vertigo* and the fever dream aesthetic of *Suspiria*". We'll find out for sure whether all these influences have come together as masterfully as intended later this year. ⓦ

> **"I always loved the style of *Paper Mario* and *The Wind Waker*"**

GOOD ON PAPER

The world and characters featured in *Gloomy Juncture* have a folded, screwed-up paper effect because that's largely how each asset starts out. After drawing up a final sketch, a low-poly model (with folds included) is created in Blender before it's imported into Unity, where Rodrigues uses his own custom shader to add bump and detail mapping that creates paper features such as that squiggly effect. "While drawing everything on paper is time-consuming," Rodrigues says, "it ends up paying off by allowing me to keep the models low-poly but with detailed textures in order to achieve that look I'm aiming for – which matches perfectly with my rudimentary 3D modelling skills."

How I became a...
Level Designer

Kolbe Payne from Crystal Dynamics talks shipping Halo
as his first game and the key to great level design

What was the game that first made you want to work in the industry?
As a kid, I grew up playing all sorts of games. I would get the same games as my friends and they would rush to beat it. [However], I would happily take my time, soaking up all the art and content the developers made. At a young age, I knew I had a love for the art of video game design. However, there is one game that made me fall in love with level design. *Black Ops 2* will always be my favourite FPS and *Call of Duty*. The multiplayer level design in that game is some of the best. Treyarch's three-lane approach to designing its maps is undefeated. After playing that game non-stop, I knew I wanted to get into the level design side of the game industry.

How did you break into the industry?
In school, I knew the games I was making in class weren't going to be portfolio-worthy. We had a guest speaker from Sony Santa Monica (who is now a good friend of mine) visit our class one day. He told me that portfolio is everything when it comes to most areas of game dev. Especially level design. I knew I had to make a good portfolio as a student. I found like-minded people in my same program. We made an FPS together and put it on Steam. The levels I made for this game were decent enough to put on my portfolio. I applied to 343 Industries shortly before graduating – they were impressed with my portfolio and gave me a shot. I started working on *Halo Infinite* about three weeks before I graduated.

What was the first commercially released game you worked on? Are you still proud of it?
Halo Infinite, and I am still very proud of it. Having *Halo* be my first shipped triple-A title is absolutely insane. I am very grateful for the opportunity that was given to me. I was the level designer responsible for half of the outposts. It's really cool to hear from fans that said they absolutely loved the outposts I designed. Aside from those, I worked on a majority of the gameplay for the High-Value Targets, Forward Operating Bases, and Marine events as well. I was one of the least experienced people there, but I feel like we all made a great campaign and I'll forever be proud of it.

For you, what are some of the key components for designing a great level?
The biggest component would be learning how to accept feedback and then use that to add/iterate on the level you are currently designing. This is one of the most important skills you can have as a level designer. No level is perfect the first time you design it. It takes massive amounts of playtesting, feedback sessions, and iterations to

▲ *Halo Infinite* being his first commercially released title, Kolbe primarily worked on designing the enemy outposts Master Chief can liberate.

> "At a young age, I knew I had a love for the art of video game design"

make that 'perfect' level. I learned this very early on in my career; accept all positive and negative feedback and use it to my advantage. There may be some things you disagree on, but that's what game dev is about. It's about a team coming together to create something special for players.

Another one is to be sure to provide the player multiple choices throughout your level but try not to overwhelm them. Sprinkle them throughout your level to allow the player to create their own path and have fun playing.

How important is it for a level designer to communicate with other team members?

Communicating with other team members is one of the most important factors you face as a level designer. We're creating the main experience for the player when it comes to them traversing the level and engaging with the world. A lot of other disciplines in game design go directly into the levels you're building, whether that be art, narrative, [or] gameplay. You'll need to be communicating with those teams to make sure you are building a fun experience for players and incorporating certain things that are needed in your level as well.

What's a mistake you made early on in your career but learned from?

Don't get married to your work. I've had levels that I absolutely loved, and they were unfortunately cut due to project scope. This can happen in every department. You spend a lot of time taking in feedback and iterating on your level just for it to be cut out. You can still enjoy your work – just try to not be too attached to everything you make.

What piece of advice would you give to your younger self?

Pick your favourite game genre and try to design levels based on them for your portfolio. My older portfolio had way too many different types of levels in it. I would also suggest not starting out on huge projects. Start small and create levels that you know you'll be able to finish so you can add them to your portfolio. It can get very draining if you try to create something massive and you never end up finishing it.

Would you say it's becoming easier to get work in games today?

To a degree, but this doesn't mean designing games is easy. It is very hard. There are many resources available for free out there for you to use that will help you understand game development processes. Many professionals are willing to help you out and steer you in the right direction as well.

If somebody's thinking about a career in games, what can they do now to help their future prospects?

I think joining game dev communities on Discord and Twitter is a great start. There are a ton of people out there who are willing to help students and younger devs that want to break into the industry. As a level designer, there is a fantastic community on Twitter that is always supporting each other, and [they] will always provide feedback on your portfolio to help you get your foot in the door. Ⓦ

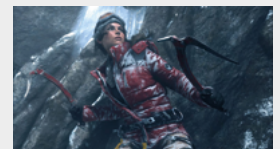## Studio highlights

Perfect Dark
TBA

Knowing a thing or two about strong female protagonists, Crystal Dynamics is currently aiding development on Xbox's in-house reboot of *Perfect Dark*, in addition to an untitled *Tomb Raider* project.
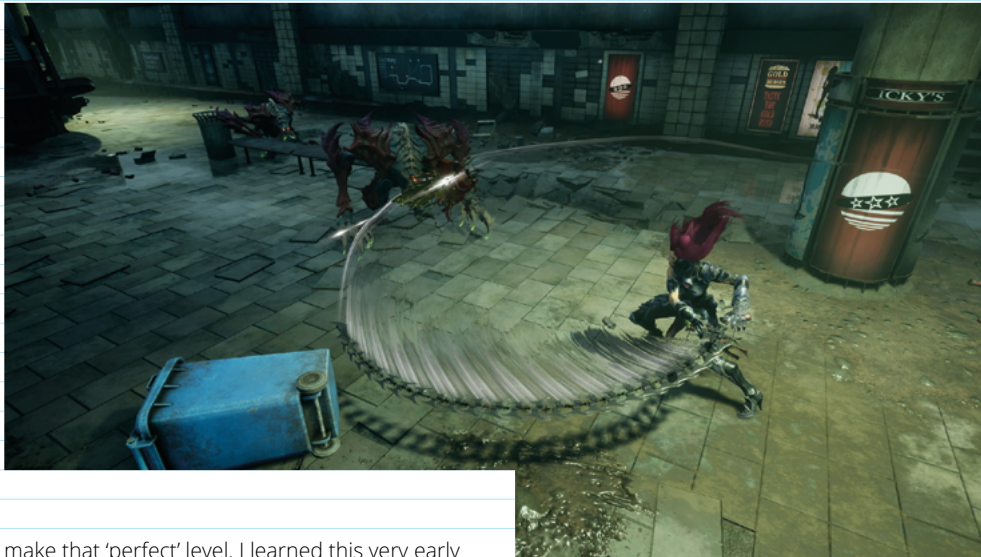

Marvel's Avengers
2020

Earth's Mightiest Heroes were the subject for Crystal Dynamics' first live-service game attempt. New characters are still being added to this day, with the latest being Jane Foster's Thor.

Rise of the Tomb Raider
2015

Crystal Dynamics lived up to the promise presented at the end of its 2013 *Tomb Raider* reboot with this Siberia-set sequel. Digging Lara's pickaxes in ice never got old.

Developer Profile

Penning the writer's journey

Denki's Gary Penn reflects on his varied career path, from journalism to game development and potentially beyond

▲ Zzap!64 journalist, The One editor, Denki co-founder, and all-round games industry veteran, Gary Penn. As you can see, he's very pleased to meet you.

❯ *Grand Theft Auto* had already been in development before Penn was hired at DMA in 1996. It was the brainchild of programmer Mike Dailly.

Making a game has a bit in common with putting a magazine together. Go figure. That's according to Denki co-founder and industry veteran Gary Penn, who started his career writing for publications like Zzap!64, The Games Machine, and The One before making the jump to development. It was in 1996, as creative director at DMA Design, that he played a key role in a little title called *Grand Theft Auto*. Setting deadlines, it turns out, can be useful in both disciplines.

While Penn got his start on the editorial side of gaming, making video games was something he was fascinated with from a young age. "I used to make all sorts of different games when I was a kid," he says, "including computer games as I got older, so it's more surprising to have ended up in journalism, to be honest."

Despite his unusual entry point, Penn describes his magazine work as "seminal" for how he came to view this up-and-coming form of entertainment. "At the time, it felt like you could do anything you wanted if you put your heart and mind to it, and I was doing exactly what I wanted. I guess all we were doing at the time was sharing our enthusiasm for the medium."

Penn soon went on to rise up through the editorial ranks in a freelance capacity, acting as consultant editor on a lot of Future-published mags like Nintendo Power and Edge, until he began craving a different type of challenge. "I get bored fairly easily," he jests. "So I was just looking for something else to do." This ultimately led him down a rather varied path of working in multiple areas of

games. Penn began writing instruction manuals for titles such as Disney's *The Lion King* for the SNES and Sega Mega Drive, and most intriguingly, 1993's *Mortal Kombat*, and then eventually into quality assurance and so on. "Over the past 37 years in the industry, I think I must've done – and enjoyed doing – pretty much everything you can do with games," Penn says. "Graphics, audio, voice acting, writing dialogue and narrative, game appraisals, instruction manuals, formal demonstrations, marketing, PR, QA, designing, producing, directing, editing... everything except sales."

All these experiences give Penn an understanding of the efforts that go into making games at every stage. "It certainly helps to walk in other people's shoes, to better appreciate their perspective."

Working on instruction manuals might have seemed like a strange step for someone who'd already reached such journalistic heights. For Penn, however, it was an opportunity for him to be his own boss, in a market adjacent to the industry he adored that was going relatively untapped. "I started doing instruction manuals because I like a decent instruction manual, and there weren't enough being made. I offered a thorough

"At the time, it felt like you could do anything you wanted"

service, writing, sourcing images, sorting out the layouts, editing where necessary, and so on, which was thanks to my magazine publishing experience.

That was only ever meant to provide a dependable income, but it almost took over because every publisher – and developer – at the time wanted me to write their manuals for them. Flattering, but also far too constraining and consuming for my liking."

It was through his work editing manuals that Penn started freelance producing on UK projects like *Batman Returns* and *Frontier: Elite II* for roughly a year or so, primarily on the publishing side. Following that, and looking for something more permanent, he then took on the role of senior producer at publisher BMG Interactive, where he was charged with looking after its new star signing: a developer based in Dundee called DMA Design. Penn had gotten to know the studio's founder, David Jones, through his prior work as a journalist, hence why he was hired into the DMA Design family proper once BMG Interactive's US owner went bust.

Officially hired as a creative director at DMA, Penn wasn't immediately tasked with wrangling *Grand Theft Auto* into the

final form we know and love today, but he recalls how the idea behind it first came to be. "Programmer Mike Dailly – who also did the original *Lemmings* – was constantly creating these interesting technology showcases, one of which was this top-down view of a world full of simple boxy polygon structures."

The original *GTA* may have started out life before Penn upended his life to Scotland and arrived in the DMA offices, but its potential was instantly clear. "It was an elegant illusion," is how Penn puts it, "like a camera on a news helicopter flying over a city." ➡
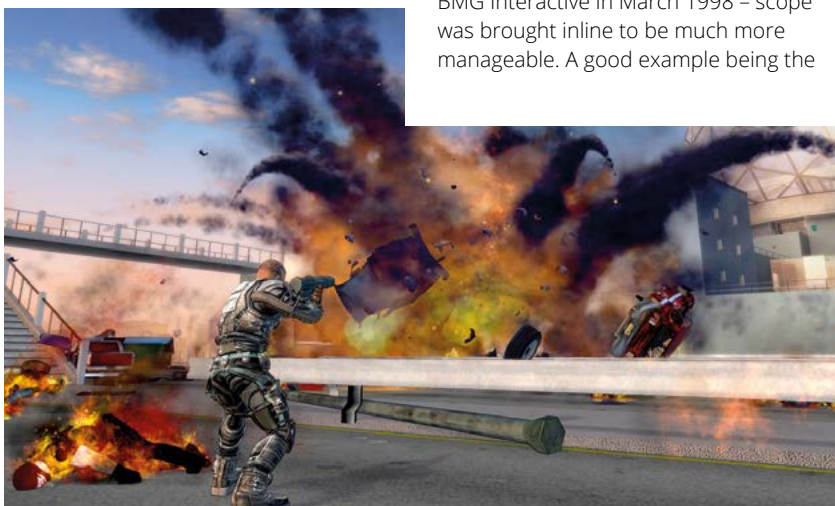

⌃ **Around the time of *Grand Theft Auto*'s development, DMA Design had its hand in a bunch of other games including 1998's *Space Station Silicon Valley*.**

The objective with *Grand Theft Auto 2* was to essentially remake the first game with extra bells and whistles, though it wasn't as well received.

WHEN GARY MET DAVE

Having worked at no less than three studios together, Penn's relationship with Scottish programmer David Jones has been crucial to his career path. "As a journalist, I'd interviewed Dave a few times, but we didn't really meet until BMG Interactive," he says. "Dave and I instantly got on like a house on fire with a mutual interest in unusual games and design principles, and he was a big fan of some of the ideas and visualisations I shared with him. Not long after I was made redundant from BMG, when they shut down the US office, which was my employer, Dave approached me to see if I'd be interested in bringing my broad experience to bear as creative director at DMA."

Crackdown was a hit on the Xbox 360, arriving two years after launch.

Having just started at the studio in 1996, Penn got involved in other DMA games already in the throes of development, like action-adventure Nintendo 64 exclusive *Body Harvest*, PC strategy game *Tanktics*, and tank battler *Wild Metal Country*. One of the first things Penn noticed about the way DMA operated was just how much it was outstretching its development capabilities. The idea at the time was to develop each game for almost every platform (PC, PlayStation, and Sega Saturn), until – largely as a result of Take-Two Interactive's acquisition of BMG Interactive in March 1998 – scope was brought inline to be much more manageable. A good example being the

aforementioned *Body Harvest*'s exclusivity deal, which meant it would launch only on Nintendo 64.

Even before BMG was liquidated, though, Penn was given clues that development wasn't running as smoothly as desired. "The team just kept going," he recalls. "When I was at BMG, we'd have weekly calls with our US office, and they – understandably – weren't happy with the way *GTA* was not coming together; it was the same with *Tanktics*, *Space Station Silicon Valley*, and *Covert*." Still, Penn didn't see the sense in giving up completely. "With hindsight, I'm not sure why I used to constantly defend it, and DMA's poor progress as a whole, but I did. I guess I was blinded by belief; I wanted all these cool ideas to work, to become real."

Making *Grand Theft Auto* resemble something real, and just generally get it to a releasable state, required the opposite of a delicate touch. It was here, when being fully brought onto the project as creative director, that Penn imposed several of the lessons magazine journalism had taught him. "Having to 'cut to fit' – to make a magazine within a fixed timescale – teaches you a lot about what you do, how you do it, yourself, your team, and your audience," he says. "Game development has a tendency to slip, whereas there's no such luxury when

⌃ **Penn describes Denki as a "digital toyshop" first and foremost.**

delivering printed periodicals on a regular basis." Penn admits that his leadership style might not have been popular amongst most staff, but it worked to get *GTA* over the line. "Editing is what makes the magic happen – in all media. You can't edit what you don't have, so finishing is essential. You effectively need to make your game then remake it at least once."

Speaking of remaking... with the original *GTA* (finally) out of the door and well received by critics and players alike, the task of tackling the sequel loomed, and the idea of expanding in scope but retaining the first game's vibe and feel served as its main driver. After all, it wasn't broken, so why fix it?

"*GTA 2* was meant to be the first game remade better, but it ended up taking on a life of its own," Penn says. "The story threads [were] tighter now, but that structure mixing story-driven missions and open-world play didn't change that much since the beginning."

By the time *Grand Theft Auto III* – a game we now know would change how we think about open-world games forever – was being thought about, Penn's classic case of not being challenged enough started to creep in once again. "I was burned out, too, and I needed to do something before I self-destructed."

> **"Editing is what makes the magic happen – in all media"**

Fortunately, other than the need to drastically rethink the game's perspective, the template for what would become *GTA III* had already been set. "It was clear the core team had everything in hand," says Penn. "They had the attitude, the skills, the previous two games for reference. I didn't feel the need to be involved at all."

Turns out he wasn't the only one seeking a fresh start following *GTA 2*'s release, as many of the key creative people behind DMA Design (Dave Jones included) left to form another studio, Denki. From 2000 right up until now, this is where Penn still happily works as head of development, overseeing a foray into new modes of development like interactive TV games, licensed tie-in games, and more. However, alongside his more experimental work at Denki, even he couldn't turn down the opportunity to expand on a genre he helped usher in with *GTA* at a shorter-lived studio: Realtime Worlds. Again in partnership with long-time collaborator David Jones, it was here where early Xbox 360 hit *Crackdown* came to be.

"I was involved with *Crackdown* from start to finish," Penn enthuses. "From when it was called *Car Wars* and was more of a turn-based RPG. Dave [Jones] wanted to use Denki's proven ➡

> *Autonauts vs Piratebots* expands on the idea of rampant automation by introducing tower defence and RTS elements.

TOOLS OF THE TRADE

The idea behind *Autonauts*' settlement management was so unwieldy, there was arguably no better avenue to gauge interest than itch.io. Here, the community could provide Penn and the Denki team with essential feedback, and influence the direction of the prototype right up until release. "[Rapid prototyping] was made public through itch.io and shared Google documents," Penn says. "Players were given controlled access to all of our documentation so we could track bugs and interest in potential features. Our players have been essential when it comes to helping us shape the *Autonauts* experience. It's such an inspiring thing to see."

⌄ At its height, Denki was able to conceive and release games in rapid time. Free-to-play word puzzle-adventure *Word Quest*, for example, was developed in just four weeks.

development methodology on a big game." True to tradition, not every aspect of the game's development went to plan, but it eventually took enough shape to catch the eye of a particular tech giant hoping to make further waves in the console world. "We helped package up the concept to sell it to Microsoft, and then I ended up doing a mishmash of design, direction, and production – and eventually some editing and writing and even voice acting. It felt like the concept changed every day, until one day, one of the designers was messing around with the main character and made it more like a superhero. That stuck, and ideas started to consolidate around that."

Realtime Worlds may have shut down after the disappointing sales suffered by its second game, *APB: All Points Bulletin*, in 2010, but Penn continued to be heavily involved in *Crackdown* as an advisor

and writer. It's especially notable given just how much the series was passed around between different studios, as Ruffian (another developer based in Dundee) completed work on the direct sequel, while Sumo Digital launched *Crackdown 3* after an infamously troublesome development cycle – in part due to overshooting with its ambitiously destructive cloud tech. "Kudos to Sumo for finishing it off," says Penn. "*Crackdown 3* was... a challenge. Trying to constrain and direct the destruction within the *Crackdown* universe was a nightmare."

Crackdown 3 may not ultimately have lived up to its full potential as a key Xbox One title, but it's yet more evidence of Penn's wider belief that it's crucial to finish what you start. It's fair to say that none of the tentpole titles Penn has been a part of has been an easy ride.

But maybe that says more about the speed at which the industry evolves and adapts, as opposed to any lack of skill or ambition. Theorising why this is, Penn says: "Making original games is so hard, even harder at this scale. You shouldn't go into production until you've finished the game once in a playable form and have a clear idea of what it is you're building... but we did, despite trying so hard not to." For evidence of how it should be done, Penn cites a certain other open-world behemoth. "*GTA III* is a great example of what a capable team can do, working from a tangible model like the first game."

Most recently, after securing funding from the UK Games Fund back in

▲ After joining the company in 2000, Penn helped Denki get to work creating various original and licensed interactive TV games.

2017, under Denki, Penn has been in his element handling a new series of cutesy games based around the idea of automating settlements, called *Autonauts*.

Designed to encourage players young and old to engage in Scratch-style programming, the objective is to build, create, and automate legions of workerbots to function in whatever way you choose. The concept's flexible structure and litany of design capabilities makes pinning it into any one genre a tough task. But its low-poly art coupled with near endless possibilities has rendered the original *Autonauts* a fun way for children to get into programming, going so far as to be used as an educational tool in schools.

"It's been such a lovely surprise to see *Autonauts* help people learn about coding," Penn says. "We've had some fantastic feedback from schools around Europe who've seen students better appreciating the fundamentals of coding from playing *Autonauts*.

"It's not a coding game, not really – [it's] more about using the broadening principles of coding to automate systems, which is a horribly dry way to put it."

Such infinite potential left Penn at somewhat of a dead end when thinking of where to next take the series following the game's full launch in 2019.

Where do you take a game that can be influenced and manipulated into almost anything? Into its own sub-genre, consisting of both tower defence and real-time strategy elements, of course. The recently released *Autonauts vs Piratebots* "is a puzzle game like the original," explains Penn, "but sees you juggling essential base-building with automating a business, to create finances to build an army to defend against and attack hordes of Piratebots." Not only does this serve as an effective way for the sequel to maintain the core creativity introduced in the original, but it also offers new players a bit more structure. The hope being that an even wider player base can discover the joys only a game based around automation can provide.

> **"Making original games is hard, even at this scale"**

One of the enduring aspects of *Autonauts*, and now *Autonauts vs Piratebots*, is the idea of collaboration. Because unlike when Penn was forced to take charge during his days at DMA Design to get *GTA* shipped, and then Realtime Worlds where he wore a lot of development hats, *Autonauts* allows for a back-and-forth conversation between player and studio. For the first time in years, Penn is free to create a relaxing and attractive space for people to play instead of rushing out the door, with technologies like Discord and Reddit
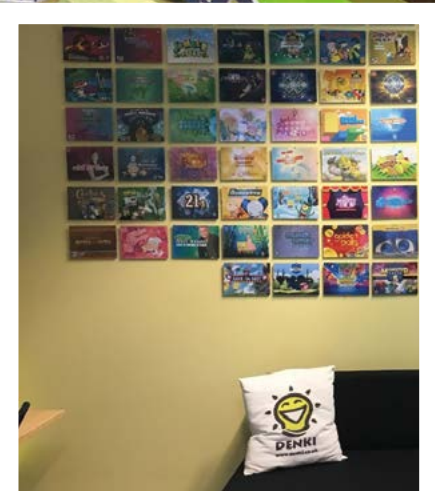
being excellent avenues to provide instant fan feedback. "We used our brilliant community's feedback to help us decide where to go with *Autonauts*, and ended up at *Autonauts vs Piratebots*. We shared visualisations of six possible concepts and found there was a hunger for automating combat within RTS and RPG themes."

As well as being indicative of his desire to never stand still, Penn's move into a more automated brand of game development sees him focus less on deadlines and more on what creative choices will best benefit the titles he now makes. It's hard to imagine him reaching this point, though, were he not forged in the fires of magazine journalism and triple-A game development. And whereas before, Penn was sometimes forced to strip away a project's ideas to help it see the light of day, now the opposite is true: "There's so much untapped potential". ⓦ

Whoops, it's 4am: a novice's guide to management sims

STEVE MCNEIL

Steve can't come to the phone right now, he's "busy".

⌄ **Two Point Studios founders Mark Webley and Gary Carr know their stuff, having worked at Bullfrog on the original *Theme Hospital*.**

Like all right-thinking people, I've fallen down a massive hole. Not literally, of course, but figuratively, with the recent release of *Two Point Campus* and its resultant impact on my productivity.

From the moment Peter Molyneux released 1994's *Theme Park* onto his unsuspecting victims, I was hooked. Bullfrog and Molyneux continued to monopolise my time for years with titles like *Dungeon Keeper* and *Theme Hospital*, until the dastardly Chris Sawyer came along and robbed me blind with *RollerCoaster Tycoon* and its must-have expansion packs and sequels.

Peter Molyneux made a final grab for my heart with the criminally underrated Hollywood film studio sim *The Movies**, before stupid things like "work" and "baby" stole me away from my one true love for a number of years.

More recently, franchises like Frontier's *Planet Coaster*/*Zoo* and *Jurassic World Evolution* have lured me back in gently, and I'll occasionally dabble with a *Cities: Skylines* or *Tropico* and the like, but it's only with *Two Point Campus*, and its predecessor *Two Point Hospital*, that I felt the strong pull that lost me many summer days, and nights, and days again, in the late 1990s. Indeed, this article primarily exists as a justification to myself and anyone who wants me to look up from the screen as to why I've allowed myself to take a hatchet to my productivity for the last week by playing the game for "research". I'm fooling no one.

For me, the reason the *Two Point* titles succeed is the perfect way it has blended the look and feel of the old games, whilst adding many subtle quality of life improvements that we take for granted, as a result of everything the medium has learned in the intervening decades.

You may hear people say that *Two Point Hospital* is basically a carbon copy of *Theme Hospital*. It isn't. If you go back to its inspiration, there are, of course, many, many similarities, but Two Point Studios has very much made the genre its own, in the same way that *RollerCoaster Tycoon* was both the same as, but utterly different from, the original *Theme Park*.

Crucially, Two Point Studios has achieved the magic trick of making the game *feel* like you *think* those old games felt, in your memories. You gain the same joy at their silliness, the same satisfaction for creating order, and the same "just one more thing" gameplay that keeps you trapped in your joyful pixel prison.

On which note, I'm off to play it again now. Damn you, Peter Molyneux. ⓦ

*Note to Two Point Studios: for the love of all that is good, please make this the focus of your next Two Point game. Or someone remaster the original. Oh god, it was SO GOOD.

Backend Contents

Reviews, retro games, and lots more besides

OUR SCORES

1–9
Trash. Unplayable. A broken mess.

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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.

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50–59
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60–69
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80–89
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Never say never, eh?

⌃ A fox's perspective on the climate crisis in *Endling*. Find our verdict on page 98.

PLUS

⌃ Streamer AshSaidHi recalls her childhood memories of *Dungeon Master* and explains why Twitch is her happy space on page 101.

Review

REVIEWED BY
Andrew J. Dickinson

Two Point Campus

A scholarly addition to the management sim genre

It's been 15 years since I left university, but after playing *Two Point Campus*, it's like no time has passed at all. The only difference now is that I'm running the place, and I can put *Crazy Taxi* arcade machines in every hallway if I want to. Although, that would probably take away money that would be better spent on staff training, new classrooms, or perhaps a party at the student union. Decisions, decisions...

You start off your career in *Two Point Campus* at the modest Freshleigh, where expectations are low, and you can learn the business of campus management. You're introduced to the game's mechanics via bite-sized tasks, and anyone who has played 2018's *Two Point Hospital* will be at home with the controls.

You're first asked to build a classroom for the Scientography course, and doing so is an intuitive affair. Dragging your cursor across the grid that makes up each building allows you to set the size of the room, while the responsive camera controls allow you to place every item just where you'd like it. Simulations like this are often made for PC and later ported to console, their control scheme a hurried add-on. Here, Two Point Studios has developed both PC and console versions together, meaning the controls feel fluid and natural on console.

Soon you're into the menus, selecting teachers, assistants, and janitors to hire. The UI is clear, and it didn't take long to work out where to go for what and the buttons to press to get there. Again, the console controls have been thought through well, with each section of the UI being accessible through a face button or D-pad press. Almost all actions you'll want to take are a couple of clicks away, which means

Freshleigh Meadows

Campus Management 101

This countryside college has low expectations and a nice canal. It's the perfect place to start your career.

∧ There's often a requirement to improve your courses or add new ones each year, and a limited time frame to do so once you kick off the new semester.

There's an abundance of ways to tailor your campus and classrooms to your liking – you can even move existing windows and entrances.

Each class type has a special room where students create something cool during the course of their studies, like a robot or even a giant hamburger.

you're spending more time checking out the goings-on of your students than you are buried in multilayered menus.

Then there's the Aardman-meets-Bullfrog aesthetic. Cartoonish characters roam your university, each with their own exaggerated features and quirky mannerisms. The typical geek can be seen wringing their hands, walking with an awkward gait (which I sometimes mistook for them needing the bathroom), while the goth sports a long, black trench coat and a cocky saunter. The rich kid seems to own the place as they breeze through the campus, comically large top hat visible a mile away, while robotics students have mechanical prosthetics and march around like the robot they're trying to create. It's all charming, and gives your university much more personality.

Your goal is to move from campus to campus, helping to solve its problems, and ultimately bring in applicants and see them leave with high grades. That means balancing not only the needs of the university, but also the needs of the students. You might have a world-class VR lab, but do you have places for the students to unwind and socialise? Are there any clubs on campus for them to join? Students will often give you requests that will help with their studies, or that will make their time at university more enjoyable. You may be asked to buy a culinary bookcase for the library to aid with research, or to place a specific poster in a room to make someone happy (or give the area more prestige). These requests often come in thick and fast, and can be rejected if you so wish. These are separate from the goals set by the establishment itself, which will help the campus grow and eventually reach a coveted three-star status.

The ultimate goal is to attain stars for each campus you manage. There are three on offer, and usually attaining one will give you access to the next available campus, but a good challenge comes from trying to obtain all three. There are 12 universities to manage in total, each with their own set of goals to meet. You could move through them within a couple of hours each, sure, but the lure of getting those stars and crafting the best campus possible meant that I spent much more time than that with the game.

While my time with *Two Point Campus* was predominantly positive, there were some small issues that felt jarring. The tasks set by students, to buy certain items or hold events, were quite frequent, and often came when I didn't have the kudosh (kudos points for meeting certain milestones) available to unlock what they were asking for. Rejecting these requests is a viable option, and gives you a certain amount of time to action them if you don't, but they just felt pointless when I knew I couldn't make the kudosh in time. There was also some slowdown in certain areas, and occasionally the build menu had a mind of its own, ignoring my directional inputs. Most egregious of all, however, was that the developers put a *Crazy Taxi* arcade machine in the game but didn't make it playable. How dare they!

Overall, though, there's a great time to be had with this second outing from Two Point Studios. While *Two Point Hospital* sometimes stood in the shadow of its inspiration, *Theme Hospital*, *Two Point Campus* has helped the studio step out into the limelight with something new, entertaining, and funny. I'm excited to see what the future holds for the developer now they have such a solid foundation in place. *Two Point Mall*, perhaps? ⓦ

"I can put *Crazy Taxi* arcade machines in every hallway if I want"

HIGHLIGHT

Like *Two Point Hospital*, *Campus* again features the sarcastic tannoy announcer, along with a host of DJs for various fictitious radio stations throughout the regions you visit. Alongside fun music, the audio for the game really helps give a great sense of personality that I very much appreciated.

VERDICT

An intuitive, deep, and funny business simulation that many will love, and more should try.

85%
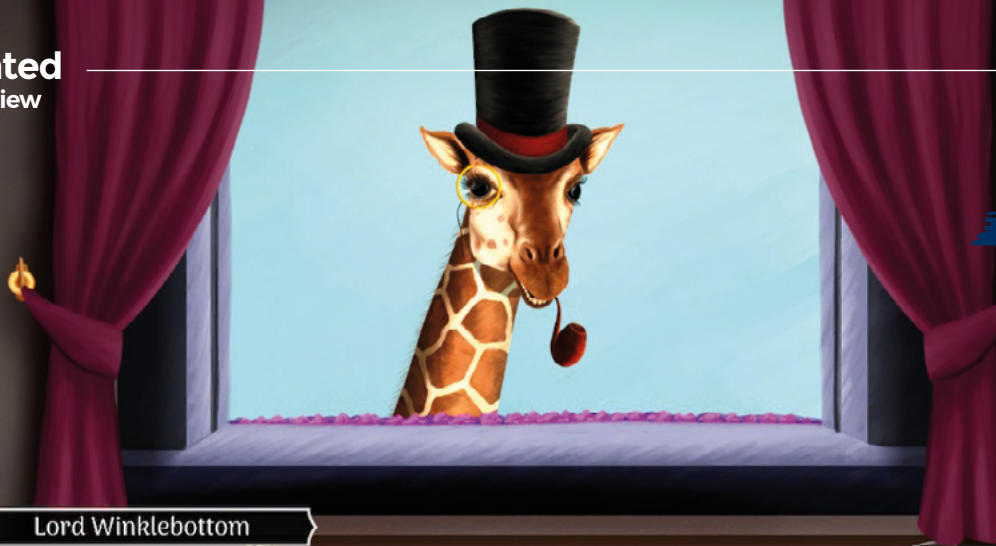
HIGHLIGHT

The 2D hand-painted artwork really pops, with brightly coloured and detailed backdrops creating an intriguing and inviting atmosphere. A lot of care has been taken over the way *Lord Winklebottom Investigates* is presented, and nothing says 'premium feel' quite like hand-painted artwork.

Lord Winklebottom

Lord Winklebottom committing common larceny? Most certainly not!

Review

Lord Winklebottom Investigates

The game's afoot

Info

GENRE
Puzzle, adventure

FORMAT
Switch (tested) / PC / XBO

DEVELOPER
Cave Monsters

PUBLISHER
Wings/Cave Monsters

PRICE
£15.99

RELEASE
Out now

SOCIAL
@cavemonsters

REVIEWED BY
Shaun Hughes

VERDICT

It's British. It's barmy. It's bound to make you smile. It's also in need of some refinement, but don't let that put you off.

67%

The simpler a video game is, the more precise its individual parts need to be. This is certainly true of *Lord Winklebottom Investigates*, a point-and-click murder mystery that has you playing as a 1920s giraffe detective. With its locations and objects depicted with (admittedly lovely) static images, it's left to the voice acting, plot lines, and some good old British humour to engage the player in its Agatha Christie- and Sherlock Holmes-inspired yarn.

For the most part, *Lord Winklebottom* delivers. One of the first notable elements is the acting, with the entirety of the animal cast fully voiced with oh-so British accents. Bizarrely, it's Lord Winklebottom himself who lets the side down in the opening moments: an overly stiff delivery coupled with a disregard for punctuation and a penchant for wordy explanations makes it difficult to warm to him. Thankfully, he stops giraffing around after a while and joins the other cast members in delivering suitably stellar performances steeped in humour and precise comic timing.

Item interaction is also important here – especially as it's responsible for much of the puzzle-based gameplay. There are many inventive ways for items to be used or combined to overcome challenges. Some of them miss

> **"Steeped in humour and precise comic timing"**

the mark a little, but by and large, solving the puzzles is enjoyable without ever feeling too taxing. What is taxing, though, is the cursor. Within seconds of playing, I was compelled to check the settings for a sensitivity slider. With no way to change the speed at which the cursor moves around the screen, you're left to either hope for the best or to take far longer than you would like to select an on-screen option. This is at its worst when an item has two interactable options positioned closely together. Sadly, the calibration on the Switch touchscreen doesn't fare much better, either.

Between the acting, humour, and puzzle design, there are moments of excellence in *Lord Winklebottom*. Charlotte Sutherland, founder of Cave Monsters and former Sumo, Rare, and EA developer, has crafted an eclectic mix of recognisable characters who play their roles well in the first two acts. The third act is where the story seems to lose its way, and after that, the mystery's resolved a little too quickly for comfort.

Lord Winklebottom Investigates is both memorable and charming, then, but can leave you wanting. There's enough here to enjoy it for what it is, but it's unlikely to convert genre sceptics to the point-and-click cause. And for true fans of the genre, there are other, more refined experiences out there to be enjoyed. ⓦ

Timber Crossing

Dinky
Prestige
LEVEL 1

Rated
Review

DAY
2

Quest Tracker

Home Improvements
Get the Dinky Shed Prestige to Level 2.

On the Road
Give Beanie the envelope from Oliver.

Repairing the Kiosk
Talk to Tony about the Little Travel Kiosk.

Your Inventory

Filters

x7   x5   x18

x20   x19   x21

29   130

Review

Bear and Breakfast

A woodland retreat that offers more than the bear necessities

Hank the bear was trekking through the forest with his friends, minding his own business, when suddenly, out of nowhere, the shrieking of an electronic voice brought him to a halt. Pressing a green button on a curious metal shark, Hank learned the story of how humans fled the forest. From this moment on, he decided to open his own bed and breakfast in the hope of coaxing humans back into the countryside.

Developed by Romanian studio Gummy Cat, *Bear and Breakfast* puts us in Hank's hairy paws, gathering resources and materials to restore decrepit cabins to their former glory, thus providing comfortable stays for potential guests.

After cleaning and restoring cabins, we'll have to craft beds, vanity tables, and footrests to add an extra dash of comfort. Trash can be collected and traded with a raccoon, who will furnish Hank with room decorations, increasing the prestige of the cabins. Later in the game, more rooms will unlock, like a bar and an outdoor kitchen. These humans sure have some high standards.

Bear and Breakfast perfectly fits the requirements of a cosy game. The pacing is relaxed and there are no timed quests; even splashing out on a few luxuries isn't a huge issue as Hank's mum is on hand to provide occasional monetary relief. To attract more visitors, our dear shark recommends restoring abandoned places, like the diner or the information centre. Beyond

"These humans sure have some high standards"

bringing these places back to life, though, there seems to be nothing else to do with them – they just sit there, shiny and new but empty and alone, like the carcass of an abandoned mall.

The game's slow pace will be perfect for some, but players looking for a more focused experience might be turned off. There are quests that require Hank to wait for multiple guests to finish their stays. Hank can go to sleep (momentarily), which allows you to skip the night-time, but there's still several minutes of waiting involved. In these instances, we're invited to take our time, take a breath, and soak up the great outdoors. Luckily, the time spent wandering around the forests, swamps, and highways gives you more time to take in *Bear and Breakfast*'s delightful graphics. Beautiful hand-painted scenes in loading screens sit alongside detailed sprites and locations. The electronic/trip-hop music also contributes quite a bit to the relaxing mood.

The writing, meanwhile, is witty, with colourful jabs at capitalism, along with the obviously bizarre idea that a bear should be building rooms to welcome humans back to nature. Instead of, well, scaring them away with roars or, in this instance, terrifyingly high prices.

If you can bear a couple of pacing issues, there's a lot to enjoy in managing cabins, seeing guests come and go, and later reading their reviews. Hank's ready to provide comfort as much to us players as he is to his in-game guests. Ⓦ

VERDICT

Bear and Breakfast is a cosy little sim that, thanks to witty text and cute graphics, will easily win hearts all over.

82%

TOTAL SCORE
51,216

ELAPSED TIME
0:50

630

HIGHLIGHT

Inspired by retro-futurist sci-fi cinema from the 1970s and 1980s, *Rollerdrome* combines this aesthetic and vibe with cel-shaded linework and bold colours to really draw you into its world. The style's simplicity makes each arena easy to read, which is essential when you're rolling around, shooting, and performing tricks at high speed.

Rollerdrome

On a roll

Info

GENRE
Third-person shooter, sports action

FORMAT
PC (tested) / PS4 / PS5

DEVELOPER
Roll7

PUBLISHER
Private Division (PC), Take-Two Interactive (console)

PRICE
£24.99

RELEASE
Out now

REVIEWED BY
Aaron Potter

VERDICT

A short yet oh-so-sweet spin on the skating game genre, packed with fluid action that feels rewarding for all skill levels.

82%

Momentum is king in the eponymous, near-future blood sport Kara Hassan finds herself taking part in. It's there each time she forward-flips into a new arena, performs the cool tricks needed to refill her ammo belt, and skirts a rail or rides a wall in the hopes of gaining a better vantage point on her next enemy target. This combination of factors quickly sees *Rollerdrome* evolve into a delicate dance of dodging, shooting, and grinding in the best way; the pursuit of improving on them also rendering it a dangerously addictive endeavour. And yet, having already near-perfected the act of skating on a 2D plane with *OlliOlli World* earlier this year, it's no surprise that developer Roll7 has done it again, bringing such high-flying antics into the third dimension with incredible ease.

Set in the year 2030, at a time when civilisation is advised to stay indoors and stay distracted by different bouts of mega-corp-funded entertainment, the most popular amongst them is *Rollerdrome*. Becoming champion in this shooter-skater hybrid means killing enough enemies – known in-universe as "house players" – to advance as stylishly and skilfully as possible. Done correctly, it's enough to make you feel like an unstoppable force, and much of this comes from how the game's mechanics always feel they're working for you instead of against you.

> ### "It's enough to make you feel like an unstoppable force"

Working your way from the bottom to the top of the league, every round of *Rollerdrome* begins with you simply getting a lay of the land. Because while your objective to decimate a predetermined number of enemy waves always stays the same, how you navigate and use each fresh environment to your advantage proves equally as important. If you're skate-shooting through a mall, for instance, it can often pay to grind up to the upper levels and take out house players from above. Similarly, in the handful of arenas that take place in the snow, skirting across the skylift that adjoins its two zones can be essential for maintaining a good sense of flow, always staying stocked with enough ammo, and keeping your score multiplier ticking up.

It might sound complex, but in practice, ascending the *Rollerdrome* ranks is far from it. Certain *OlliOlli* staples crossing over – such as the in-game tricktionary and each stage's specific challenges – sands down most rough edges, acting as a shorthand to get familiar players up and running while being understandable for newcomers to enjoy (and potentially even master). With only a dozen or so unique matches to complete, most will be done relatively quickly, but with the aforementioned challenges, gradual rollout of new weapons and enemy types, and an additional campaign that ups the difficulty by rearranging elements, *Rollerdrome* offers plenty of reasons to brush up on your skate skills. ⓦ

Lost in Play

Close your eyes and make believe that you could be anywhere

Do you remember that episode of *Muppet Babies* where they shrank down in a tiny submarine and went into Gonzo's body through his belly button? You probably don't; you're probably far too young. And I'm not even sure if it was Gonzo. It doesn't matter: the point is, it was really weird. One minute they're mucking about in the nursery, and the next minute they're navigating through Gonzo's alimentary canal. And that's just what *Lost in Play* feels like.

No, hold on, that's a terrible image. I don't mean that *Lost in Play* is like worming your way through the guts of a beloved puppet. I mean that it constantly surprises you, throwing in giddy little trips of the imagination, bizarre little snippets of oddness. Here's a seagull playing draughts with a walrus. Here's a goblin piloting a giant stork. Here's a cactus having a shave. Every new screen is a fresh delight, a fresh clutch of strange imagery. It's quite wonderful. And it's funny, too.

The plot shares a lot in common with *Muppet Babies*, believe it or not. In that old cartoon, each episode saw the diminutive felt creatures use their imagination to go on some grand adventure, like battling pirates, going to the Moon, becoming knights of old, or what have you. And yes, infiltrating Gonzo. *Lost in Play* follows a similar pattern, starring a brother and sister who begin the game in their boring old bedroom, but soon get caught up in a game of imaginative play that

sees them confront monsters, befriend a troupe of frogs, get lost at sea – plus more that I won't spoil.

Mechanically, it follows the age-old point-and-click mechanic of picking up items and using them in inventive ways to progress, but it's elegantly streamlined here. You control the characters directly with a gamepad (or keyboard), and interactive items are helpfully highlighted when you pass them. As such, it's rare that you'll miss anything, leaving you solely with the challenge of working out what goes where. Puzzles are pitched perfectly for the most part, giving you conundrums to ponder, but never enough to leave you frustrated. If you do begin to feel that all hope is lost, however, there's a handy hint function to set you off in the right direction.

The mechanics might not be particularly innovative, but the presentation is absolutely stunning, with animation that is incredibly smooth and just absurdly good. Every little interaction has its own bespoke animation, to the point where it feels like you're playing an actual cartoon.

In fact, *Lost in Play* is just as fun to watch as it is to play, making it ideal for enjoying with, say, your partner or children. The downside is that it can't last forever and, at roughly 5–6 hours long, you may have seen everything after a couple of evenings. But it will stick in your memory for a long time after that – just like I can't forget that time the Muppet Babies went spelunking in Gonzo's tummy. Ⓦ

> **"Every new screen is a delight, a fresh clutch of strange imagery"**

HIGHLIGHT

The animation in *Lost in Play* is simply superb, and a large part of why it's so good is down to the comedic timing. There's a bit with a chicken that had me in stitches as it pecked and strutted around. Did you know that a chicken's inventory is in its stomach?

Info

GENRE
Puzzle/adventure

FORMAT
PC (tested) / Switch

DEVELOPER
Happy Juice

PUBLISHER
Joystick Ventures

PRICE
£15.49

RELEASE
Out now

SOCIAL
@HappyJuiceGames

REVIEWED BY
Lewis Packwood

VERDICT

A beautiful, funny, weird, and delightful puzzler that you won't forget in a hurry.

86%

Review

Endling: Extinction Is Forever

For fox sake

REVIEWED BY
Jon Bailes

L ike a nature documentary, *Endling* wants to tell a story as well as display the brute facts of life. Just as the TV lens frames real-life creatures with tales of hardship and heroism that prick your sense of empathy, this survival game wants you to root for a vixen and her cubs sniffing out food among man-made rubble and pollution. The result is a melancholic rumination on rapacious human appetites, and a close-up shot of one four-legged family's tribulations.

In isolation, each half of this equation is easy to appreciate. From your foxy perspective, humanity is an ongoing natural disaster and constant thorn in the side, right from the start as you guide the pregnant animal from the grasp of a raging forest fire. Then once you

find a lair and release your litter (hold X to give birth), your nightly hunting, scavenging routine has to work around the rhythms of human life. The restrictions are analogised most efficiently by a 3D open world that is actually made up of side-scrolling 2D paths you transition between at junction points. When you first venture out, some routes on the map are locked, because people have closed them off in the course of their activities. As they later open up, it's not because you achieved something, it's an arbitrary change that sends you in new directions.

And while that means more room to roam, at the same time your surroundings visibly decay from night to night, nurturing a creeping sense of alarm. Natural food sources such as mice and fish dwindle, forcing you to stick your head in bin bags for scraps, while patches of water you need to swim through get greener and sludgier as you near the perimeter of an ominous factory. Fruitful hunting grounds dry up, prompting you to venture further, risking contact with people. An undulating challenge evolves organically as the pieces shift around you.

Concurrently, the fox herself is a sympathetic character, although her cubs soon upstage her in that respect, once they begin accompanying

> **Some humans are out to get you, but one or two might even help you out.**
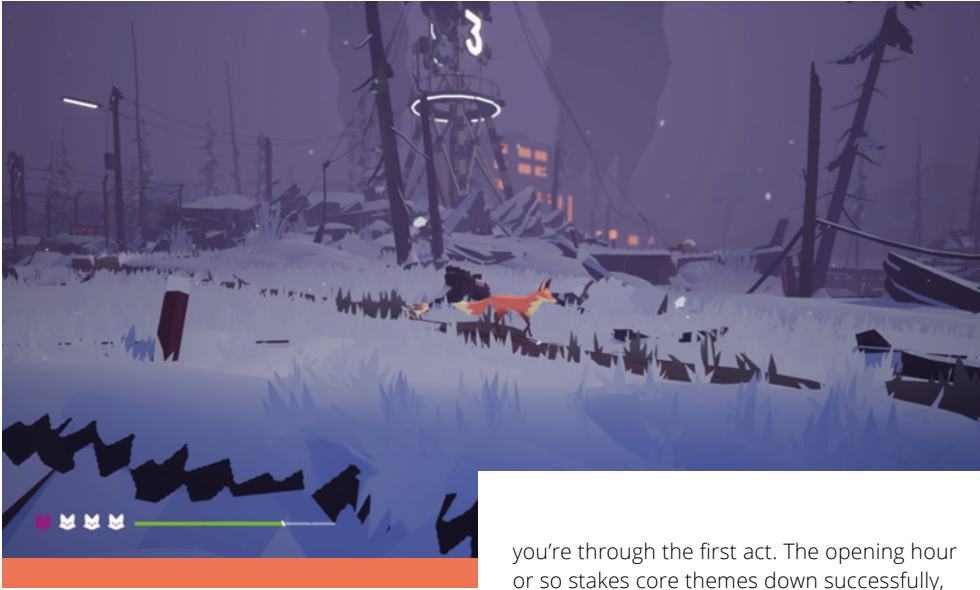
her on excursions. *Endling*'s sharp cel-shading and fluid animation brings cartoon cuteness to the gang, from the mother's hang-dog expression when she gets injured, to, well, everything about her progeny. "Aren't they just to die for?" the game seems to scream when you snuggle up with your squidgy cocktail sausage newborns, or stop to pet their later incarnation as cuddly toys. "Couldn't you just eat them?" Of course, there are predators about that really could just eat them, and all that adorableness ensures you're extra vigilant about protecting them. You desperately want the little critters to grow big and strong and learn the tricks of the trade, welling with pride when one triggers a scripted skit that sees them grasp a new skill.

For all the polish on both sides of *Endling*'s coin, however, its stories don't harmonise around a coherent experience. For starters, given its grim examination of human violence, there's relatively little danger. Even in leaner times, there's almost always enough nutrition in your vicinity to make certain your food meter never empties. And although some human characters attack if you approach, leading to brief *Little Nightmares*-style chases, more often such threats function as additional roadblocks, forcing you to take a long way round. Yes, it's a relief that *Endling*'s fluffy cast aren't subjected to some gory vulpine survival horror, but the result is a survival game with little tension or urgency, which sits awkwardly with its message.

This reluctance to ratchet up the stress also means there's not much variety once

"You desperately want the little critters to grow big and strong"

you're through the first act. The opening hour or so stakes core themes down successfully, as the land degrades and the fox is pushed into industrial territory. But the following acts effectively reset the clock to drive the same cycle home again. The most enticing aspect then is the different kinds of devastation and deprivation in the background, as you have to adopt fresh lairs amid logging and fur trapping operations, then a grubby refugee camp. Problem is, your sorties and interactions don't evolve with these scenes, and the cautionary tale feels like it's stalling before making its final point.

The fox's personal journey, meanwhile, gains texture early on when one of the cubs is kidnapped, and from there you sporadically pick up scents that offer insight into where they were taken. The way the pup's fate is depicted in semi-transparent purple stills, though, makes it difficult to follow, and even more than the big-picture narrative, the story spends too long treading water. Plus, unfortunately, in my case, the denouement never arrived due to a glitch that broke the last string of clues. After diligently following every scent for four hours, I was robbed of closure.

Then again, even if it had played out as intended, the missing cub plot line would have still been an indulgence in an experience that doesn't need to personalise its stars so much to make you feel their pain. Rather than a production that Attenborough might put his voice to, *Endling* serves up Disneyfied critters whose design rubs against its unflinching glare at ruthless industrial exploitation. Moments of beauty and tragedy fight against episodes of sentimentality. Given *Endling*'s deeply critical assessment of people, why give these foxes so much humanity? ⓦ

The most effective marriage between *Endling*'s themes and mechanics comes with its depiction of deforestation, as more trees are felled each day. Piles of logs start to block preferred paths, for instance, while an armed lookout becomes harder to avoid thanks to ever-thinning cover that helps you sneak by.

VERDICT

**This fox's view of humanity has powerful moments, but tugs too hard on the heartstrings.**

63%

Why not try...

Itch.io roundup

Picking out some of the platform's standout titles | **REVIEWED BY** Nic Reuben

Carphero

Coast City Games / **Name your own** / **wfmag.cc/carphero**

Enough time has passed from the UK's recent heatwave for us all to get nostalgic about it every time we have to put on an extra jumper, so there's no better time for a trip to the sunny, voxelated beach of this enjoyably stressful plate-spinner. You play an overworked, legless cuboid tasked with running back and forth down a dangerously hot beach, fulfilling the needs of fussy holiday-makers. Quick deliveries earn tips, but miss too many and it's game over. Spend too long on the sand, and your brisk cuboid sprint will gradually degrade to an exhausted waddle. Evokes a distilled, single-player *Overcooked*.
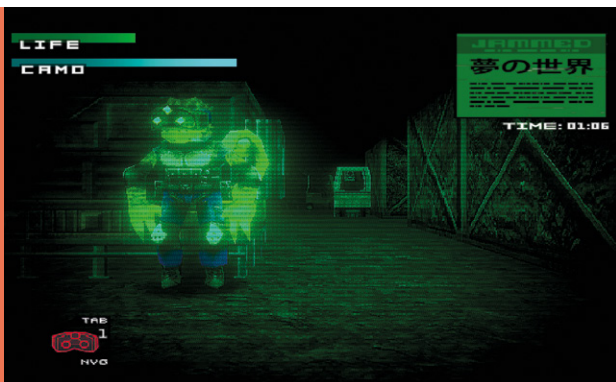
Covert Critter

sodaraptor / **Name your own** / **wfmag.cc/covert**

You know that Simpsons gag with the rainbow paradise depicting a world without lawyers? That is what I personally predict the world would be like now if Gex was as famous as Solid Snake. I haven't worked out the details yet, but it just feels right. Thankfully, Retro PSX love letter *Covert Critter* allows a glimpse into such an erstwhile utopia. From the watery lens to the classic codec zoom-in, the animation and texture work here is primed to deliver nostalgic perfection, but the flow and level design is full of brand new tricks.
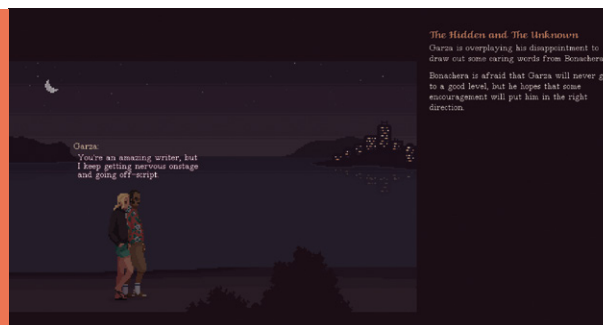
De Tres al Cuarto

Deconstructeam / **Free** / **wfmag.cc/cuarto**

Plucked from Deconstructeam's Essays on Empathy project, this short story come narrative card game follows two down-on-their-luck comedians trying to perfect their set. What presents itself as a light minigame filled with intentionally awful jokes, hides a deeply human story about aspiration and self-acceptance. A tight upgrade system requiring payouts from a meager pool of funds means that personal improvement always feels just out of reach, but there's a real beauty in failure too. It's less about the sets that bomb, more about the midnight conversations in this gorgeous island purgatory, between two deeply unfunny but genuinely likeable friends and lovers.

DoggoPromenade

Dialobic / **Free in browser** / **wfmag.cc/doggo**

A surreal, charmingly animated physics game. Commandeer a noodle-armed protagonist and get progressively annoyed at trying to perform basic tasks in this hilariously oddball nugget. Featuring such seemingly easy but shockingly insurmountable goals as 'Get off bed' and 'Put on shoes'. Relatable, honestly. Ⓦ

The bonus game this month is *Hungry Lamu* (**wfmag.cc/lamu**), a game I almost included last month, thought I'd forgotten about, but turns out I'm still traumatised by.

▶ STREAM OF CONSCIOUSNESS

Self-proclaimed "queen of the stream" **AshSaidHi** on what Twitch and games mean to her

What would you say is your favourite game of all time, and why?

If I was stuck on a desert island and I could only take one game with me, it would have to be *The Legend of Zelda: Breath of the Wild*. I could play that game for hundreds of hours and still have places on the map to discover. There are many different ways of solving the same puzzle or defeating an enemy. That game ranges from super-relaxing when travelling the hills with an ambient soundtrack to dark and eerie in the maze of Hyrule Castle. I love it!

Can you remember the game that first got you into gaming?

My love for video games was ignited by growing up around a family of gamers. I don't know if there was one particular game that first got me into gaming. I do remember sitting with my father while he played *Dungeon Master* on his Amiga 500 and helping my mum play *Zaxxon 3D* on the Sega Master System. I also remember watching them play *The Legend of Zelda* and *Dragon Warrior* on NES and holding onto the second player controller thinking it did something. These experiences are probably why video games evoke such strong nostalgia in me.

Has there ever been a time when you felt like you needed to take a break from gaming or streaming?

I would say no. Broadcasting on Twitch is a happy space for me. I make it a point to take regular time off just as I would for anything else in life. Breaks from Twitch help keep things exciting and fun. It's like working on art: sometimes you have to take a step back from creating to see your progress, then come back with fresh eyes. I think people put pressure on themselves when numbers become the source of their validity. I've learned to create and let things go where they may. If an experiment

works, awesome. If it doesn't, that's OK, too. I can always try again. I make it a point to keep an eye on how long I stream or play games so that I get enough rest and physical activity. That balance is super-important to me.

For you, what's the appeal of streaming? What do you get out of it?

Broadcasting on Twitch has impacted my life in many wonderful ways. I've made friends, found incredible opportunities, worked with wonderful people, and I have a ton of fun. For me, the main motivator is connecting with people and creating a space where I can tell stories about my life and gaming experiences. I also love sharing my first-time playthroughs of games with others. People live vicariously through you when you play their favourite game for the first time. It sparks great conversations. Broadcasting gives me the freedom to be creative and resourceful. I also have the autonomy to set my schedule and play whatever I want. I feel extremely lucky to have a slice of this space.ⓦ

Watch Ash stream regularly on Twitch at wfmag.cc/ashsaidhi

> **"I could play that game for hundreds of hours and still have places on the map to discover"**

The Wireframe HOTLIST

The best PC games, according to Wireframe, catering for whatever your mood might be

The games for... BIG ADVENTURES

Elden Ring / *Bandai Namco* / **95%** (Issue 61)

Assassin's Creed Odyssey / *Ubisoft* / **93%** (Issue 1)

Yakuza: Like a Dragon / *Ryu Ga Gotoku Studio* / **90%** (Issue 45)

Amnesia: Rebirth / *Frictional Games* / **87%** (Issue 46)

Death's Door / *Acid Nerve* / **87%** (Issue 55)

The Last Campfire / *Hello Games* / **86%** (Issue 47)

Resident Evil 2 / *Capcom* / **86%** (Issue 7)

Stray / *BlueTwelve Studio* / **86%** (Issue 65)

📷 **Lost in Play** / *Happy Juice* / **86%** (Issue 66)

Journey to the Savage Planet / *Typhoon Studios* / **84%** (Issue 33)

The games for... REPEATED PLAY

Hades / *Supergiant Games* / **94%** (Issue 44)

They Are Billions / *Numantian Games* / **88%** (Issue 20)

Sekiro: Shadows Die Twice / *FromSoftware* / **87%** (Issue 11)

Streets of Rage 4 / *Dotemu/Lizardcube/Guard Crush* / **86%** (Issue 40)

Trials of Fire / *Whatboy Games* / **84%** (Issue 50)

Katamari Damacy REROLL / *Monkeycraft* / **84%** (Issue 4)

Spelunky 2 / *Mossmouth* / **83%** (Issue 44)

Hitman 2 / *IO Interactive* / **82%** (Issue 3)

Alba: A Wildlife Adventure / *ustwo Games* / **82%** (Issue 46)

Slay the Spire / *Mega Crit Games* / **81%** (Issue 45)

The games for... SOLID STORY TIMES

Disco Elysium / *ZA/UM* / **94%** (Issue 28)

Life is Strange: True Colors / *Deck Nine* / **89%** (Issue 57)

Mutazione / *Die Gute Fabrik* / **86%** (Issue 26)

Whispers of a Machine / *Clifftop Games/Faravid Interactive* / **85%** (Issue 14)

The Forgotten City / *Modern Storyteller* / **85%** (Issue 55)

Mythic Ocean / *Paralune* / **84%** (Issue 36)

Sunless Skies / *Failbetter Games* / **83%** (Issue 7)

Arise: A Simple Story / *Piccolo Studio* / **82%** (Issue 31)

Assemble with Care / *ustwo Games* / **81%** (Issue 27)

FAR: Changing Tides / *Okomotive* / **81%** (Issue 61)

The games for... FIRING UP BRAIN CELLS

Telling Lies / *Sam Barlow* / **92%** (Issue 24)

Kentucky Route Zero / *Cardboard Computer* / **90%** (Issue 33)

Slipways / *Beetlewing* / **90%** (Issue 53)

Heaven's Vault / *inkle* / **89%** (Issue 12)

Total War: Warhammer / *Creative Assembly* / **87%** (Issue 60)

The Pedestrian / *Skookum Arts* / **84%** (Issue 35)

Dorfromantik / *Toukana Interactive* / **85%** (Issue 63)

📷 **Two Point Campus** / *Two Point Studios* / **85%** (Issue 66)

The Legend of Bum-Bo / *Edmund McMillen* / **83%** (Issue 31)

A Monster's Expedition / *Draknek & Friends* / **82%** (Issue 47)

The games for... HIGH-INTENSITY PLAY

Tetris Effect / *Monstars Inc./Resonair* / **90%** (Issue 4)

Sayonara Wild Hearts / *Simogo* / **89%** (Issue 25)

Chivalry 2 / *Torn Banner Studios* / **88%** (Issue 54)

Hot Wheels Unleashed / *Milestone* / **86%** (Issue 56)

⊙ **Star Wars: Squadrons** / *EA* / **86%** (Issue 45)

LEGO Star Wars: The Skywalker Saga
/ *TT Games* / **86%** (Issue 62)

Devil May Cry 5 / *Capcom* / **84%** (Issue 10)

Black Bird / *Onion Games* / **84%** (Issue 3)

BPM: Bullets Per Minute / *Awe Interactive* / **83%** (Issue 45)

Resident Evil Village / *Capcom* / **82%** (Issue 52)

The games for... CURING THE INDIE ITCH

If Found... / *DREAMFEEL* / **92%** (Issue 44)

Can Androids Pray
/ *Natalie Clayton/Priscilla Snow/Xalavier Nelson Jr.* / **90%** (Issue 21)

Tales From Off-Peak City Vol. 1 / *Cosmo D* / **89%** (Issue 39)

Baba Is You / *Hempuli Oy* / **88%** (Issue 10)

TOEM / *Something We Made* / **87%** (Issue 57)

⊙ **Afterparty** / *Night School Studio* / **86%** (Issue 33)

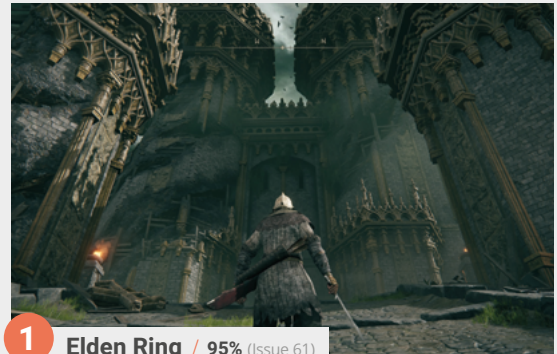**Witcheye** / *Moon Kid* / **86%** (Issue 30)

Hypnospace Outlaw
/ *Tendershoot/Michael Lasch/ThatWhichIs Media* / **86%** (Issue 11)

Haunted PS1 Demo Disc / *The Haunted* / **85%** (Issue 39)

OlliOlli World / *Roll7* / **84%** (Issue 60)

PC Top 10

1 **Elden Ring** **95%** (Issue 61)

A game of massive scale, packed with intelligence
and mystery. A towering achievement.

2 **Disco Elysium** / **94%** (Issue 28)

Smarter and deeper than anything else; truly
an RPG in a class completely of its own.

3 **Hades** / **94%** (Issue 44)

Proving 'roguelike' isn't a dirty word, learning-
and-dying is a joy from start to finish.

4 **Assassin's Creed Odyssey**
/ **93%** (Issue 1)

The point where Ubisoft realised over-the-top
adventures were the right direction.

5 **Telling Lies** / **92%** (Issue 24)

This FMV mystery asks more of the player
than most, with rewards to match.

6 **If Found** / **92%** (Issue 44)

A compelling and beautifully illustrated
narrative, as moving as it is memorable.

7 **Yakuza: Like a Dragon** / **90%** (Issue 45)

A bold, brash, and joyous rebirth for the
long-running gangster series.

8 **Tetris Effect** / **90%** (Issue 4)

The question is 'how do you better *Tetris*?'
The answer is: like this. This is how.

9 **Kentucky Route Zero** / **90%** (Issue 33)

Abstract style meets concrete commitments
in this fantastic magical realist adventure.

10 **Neon White** / **90%** (Issue 65)

A free-flowing, first-person speedrunner that
will have you chasing divine perfection.

Backwards compatible

WRITTEN BY RYAN LAMBIE

Nice rendering, Dave

Collecting retro games is an expensive hobby these days, but then, there are certain old games that have always been absurdly pricey. Just look at *Rendering Ranger: R2*, an obscure run-and-gun released solely for the Japanese Super Famicom in 1995. An expensive game to pick up even 20 or so years ago, it's only skyrocketed in price since, with asking prices going from around £800 for a loose cartridge to over £3000 for a boxed copy.

Annoyingly, *Rendering Ranger* isn't one of those games that's collectable even though it's slightly rubbish, like *Stadium Events*, say – it's a lesser-known work from *Turrican* developer Manfred Trenz, and it's an absolute corker.

Much like *Turrican*, you control a masked, gun-wielding space warrior capable of blasting gigantic warships out of the sky. It's smooth, slick, and full of huge explosions. The good news is there's now a means of playing it without having to sell a vital organ or your family car: it's getting a port to PC, Switch, PS4, and PS5 courtesy of Ziggurat Interactive, which is a specialist in bringing old games to modern systems. Limited Run Games is also re-releasing *Rendering Ranger* as a physical cartridge on the SNES, though thanks to the vagaries of magazine publishing, orders will have closed by the time you read this. Expect to find copies on eBay in a few months or so, with silly price tags attached. It's the circle of life.

Take a pew pew pew

For fans of obscure shoot-'em-ups, the past few years have been golden. Take the *Aleste Collection*, released in 2020: not only did it collect together four of Japanese studio Compile's shooters, but it also included a new title, *GG Aleste 3*. A sequel to a pair of games made exclusively for the Sega Game Gear? It seemed too good to be true at the time, and yet there it was in all its low-res glory. And now we have *Gun Stream* – another new shooter for the Game Gear, announced in July. In development at Habit Soft, it's being made by the same design duo that made *GG Aleste II* in 1993. A trailer gave us an early glimpse: there's a tiny player ship, which can be equipped with lasers and missiles, levels set in space and atop overgrown cities, and big angry bosses. Exactly which systems *Gun Stream* will appear on hasn't been announced yet, but we're hoping it gets a physical release on a Game Gear cartridge. Unfortunately, this didn't happen with *GG Aleste 3*, even though it could work on original hardware, so we'll keep our expectations in check for now.

Finally, Winston

In an otherwise entertaining action-platformer, it was a glaring oversight. *Ghostbusters* on the Sega Mega Drive, originally released in 1990, failed to include Winston Zeddemore as a playable character, even though the rest of the busting team – Peter Venkman, Ray Stantz, and Egon Spengler – were all present and correct. Over 30 years later, a group of modders is putting Winston in the game, with two selectable outfits and his own abilities (he can jump higher and do more damage than his compatriots). You can follow the mod's progress via one of the modders' Twitter feeds: **wfmag.cc/billytime**.

Mr Sparkle

If you've ever looked at your Game Boy Advance and thought it looked a little too bland, a little too businesslike, then RetroSix (**retrosix.co.uk**) has you covered. It's recently unveiled its new range of custom buttons. Made out of resin, they can contain a range of glitters and colours, or even personalised inserts (such as a photo or other image), if you fancy it. We've plumped for some sparkly red buttons here, and very nice they look, too, when paired with our GBA's white shell. RetroSix kindly sent a few other button types to give you an idea of what's possible. With a screwdriver and a few minutes' effort, you too could own a GBA that sparkles like Robert Pattinson in *Twilight*.

Looking Sharp

If you were a Japanese gamer growing up in the late 1980s, the X68000 would probably have been your Holy Grail. A home computer made by Sharp, it was a powerful system for its day – so powerful that it could not only run almost perfect conversions of arcade games like *Gradius II* and *R-Type*, but was also the platform some developers used to make those games in the first place. The downside? The X68000 was hideously expensive, only available in Japan, and only sold around 150,000 units as a result. The system still has an aura of legend around it, though, which might explain why there appears to be a miniature version of it coming soon in Japan. In early August, Japanese firm Zuiki posted a teasing picture on Twitter, showing a keyboard, mouse, and what appears to be a miniaturised replica of

the X68000, complete with its distinctive 'twin tower' case design. Zuiki has form when it comes to making dinky games machines; it provided the hardware that underpinned such nostalgia boxes as the Mega Drive Mini and PC Engine mini, for example. Zuiki hasn't provided any other details about the device, though, or even confirmed that it's actually coming out –

although as Japanese video game website 4Gamer.net points out, the word 'product' is embedded in the teaser image, which makes an eventual release seem likely.

If it happens, we may be in for a tiny system capable of running the likes of *Strider*, *Final Fight*, and *Space Harrier*. That sound you can hear is my credit card quaking in terror.

Backwards compatible

WRITTEN BY **AARON POTTER**

Animal espionage action

"*Metal Gear Solid* but what if Solid Snake was replaced with a gecko? Not a person codenamed 'Gecko' but an actual, human-sized gecko" appears to be the pitch behind this unabashedly indie-fied take on Konami's PSone magnum opus. As far-fetched as *Covert Critter* first appears on the surface, however, it actually does well to parody the po-faced nature of Kojima's tactical stealth series while still paying true affection to it. It's made all the more impressive when you consider that it was made by two people as part of a game jam in just twelve days. They hardly kept us waiting, huh?

You play as Koss, a cigar-chomping covert operations specialist who must use his skills of camouflage, distraction, and evasion to thwart the efforts of the Red Hawks terrorist organisation. They've taken control of a nuclear weapons facility, you see, and only by infiltrating it bunker by bunker across eight familiar-feeling levels can disaster be averted.

Covert Critter hits all the right beats any fan would expect to see, that's for sure. And while the itch.io title can be beaten in just a little under half an hour, there's a surprising number of Easter eggs to chew on.

Floating boxes rotating in mid-air, red-dot visual cones for enemies, and the left-side item menu that's snappy to scroll through... developers sodaraptor and NormalHumanSixx have laced in so much *Metal Gear Solid* iconography in a surprisingly small package. *Covert Critter* even finds time to pay homage to one of Snake's OctoCamo suits from the infamous fourth entry; Koss can lean up against a wall at any point and temporarily blend in with his environment, giving you a slight edge when dodging enemies as they patrol past you. One level early on even purposely shrouds your surroundings in darkness, prompting you to seek out a pair of night-vision goggles à la *Splinter Cell*, in a cheeky wink to one of gaming's other successful stealth franchises.
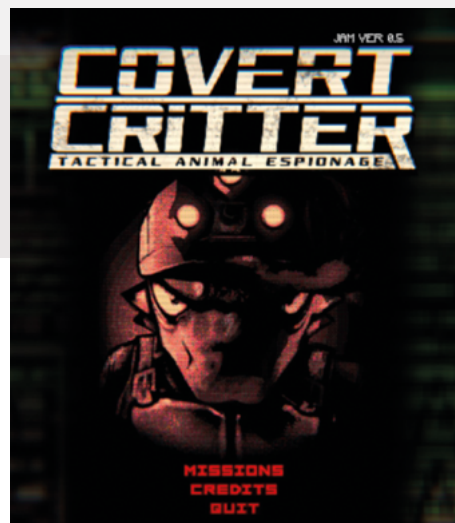
Beneath the game's misty, polygonal aesthetic there's not too much complexity going on. That said, sneaking around and exploring these spaces from a top-down view proves wildly nostalgic. And using quirky items like banana peels and fake giftboxes to temporarily stun Red Hawk guards or trip them up proves good fun.

Arguably the biggest innovation *Covert Critter* brings to the PSone *Metal Gear* mould is the addition of a drone that can be accessed from the start of each mission. This is mainly because, true to form, Koss's field of view isn't the best outside of when he leans up against the wall. Solid Snake should perhaps take note.

At a time when Konami seems painfully unwilling to return to *Metal Gear Solid* any time soon, it's taken a two-person side project like this to remind me why we all fell in love with the series in the first place. Snake's debut outing was a weird, oddly prophetic game at the time, but for all its self-seriousness, it was also about mechs that scream (and bleed), evil twin brothers, and a soldier who couldn't stop breaking wind. That *Covert Critter* can capture a small slice of that overt ridiculousness while distilling Kojima's stealth-action essence into a game about a bandana-wearing lizard makes this a bite-sized mission worth undertaking. Try it for yourself at **wfmag.cc/covert-critter**.

Knock us sideways

Nobody denies that the Nintendo Game Boy is the OG when it comes to video game handhelds, but modern designs have taught us that an upright console sometimes doesn't cut it. The Game Boy Advance was the first Nintendo system to set the horizontal precedent that the Switch currently benefits from, so it's great to see a modder like Obirux reimagine what the original 8-bit handheld can look like if turned sideways.

The new orientation, of course, also benefits from a beautiful backlit IPS screen, but internally, this redesign is just as true as the original monochrome Game Boy Nintendo released in 1989. The chassis alone would have taken a lot of work, and to some degree leaves me pondering if I need an Analogue Pocket at all. (Spoiler Alert: I totally do). Watch Obirux work here: **wfmag.cc/obirux**.

Bricking it

We're always so obsessed with what moves the big three platform-holders are making in the console space, it's easy to forget about another major player: LEGO. Yes, by the time you read these words, the plastic brick empire will have released a 2532-piece set that recreates the Atari 2600 in painstaking detail, and though it can't outright play original cartridges (duh!), at $240 it's certainly priced in the region of a legit home console. Especially since, before inflation, the true Atari 2600 launched for even less at $189.95.

Wallet-crushing news aside, however, it's a genuine delight to see LEGO wants to maintain the momentum it initially kicked off when releasing the LEGO NES set roughly two years ago. And true, while this latest offering doesn't come with a TV that can mimic an actual game

being played, the inclusions of the 1982 console's legendary joystick and three cartridges that can transform into mini dioramas of *Centipede*, *Adventure*, and *Asteroids* is a nice touch.

Being a child of the 1990s, neither the LEGO NES or new LEGO Atari 2600 has yet to make me fear draining my bank account, but my head is spinning at the prospect of a brick-based Sega Mega Drive (the first console I ever owned) or dare I say my precious PlayStation One in future. Either way, it's exciting to see LEGO stay nimble in this space by continuing to affectionately recreate classic consoles.

The toy giant has finally realised that gamers are an untapped resource pining for bottled nostalgia, and – for better or worse – we're ready to click infinite pieces together trying to get it.

Enter the void

With light spoilers, Ryan delves back into the murky world of Inside

I really, really hate those dogs. And that killer mermaid, or whatever the heck it is. Yes, I decided to take a return trip to Playdead's 2016 side-scrolling nightmare *Inside* this month, and was surprised to find just how little the intervening years have dimmed its raw, oppressive power.

Like the Danish studio's debut, *Limbo*, *Inside* follows the progress of a solitary boy across a stark landscape. In *Limbo*, the world felt like a Gothic fairytale storybook; *Inside*, on the other hand, goes for pure sci-fi dystopia. The absence of dialogue or descriptive text forces you to comb your surroundings for clues. There are signs of some sort of biological or environmental catastrophe everywhere – perhaps even both. The sky is perpetually grey and sunless, while a trudge through a farm reveals great piles of deceased swine.

Limbo was marked out by its frequent, sudden, and often unsettling deaths; Playdead takes these a step further in its second game. Spend even a few minutes with *Inside*, and you'll see its young protagonist drowned, shot, strangled, and liquidised by gigantic fans, or left crumpled at the bottom of an unexpectedly long drop. Perhaps the most unpleasant deaths come at the gnashing teeth of those dogs mentioned earlier: whether they hunt individually or in packs, they'll track you down with frightening speed. Then you're left to watch for what feels like an eternity, as your fragile character is mauled to death.

The almost obsessive attention to detail in these death animations left me wondering: what was Playdead trying to achieve here? Why linger on the details of a child being torn apart by dogs, or brutally attacked by the game's legion of faceless grown-ups? Certainly, the implied age of the central character gives these scenes an entirely different charge to, say, the original *Prince of Persia*, where falling on spikes or getting run through with a sword underlined the game world's life-or-death stakes but not too much else. With *Inside*, Playdead isn't just saying its world is merely dangerous, it's saying it's brutal. Merciless. Cruel.
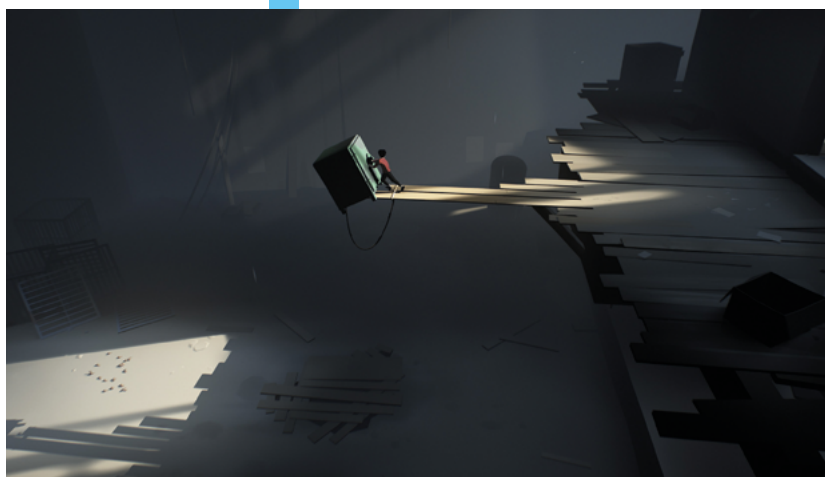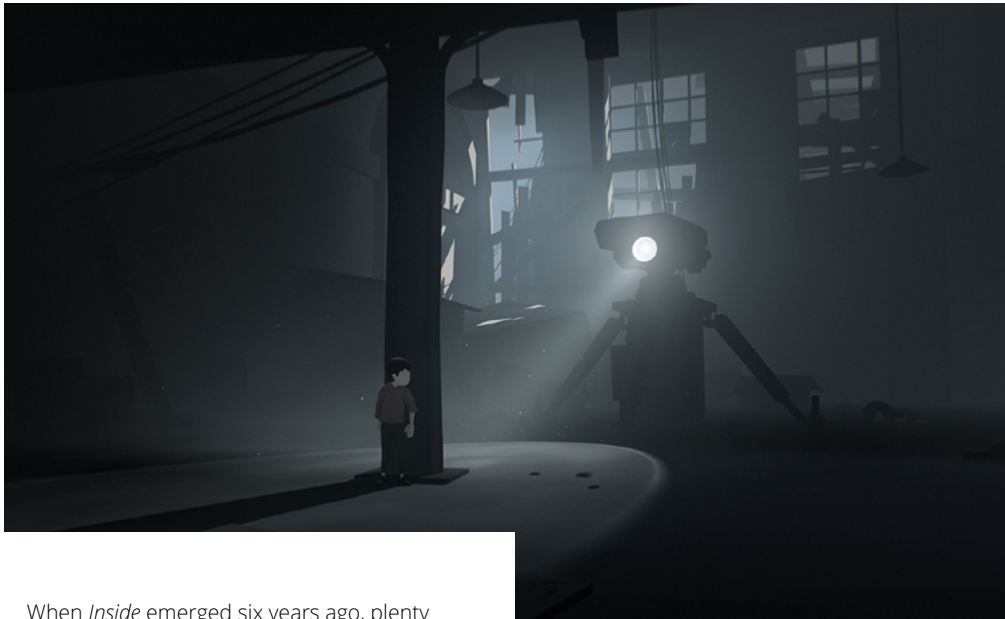
When *Inside* emerged six years ago, plenty of outlets pondered its ambiguous ending and freaky imagery. What could it all mean? Is the boy being controlled somehow? Could the game as a whole be, as Eurogamer's Jeffrey Matulef once suggested, a fourth-wall-breaking attempt to cast the player as an unseen puppet master?

Quite possibly. But while it's fun to ponder what's going on in *Inside*'s world, I'd argue that the purpose of the unholy scientific experiments we see taking place in the game are less important than what they represent. If we put together the poor boy's repeated deaths, the armies of mindless, zombified workers who may or may not be actual corpses, the test facilities, and the potentially dangerous figures cooped up in reinforced chambers, what do we have? A dark mood piece about humanity's seemingly bottomless cruelty.

For whatever reason – possibly to save our species from extinction – the game's scientists have given themselves licence to do all kinds of unspeakable things. Animals and human beings, whether they're young or old, male or female, are essentially a malleable, clay-like substance which can be manipulated for whatever purpose. When people become desperate, morality and compassion vanish.

Note that Playdead doesn't let the player off the hook in this regard: in our relentless journey from left to right, there are obstacles that can't be cleared without exploiting another living thing. An early scene with a pig sets the tone: if we want to get any further, we'll have to use the pig as a platform. Another scene sees us feed a clutch of

"Playdead isn't saying its world is merely dangerous"

chicks into a piece of farming machinery. Later, we're asked to gather a small army of those mindless workers, which we can then control and use to help solve puzzles. Then there are the final scenes, which have a level of terror and violence that's cathartic and stomach-churning all at once.

Replaying *Inside* in 2022, I couldn't help picking fault with some of its puzzles. A few are simply trial and error: I found myself replaying a section again and again until I found precisely the right moment to jump out of the way of a dog's snapping jaws.

A scene that involves turning a crank, then ducking under a pipe to avoid a searchlight, then nipping back out to turn the crank a bit more, felt more annoying than tense. But none of these flaws matter when weighed against the game as a whole. As a work of interactive, dystopian fiction, *Inside* builds an atmosphere of poetic melancholy that has rarely been matched since. ⓦ
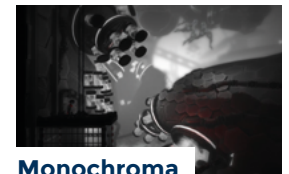

Wireframe Recommends

Stela
PC, SWITCH, XBO, IOS
Less widely celebrated than *Inside*, *Stela* is a similarly haunting platformer set in a darkly surreal world. The challenges are familiar enough – push boxes, pull levers, avoid falling rocks – but its air of mystery constantly spurs you on.

Monochroma
PC, XBO, PS4
Like *Inside*, *Monochroma* contrasts a largely colourless world with eye-catching splashes of red. And like *Inside*, you guide a small boy through a dangerous, dystopian world. Nowhere Studios' game may feel familiar, but its craft and quietly moving story – about protecting an injured brother – make it well worth playing.

SILT
PC, SWITCH, PS4, XBO, PS5, XB S/X
A game directly inspired by Playdead's output, Spiral Circus' debut is an absorbing dive into an unfamiliar ocean of exotic creatures and drowned civilisations. And Tom Mead's artwork makes *SILT* one of the most beautiful-looking games of 2022.

Truly scrumptious

Aaron tucks into the delicious last course of Studio MDHR's animated run-and-gun platformer

You don't need me to tell you how drop-dead gorgeous *Cuphead* looks. But I'm going to anyway. Studio MDHR's mastery of the hand-drawn, rubber hose style evocative of 1930s cartoon serials never fails to be absolutely on point; it's there in every jump of the frame, inventive boss transformation, and the way faux film scratches appear on screen as the fights grow ever more intense. The recently released DLC, cleverly subtitled *The Delicious Last Course*, proves the developers haven't missed a step in

the five years since the base game released and wowed everyone who played it.

In addition to an entire new isle to roam, the main inspiration for an Inkwell return trip is Ms. Chalice being made a playable character. Her fleeting appearances before always hinted at a deeper story, and while *The Delicious Last Course* is first and foremost a gameplay-focused experience, the tale of Cuphead and Mugman trying to get Ms. Chalice her body back is a narrative entry point I greatly appreciate. So, with that light bit of context provided, and after hopping on a boat to this mysterious new isle, it's off to wallop another six or so bosses (with a few hidden secrets littered in-between).

The first blighter I come up against is Mortimer Freeze who, as his name suggests, suffers from a serious case of frostbite. Starting off as a maniacal wizard lobbing down cards and icicles from high above, dodging between them using Ms. Chalice's horizontal dash is relatively breezy. The fun really starts, though, when Mortimer takes on the form of an abominable snowman and rolls about the screen. It quickly forces me to use the air just as much as the ground, where I need to stay low. It's yet another example of why watching for tells is crucial in a Cuphead fight.

Trying to bob, weave, and duck beneath so many incoming obstacles still leaves me a bit

gutted that there isn't a way to just sit back and enjoy all these new animations without fear of death. However, getting progressively better at surviving each of Mortimer's three stages serves to remind me of the satisfaction that can quickly set in once you enter that unique *Cuphead* flow state. Being the first boss I tackled in the DLC, I know now that Mortimer could probably be made much easier with the help of the newly added charms and ammunition types. That said, by the time I enter his last stage and finally land that knockout while simultaneously trying to stay atop melting platforms that continuously rotate, an unmatched feeling of elation hits me. I'm no *Dark Souls* guy, but I imagine it's a similar level of satisfaction.

Pre-release, I recall many players calling for Studio MDHR to make *The Delicious Last Course* not as painstakingly hard as the main adventure. Luckily, that is far from the case. All six of the main new bosses are just as meticulously intricate to navigate and take down as the 15 featured before. The difference now, however, is that Ms. Chalice taking up a charm slot sees her given a unique moveset that quite literally changes the game.

For example, whereas when playing as Cuphead or Mugman, you'd have to jump into the air to land a parry needed to build your super move, Ms. Chalice's dash doubling up as a parry makes the act a lot less intimidating.

Ms. Chalice doesn't explicitly make any of the boss fights any less daunting, but the parry dash – coupled with her additional HP and ability to double jump – does help take the edge off most ever so slightly. The DLC only took me a couple of hours to run through, and more useful was a new ammunition type called the crackshot. You see, while most traditional firing methods require you to persistently aim at your target (as in most run-and-gun games), this can be aimed anywhere from any position and it will still hit a mark – be it the boss itself or one of its underlings. The main *Cuphead* game's homing shot functioned similarly, sure, but believe me when I say the crackshot is far superior.

It would have been easy for Studio MDHR to completely isolate *The Delicious Last Course* from Cuphead and Mugman's larger story, and the developers are on record as stating that they did consider splitting the DLC into its own standalone game at one point. Keeping it a tight package has turned out to be another stroke of genius, though, because it means Ms. Chalice can be used to tackle any of the classic bosses, too.

This bite-sized second outing might be brief, but even after just a few minutes of battling foes, it's evident there was just as much love, care, and passion poured into *The Delicious Last Course*. And as far as great game ingredients go, you can do a lot worse. If anything, the DLC offers players previously put off by the original game's brutal difficulty a more approachable way to play, via Ms. Chalice's distinct gameplay changes. If this is indeed the last *Cuphead* course, at least there's plenty of reasons to go back for seconds. Ⓦ
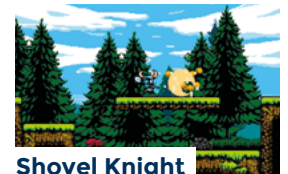
> **"At least there's plenty of reasons to go back for seconds"**

Wireframe Recommends
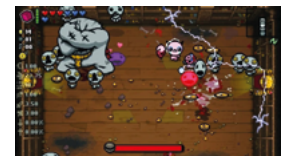
The Binding of Isaac
PC, PS4, XBO, SWITCH
Edmund McMillen's grimy roguelike features its own gamut of challenging bosses. They're always presented in a randomised order, however, so perfecting a good build is essential.

Shovel Knight
PC, PS3, PS4, XB360, XBO, SWITCH
Mega Man meets *DuckTales* in Yacht Club's wildly inventive tribute to old-school 8-bit platformers. Saving the kingdom in the name of shovelry never gets old in the base game or expansions.
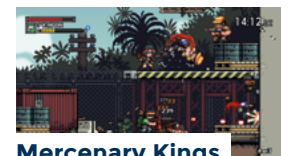
Mercenary Kings
PC, PS4, XBO, SWITCH
Look beyond *Mercenary Kings*' chibi aesthetic and you'll find a deep run-and-gunner with an excellent feeling of progression. Combining different gun parts always makes missions a bombastic delight.

Mario Kart 64

Why Mario Kart's most hated item, the Blue Shell,
is also a necessary evil

NINTENDO EAD / **1996** / **NINTENDO 64**

The *Mario Kart* series, often lauded for how fun and approachable it has made the racing genre for all, actually has a dark side: the Blue Shell. Picture the scene: there you are, ahead of the pack by a country mile, counting down the last remaining turns needed for you to secure first place and win the cup by gunning it across the finish line. But oh no, what's this? Suddenly an erratic beeping has appeared out of nowhere, until a flying overhead shell comes into view and blasts down on you. You're robbed of your coins and forced to come to a complete standstill, while other Mushroom Kingdom racers whizz on past and potentially claim the cup. I say... what a cruel price to pay for being too good at tearing up the Rainbow Road.

There was a time when we as players associated this spiny turtlewear with the strong-type Koopa Troopas from *Super Mario World* and little else. Ever since *Mario Kart 64* sped on the scene to cement the series as an all-timer via its first full 3D outing, however, sight of the dreaded Blue Shell has come to send shivers down our collective spine.

In fairness, its mainstay appearance in Nintendo's colourful karting series is well-intended, and even purists know this. Because while its abrupt appearance can frustrate those who have mastered the act of drifting, turning, and boosting across the franchise's several crazy courses, it's also a lesson in being humble.

> **"What a cruel price to pay for being too good at tearing up the Rainbow Road"**

You see, the Blue Shell might be annoying for those who like to hog first place, but there's no denying that it's a smart game design workaround, made to keep said players on their toes; otherwise, karting with friends (or even the AI, for that matter) wouldn't be fun for anyone. Whereas trying to stay ahead felt like a challenge in *Super Mario Kart*, largely due to the awkwardness of the D-pad, the analogue stick in *Mario Kart 64* means you're fighting with the controls less, letting you focus purely on navigating the track.

This added comfort, though, means that it's all too easy to zoom off and put great distance between you and the other seven contenders. The Blue Shell ensures that those bringing up the rear always stand a fighting chance at clawing it back.

The Blue Shell is right up there with Bullet Bill, Golden Mushroom, and Piranha Plant in terms of items that are dished out to players at the back of the pack. Meanwhile, on the less interesting end of things, it's almost always endless banana skins and squid bloopers for racers in first, second, and third position edging it out up front.

It's a tough balancing act for Nintendo to strike, sure, yet it's arguable to say that most *Mario Kart* entries are a more interesting arcade racing experience when duking it out somewhere in the middle. When that Blue Shell flies in to wreck your streak, therefore, think of it as the game's way of saying, "OK buddy, you've had your fun. Now it's time to play with our other fun items".
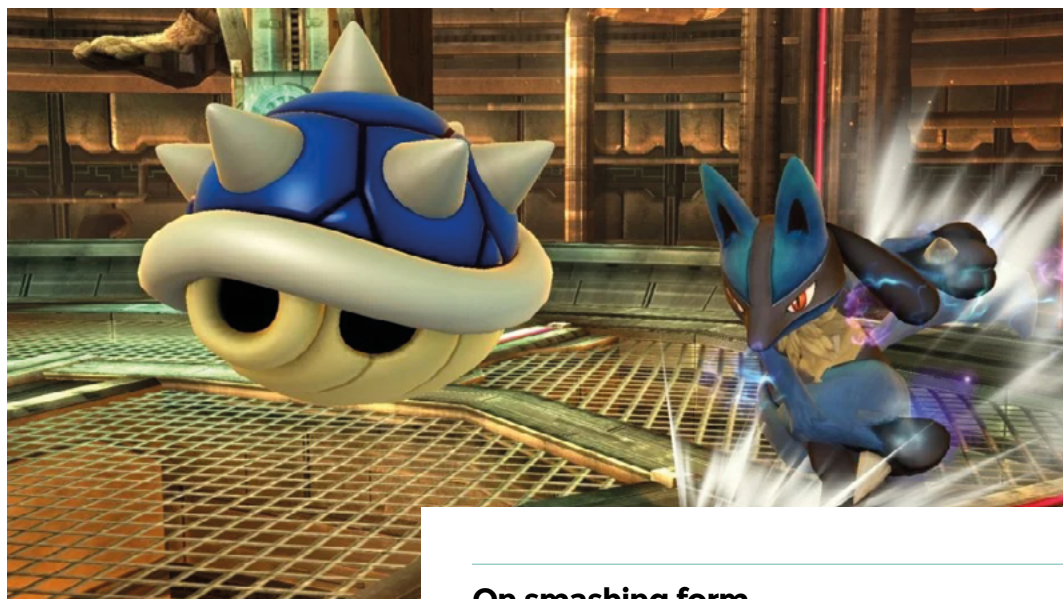
On smashing form

So infamous has the Blue Shell's reputation grown, it has since had a cameo role outside of the *Mario Kart* series by appearing as an item in *Super Smash Bros.* Making its debut first in the Nintendo 3DS and Wii U iteration, it carries on over into *Super Smash Bros. Ultimate* for the Nintendo Switch. As expected, it functions as similarly as it does on the track, temporarily hovering over the player with the most smashes before it falls and explodes on them. Thankfully, the Blue Shell in *Super Smash Bros.* isn't quite as devastating. Players have more of a chance to dodge it, although they have to account for the unpredictable length of time it'll stay hovering before smashing down.

Not having an effective, reliable way to avoid being hit by a Blue Shell only plays into their mystique and controversial reputation among *Mario Kart* fans. Only with an impeccably timed hop of the kart do players even stand a chance (before *Mario Kart 8*'s Super Horn item). They differ wildly from, say, how Green Shells can be dodged quite easily, and even Red Shells – which home towards the closest racer in front of you – are warded off by keeping a banana or Green Shell at your back for protection. The director of *Mario Kart 7* and *Mario Kart 8*, Kosuke Yabuki, is even in on the joke himself. He recently told Eurogamer that while he and team "want to avoid those feelings of frustration", Blue Shells are important to the game's overall balance and that "sometimes life isn't fair".

That thrilling feeling of dominating first place, only to have it instantly thwarted by a flying Blue Shell with your name on it, isn't going anywhere anytime soon then. And not just because

Mario Kart 8: Deluxe continues to sell up a storm, giving Nintendo absolutely no reason to rush in releasing a new instalment. When that inevitable ninth entry does release, however, it sounds like the infamous Blue Shell will be there, continuing to teach veteran players to stay humble.

Until then, whether it be in a classic game of *Mario Kart 64* via the Nintendo Switch Online + Expansion Pack service, or any of the fresh tracks rolling out as part of *Mario Kart 8: Deluxe*'s new Booster Course Pass, the only thing players can do is sit back and embrace the destructive blast of blue each time that beeping begins. ⓦ

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