

# Wireframe

LIFTING THE LID ON VIDEO GAMES



INSIDE THE NEXT ACTION-ADVENTURE FROM THE CREATORS OF **SHOVEL KNIGHT**

THE EVOLUTION OF  
PIXEL ART

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# Why there's more to pixel art's revival than nostalgia

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**P**eople forget 'pixel art' was once just 'art'. At least as far as computer graphics can be considered art, which is a can of worms I'm keeping permanently closed by whacking it repeatedly with a mallet. Anyway, for those of us around at the time, there was something magical about seeing blocky approximations of people, spaceships, and household appliances move around in a screen-based world you could directly influence.

As with other media that simplified reality, your brain didn't question this presentation. No one debated whether Charles M. Schulz was drawing children and a bizarre beagle in his *Peanuts* comics. And people didn't prod their tellies, demanding to know why a camel that took their face off in a Jeff Minter shooter wasn't photorealistic. Your imagination filled in the gaps.

Over time, the rapid evolution of hardware gradually removed technological barriers that forced this graphic style to exist in the first place. Fast forward a few decades, and we've moved on from systems barely able to render a few squares to those where the pixels have disappeared into the crisp resolutions of modern displays. Only, they didn't disappear entirely, because certain developers won't let them, remaining infatuated with creating games that look like they've beamed in from 1985.

But why? The obvious answer is nostalgia – yet that's not it. Many people who use this style weren't even born when Bub and Bob first popped a bubble and sort-of Mario partook in a stint of ape bothering.

Instead, when you dig into the non-death of pixel art, you find games creators tend to say it just feels right. Like a musician knows which sounds suit a song, artists know what works for a game. The decision to use pixel art might arrive from personal taste, alignment with a game's character, or its visual abstraction complementing a given project.



**CRAIG GRANNELL**

Craig Grannell has been writing about tech and games for more years than he cares to remember. He shares his time between black rectangles, too many games of *Polytopia* and rediscovering one-button classics to play with the youngling. Tweet him: @CraigGrannell

Additionally, pixel art can provide visual clarity and focus; and it acts as shorthand, showcasing dedication on the part of an artist, with players instinctively understanding each dot was deliberately and painstakingly placed. It is, however, now a choice rather than a necessity driven by technology – an aesthetic that borrows from the past, selected from a vast range of potential options.

Nonetheless, this, for me, feels like something to celebrate. Being old – although not as old as Mr. Biffo – I found it sad when games were seemingly legally obliged to shift from pixel precision to 3D murk. I enjoyed titles where characters in part came to life in the imagination, rather than barrelling along on a one-way trip to uncanny valley (by way of zombie sporting hell in *Virtua Tennis*). Any opportunity to go 'back home' should bring joy.

Only it isn't going back home – not really. It's reductive to suggest those working in pixel art are stealing wholesale from decades past. For one thing, limitations that once defined the style are long gone. That changes the nature of what is produced. Games were once designed for CRT screens. Chequerboard dithering would blend, corners would smooth. Modern displays make for pixel art so sharp you can cut yourself on its edges, and graphics in this style are now designed accordingly.

The result is more remix than recycle – and that's how things should be. Even when glancing back, gaming moves forwards. Pixel art can be about nostalgia, but that's never all it is. It's today part of the increasingly rich visual language of gaming – an ever-expanding toolbox that continues to grow and evolve. It shouldn't be dismissed as the end product of creators – whatever their age – who have somehow never got over the fact gaming moved on from *Jet Set Willy*. 🎮

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## WELCOME

"Sooner or later, everything old is new again," Stephen King wrote somewhere or other at some point. It's an observation that certainly applies to video games, where genres and styles fall out of vogue only to make a triumphant return a few years later. Pixel art, the theme of this issue, is now a popular and widely respected art form. Low-poly models, once a feature of the PSone era, are now fashionable again. The roguelike, a genre almost as old as gaming, is pretty much ubiquitous.

So what will the next trend be? My prediction: digitised graphics. A trend that arose in the late nineties, when developers were striving for a bit more realism than you got with hand-drawn sprites, digitised images appeared in such games as *Lethal Enforcers*, *Pit-Fighter*, and *Mortal Kombat*. A process that turned real-world imagery into 2D sprites, digitised graphics could take in anything from flesh-and-blood actors to stop-motion puppets to pre-rendered 3D models. Some games even provided a mix of these – *Mortal Kombat* used a combination of actors and clay models for its characters.

At their best, digitised graphics gave games a sculptural sense of depth and light and shade. At their worst, they just looked like a bunch of grainy photos shuffling about on the screen. More games fell into the latter category than the former, I'd say, but nostalgia being what it is, maybe we really will see them make a comeback over the next few years. You read it here first...

Enjoy the new issue!

**Ryan Lambie**  
Editor



# The mouse that ROARED

Castlevania meets Link's Awakening?  
Yacht Club's Sandy Gordon talks us through its latest  
retro-inspired adventure, *Mina the Hollower*

**C**all it fate, or a case of creative serendipity. Once it finished its hit platformer *Shovel Knight* in 2019, LA studio Yacht Club Games began thinking about its next project.

According to pixel artist Sandy Gordon, the brief went something like this: "If anybody has an idea of what we should work on next, feel free to pitch it." So, with that in mind, Gordon went home and came up with the prototype for a top-down action game straight out of the Game Boy Color era. Little did Gordon know that his colleague Alec Faulkner was also working on a prototype – a top-down action game straight out of the Game Boy Color era. "Something in our subconscious was on the exact same wavelength," Gordon laughs. "So we're, like, 'Wow, this is obviously what we have to do!'"

Faulkner's prototype formed the basis for *Mina the Hollower*, a game that continues Yacht Club's penchant for mixing old and new. *Mina* blends the action of early *Castlevania* titles, the exploration of a top-down *Zelda*, and the RPG-like side quests and upgrades of, say, the *Souls* series.

*Mina* also displays Yacht Club's love of precise, crisp sprites: the titular mouse is full of character, despite

comprising just three colours and a handful of pixels. Indeed, Gordon – now lead pixel artist on *Mina* – is candid about the effort that goes into making those sprites. "It's less like doing an illustration, and more like a puzzle," he says. "The smaller the sprite, the more it's about trying to find the exact combination and placement of individual pixels. I can spend minutes to maybe even an hour, I'm embarrassed to say, trying to make four pixels look like they best represent a hand."

It's that dedication that made *Shovel Knight* one of the most beloved games of 2014. And by the time Gordon joined Yacht Club around 2017, the game had only grown in popularity thanks to its wealth of free DLC, released as *Shovel Knight: Treasure Trove* in 2019. To get a snapshot of how respected Yacht Club is today, look at *Mina the Hollower's* Kickstarter page. *Shovel Knight* raised over \$300,000 on the site in 2013. At the time of writing, *Mina* has raised a startling \$1.2m and counting.

To find out more about *Mina*, we caught up with Gordon to talk about its mechanics, character designs, handheld look, and whether it'll have quite so much free DLC this time... ➔







## Knight Watch

Like many studios over the past couple of years, Yacht Club found itself having to adapt its working approach as the pandemic swept the planet in 2020. "Covid hit right when we started trying to develop *Mina*, so that was a struggle, just getting the ball rolling in a way that felt productive and efficient," says Sandy Gordon. "I feel like we're at that point now where we've increased our team size and we're definitely moving a lot faster over the past handful of months, but we're also a small team. We're still some 20-odd people, despite having hired a handful more recently, and we're working on four games at the same time." Those projects include DLC for *Shovel Knight Pocket Dungeon*, released in late 2021, the recently released *Shovel Knight Dig* (co-developed with Vine and Nitrome, respectively), *Mina*, and an as-yet-unannounced 3D title. "It's a lot," Gordon continues, "and there are times when our attention's been taken away here and there from projects like *Mina*. So they're always being worked on, it's just that the speed can vary a little bit."



▲ The Tenebrous Isle provides the setting, and it's a forbidding place full of crumbling buildings and flickering candles.

## What was it about the Game Boy Color aesthetic that attracted you all?

Everyone at the company is more or less around the same age – I would say early 30s, mid-30s. Most of us grew up playing Game Boy, and so we all have this nostalgia for it that we're bringing to the game. We all knew this was something we'd want to do at some point, and even the younger members of the team have some sort of association with the Game Boy, too. They had an older sibling who had one, and they found it buried in their closet one day and just ended up having a fondness for it. But there's something intimate and special about having this little chubby console that you can hold in your hands, take anywhere with you, and have this window-sized adventure wherever you go.

It's like with *Shovel Knight*, we were inspired to hit those nostalgia buttons of the games we loved growing up. Game Boy just seemed like a natural evolution of what we like to do – fusing nostalgic gameplay with modern mechanics.

## Can you describe some of those mechanics and the abilities that *Mina* has? You've got the whip and then obviously the digging ability, so how do those come into play?

The prototype initially had *Mina* with her whip, which was obviously a very *Castlevania*-like attack mechanic, and she's got the slow wind-up on the whip, like Simon Belmont. So you really have to manage your spacing between enemies to make sure you land the attack with proper timing. The burrow mechanic was there from the beginning, as well. Link's got his dodge roll and the *Souls* games clearly inspired us, so we wanted something like that to allow us to have combat that's a little more intense than you'd find in a top-down *Zelda* game.

Since creating those elements, we've added more weapon choices as well. *Mina* going to have access to dual daggers, which are a fast, close-range weapon. There's a giant charged hammer with a massive bullet cartridge, so you can hold the button down to charge and then release it for an extra-powered attack. That's the slower weapon, and your timing's going to be even more important, but you're rewarded with a much heavier hit if you nail it. And we've also got other weapons in the works.

We've got a bunch of trinkets that were added later during development, where we really wanted to have some kind of system that rewards exploration and playing through a lot of the side quests. So you can collect 60 trinkets – or potentially more by the time the game comes out – and you can equip them for stat bonuses, mechanic bonuses, even goofy cosmetic things. We're trying to give people the chance to really

▼ As well as a defensive move, *Mina* can use her burrowing ability to tunnel into secret rooms containing treasure.





▲ The Castlevania vibe is particularly strong in scenes like this one.

adapt their playstyle and create something unique to how they'd like to progress through the game.

**You mentioned the Souls games: is Mina going to be a more difficult game than Shovel Knight, or on a par?**

It's certainly not going to be as difficult as *Bloodborne*, I'll definitely go on record saying that.

**Phew, that's good.**

We're giving players a lot of tools to accommodate their capabilities. So there might be a bit of a difficulty curve at the outset – similar to how there is in *Shovel Knight*. Unlike *Shovel Knight*, *Mina* has a level-up system, so players that are struggling can kill more enemies, collect more Bones [currency], and level up their attack or their defence and mitigate the difficulty that way. The trinket system I mentioned is going to assist in that as well. There are trinkets that let you walk over pits, walk through spikes, take zero knockback or fall damage, things like that. So there are going to be ways that players will be able to progress, regardless of their skill level.

**You have these self-imposed limitations of resolution and colour, so it must be more important than ever to make sure that you've got those easy-to-read, dynamic animation poses so you can signpost what the character's doing, right?**

Yeah, even more so than on *Shovel Knight*, where we were inspired by the NES. Obviously, there were frame and colour restrictions there, but on *Mina*, the frame restrictions are even lower. An enemy might only have a two-frame walk cycle or two to three frames for their attack. So you really need to make sure that every pose is dynamic and readable. Being economical with your frames is very important, but it's a really fun challenge. I wouldn't have it any other way. When I started pixel art, I was spending way more frames to make animations look smooth. Working at Yacht Club, I've really had to pare down my frame usage and learn how to be economical and respect the limitations. ➔





◀ *Mina the Hollower* is a more complex game than *Shovel Knight*, Gordon agrees, with more emphasis on action-RPG elements than its predecessor.

▼ According to the game's lore, Hollowers are a guild that specialises in digging into the earth and studying its secrets. Like a more studious *Shovel Knight*, perhaps.



**Before you started out as a pixel artist, you studied 3D design at college. So what prompted you to make that change?**

Yeah, I kind of fell into it. I went to college for 3D art and animation, and that's what I assumed I had to do to get into the games industry. At the time, the indie scene didn't really exist – this was back in 2004, so when I graduated from high school there were no other avenues than triple-A if you wanted to work in games. So I thought, 'Alright, I guess 3D is it'. And at the time I enjoyed it, but a part of me kept screaming that I wanted to do 2D and art illustration.

Years down the road, I put aside any dreams of getting into games and went into graphic design. About ten years later, I saw a Twitch stream of *Nuclear Throne* when it was being developed, and it sparked something in me where I was like, 'What? You can do that? You can just make these little retro characters and still have a base of people who want to play it?'. I thought I had to give it a shot. And it's been something like eight, nine years now that I've been doing it. I just keep managing to find someone who's willing to pay me to do it!

**So was there a particular piece of work that caught Yacht Club's eye? What led to you working there?**

That's a good question. I had my own little company called Space Boy Games before Yacht Club, and we were working on a prototype of this magical girl, top-down

fantasy adventure game – no relation to *Mina*. I'd been posting some of my animations for that game on Twitter and I connected with Nick Wozniak, the lead pixel artist from *Shovel Knight*, and they just happened to be looking for a second pixel artist to help with *King of Cards* and *Showdown*. This was as *Shovel Knight: Treasure Trove* was wrapping up. And lo and behold I got the job. It was a fortunate turn of events I would say, but I've been at Yacht Club for five-and-a-half years now.

**What was that like, going on to *Shovel Knight* relatively late? Was that an interesting challenge, working on something that already had an established style?**

A little bit. I had an art test before I got hired and it was basically trying to style-match the *Shovel Knight* aesthetic. And I'd never really tried to restrict myself like that in the NES fashion, but I found it really freeing to work with restrictions. You only had like 56 colours to pick from, or something like that. It was an interesting set of rules that I'd never really tried to apply to my own work, but like I said, I found it freeing.

**Going back to *Mina*, is there a particular character design you're really pleased with, and if so, what was the process of creating it?**

There's a shopkeeper with a pot on their head, like a clay pot upside down, and these little eyes, just kind of sitting against

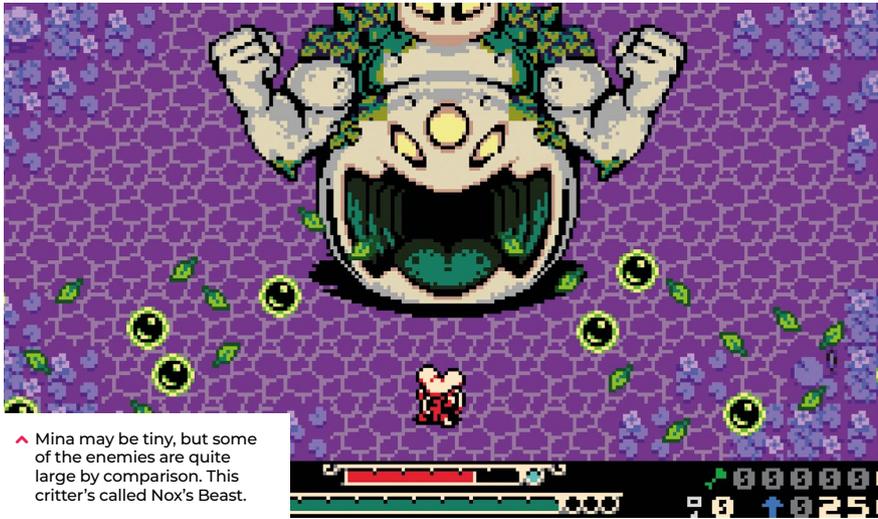
a wall. And there's a back story with that character that I'm very fond of, and I like the design as well. So I guess that's one that I could say is close to my heart right now. I've always loved coming up with NPC back stories, trying to place them in the world and figure out what their history is.

**So do you write bigger biographies for characters than actually appear in the game, just to help your own process?**

I'll write down bullet points of ideas. So I might just be cooking in the kitchen and something will spark an idea. And I'm like, 'I've got to go write this down before I forget'. We have this spreadsheet full of ideas that aren't in the game yet. But when the time comes to start working on a new area we're like, 'OK, each area we want to have at least four to five NPCs. Let's go to the list and look at ones we like and haven't used yet and pull them from there'. That list gets longer and longer all the time. So we've got a lot we can use, for sure – there's no shortage of ideas.

**What percentage of the game was completed, roughly, when you put it on Kickstarter?**

When we went to Kickstarter, honestly, everything you see in the trailer was pretty much just smoke and mirrors. It might look like a finished game, because we tried to show content from a variety of zones, but all you see in the trailer is what was done at the time, and a lot of level setups were made just for the trailer.



▲ Mina may be tiny, but some of the enemies are quite large by comparison. This critter's called Nox's Beast.

The demo of the crypt area was pretty much all we'd done, content-wise, so it's hard to put a percentage on it, but when the Kickstarter launched, we had maybe 20 percent or something. There's still a way to go, I would say.

**Shovel Knight had some of the most generous DLC I've ever seen in a game. Do you think Mina the Hollower will follow a similar pattern?**

Not a similar pattern with regard to the DLC, no. We're trying to be a little more mindful about valuing our time and the amount of work it takes to make that much content. *Shovel Knight: Treasure Trove* was five full games by the time it came out, and all of them were released as free DLC. So that was eight years of work for quite a lot of free content.

I think this time, we want *Mina* to be as big and special an IP to players, so we're going to give it the attention it deserves. But we might end up making new games in the *Mina* franchise be their own things and release them separately.

**I'm old enough to remember back to what it was like in the mid-nineties, when it felt as if almost overnight, the industry went, 'Right, sprites are dead. You're playing 3D games now and you have no choice about it.'**

Oh yeah, 100 percent. I don't know if you grew up playing pixel JRPGs, but it was inspiring at the time. And then suddenly, like you say, it was just all replaced by these low-poly 3D characters, and it's just like,

'I guess this is what we're doing now'. But I've always missed it, and I guess that part of me was glad to get back into it as an adult, to try and bring it back in my own way.

**Do you think the games industry was a bit hasty in the nineties, perhaps, in rushing away from the art form quite so quickly?**

It seems clear that they were, because you have these 2.5D – as they're being called – RPGs that are coming out now, the likes of *Octopath Traveler* and the *Dragon Quest III* remake. And there are plenty of Kickstarters from bigger companies that are trying to revive sprite art.

Game companies are still businesses at the end of the day, so they're going to try and appeal to as wide an audience as they can and hop on the newest trends just to try and stay relevant. So I don't blame them, per se.

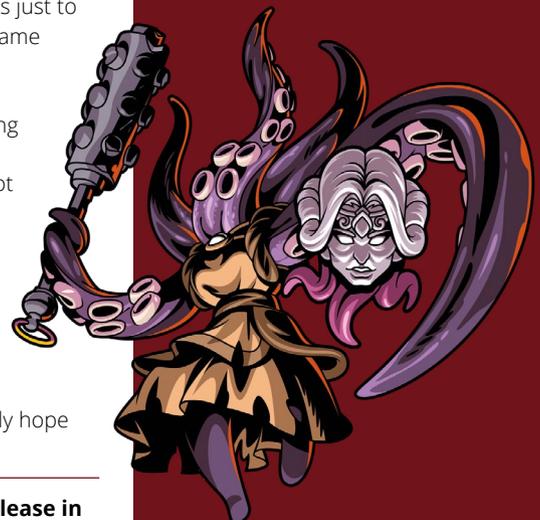
But it's clear that nostalgia is a more powerful force than changing technology sometimes. It's clear that nostalgia is what's driving a lot of sales, and people our age who grew up playing a lot of those retro games are now looking to relive that heyday of classic gaming, or share it with our children or relatives who didn't grow up with it. So I think it'll continue to come back – I certainly hope it does. ☺

**Mina the Hollower is due for release in December 2023**



**A mouse's tale**

*Mina the Hollower* offers up a disarming blend of the Gothic and the whimsical. The titular mouse is both a scientist and an adventurer, with her journey across the murky Tenebrous Isle triggered by the abrupt shutdown of an experimental energy source she'd started there years before. It's a concept and setting that's changed somewhat since *Mina's* early development, Gordon tells us. "The initial prototype was straight-up *Castlevania* – crosses, vampires, werewolves, that kind of thing. But we ended up taking it into a stranger, more unique brand of Victorian horror of our own. Kind of like *Bloodborne* – you don't see references to specific works of literature in it, but you do get that Victorian horror flavour."





# Put a spell on you

Alchemist Interactive's Roman Matuszczak talks making magic in *Spells & Secrets*, a wholesome wizard school roguelike

## Info

**GAME**  
Roguelike, action-adventure

**FORMAT**  
PC / Switch

**DEVELOPER**  
Alc active

**PUBLISHER**  
Rokaplay

**RELEASE**  
Q2 2023

**SOCIAL**  
@SpellsSecrets

Over 2500 people saw enough spark in *Spells & Secrets* to be willing to back it on Kickstarter. That was in April this year, where Alchemist Interactive's enchanting-looking isometric roguelike set in a wizard school managed to achieve full funding in a mere 30 hours. The prospect of learning new powers and uncovering secrets as a fully customisable student – either alone or in local co-op – clearly charmed its intended audience. But now the pressure is on for the studio to achieve its ambition of creating the ultimate magical sandbox, one where players are encouraged to endlessly explore thanks to castle Greifenstein's ever-changing rooms and a generous number of spells.

"We wanted to make a game where you can creatively solve your problems, whether that's common encounters or puzzles," game director Roman Matuszczak tells us. "And we found a magical setting to be the perfect fit for that. Because you can be very creative with all the different effects." Alchemist intends to have

a total of 21 different effects or "spells" in the game at launch, with abilities like levitate, freeze, and more all carrying over from run to run. "The more spells you learn over the course of a game, the more tools you have in your toolbox, and the more different approaches you can take to defeat enemies or solve puzzles."

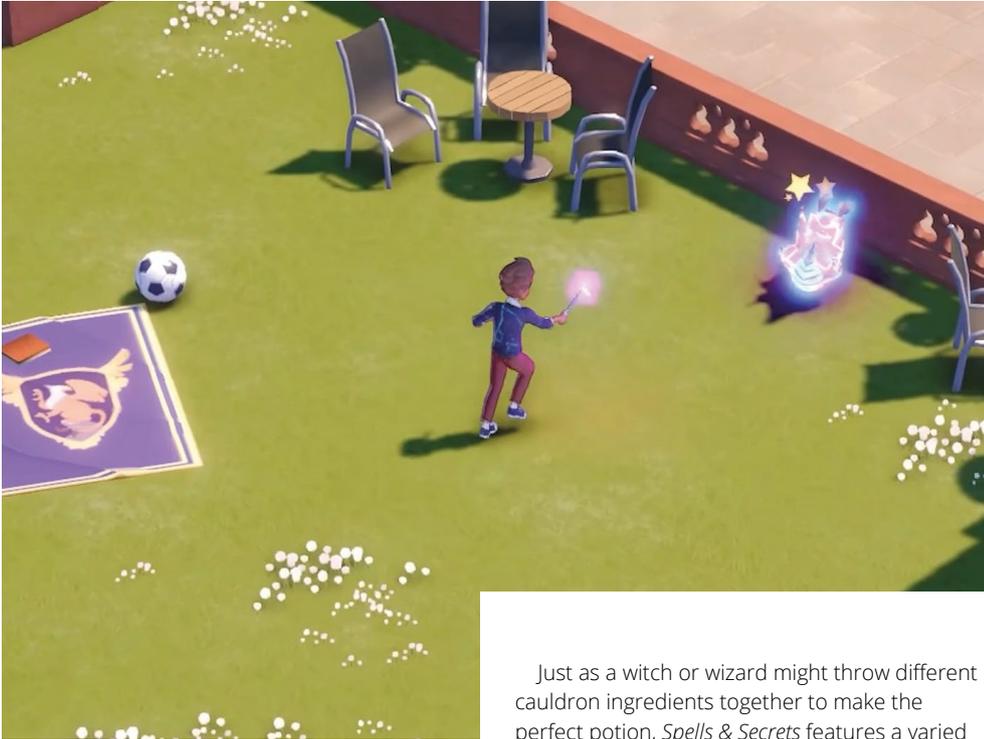
Not to be dissuaded by the *Hogwarts Legacy*-shaped behemoth also set to arrive next year, *Spells & Secrets* intends to offer a more bite-sized wizard experience by comparison, designed to be played in short bursts (as all good roguelikes arguably should). Better yet, it's hoped that not having to start from scratch and relearn your abilities will make the game more approachable for a wide age range, especially compared to more recent roguelikes that tend to favour a hardcore player base.

A standard run through the central castle is estimated to take between 30 to 60 minutes, depending on skill. In that time, players will battle their way through three floors all based on a possible ten different things, but it's the schoolyard starting area that serves as the main hub. It's here you'll be able to upgrade old spells and purchase new ones, both of which will open up ways to navigate areas that might otherwise feel too familiar after a couple of playthroughs. Selecting the Mouseform spell early on, for instance, will let you access shortcuts between rooms that are unavailable to someone who'd rather, say, fly over obstacles.

Spells, in case you hadn't already guessed, are at the centre of everything, including how you choose to dispatch each floor's unique enemies.



➤ Certain enemy types are weak to specific spells, so it's worth keeping some cool.



◀ The story of *Spells & Secrets* begins on your first day at the academy, when the school falls into turmoil and you must rescue other students.

## Wizard's wardrobe

Body size, hair colour, and even eyebrow shape... *Spells & Secrets* features a generous suite of character customisation options to truly let people role-play their first year at Greifenstein as themselves – or anybody else, for that matter. Most importantly, you can change how your character looks at any time in the story from the main hub area, which you'll want to do when collecting new accessories and outfits. "You will always have the opportunity to customise a character as you earn new customisation pieces over the course of the game in various different styles," says Matuszczak.

"Each enemy has a weakness, which you can exploit if you wish," Matuszczak explains. "You can exploit it by different means, depending on which ones you have learned, and then you can use that to your advantage. You can also use the environment or other enemies to your advantage. So enemies may [also] call some effects. For example, when they hit an area with an attack, you can use that to your advantage by moving a different enemy into that location with your telekinesis."

Perhaps the best magic trick *Spells & Secrets* pulls off is to let players adventure out with a fellow student by their side. Local co-op might be a rarity these days, especially in the roguelike genre, but having the spell-casting action play out on the same screen simply made too much sense for Matuszczak. "You can play with two players, and then the game changes quite a lot," he says. "Because when you play alone, you only have yourself to trade combos and stuff. But when you play with two people, then the different synergy between styles come together."

Exactly what the effects of combining any two of the 21 spells will be is something Alchemist Interactive wants co-op pairs to discover naturally for themselves. "If you communicate well with your partner, you can do some very, very powerful things."

Just as a witch or wizard might throw different cauldron ingredients together to make the perfect potion, *Spells & Secrets* features a varied concoction of simple yet effective elements that Matuszczak hopes will come together to create something magical. The 21 core spells available to collect during your goal to reach the castle's final floor are paramount to this idea of a replayable creative sandbox, yes, but equally so is the sheer amount of variety Alchemist Interactive hopes to instil using different level layouts, randomised artefacts, and multiple puzzle solutions. As Matuszczak himself says: "Every element of the game is connected to everything else." 🍷



▲ Optional floor challenges encourage you to explore every room, rewarding you with additional gold and XP.



# Live and die by the blade

Point Blank Games' upcoming high-fantasy RPG straddles Souls-like technical action and approachability. Introducing *Stray Blade*...

## Info

**GAME**  
Action RPG

**FORMAT**  
PC / PS5 / XBO /  
XB X/S

**DEVELOPER**  
Point Blank Games

**PUBLISHER**  
505 Games

**RELEASE**  
2023

**SOCIAL**  
@straybladegame

**M**aybe hardcore action RPGs have become a little too hardcore in recent years. That's the sense we get after spending an hour or so with *Stray Blade*, developer Point Blank Games' upcoming fantasy adventure that certainly presents itself as your typical riff on the *Souls*-like formula at first, but is in actual fact much more welcoming to players who don't enjoy routinely getting their backside kicked. The likes of *Elden Ring* will always have its devotees, true, but this? This is less about 'gittin gud' almost instantly, and more about giving people the space to learn the craft of technical third-person combat over time, while still letting them feel like a badass ancient warrior.

*Stray Blade's* vibrant art style is the biggest representation of this slightly more relaxed design ethos. It doesn't aim to be dank, gritty, and realistic. Instead, there's a storybook quality to it, with the land of Acrea presenting itself as – dare we say – inviting. This is very much an intentional choice to reflect how the game differs from other genre entries. "We're very stylised

and yet high-detail," says Nicholas Zamo, brand manager at Point Blank Games. "Sometimes we get the reply that 'Oh, this looks like mobile', but connoisseurs of the genre are quick to say 'Nu-uh, this is not possible.'" *Stray Blade's* softer aesthetic compared to certain other action RPGs is all done in the effort to make you feel comfortable in its world, rather than constantly wanting to fight your way out of it.

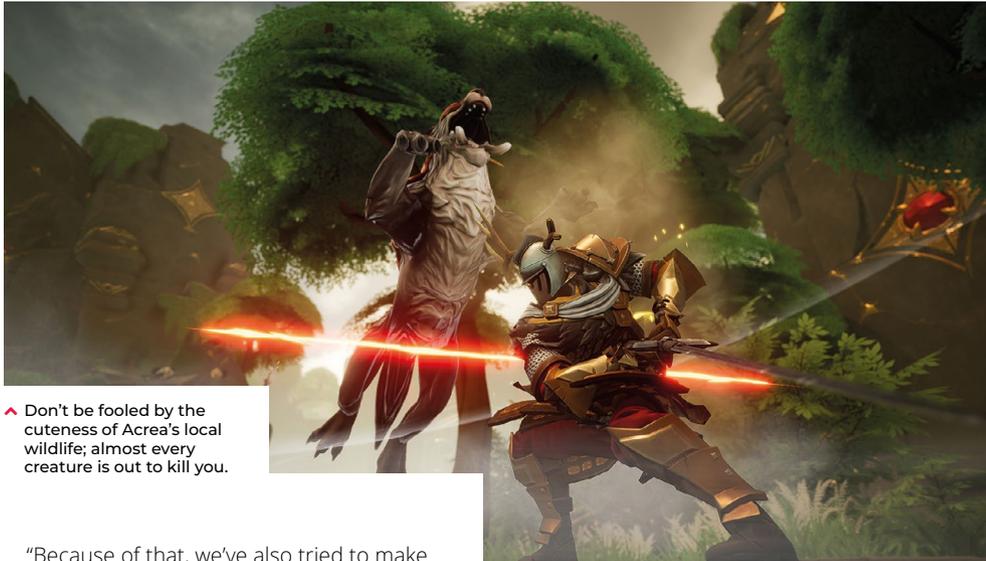
From oversized spiders and fearsome knights to spiky squirrels that attempt to cut away at you using their sweeping tails, *Stray Blade* has more than enough enemy types to keep players guessing, despite its inherent approachability. It offers up a good excuse to experiment with different combat tactics, whether you're someone who prefers to dodge around foes at the risk of losing stamina, or are willing to perfect the incredibly tight timing window to pull off a perfect parry. Point Blank Games has been smart enough to provide options, and that extends to a wide range of weapon types.

Crucially, though, *Stray Blade* doesn't let players equip ranged weapons. These are instead reserved solely for enemies that will try to pick you off from afar, in effect forcing you to plan your approach tactically when having to get up close. "We decided we wanted our players to really feel the heat of the moment," Zamo explains. "And they won't feel the heat of the moment if, after defeating two or three guys, to take down the last one they can just back off and use their bow to shoot him." In other words, playing ranged is seen as a coward's way out, and *Stray Blade* doesn't allow for that.

▲ As expected, the swing of a giant axe will take much longer to land on enemies than a set of dual blades.

▷ Both the player-character and Boji can be upgraded with new skills and abilities the more your quest through Acrea goes on.





▲ Don't be fooled by the cuteness of Acrea's local wildlife; almost every creature is out to kill you.

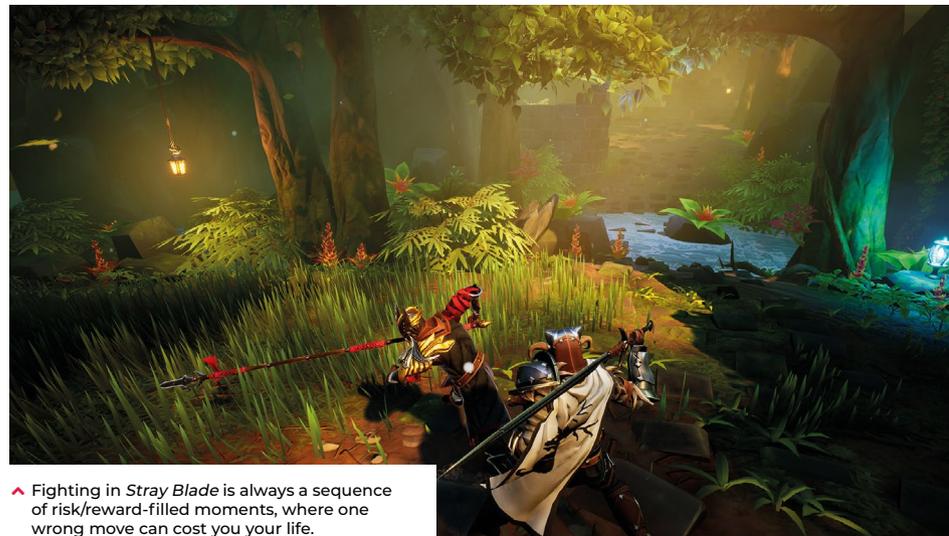
"Because of that, we've also tried to make combat very fair, even when things go wrong," continues Zamo, in reference to the ways Point Blank has ensured no player should get stuck on a combat challenge for too long.

"If there's an encounter that you find too difficult, and you grind all the healing berries, most likely your next run won't be the same. It's not like in *Dark Souls* or older *Souls* games where you have just one linear level or route of progression, because encounters change here from one death to the other."

While your nameless warrior is the one who'll be engaging in up-close precision attacks, trying to dodge, parry, and regain footing when fighting tough foes, some help is provided by your trusty Xhinnon wolf companion Boji, who you meet early on. He rebalances your inability to use ranged attacks somewhat, thanks to his arcane blasts that can stun enemies. He can also distract them as and when you need to, while handily being able to revive you if you die. Boji's abilities (much like the player character's) are tied to specific meters, however, so not exhausting them is a delicate balance.

This balance will no doubt improve as your bond with Boji grows and both your talent trees expand. "That's the idea behind Boji in combat," Zamo continues. "Later on, when you defeat the bosses, he'll also learn passive abilities that you cannot control. Sometimes he jumps into the fight and pounces on the face of enemies, locking down one, but it's always about helping you crowd-control enemies and never dealing the damage."

*Stray Blade's* more whimsical approach to third-person action set in a high-fantasy land is no doubt refreshing within the current landscape. The vibes it's putting out hew much closer to something like, say, *Kingdoms of Amalur*, as opposed to those grim-dark titles that can be far less forgiving. There's no bones about it – Point Blank Games does want players to encounter and overcome rigorous challenges, but the studio has also attempted to balance these tests out with adaptive encounters, a non-lethal companion, and an intriguing world to explore. 🗨



▲ Fighting in *Stray Blade* is always a sequence of risk/reward-filled moments, where one wrong move can cost you your life.

## Perfect Parry

It wouldn't be a true third-person action game without the ability to parry foes that would otherwise overwhelm you using a perfectly timed rebuttal. However, our preference in the demo was always to dodge, as in *Stray Blade* that window of opportunity is extremely precise. "We have iFrames in our game," states Zamo. "So during dodge, we have this very short period where you are basically invulnerable, which is a genre trope of difficult melee combat action RPGs. So, in theory, when you get used to stuff, you will automatically start to judge and leap into attacks inside the enemies' movements."

Attract Mode  
Early Access



# Bouncing back

The creators of Owlboy return with the bounciest multiplayer brawler in the land: it's Vikings on Trampolines

## Info

**GAME**  
Bouncy brawler

**FORMAT**  
PC / Switch

**DEVELOPER**  
D-Pad Studio

**PUBLISHER**  
D-Pad Studio

**RELEASE**  
"When it's done"

**SOCIAL**  
@VOTGame

It's not easy playing a video game in front of the people that actually made it. It's a bit like eating a meal directly in front of its chef, but you're standing on the top of a pole six feet off the ground and trying not to fall off and make an idiot of yourself. Thankfully, *Vikings on Trampolines* is the kind of fun, pick-up-and-play experience that can be understood in a few seconds. "It's probably one of those games where, the drunker you are, the better you're going to perform," jokes Jo-Remi Madsen, the game's creator and programmer. "We've tried to make a fighting game where people can see how it works with no explanation whatsoever," says art director Simon Stafsnes Andersen. "We've had people that are drunk out of their minds actually beat us."

It's all in the title: you and up to three friends each takes control of a Viking, and use a set of trampolines at the bottom of the screen to bounce them around. Brilliantly, all of this is achieved with a single stick on the controller: you can hold the stick up to kick your feet and stay in the air for an extra fraction of a second or so, or pull down to do a ground pound – the latter perfect for attacking bosses, say. But while the controls are simple, the wealth of modes and imagination on display is huge. There's a story mode, boss battles, and an array of minigames: battle royale, a chaotic take on football, and a competitive mode where you have to burst your opponents' balloons in a spiked arena.

Bouncing is the common factor in all of them: touching the ground means instant death, so your trampolining has to be laser-accurate – which is tricky when you're ricocheting off other players or the head of, say, a gigantic sea creature in the middle of a thunderstorm.

D-Pad Studio's previous game was *Owlboy*, a heartfelt Metroidvania whose jaw-droppingly beautiful pixel art came at a cost: development took a startling ten years. With that in mind, you'd be forgiven for assuming that *Vikings on Trampolines* was envisioned as a relatively quick project – a palate-cleanser, if you like, between bigger games. Not a bit of it: *Vikings on Trampolines* began life 20 years ago as a prototype, called *Civilization Rampage*, that Madsen made when he was a teenager ("I couldn't animate at the time, so my adolescent thought was, 'Oh, I'll use trampolines,'" he recalls). Ten years after that, Madsen showed

✓ *Vikings on Trampolines* was initially planned as a pure couch brawler; the pandemic prompted D-Pad to include a story mode.





Some of the boss battles have to be seen in motion to be fully appreciated. The chaos and brilliance of the pixel art recalls the *Metal Slug* series.

The bouncing premise has been explored from every angle in *Vikings on Trampolines*'s array of minigames.

the dormant idea to Andersen, and a new version of that earlier prototype took shape. Recalls Andersen: "We made that, brought it to the Nordic Game Conference, and then won Game of the Year. But then we started working on *Owlboy*. Now it's eleven years since then, and we're picking it back up."

As with *Owlboy*, *Vikings on Trampolines*' artwork is absolutely sumptuous. The game may be smaller in scale compared to *Owlboy*, but its pixel art is equally packed with colour and life. Andersen tells us that the resolution is almost double that of *Owlboy*'s, allowing for a wealth of detail in everything from the huge bosses that fill much of the screen to the gleefully intricate backgrounds. "I did *Owlboy*, so I wanted to up the ante on that," says Andersen. "But you have really tiny characters, and then you have all the enemies at the same time, and I wanted them to have detail, but getting that detail to shine through when they're jumping around at 300 miles an hour is a big challenge... One of the big challenges in pixel art, too, is big, detailed backgrounds. And the entire game is a giant, detailed background."

There's a giddy, creative joy running through *Vikings on Trampolines*, from the art to its jaunty



**"We've had people that are drunk out of their minds actually beat us"**

music to the fizzy action, which makes our time with D-Pad Studios less of a regular interview and more like a rowdy game night in our living room at home. *Vikings on Trampolines* is so enjoyable, in fact, that we're slightly concerned it might still be months, if not years, before we actually get to play the finished product. "We're sort of aiming for next year," Andersen says when we put the subject of release dates to him. We quietly note the hint of uncertainty in his voice. "It's sort of a 'no promises' kind of a deal because, well, we're D-Pad Studios."

"I mean, with *Owlboy*, we initially announced it to come out in 2011," grins Madsen, "and it came out in 2016. So we've learned our lesson. We're going to tell people we're launching... when it's done!"

## Extra Credit

*Vikings on Trampolines* isn't the only project that D-Pad Studios has lined up, but Andersen and Madsen are tight-lipped about what else they're working on behind the scenes – though the latter does at least drop a hint. "We're actually working on a project where Simon's restricting himself to 8-bit colour palettes – sort of a facsimile of the original NES," says Madsen. "That's set for announcement for later this year. I don't know how much I can say, but imagine a console from around the NES era that could do widescreen." "We do have a lot of other projects we're working on," Andersen adds, "but there's only three people on the team. It takes whatever time it takes."

# That was the month that was



## 01. It's a him

Following teases that his vocal take on Nintendo's iconic plumber would be "unlike anything you've heard in the Mario world before", it turns out that Chris Pratt's Mario voice sounds a lot like, well Chris Pratt (with the slight hint of a Brooklyn accent). That was most people's main takeaway from the first *Super Mario Bros. Movie* teaser anyway, which hits cinemas next year. Far more well-received was Jack Black's performance as Bowser, who looks to be imbuing the character with some actual menace for the first time in decades. At least the animation quality had us saying "Wa-hoo!".



## 02. Rewrite the stars

Sony's new customer loyalty program finally went live in territories like the UK, Asia, and America, free to opt-in for players that crave staring at a virtual *Ape Escape* ape. "By joining PlayStation Stars, you can use your gaming skills to collect unique digital collectables and earn rewards," a post on the official PlayStation Blog read. "Complete campaigns, earn points, and show off your collectables in a digital display case on PlayStation App as a way of celebrating your love of play and PlayStation experiences." Oddly, though, some players were placed on a two-month waiting list, rendering the stars still out of reach.

## 03. Modern-er Warfare

Not to be confused with 2009's *Modern Warfare II*, or the remaster of the same *Modern Warfare II* from 2020, last week saw the release of the new *Modern Warfare II*. Simple. It's so new, in fact, that this rebooted version of the classic *Call of Duty* sub-series could be the first ever to receive campaign DLC. That's according to Bloomberg reporter Jason Schreier, who said there will be "an expansion or something like that (not sure exactly what it'll look like, but it'll have campaign stuff too)". This could likely make up for *Call of Duty* taking a break in 2024.



Brain cells grown in a lab have learnt how to play *Pong*. *Pac-Man* next?

Despite stock shortages, PS5 has matched PS3 levels and sold 2 million units in the UK



#### 04. User error

Publisher 2K has confirmed that some user data was recently stolen via a hack, and then illegally put up for sale online. The data includes customer email addresses, gamertag info, and other console details, forcing 2K to warn any and all affected players. "The unauthorised third-party accessed and copied some personal data that was recorded about you when you contacted us for support, including your email address, helpdesk ID number, gamertag, and console details," it explained. 2K then encouraged people to adopt "multi-factor authentication if they have not already done so" and change their passwords, which presumably shouldn't just be Passw0rd.



#### 05. Advanced steam

It only makes sense that, as units of Valve's Steam Deck become more widely available, players take it upon themselves to tweak away and push the portable device far beyond its intended function. That apparently includes getting it to run cartridge games too, as shown off by Twitter user [@meet\\_epilogue](#), who managed to get GB Operator and the Operator app running on Steam OS. Described as "like a cartridge slot for your computer", GB Operator is in effect a clever way of getting Game Boy, Game Boy Color, and Game Boy Advance games to run natively. Watch out, emulation!



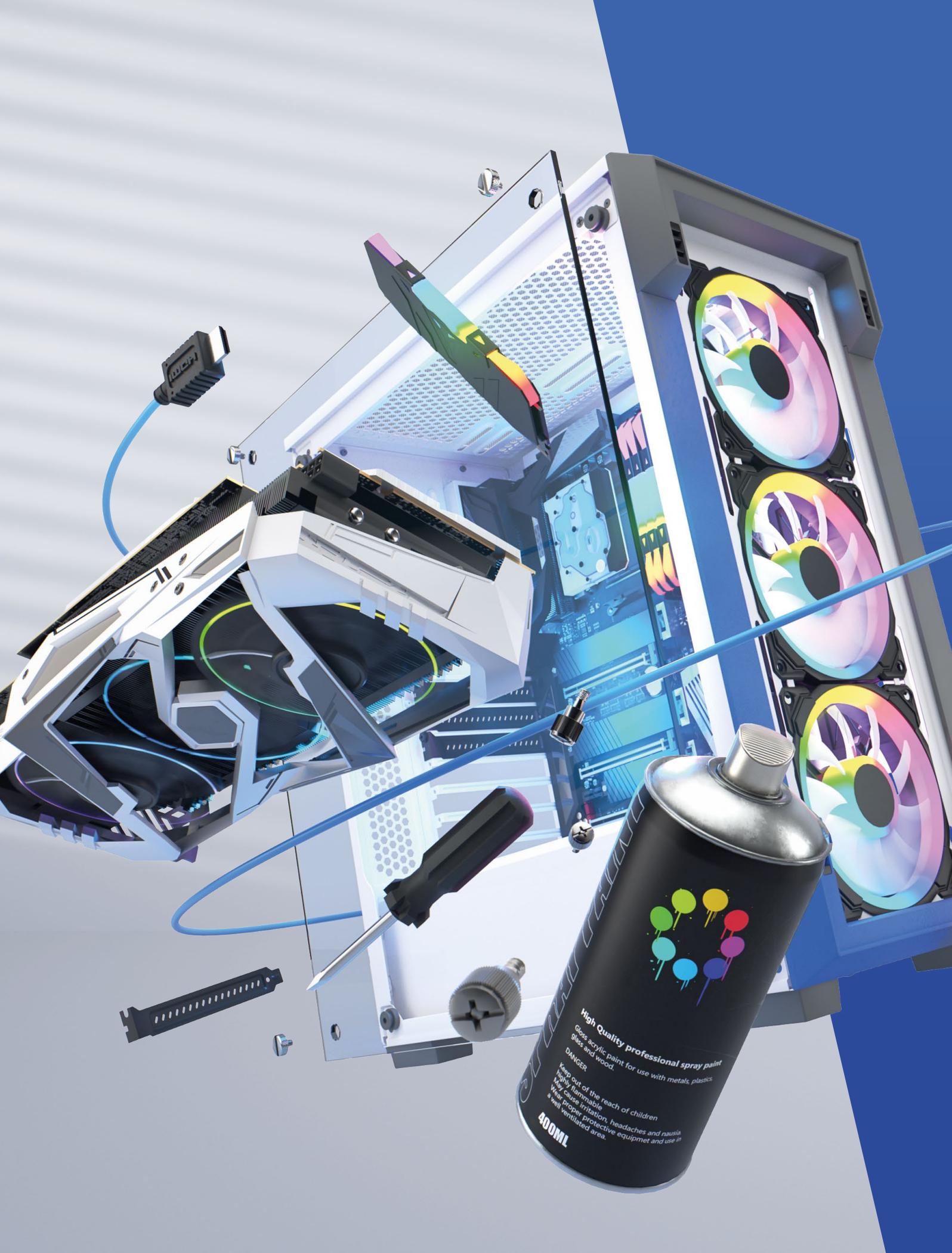
#### 06. Ark at this

Other than both services being great value for console players, the exact details of how Xbox Game Pass and PlayStation Plus operate are mostly still shrouded in mystery. A recently published SEC report, however, has shed light on the kind of cash both parties pay to get certain high-profile games featured. The report revealed that Sony paid a whopping \$3.5 million to include *ARK: Survival Evolved* in its PS Plus line-up for five weeks back in March, while Xbox paid \$1 million less to have it on Game Pass from "November 2018 through to December 31, 2021". Money doesn't talk, it roars.

Bethesda confirms that *Deathloop* is set in the same universe as the *Dishonored* games



*Iron Man VR* developer Camouflaj purchased by Meta, game no longer PSVR exclusive



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## GAMING HISTORY

## with Mr Biffo

## The surprising history of sprites



## MR BIFFO

Mr Biffo, better known as Paul Rose, was the creator of the legendary Digitiser. Check him out on [wfmag.cc/digitiser](http://wfmag.cc/digitiser)

**“Sprites are so ubiquitous in gaming that it’s almost difficult to believe they had to be invented”**

Video game graphics owe a huge debt to Nolan Bushnell and a chap named Danny Hillis

**T**he word sprite comes from the Old French word ‘esprit’, meaning ‘spirit’ – derived from the Latin term ‘spiritus’. In folklore, sprites were small beings that were lively, playful, and magical.

These days, certainly to the likes of you and I, they’re two-dimensional images that play a role within a larger environment. From Pac-Man to Mario to Sonic, it’s the perfect word to describe them.

The definition of what makes something a sprite, and the way in which they were created, has changed over the years, but sprites are so ubiquitous in gaming that it’s almost difficult to believe they had to be invented. I mean, it’s almost a chicken-and-egg thing. Over time, the classic pixel sprite became an art form in itself, a sort of impressionistic rendition born out of necessity. *(For a whistle-stop tour of sprites as an evolving art form, see our feature on page 28 – Ed.)*

When polygons sunk their claws into gaming during the nineties, the sprite quickly fell out of fashion, in the same way as deely boppers, Hypercolor sweatshirts, and shoulder pads. Even at the time, I always felt it was unjust how sprites got scoffed at by the gaming fashionistas, as they became increasingly dazzled by 3D images. Those early, flat polygons never seemed as characterful as what could be achieved by a good pixel artist, working within the limitations of a system’s hardware.

Now, of course, it’s all come full circle. The rise of indie gaming over the past decade or so has seen sprites and pixels re-emerge, their artistic potential being used as a selling point, rather than a best solution to the age-old limits of processing power. *Shovel Knight*, *Owlboy*,

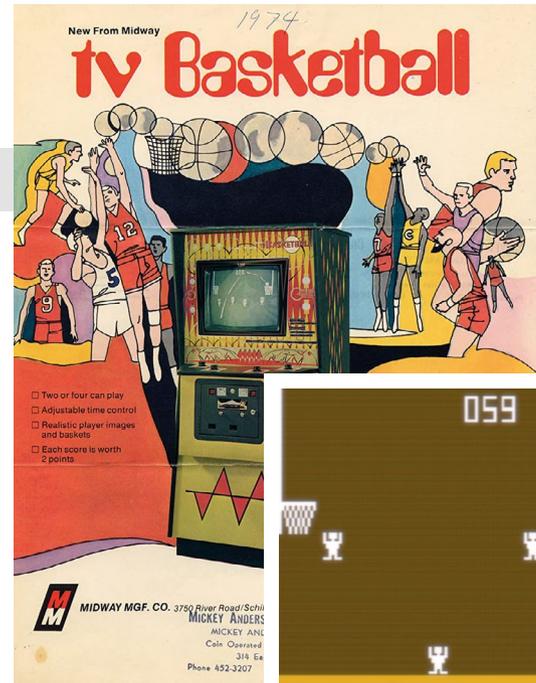
*Downwell*, *Dead Cells*, and the like, embraced that retro aesthetic and re-established it in a modern way. Modern sprites are an artistic choice, rather than a default requirement.

## CHEESE

The sprite, as with so much else, was invented by legendary Atari founder Nolan Bushnell, also the Chuck E. Cheese man. His *Computer Space*, the first arcade video game, was based on 1962’s *Spacewar!*, which ran on a powerful mainframe computer. The space rockets in that game moved around by refreshing the entire screen every single time anything happened.

That was untenable and inefficient for what was intended to be a commercial product – on-screen images would swallow up data enormously – so Bushnell reduced the processing demands by designing the ships in *Computer Space* to move independently from the background. Though the visuals of *Computer Space* looked very different from the way sprites would evolve, Bushnell’s innovation pointed the way forward for game development over the next two-and-a-bit decades.

Another gaming legend, *Space Invaders* creator Tomohiro Nishikado, pushed the form further forward with 1974’s imaginatively titled *TV Basketball*. A four-player variant of the even more imaginatively titled *Basketball*, released earlier the same year, it was effectively a variant of *Pong*. What set it apart is that the paddles were designed to resemble human players, and the goals looked like baskets. Though crude by today’s standards, at the time it was a revelation. Though strictly black and white, the opposing teams even had their own ‘colour’ scheme,



making two of the players appear greyer than the others by removing horizontal lines across their bodies.

It would be a while yet before sprites could be animated, or depicted in full colour, however. Namco's *Galaxian* arcade board – used in a number of games in the late 1970s and early 1980s – allowed for multicoloured sprites to be laid atop scrolling backgrounds. Sega was but one company that licensed the technology, which could be seen in games such as *Moon Cresta* and *Frogger*.

## SCRAMBLE

Konami's *Scramble* – and indeed its spiritual successor, *Super Cobra* – added side-scrolling, while the long-forgotten *Jump Bug*, released by Sega, introduced parallax scrolling to the mix.

When games truly got a foothold in our homes, sprites were the only way to go. You may be forgiven for not remembering the 1292 Advanced Programmable Video System – a console released by Audiosonic back in 1978 – but it used the Signetics 2636N, a processor capable of throwing four single colour sprites (or 'objects', as Signetics called them) onto the screen at any one time. It was also capable of displaying a single sprite with eight colours. The 59 games released over the course of its relatively short life were mostly clones of popular arcade hits or sports simulations, but they weren't dissimilar to the sort of thing you could find on the Atari 2600. Had Audiosonic been a bit quicker about it, the story of gaming might've played out very differently.

Of course, as history records, the Atari 2600 got there first, a full two years before Audiosonic, and had already trumped the 1292

and the Signetics processor, with five on-screen 'moveable objects', or 'player missile graphics', at a time. There were limitations in terms of how much could be on-screen at one time, but what programmers could achieve was remarkable, especially given the 2600 had no dedicated graphics memory. Its graphics were drawn one line at a time, with the CPU essentially redrawing the screen whenever something moved or fired. That almost iconic flickering in the 2600 version of *Pac-Man*? That was basically a cry for help.

While Atari used a number of different terms for these devices – player/missile graphics, objects, and so on – others called them stamps (such as in *Ms. Pac-Man*), while Commodore favoured movable object blocks, or MOBs.

The first person to use the term 'sprite' was computing pioneer Danny Hillis, while working for Texas Instruments in the late 1970s. Hillis designed a chip for the TI-99/4, which allowed multiple characters to move on screen at the same time. He referred to these characters as sprites, due to the way in which they floated independently over the background. You may not remember the TI-99/4, although it was for a brief time the best-selling computer in America, but you will no doubt know of the Nintendo Entertainment System, which also used Hillis's chip. Without it, we'd have had no Mario, no Donkey Kong, no Ice Climbers, no *Punch-Out!!*, or that dog in *Duck Hunt*.

Sprites made gaming, but more than that, they gave us character, and characters. That's the real legacy of Nolan Bushnell's invention. 🐾



# Attract Mode



## 10 Dead Doves ↗

A clear reference back to an age when fixed-camera angles ruled the horror game roost, *10 Dead Doves* uses lo-fi character models and campy voice acting to fully sell you on this familiar – and surprisingly uneasy – tone. Exploring the mountains as a lowly backpacker brings with it many mysteries, though, as you venture into the Appalachian wilderness and decipher messages fed to you by a dove in your dreams. A chilly expedition in more ways than one? Almost certainly.



## Plasma ↗

Games in which you can make other games inside of them are all the rage in the current landscape. *Plasma*, however, takes the concept one step further, allowing players to expand their development chops by letting them create almost any mechanical device they can imagine. Arcade machines, controllable cars, complex robots... they're all possible thanks to *Plasma*'s wildly in-depth physics engine that aims to make building technology fun.

## Rhythm Sprout ↘

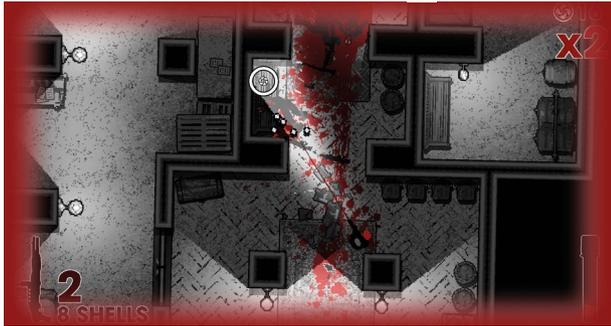
This anthropomorphic sprout has rhythm, and that's all there is to it in this zany twist on the underserved note-hitting sub-genre. Complete with an appropriately zany story mode that sees the Chosen Onion fight their way through the vegetable kingdom, stepping ever-forward means slashing at beats using the appropriate timing. Of course, any rhythm game is only as good as its soundtrack, so *Rhythm Sprout* wisely spans a multitude of styles, including K-pop, disco, EDM, and more.



## ArcRunner ↗

Whether it's a result of the voxelised art style, neon-drenched environments, or pulsating synth soundtrack, *ArcRunner*'s unabashed cyberpunk stylings could easily fool you into thinking you've seen it all before. However, this is an action rogue-lite that promises a lot of depth and variety thanks to the inclusion of three augmentable classes – Hacker, Ninja, and Solider – which work to make players feel uniquely empowered when trying to take down an AI force that's become self-aware. Action is almost always fast-paced regardless of which class you settle on, too, at least if our brief hands-on experience is anything to go by.





## OTXO ↗

Let's not quibble over how it's pronounced, just know that *OTXO* is a violent shooter with an aesthetic that contrasts black-and-white environments with gaudy splashes of crimson. A riff on the *Hotline Miami* template, its main differentiator is a rogue-lite-esque structure that ensures the brutal gun-play always stays fresh. One-man band Lateralis has handcrafted over 150 rooms to blast through in total, promising an impressive amount of variety when combined with the bartender's cocktails that each grant you a random skill. *OTXO* should leave players shaken and stirred...



## The Entropy Centre ↗

Making it out of this sci-fi puzzler's titular location means rewinding objects through time in the correct manner using your hulking big beam gun. Sure enough, it's a novel idea as far as core mechanical hooks go, and should hopefully be enough to help *The Entropy Centre* avoid too many comparisons with *Portal* (despite the aesthetic similarities). Solving increasingly more complex time puzzles is all in a day's work.



## ↖ Trinity Fusion

It's hard to see *Trinity Fusion* in motion and not notice the heavy *Metroid Dread* influence. We're willing to forgive this, however, because A) it'll surely be a long while before *Metroid* returns, and B) *Trinity Fusion* is a rogue-lite action-platformer set to grace all console platforms – not just one. Most enemies are dead ringers for the E.M.M.I. that Samus fights in her latest outing, it's true, but Angry Mob Games has imbued its title with plenty of ideas of its own.

Firstly, there are three playable characters for you to take control of; these are technically parallel universe versions of an individual character that functions and handles differently. One starts out with a blaster ideal for popping off enemies from afar, while another's dual blades make sliding between a foe's knees before stabbing them in the back infinitely fulfilling. Its rogue-lite sensibilities leave us a little spooked, since *Metroidvanias* are traditionally at their best when they provide a consistent map to explore, but there's no denying that *Trinity Fusion* both looks and feels great to play. We're enticed by the prospect of saving this dying multiverse. ➔



## Peaky Blinders: The King's Ransom ↗

Having already treated *Doctor Who* fans to a VR trip in the TARDIS with 2019's *The Edge of Time*, Maze Theory has turned its head to adapting another beloved – albeit very different – BBC property. *Peaky Blinders: The King's Ransom* looks to be a dream for avid show devotees from what we've played, nestled safely between the events of Seasons 4 and 5 so as to not detrimentally affect the finale's impact. Players will go for a pint with Tommy Shelby himself, navigate the gritty Birmingham streets up-close, and engage in rough-and-tumble shootouts to take on rival gangs.

It's clearly a huge step up from the studio's previous virtual reality attempts, too, no doubt helped by a more action-oriented focus that makes sense in this original story, where players take on the guise of a new gang member. By order of the *Peaky Blinders*, TV show fans will want to take note.

## The Siege and the Sandfox ↘

A Metroidvania without any combat? A worthy prospect, for sure, and one that Cardboard Sword's *The Siege and the Sandfox* might actually look to pull off, thanks to a smart implementation of parkour and 2D stealth systems. Getting around the cavernous prisons situated below the majestic palace overhead is instead all about being sneaky, jumping, and sliding across multiple floors when trying to evade guards rather than facing them head on, finding other non-lethal ways to get around obstacles. Drawing you into this fresh genre twist is a lusciously rich 16-bit art style, which only serves to enhance the classic *Prince of Persia* vibes.



## Solium Infernum ↗

It turns out that Hell is a battleground full of nothing but political turmoil and intrigue. So says this updated reimagining of the cult classic grand strategy game, *Solium Infernum*, coming from the Australian team behind tabletop hit *Armello*. With improved, hand-painted visuals that make moving your forces around and taking decisions a lot more engaging than the quaint original, the clear hope is for the concept to finally find a broader audience. Hell is without its prince, and all the pieces are there for you to take over. More on this one in next month's issue.



## These Doomed Isles ↴

Roguelike deckbuilder meets classic god game in *These Doomed Isles*, which doesn't mess around in the sheer number of challenges it forces upon your humble settlement. Famine, invaders, natural disasters... it's all here for you to try and account for as the turns roll on. Selecting the correct cards from a randomly dealt deck at the end of each season is your best chance at survival, whether that's by laying down a Logging Camp card to keep resource levels high, Tax Collector to receive more gold at the cost of your inhabitants' happiness, and so on. Forward-thinking will absolutely prove key, or your isle is indeed forever doomed.



## Do Not Feed the Monkeys 2099 ↴

Where 2018's *Do Not Feed the Monkeys* had you spying on strangers in a contemporary setting, 2099 flings events forward by almost a century to let players snoop their way through people's private lives. It was an original (if icky-feeling) concept before, and now this sharp change of time period has given Fictiorama Studios a good excuse to let their imaginations go wild. Humans, robots, and aliens now live side by side, for instance, and while you're not meant to directly affect the lives of these "monkeys," it's often all too tempting. The game presents a highly capitalistic future, so guilt-free spying is definitely encouraged.



## Octopath Traveler II ↴

The progenitor of the so-called "HD-2D" aesthetic was a fun throwback to the pixel-perfect JRPG heyday, but it was clear that *Octopath Traveler* suffered structural issues. Completing the eight characters' storylines in any order offered freedom, true, yet it resulted in limited interaction between them. This will surely be remedied in the equally stunning sequel announced in September, which presents an entirely new location and eight new travellers to play as.

We'll need to wait until next year to see if *Octopath Traveler II* evolves its core premise rather than simply repeats it, but to be quite honest, it's heartening to see both Square Enix and Nintendo place value in this classic-style genre. Traditional turn-based combat seems to have faded away in the 3D space, so smaller games like this keep the flame alive.



# The evolution of pixel art in 20 games

From monochrome aliens to vibrant fantasies in the 21st century, we follow the rise, fall, and rise of the humble sprite



**U**biquitous in video gaming's nascent years, pixel art arose as a solution to a problem: how do you create a virtual world on computers with monochrome displays and only a few kilobytes of memory? It wasn't long, though, before drawing sprites (a term coined by Danny Hillis at Texas Instruments – see page 22) became an art form, as technology improved and developers found new, creative ways of rendering objects using just a handful of dots. In just a few years, video games leapt from the angular bat and ball of *Pong* to full-colour space battles and pseudo-3D racing sims.

Pixel art continued to evolve with technology, and while polygonal 3D games soon elbowed their way into the mainstream around the mid-nineties, it still thrives today. Here's a brief look at how sprites have moved with the times, from the late 1970s to the 21st century...



### Space Invaders (1978)

For years, it was the unofficial logo for gaming as a medium: the two pixels for eyes, the ungainly arms and legs, and the awkwardly elongated torso. And while *Space Invaders* may be rapidly receding into history, its legacy remains: the alien sprite was gaming's first truly striking image, and one of the earliest instances of a piece of pixel art selling a game to the masses. Before he hit on the invasion theme, designer Tomohiro Nishikado toyed with tanks and soldiers. Had he not plumped for those eye-catching aliens, it's questionable whether *Space Invaders* would have been such a 1970s icon.



### Pole Position (1982)

True, polygonal 3D driving games were still years away in 1982, but developers at Namco were determined to make a realistic racing simulation with the technology then available. Their use of sprites to create a pseudo-3D version of the Fuji Speedway resulted in a huge arcade hit, paving the way for Sega's line of adrenaline-pumping 'super scaler' coin-ops, including *Space Harrier*, *OutRun*, and *After Burner*.



### Pac-Man (1980)

By 1980, arcade games had moved on from monochrome screens to glorious Technicolor, and Pac-Man was gaming's first true mascot. Along with the ghosts that chased him around the electric blue maze, Pac-Man was immediately recognisable as a cartoon character built out of pixels. Sure, he was little more than a yellow circle, but what a circle: before Mario, before Donkey Kong, Pac-Man was gaming's first true celebrity.



### Manic Miner (1983)

The 8-bit computers and consoles of the early eighties each presented their own strict limitations, and the cheap-and-cheerful ZX Spectrum was no exception. But what was striking about the British computer was just how much personality and charm its more talented users managed to pack in their games. Case in point: *Manic Miner*, programmed by Matthew Smith. We'll politely say that it used the American platformer *Miner 2049er* as its template, but what Smith's game added was bags of surreal, quintessentially British humour, from its curious array of enemies and hazards (robots, sentient toilets, patrolling *Star Wars* bears) to the giant foot that flattens you when you eventually lose all your lives. Its main character, Miner Willy, even got a whiff of *Super Mario*-style fame for a while, since he made appearances in two sequels (*Jet Set Willy*, *Jet Set Willy 2*) and a couple of minor spin-offs and unofficial sequels. Not bad going for a monochrome, 16 pixel-high graphic. ▶

## Interface

Pixel Art in 20 Games



### Super Mario Bros. (1985)

Having already bounded through the likes of 1981's *Donkey Kong* and 1983's *Mario Bros.*, the diminutive plumber's iconic status was assured thanks to this seminal platformer. But as well as a classic game in its own right, *Super Mario Bros.* is an exercise in economy – before the advent of custom 'mapper' chips, the number of sprites the NES was capable of displaying was severely limited. With just 64kB of memory to squeeze in its graphics, some ingenious design decisions had to be made – clouds are recoloured bushes, while Goombas use the same sprite, flipped horizontally, to create the illusion of movement. Within these confines, designers Shigeru Miyamoto and Takashi Tezuka created one of the most recognisable games of all time.



### Contra (1987)

Thanks to a small cluster of largely uncredited artists, Konami had an immediately recognisable house style in the mid-to-late eighties. From *Green Beret* to *Castlevania* to *Contra*, its characters were marked out by their compact size, striking lack of facial features, and use of dynamic poses to mitigate the limited number of animation frames available. It was a style that meant you felt every slash of Simon Belmont's whip in *Castlevania*, or the athletic jumps and vaults the titular soldier made in *Green Beret*, or the gung-ho dash of *Contra's* warriors, Bill and Lance. Konami was at the height of its creative powers, creating some of the era's most distinctive sprite designs.



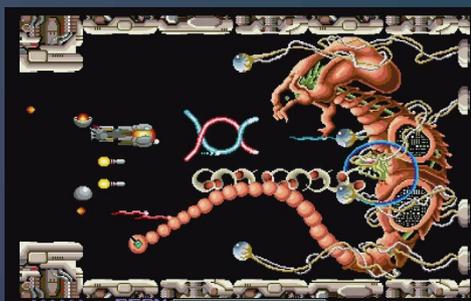
### Prince of Persia (1989)

Today, motion capture is a common sight in video games. In the mid-eighties, the concept was almost unknown. But in his quest to create ever more lifelike, fluid character movement, young designer Jordan Mechner used some video footage of his brother, some paper and pens, and came up with a crude yet effective means of creating 2D sprites that moved like real people. Mechner first used the rotoscoping technique in 1984's *Karateka*, but it was *Prince of Persia*, with its title hero fluidly leaping across chasms, hanging off ledges, and fending off enemies with a flick of his sword, that truly caught the world's attention. With *Prince of Persia*, the cinematic platformer genre – which takes in the likes of *Another World*, *Flashback*, *Limbo*, and *Inside* – was born.



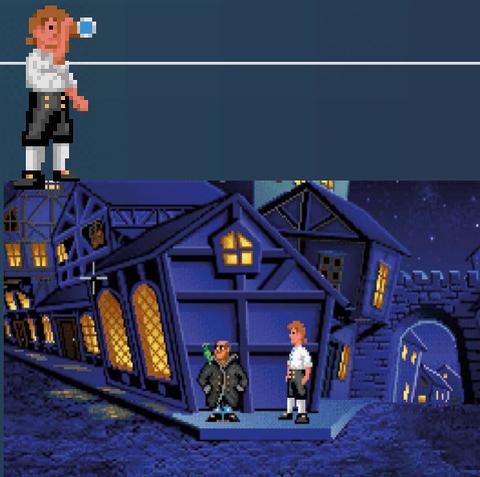
### R-Type (1987)

Stripped down to its essentials, the shoot-'em-up is simply about eliminating objects as they float onto the screen from an assortment of angles. Irem's genius, then, was in turning this most basic of genres into something truly dramatic: playing *R-Type* in an eighties arcade made you feel like you really were a lone pilot in a pitched battle against hideous aliens. It was far from a new scenario even then, but the twisted imagination in *R-Type's* sprite work still made it a standout: the mechanical backdrops that feel like exotic yet functional pieces of sci-fi technology, and the gigantic, fleshy area bosses that flailed and pulsated as they scrolled into view. From a visual standpoint alone, *R-Type* set a new bar for all shoot-'em-ups that crowded into arcades after it.



### Shadow of the Beast (1989)

Strip away the fancy packaging, and *Shadow of the Beast* was a simplistic action-platformer in the vein of Taito's *Rastan*: you walked along a bit, punched things, collected keys to unlock doors, and walked along a bit more. But as a showcase for what the Amiga was capable of from a visual standpoint, Reflections Interactive's opus was a technical marvel at the tail-end of the eighties. Its baroque fantasy world was brought to life with multiple layers of parallax scrolling, while the central character's run cycle was crisp and fluid. *Shadow of the Beast* also displayed a particular visual quirk that 16-bit games often had if they were developed in the West: basically, if the sky was essentially a gradient with some fluffy clouds scrolling on top, you were probably playing something European.



### The Secret of Monkey Island (1990)

Aside from the sharp comic writing, a large part of *Monkey Island's* brilliance lay in its ability to conjure up an entire world from largely static 2D backdrops. Embracing the limitations of early-nineties computers, artist Steve Purcell and his collaborators made one of the most inviting, atmospheric settings in any point-and-click adventure. Despite their valiant efforts, subsequent remakes – with their smoother, high-resolution graphics – never quite captured Méléé Island's magic in the same way.



### Chrono Trigger (1995)

We include *Chrono Trigger* here as but one example of a JRPG with truly beautiful pixel art. As Yacht Club artist Sandy Gordon pointed out on page six, the JRPG genre played host to some of the loveliest sprites of the eighties and nineties. Whether it was in such franchises as *Dragon Quest* or *Final Fantasy*, or (slightly) more obscure titles like *Secret of Mana*, there was an unbridled, creative joy in the worlds those games created. *Chrono Trigger*, with its sci-fi fantasy world soaked in the distinctive style of Akira "Dragon Ball Z" Toriyama, was certainly among the most spectacular JRPGs of its age. Two years later, *Final Fantasy VII* saw the series make the jump to 3D.



### Street Fighter II (1991)

Capcom's seminal fighting game is a work of technical genius – without the precision and depth of its combat, there's no way it could have reignited an ailing arcade industry as it did. But without those striking character designs, and the triumphant sprite work, it's unlikely that *Street Fighter II* and its variants would have stuck in our imaginations for quite so long. Those punches, kicks, and throws had a dynamism and heft thanks to some perfectly rendered poses, but it was the smaller character touches – Chun-Li's exuberant post-match celebrations, or the look of agony on Blanka's face as he's struck by an opponent – that helped make *Street Fighter II* a true landmark in gaming. ➔



## Interface

Pixel Art in 20 Games

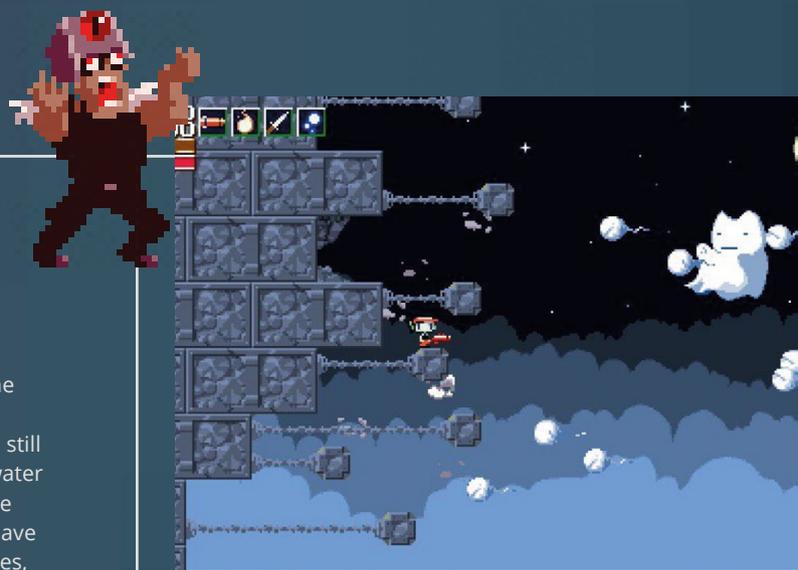
### Yoshi's Island (1995)

Nintendo's *Super Mario World* sequel gets a mention not just for its gorgeous sprites, but because of their handling: *Yoshi's Island* was one of a number of games that used scaling and rotation to striking effect in the nineties. The SNES's built-in Mode 7 graphics allowed for all kinds of pseudo-3D effects in everything from the aforementioned *Super Mario* outing to *Pilotwings* and *F-Zero*. The *Yoshi's Island* cartridge, meanwhile, had a Super FX 2 chip, which was used to create such things as lowering drawbridges and the eye-catching rotating island at the game's start. Our favourite moment? Being chased around a tiny rotating planet by Raphael the Raven. It's a boss battle that makes innovative (and dizzying) use of the chip.



### The Legend Of Zelda: The Minish Cap (2004)

*Ocarina of Time* marked the point where the mainline *Zelda* series moved away from traditional pixel art and towards a 3D, polygonal future. Link's handheld adventures, meanwhile, continued to revel in the old top-down, sprite-based tradition. *The Minish Cap*, the first *Zelda* game for the Game Boy Advance, made the most of the console's expanded colour palette and 32-bit processor. Depicting a miniature world in vibrant shades of green, *The Minish Cap* was arguably the most beautiful handheld *Zelda* game up to that point.



### Metal Slug (1996)

By the mid-nineties, the polygons were truly on the march. But as the likes of *Quake*, *Super Mario 64*, and *Tomb Raider* showed us what the future of cutting-edge 3D games would look like, some studios were still flying the flag for the humble sprite. *Metal Slug* represented a high water mark for the art form, with its warring soldiers and military hardware displaying an unparalleled level of personality and detail. You only have to look at the humour and life in *Metal Slug's* titular tank, as it bounces, squashes, and stretches across the battlefield, to see how much technical skill went into every frame. The demand for such detailed pixel art dwindled over the next decade or so, but thanks to developer Nazca, *Metal Slug* celebrated the possibilities of 2D sprites in explosive fashion.



### Cave Story (2004)

Years before the indie dev scene truly took off in the West, Japan's Daisuke "Pixel" Amaya huddled up in front of his computer for about five years and emerged with this masterpiece. An homage to *Metroid* – before such a thing was commonplace – *Cave Story* introduced a captivating array of offbeat, unforgettable characters, all brought to life through Amaya's economical yet distinctive sprite work. Platformers and pixel art had fallen far from the mainstream by 2004, but Amaya led the way for a triumphant revival for both the genre and art form in the years to come.



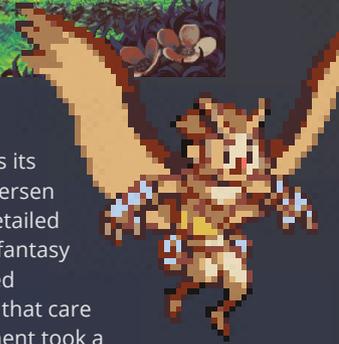
### Fez (2012)

Thanks to a growing indie scene, pixel art has made a triumphant return to the fore over the past decade. *Fez* is but one example of what can be done with the form on more modern hardware, with Phil Fish's indie darling using voxels to create the illusion of a 2D world which can be rotated in 3D space. The result is a traditional 2D platformer with some truly forward-thinking, ingenious ideas behind it – and a disarming, blue-skied visual style that owes as much to Studio Ghibli as it does to Nintendo.



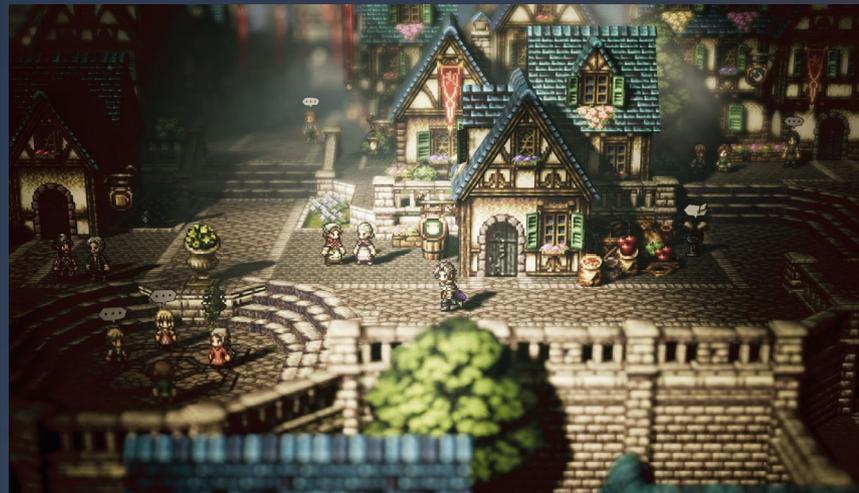
### Owlboy (2016)

In the 21st century, pixel art is widely recognised as its own art form; in *Owlboy*, artist Simon Stafsnes Andersen created one of the most captivating, obsessively detailed 2D games since the mid-nineties. Every pixel in its fantasy world felt considered, from the exquisitely rendered backdrops to its cartoon-like cast of characters. All that care and attention may have come at a cost – development took a startling ten years – but the effort was worth it: *Owlboy* is surely one of the most beautiful-looking 2D games of the past decade. Meanwhile, Andersen and his studio, D-Pad, are set to provide another feast for our eyes with the upcoming *Vikings on Trampolines* (see page 16).



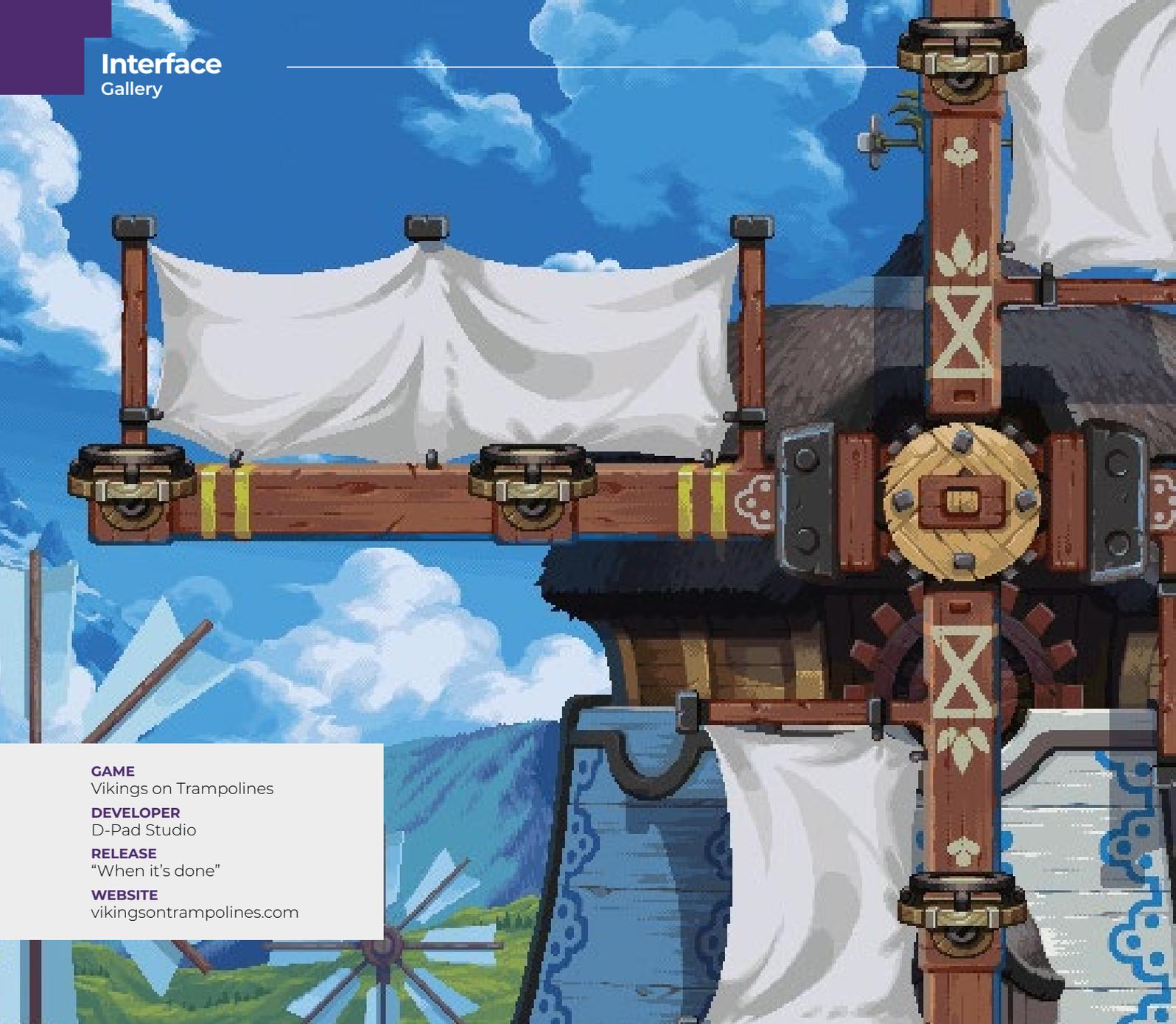
### Shovel Knight (2014)

Yacht Club Games' debut is significant not just because it's a corking game, but also because it's an example of how Kickstarter has helped what might once have been considered niche games and genres find an audience. A decade earlier, most publishers would likely have passed on a 2D platformer that harks back to the days of the NES. Thanks to Kickstarter, *Shovel Knight* found its footing and gave gaming some of the most distinctive pixel art character designs of recent years. The dance of the Troupple King – a wonderfully bizarre event that happens in the game once, and once only – has to be seen to be fully appreciated.



### Octopath Traveler (2018)

More recently, we've seen an increasing number of games mix traditional sprites with 3D environments and lighting and atmospheric effects in a way that wouldn't have been possible in the eighties and nineties. Square Enix and Acquire's JRPG is a particularly striking example, with its character sprites recalling the SNES era while its use of 3D and depth of field heightens the feeling of a vast fantasy world. From *Inmost* to *Octopath Traveler* and beyond, pixel art is constantly being revitalised, experimented with, and repurposed by a new wave of developers. 🐣



**GAME**  
Vikings on Trampolines

**DEVELOPER**  
D-Pad Studio

**RELEASE**  
"When it's done"

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



## Vikings on Trampolines

READ  
MORE  
turn to  
page 16

"It looks a bit like *Metal Slug*," was one of the observations we made as we careened around the screen in *Vikings on Trampolines*, D-Pad Studio's hectic follow-up to *Owlboy*. Given that *Metal Slug* is perhaps one of the most beautiful sprite-based games of all time (for more on the subject, see page 28), this is about as big a compliment as we can think of. "*Metal Slug* is known as one of the most detailed pixel art games..." agrees Jo-Remi Madsen, the game's creator and programmer.

"I always felt like I could do that level of detail. I wanted to do it!" the game's sole pixel artist, Simon Stafsnes Andersen, enthusiastically cuts in.

"...and I feel we're pretty darn close with this," Madsen continues. And he's not wrong: as you can see from the artwork D-Pad Studio kindly supplied for these pages, *Vikings on Trampolines* is packed with an almost obsessive level of detail, whether it be the particular texture on a colossal whale boss' tongue or the sculptural quality of a distant cloud. In fact, the pace of *Vikings on Trampolines*' arcade action is such that a lot of these details run the risk of being overlooked in the heat of the moment. All the same, we suspect that Andersen's sprites will be pored over and studied by other pixel artists for many years to come.



# MYSTICAL NINJA



The history of Konami's *Ganbare Goemon* series, and the games the West never got

WRITTEN BY  
JACK YARWOOD

**K**onami's *Ganbare Goemon* series has had a bit of a spotty history in the West, with only six titles ever receiving an official release outside of Japan. That's in spite of the series containing roughly 30 games in total, released across various consoles and handheld devices. This has resulted in the *Goemon* series being a difficult one to keep track of for western fans. But, regardless, it's still managed to develop a cult following due to its odd mix of action and comedy. Over the last few months, Wireframe set out to find out as much as it could about this cult series, speaking to ex-Konami staff members

who were involved to tell us more about the games, their origins, and why they were released so sporadically in the West. To tell this story, though, we need to travel all the way back to 1986.

## ARCADE ORIGINS

You see, despite *The Legend of the Mystical Ninja* for the Super Nintendo being the first *Goemon* game that was ever released overseas, the *Goemon* series actually started in Japanese arcades with *Mr. Goemon* in 1986. This was a side-scrolling action game developed in Konami's Osaka offices that focused on a more traditional depiction

## THE MEANING OF "GANBARE GOEMON"?

Those who have played a number of *Goemon* games will likely know the phrase 'Ganbare Goemon', but they might not know what it means. It actually translates as "Go for it, Goemon!"

of legendary 16th-century thief Ishikawa Goemon, as he battles his way through demons and ninjas to save Edo from a terrible new threat.

Of course, you have a few tricks up your sleeve in order to accomplish this: stomping on enemies, collecting pick-ups, and using your trusty pipe as a weapon, with the ultimate goal being to reach the end of each of the game's four stages. For fans of the later *Goemon* games, *Mr. Goemon* will probably look pretty different to what you might expect. Goemon has yet to receive his iconic blue hair, and characters like Ebisumaru, Yae, Sasuke, and even the robot Impact have yet to be introduced. This was case for the next title in the series too, *Ganbare Goemon! Karakuri Dōchū*, for the original Famicom. This console sequel also lacked the comedic dialogue and characters that would become staples of later games, and Goemon had still yet to take on his classic look.

*Ganbare Goemon! Karakuri Dōchū* was an action-adventure which again tasked you with fighting through stages and collecting power-ups, but it also introduced additional stores that you could enter in order to buy items, and featured both top-down and first-person perspectives. Both games were modest hits for Konami when they first came out, with *Mr. Goemon* charting on Game Machine's 25 Best Hit Games for arcade titles, while *Ganbare Goemon! Karakuri Dōchū* did well enough to warrant an additional port for the MSX.

Later, in 1989, the Famicom team released another sequel, *Ganbare Goemon 2*. This was the first title in the series to start



▲ Here's a look at a preview of *Mr. Goemon* in the Japanese magazine *Gamest* from 1986, the year it was released.

▼ *Mr. Goemon* would eventually release in the West as part of the *Arcade Archives* collection in 2015, making it the sixth game to come out in Europe and the US.

incorporating comedy explicitly into the game, inspired by the *Manzai*-style of stand-up often associated with the Osaka region. For those unfamiliar, *Manzai* is a traditional style of Japanese double-act comedy, typically featuring a straight man and a funny man trading gags at high speed. These jokes are often characterised by puns, wordplay, or mutual misunderstandings. To be able to implement this into the game, the *Goemon* team gave the character a sidekick named Ebisumaru, based on the Japanese thief *Nezumi Kozō* (who appeared as the second playable character in the MSX version of *Ganbare Goemon*). This character was modelled after Konami employee Etsunobu Ebisu, who also worked on the game as a programmer. Ebisumaru wasn't the only thing *Ganbare Goemon 2* contributed to the identity of the series, however.

It was also the point at which the team began including the historical anachronisms that would later come to exemplify the series, such as giant robots and children's toys, such as pogo sticks. All of this makes *Ganbare Goemon 2* an important transitional title, but the series wasn't yet finished evolving.

## SUPER GOEMON!

In 1990, Konami released an RPG for the Famicom featuring the character, called *Ganbare Goemon Gaiden: Kieta Ōgon Kiseru*. This was the first game to feature the modern design of the character on the cover, ▶





Goemon looks a little different from how we remember here!

### CONTINUITY ERRORS

At the end of *Ganbare Goemon 2* for the Famicom, Ebisumaru reveals himself to be a beautiful woman who was cursed. This is something that's never mentioned again in any later games, however. Despite that, the character does maintain a lot of feminine traits and even sometimes wears women's clothing.

depicting him with a big bushel of blue hair. It also marked the first appearance of series' regular Yae, a female ninja who could join your party.

*Ganbare Goemon Gaiden: Kieta Ōgon Kiseru* follows Goemon's attempt to recover a 1000-year-old pipe that was stolen from his altar while he was away travelling. Together with his partner from the last game, Ebisumaru, he sets off on an adventure across Japan, battling monks, sumo wrestlers, and cyborgs to reclaim this treasure. According to the former Konami staff we spoke to, *Ganbare Goemon Gaiden: Kieta Ōgon Kiseru* released at an interesting time for Konami. As the Super Famicom was scheduled to release later in 1990, Konami had already begun setting up a specific team to develop for the console.

As part of this new initiative, members of the Famicom Osaka team were moved across to this new department, with *Ganbare Goemon! Karakuri Dōchū* producer Shigeharu

Umezaki also being among this group. As such, there were now two separate Goemon teams working on original games across the two machines.

One former employee explains: "With the release of the Super Famicom, the company established a new development department focused on it. And as the Super Famicom became more popular, staff gradually moved away from the Famicom department to the Super Famicom department. The ultimate result of all of that was that the SFC division inherited the development culture – the way we made action games and such – of the Kansai FC development department."

Because of this change, only one year after *Ganbare Goemon Gaiden: Kieta Ōgon Kiseru*, Konami released *Ganbare Goemon: Yukihiime Kyūshutsu Emaki* (or *The Legend of the Mystical Ninja*, as it was called overseas) for the Super Famicom. This was the first title for the new console and was a return to the classic side-scrolling gameplay of the first two *Goemon* games for the Famicom. It was also the first game to be localised for an international audience.

Noticing some strange goings-on in their hometown of Oedo, Goemon and Ebisumaru (dubbed Kid Ying and Dr. Yang in international versions) set off to investigate the cause of the disturbances, before encountering the plight of the kidnapped Princess Yuki who they then endeavour to rescue.

With the game so steeped in Japanese culture and history, you might think that western reviewers would struggle with what to make of the game, but that really couldn't be further from the truth. Most publications published strong reviews – Nintendo magazine N-Force gave it a 95% in its debut issue, writing: "With *The Legend of the Mystical Ninja*, Konami have produced a winner – oodles of character, excellent graphics, marvellous ditties to get your toes tapping throughout, more depth than the Grand Canyon but, most striking of all, is the fantastic humour..." Computer & Video Games, meanwhile, gave it 92 out of 100,



*Ganbare Goemon! Karakuri Dōchū* featured a mixture of perspectives, as you can see.



### FROM A DISTANCE

Some western magazines like Electronic Gaming Monthly continued to cover Goemon's SNES adventures, even though those games were never released in the UK or the US. This was one of the few ways that fans of the series could keep up to date, before the internet took hold.

◀ How many other games feature a chain-smoking protagonist riding a tiger? Not many we can think of.

with writer Tim Boone describing the game as "totally original, utterly vast, and darned funny, to boot".

*Ganbare Goemon* had finally arrived in the West. However, just as soon as it had appeared, the spiky-haired thief disappeared again, with the next few *Goemon* titles failing to see a release overseas.

In-between *The Legend of the Mystical Ninja* and the next *Goemon* game to come out in Europe and North America, *Mystical Ninja Starring Goemon* for the Game Boy, Konami developed six games in the popular series. This included 1992's *Ganbare Goemon Gaiden 2: Tenka no Zaihō*, a Famicom sequel to *Ganbare Goemon Gaiden: Kieta Ōgon Kiseru*; as well as *Ganbare Goemon 2: Kiteretsu Shōgun Magginesu* and *Ganbare Goemon 3: Shishijūrokubei no Karakuri Manji Katame*, sequels to *The Legend of the Mystical Ninja*. None of these were released outside Japan, but they would occasionally be referenced in magazines like Electronic Gaming Monthly.

## MYSTICAL NINJA

Asked about why *Ganbare Goemon* struggled to make it overseas, one Konami source, told us: "With the games essentially being stories that take place during the Edo period, they're products for the Japanese market. In fact, each game was released at the end of the year so that players could enjoy it during the New Year holidays. Some of the games were localised, but they weren't hits the way they were in Japan."

To fans in the West, it looked like the *Ganbare Goemon* series was never going to see another international release, then something unexpected happened. In 1997, English-speaking fans got not one, but two games based on the character, both confusingly titled *Mystical Ninja Starring Goemon*. One was a Game Boy title that featured a top-down perspective and *Zelda*-esque adventuring, while the other was for the N64, and took the series into 3D.

It's this later title that most western fans will likely remember. It followed the bizarre story of a group of performers called the Peach Mountain Shoguns who are attempting to turn Japan into a westernised theatre. Goemon and his three friends (Ebisumaru, Yae, and Sasuke) are the only ones who can stop them, so must set out across the game's open world, beating its many dungeons to foil their plot.

In contrast to *The Legend of the Mystical Ninja*, critics gave *Mystical Ninja Starring Goemon* for the N64 a more mixed reception. One of the best reviews came courtesy of the Official Nintendo Magazine, who gave it 90 out of 100 and called it "a sprawling, enjoyable adventure that works its socks ➔

### AWAY FROM THE MAIN PATH

The *Ganbare Goemon* series received several spin-offs that also never made it outside of Japan. These include puzzle games like *Soreyuke Ebisumaru!* *Karakuri Meiro: Kieta Goemon no Nazo!!*, a Super Famicom title about rotating tiles that stars Ebisumaru; and *Goemon Mononoke Sugoroku*, an N64 game based on the Japanese board game, Sugoroku, similar to backgammon. There was also an attempt to modernise Goemon for teenage audiences, with games like *Bōken Jidai Katsugeki Goemon* for the PS2, and *Goemon: Shin Sedai Shūmei!* for the original PlayStation. These games gave Goemon a new look and took away a lot of the humour that made the series so appealing.



▲ Just look at those colours! It's quite a step up from Goemon's Famicom days.

## FAN TRANSLATIONS

Despite many of the *Ganbare Goemon* games never seeing a release overseas, fans can actually play many of them in English thanks to language hacks. These replace the Japanese text with English, allowing western players to experience the game without the language barrier. Many of these hacks can be found on ROMhacking.net and are patches that need to be applied to the original game's ROM. One example of these hacks is *Ganbare Goemon 2* on the Famicom.

off to square up to Mario". But this was very much the exception. Other publications, including GameSpot, gave it somewhat less enthusiastic reviews, criticising its clumsy camera, frame rate, and the accessibility of the game for western players.

GameSpot's Peter Bartholow wrote at the time: "Perhaps *Mystical Ninja*'s biggest problem for US gamers is the blinding cultural difference. The game's text is mostly for humorous intent and plot-furthering, but everything from Japanese architecture to religious practices somehow becomes an issue in playing *Mystical Ninja*. For instance, some players may have difficulty exiting the first room of the game because old-style Japanese doors look like walls to Americans."

Despite these reservations, *Goemon* hit the height of its popularity during this period. Not only was an anime show under development, but Konami also commissioned three further video games. One was a handheld game for the Game Boy Color called *Ganbare Goemon: Tengu-tō no Gyakushū*, which was being developed externally at TOSE and was another RPG adventure. There was also a 3D PlayStation title developed at Konami's Nagoya studio, called *Ganbare Goemon: Kuru Nara Koi! Ayashige Ikka no Kuroi Kage*. And

the final title was *Ganbare Goemon: Derodero Douchuu Obake Tenkomori*, a sequel to *Mystical Ninja*. Only the third from this list of games was released internationally.

## THE GREAT ADVENTURE

*Mystical Ninja 2 Starring Goemon* (or *Goemon's Great Adventure*, as it was called in North America) came out in 1998. In contrast to the first game, this sequel was played from a 2.5D perspective, meaning that instead of exploring an open world, you would need to select stages from a map screen and then battle your way from one end of a level to another. There are usually several different pathways to take in each stage, adding some non-linearity into the mix. And you can also visit towns in-between levels to pick up quests and purchase items.

*Mystical Ninja 2 Starring Goemon* follows Goemon and his friends as they must once again try and save Japan. But this time around, it's not a gang of evil theatre-goers who are threatening the nation, but a cross-dressing nun named Bismaru (who previously appeared in *Ganbare Goemon 3: Shishijūrokubē no Karakuri Manji Gatame*) and the newly revived lord of the underworld, Dochuki. Like many of the games that came



▲ All the gang are here (left to right: Sasuke, Yae, Goemon, and Ebisumaru).



Goemon: In any case, we can't  
just sit around here!



▲ In *Mystical Ninja 2*, you could speak to villagers to receive additional quests for old stages. These were often timed and revolved around defeating certain enemy types or collecting specific items.

◀ Ebisumaru shortly after trying to negotiate a discount with his hypnotic thong dance.

before, the plot features the same mix of absurdist humour and Japanese cultural references, with Konami not trying to tone down or reinvent the series to appeal to a broader audience. As such, concerns about its accessibility reappeared in western reviews of the game. These same critics were a bit more divided on how it stacked up against its predecessor.

IGN's Peer Schneider (who gave the first game a 7.6 out of 10) gave the sequel an 8, and wrote: "*Goemon's Great Adventure* still emerges as Konami's best Goemon game since *Goemon 2* and the translation is much more faithful than *Mystical Ninja* and co. A funny, addictive co-op adventure that every 2D platform game fan should add to their collection."

GamePro, meanwhile, gave it a decent score of 3.5 out of 5 and wrote: "After the quirky fun of his last N64 adventure, *Goemon's Great Adventure* is a bit of a letdown."

Despite garnering a cult following in the West during this period, *Mystical Ninja 2 Starring Goemon* would be Goemon's last adventure to be localised into English. Similar to what happened a few years earlier, Goemon simply vanished, with subsequent titles releasing exclusively in its home country.

There were several handheld titles for Game Boy Color in the years that followed, like *Ganbare Goemon: Mononoke Dōchū Tobidase Nabe-Bugyō!* and *Ganbare Goemon: Seikūshi Dynamites Arawaru!!*, as well as another 3D PlayStation adventure called

*Ganbare Goemon: Ōedo Daikaiten*. The final new release, however, came in 2005 and was called *Ganbare Goemon: Tōkaidōchū Ōedo Tengurikaeshi no Maki*. This was a Nintendo DS title that used an ukiyo-e-style aesthetic. Ever since then, *Ganbare Goemon's* characters have largely been kept to cameo roles in other games, including *Super Smash Bros. Ultimate*, or as the star of Konami's pachislot machines. It's rather a sad fate for a character who was once so popular.

We asked one former Konami staff member whether he thought the series would ever make a return and he told us: "It's been a long time since I left Konami, so I have no idea. My programs have been analysed and ported several times in attempts to remake the games on newer hardware, but on top of my code being hard to read, it would be pretty large in scale, so it would involve far too much work and ballooning costs in personnel, so I think it'd end up being a big loss. As such, I can't say I recommend they do it."

Despite this grim assessment on things, there is some positive news for fans of the game. Good-Feel, a studio made up of several *Goemon* veterans that is headed up by Etsunobu Ebisu (aka Ebisumaru himself), is currently working on an original game that seems incredibly reminiscent of *Goemon*, mixing humour with traditional folklore. It's currently unknown when this will launch or whether this will continue the trend of not releasing overseas. But for now, we can surely hold out hope. 🍵

## ✶ TOUCHING GOODBYE

The Nintendo DS title *Ganbare Goemon: Tōkai Dōchū Ōedo Tengurikaeshi no Maki* follows Ebisumaru and Goemon on a quest to clear their names, after a pair of doppelgangers cause trouble in Edo.

Like many DS titles, it uses the stylus and touchscreen for things like rubbing objects, pulling on levers and ropes, and knocking over certain enemies. UK magazines did some early previews for the game, but sadly, as expected, it never came out in the West.

# The sad tale of Odin Computer Graphics



## 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.

The early days of microcomputers played host to a number of companies we still know today – names such as Ocean, Psygnosis, and Codemasters that will forever be amongst the UK's great software houses. But it also features many who fell by the wayside – they had a few games but never quite managed to reach their full potential. Those studios, however, are still relevant, with stories that resonate through the years, and lessons that, even if they're harsh, are worth learning from. One such company that I've been looking at recently is Odin Computer Graphics, and I'll try to sum up its story as best as I can in 500 words or so.

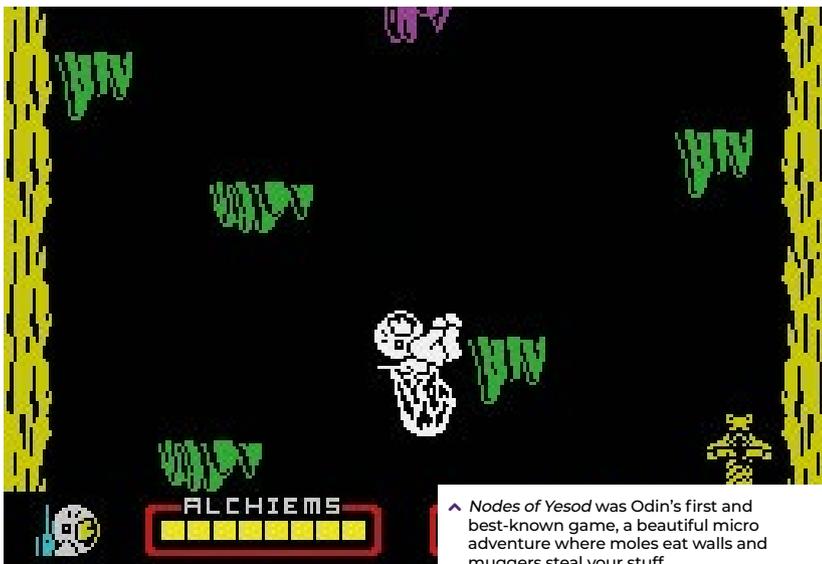
In its short time, Odin became renowned for titles such as *Nodes of Yesod*, and *Robin of the Wood* – games of exceptional quality in every department, from graphics to gameplay. Rising from a lesser studio by the name of Thor, it was quite inspired by the approach Ultimate Play the Game (the studio that went on to become Rare)

took, but it saw that standard as something to improve on, rather than simply aspire to. Games such as *Heartland* and *Sidewize* pushed the boundaries of what people thought was possible on the ZX Spectrum – no one had seen sprites mingle with each other so cleanly, or thought that a 60 fps shoot-'em-up was even possible on the platform until Odin did it – the work of programmer Steve Wetherill in particular, who would later go on to work with EA, was something to behold.

It couldn't maintain that standard, though – and for a simple reason. Odin took a deal with Telecomsoft to produce ten games inside of a year, for a six-figure sum. It looked like something that would take Odin to the next level – but as a small team of young people, not particularly versed in planning out projects, it struggled to fulfil it. The sudden expansion, and need to split into teams and organise, proved too much – it quickly had too many plates to spin, and chaos was the result. The quality of games dropped off a cliff, and in the end, Telecomsoft disputed the deal, claiming it was unsatisfied, and withheld payment. Telecomsoft had expected ten games on the level of *Yesod* – a high bar that any studio of the time would have struggled to meet.

Unfortunately, the fallout from this killed what was, at one stage, a potentially brilliant company. What can we learn from this? A simple lesson, but one that's not always followed: be wary of spreading yourself too thin, too soon. Times may be good, and opportunities may arise, but there's always the potential to take on too much, and to not be able to say "no" when sometimes, for your own sake, that's really the best thing to do. So if there's a time when you have a great deal of opportunities come your way, always make sure that you can fulfil them.

The chalice may be shining, but always check that it doesn't contain arsenic. 🍷



▲ *Nodes of Yesod* was Odin's first and best-known game, a beautiful micro adventure where moles eat walls and muggers steal your stuff.

# Toolbox

The art, theory, and production of video games

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A guide to starting your game's story in the middle

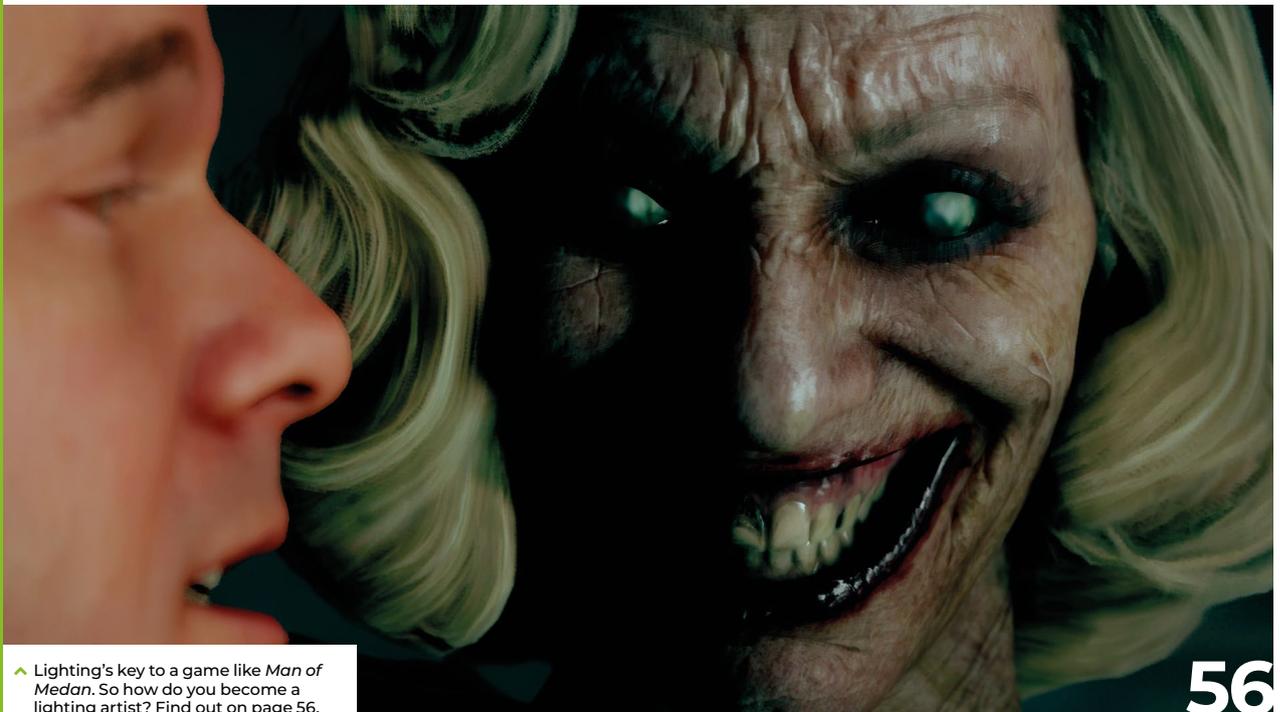
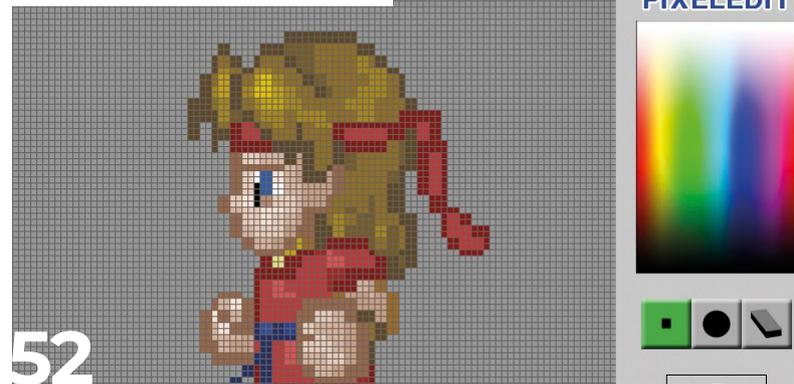
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▼ Make your own pixel art editor in this month's Source Code on page 52.



▲ Lighting's key to a game like *Man of Medan*. So how do you become a lighting artist? Find out on page 56.

# Writing in the gutter

To play a game is to experience a hallucination. So how do we write for this strange experience, instead of against it?



**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.

**C**onsider a game such as *Undertale*. The things which occur in it operate on a purely symbolic level; the skeleton doesn't look like a real skeleton, the child doesn't look like a real child, and the creatures they encounter bear little to no literal resemblance to any real thing. And yet I follow along perfectly, and can find meaning, some even find profundity, in their exploits. This is because we dream Sans, Papyrus, and the adventure.

By way of explanation, indulge me in some layman's neuroscience. Our brains can be thought of as interpretive supercomputers whose function is to create an inner model of the exterior world, a miniature mental simulation of existence, in which it can then test things out. These are our 'bubbles', our 'own little worlds'. Luckily, this behaviour grants us two key narrative concepts to understand which allow us to have a whale of a time being told a story. Understanding them can help you become both a better storyteller and a better audience.

## TWO KEYS

The first concept is that of sequence, the root of all narrative. Our brains spend most of their time away from the present moment, instead projecting sequences of causation into the future, in an attempt to predict it, and into the past, in an attempt to learn its sequence for improving future predictions. But as soon as we leave the present moment, we start to dream. The futures and pasts we envision, even recalled memories, are always at least partly

fiction, an imperfect re-creation in the brain's modelling software. In truth, even the present moment is like this, constructed from thousands of individual sense signals in the thalamus, with extrapolations then layered in by several other brain regions over the course of several microseconds. This 'waking' dream is a bit less prone to non-sequitur weirdness than true sleeping dreams, but it is a dream nonetheless. And our constant narrativising of fictional pasts and futures has had a fortunate side-effect. When I am engaged with a story, my brain stops modelling my reality, and instead models the story's.

The second key concept is that of the unknowable. When presented with a blank space, something we don't understand how to model, our brains rush to find a connection to at least some feature of that unknown thing. If one is not forthcoming, it starts calling on all kinds of memories and concepts to create the most convincing model it can. When somebody does something out of character, our brains will go overboard trying to fill in what may have occurred to motivate this behaviour. When you see the outline of an unexpected object in the corner of a pitch-dark room, you might disturb yourself with visions of what it could be. And so it is when a mind is modelling, or dreaming, a story's reality: the storyteller need not give every detail, because our dreaming will fill in the gaps. This is a common experience for everyone who's ever read a book, even one with pictures or precise descriptions. We dream that reality. The author doesn't dictate the precise

I MAY HAVE DRAWN AN AXE BEING RAISED IN THIS EXAMPLE, BUT I'M NOT THE ONE WHO LET IT DROP OR DECIDED HOW HARD THE BLOW, OR WHO SCREAMED, OR WHY.



THAT, DEAR READER, WAS YOUR SPECIAL CRIME, EACH OF YOU COMMITTING IT IN YOUR OWN STYLE.

▲ This illustration from *Understanding Comics* by Scott McCloud lays bare the power of the gutter between images, but its application goes far further than comics.



colour, texture, and placement of every hair on a character's head, and certainly cannot with accuracy describe their minute movements. We supply those things ourselves, and we can supply much more when called upon.

### IN THE GUTTERS

So we have sequential dreaming and filling in gaps; with these two functions in mind, we finally arrive in the gutter. The gutter is a concept from comics, describing the small amount of blank space between panels of sequential imagery. In comics, the gutter is remarkably where most of the story takes place. The audience only ever glimpses a few fleeting still snapshots of each scene, and all the rest of the action and nuance and movement and sound occurs in their dreaming. We may see a man raising an axe against a victim in one panel, then a scream echoing over a cityscape the next, and in the gutter between these images, the audience will construct the gruesome details for themselves.

The magic of the gutter is that what your audience populates it with is usually much better than anything you could have depicted. The ur-example in film is the Xenomorph from *Alien*. That film is timeless because it, for the most part, shows only small glimpses of parts of the alien, leaving the rest in the gutter, to be dreamt by the audience. The man stood in the rubber monster suit is, while not terrible, certainly less compelling. But don't think this wider use of the gutter is restricted to only shadow-clad boogymen in horror works. TV series *The Leftovers* chooses to leave its entire premise,



the sudden and complete vanishing of 2% of the world's population, out of frame. We see around it, and we see its effects, but the thing itself is written in the gutter, and it becomes so much more powerful in our minds because of that. The box at the end of *Se7en* is a gutter, and how much less powerful would that realisation be if we saw its contents? And beyond even these examples, there are gutters in every scene transition, every time a character is out of frame or absent in a chapter. There's a gutter when instead of focusing the camera on Saul Goodman, it's focused on a coffee cup, and our brains whirr as they model Saul's complex humanity.

This is useful both artistically, since the more you make the audience's brain work, the more engaged and personal their response will be, and also practically, since it allows you to focus production effort on a few key 'showing' moments and have the audience do the rest of the work for you. So write in the gutter, make the audience do your work for you, and they'll thank you for it. 🐾

◀ We sometimes think video games invented 'immersion', but really, we notice it more in games like *The Elder Scrolls IV: Oblivion* than other media because they're more often bad at it.

◀ Nostalgia for earlier video game aesthetics isn't completely unfounded. Low fidelity enabled greater use of the audience's imagination, allowing creators to do more with less, as in *Undertale*.

### SEQUENCE IMPERATIVE

We are addicted to sequences, and the most satisfying sequences are ones we learn from, that are added to the vault in our brains which stores sequences for later use in narrativising events. This is true of all narratives, whether real or imagined; we desire to either personally learn and change, or to see someone else do so. This is even the case in the acquired taste of avant-garde narratives that resist this desire: still we, the audience, seek to learn or change as a result of participating. When we cannot turn something into a cohesive sequence, our minds and bodies become physically stressed.

# The principles of game design

Howard's had two potential movie deals scuppered by none other than Leonardo DiCaprio. How? Read on...



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

Howard is a video game pioneer who authored several of Atari's most famous and infamous titles. This is the first chapter from his book, *Once Upon Atari: How I Made History by Killing an Industry*. [onceuponatari.com](http://onceuponatari.com)

**L**eonardo DiCaprio is a name I never thought would appear in this column. But here it is. On the other hand, Nolan Bushnell is a name that makes total sense in this column. So, other than name-dropping, what's my point?

In 2008, shortly after I'd released my *Once Upon Atari* documentary series ([onceuponatari.com](http://onceuponatari.com)), Leonardo was about to become relevant to classic gaming by virtue of the fact that he'd signed up to play Nolan Bushnell in a then-upcoming movie about the Atari founder and the birth of the modern video game industry. A topic with which I am intimately familiar. This ended up negating a deal I was negotiating with MTV to make a movie based on my *Once Upon Atari* series.

More recently, my *Once Upon Atari* book is attracting interest in another movie. During talks with one major studio, my deal was dumped based on the news that another development group was allegedly making a film about the origins of *Pong* and the gaming industry. And who was behind that development group? None other than Leonardo DiCaprio.

My point is this: Leonardo DiCaprio sits on the periphery of the video game industry, threatening to have impact at some point, but he has already twice rained on my parade.

The relationship between movies and video games has always been an incestuous one, and of late it seems they've moved into a one-room flat together. Having spent some 40 years as a peeping Tom spying on their relationship (and as a relationship therapist myself), these movie proposals raise a key question: What kind of movie will it be?

We've seen games about movies, and movies about games, but never a big-budget Hollywood production about the gaming industry. For the first time, the business of game-making may become entertainment in its own right. As the maker of the first game from a movie licence (*Raiders of the Lost Ark*), I find this particularly interesting.

Another level on which this is interesting proceeds from my experiences creating the documentary series, *Once Upon Atari*. In it, Nolan Bushnell discusses his insights, goals, and plans in founding Atari.

It also contains myriad stories and perspectives from the engineers who made the games during that exciting time at Atari. I know first-hand the legends and lore that could create a dynamic and compelling film.

♥ One of Hollywood's biggest stars, Leonardo DiCaprio clearly has a desire to make a movie about Atari.





◀ Atari founder and video game innovator, Nolan Bushnell. If you squint, he looks exactly like Leonardo DiCaprio.

Which leads me to a second question: what story will they tell?

For decades now, video games have been on a quest to achieve reality. Movies, on the other hand, have always attempted to deliver everything but reality. They generally start with a kernel of truth and enhance it beyond all recognition. The idea of a movie claiming to represent the reality of the genesis of the gaming industry is self-referentially perverse, to say the least.

This perversity is further twisted by the way Hollywood pursues reality. I've worked with Hollywood producers a number of times. What have I learned from this experience? It turns out there are conventions and standards in movie-making.

When Hollywood delivers a "true story", you can be sure it's at least 27 percent true. Unless they say it's only based on "actual events", in which case your reality index drops to single digits. That's not necessarily a bad thing. The departures they take from reality typically enhance the story. There's an old expression about writing: "Truth is stranger than fiction, because fiction has to make sense". In the course of telling a story, writers frequently take liberties to make the recounting more coherent.

Writers further need to compensate for the fact that 90-95 percent of life is dead-flat-boring. Who wants to pay good money to sit through an accurate retelling of dull events when they could just stay home and be bored for free?

But what happens when writers don't need to embellish? Well... they're writers, they're *going* to embellish. And one of the reasons they'll need to embellish is that when you start off with a life like Nolan Bushnell's and you cut out

the parts that decency, and legal and political considerations demand be cut, you wind up with something that needs a little embellishing. You wind up with something that Leonardo will insist on embellishing.

What's more, in the interests of the same considerations, I'm not going to enumerate those cut-out moments. Want to hear me discuss moments of depravity and debauchery? I'd rather not. All I'm saying is this subject matter is rife with the kind of material that would make any movie sizzle and, knowing what I do, I can assure you of two things. First, this movie will feature many edgy and controversial scenes. And second, those scenes will have precious little to do with the "reality" the movie's marketing will undoubtedly purport to proffer.

When Hollywood says we're doing a movie about a living person, it means they bought that person's life rights. They paid money to the individual for the right to portray their life events in a movie. Included (quite explicitly) in the contract is the option of modifying, enhancing, abbreviating, shading (or outright making up) events to suit the story as necessary. There can always be negotiations as to how much "say" the real-life person has in the final script or production, but you can count on the fact that the producers will ultimately have final say.

Writers need room to manoeuvre, and producers want to be able to adapt anything they want to suit popular trends and culture as they perceive it. After more than a century of experience, Hollywood has learned how to prevent silly little things like accuracy from interfering with the delivery of a high-quality entertainment product. 🗨

**“Leonardo DiCaprio sits on the periphery of the video game industry”**



**Big games, big box office**

Every day in every way, games and movies keep trying to get closer together. It is a relationship based on very human emotions. Game industry leaders have always envied the legitimacy that movies maintain as an art form and as a cultural marker. Movie magnates cast avaricious gazes over the technology engendered in even the most basic games today, and when they see opening-day box office numbers like they do for *Grand Theft Auto*, the greed flows freely from their pores. Yes, their relationship evinces all the usual emotions except for the one John Lennon said was both necessary and sufficient... Love.



▲ Coming to a cinema screen near you: the origins of Pong?

◀ Hollywood sees the value in making movies out of games, but the results are mixed to say the least. 2016's *Assassin's Creed*? Not great, to be honest.

# In media res: beginning in the middle

The techniques behind beginning a game in media res, and when should you use it or avoid it



**AUTHOR**  
**STUART MAINE**

Stuart Maine has been a designer for 26 years across PC, console, and mobile. His first gaming book is out soon, and he's [@maine\\_stuart](#) on Twitter.

'In media res' is one of several terms that often comes up when discussing video game design, with others including 'ludonarrative dissonance' (the gap between your gameplay and story), 'metagaming' (strictly meaning tactics outside of a game but generally referring to any long-term progression), and 'the possibility space' (all actions possible in a game). Let's dig into 'in media res', because although it doesn't suit every game, it can be a useful technique.

## PRESS X TO SKIP

To begin a game in media res (Latin for 'in the middle of things') is to cut out all the boring bits of "Once upon a time" and thrust players straight into the action. This doesn't mean your game must instantly begin with combat, rather that you deliberately omit the traditional setup.

In media res is a storytelling technique designed to hook readers, viewers, or players right from the beginning, making it less likely that they'll shift their limited time and attention onto something else. The Indiana Jones and

James Bond movies usually begin in media res, with our hero immediately engaged in a difficult or dangerous situation (skipping the initial setup of the hero planning and travelling to wherever the film starts). *Skyrim* does the same, beginning the game with you about to be executed then suddenly being attacked by a dragon (skipping being captured by Imperial soldiers and chucked on a wagon).

Beginning in media res can be effective at grabbing attention, but it has the downside of potentially overwhelming players. For example, if this article began in media res then we'd have skipped this entire introduction and started with the paragraph below, plunging straight into how to use the technique and leaving it to you to work out what I was talking about as we went along.

## QUESTIONS HOOK PLAYERS

In media res is so effective because it immediately forces the audience to ask questions. Where and when is this set? Why is this person distressed? Why is that person trying to kill them? Who's a hero or a villain? This is important, because in our world of free games, demos, and streaming, if you don't quickly hook players then you risk them simply turning to another of the many, many games demanding their attention. Naturally, compelling gameplay is one way to grab players, but so is a plot that asks questions.

It's notable that many huge-budget triple-A games *do* begin with "Once upon a time", taking the player through innumerable company logos, calibration setup, and then backstory before



▶ *Grand Theft Auto V* begins by dropping players into a robbery gone wrong, omitting what led to this point or even who you are.



◀ *Coffee Talk* skips opening your cafe, meeting your regulars, and even explaining its world's rules, instead jumping ahead to tell the story of new customers.

anything exciting happens. They can 'cheat' like this because they know players have already committed to the game (such as through paying a lot of cash or sitting through a lengthy install), and therefore those players will tolerate a slow opening. It will be interesting to see if services like Microsoft's Game Pass will affect even triple-A games, as laying an endless buffet of 'free' choices in front of players may demand that every game gets to its hook as quickly as possible.

## USING THE TECHNIQUE

As mentioned earlier, starting a game in media res doesn't have to mean it begins with action – any situation where we've clearly skipped over the setup and begun at some pivotal moment can grab players. For example, in Remedy's *Control*, we enter the Oldest House after the Hiss invasion, not before it begins, so the player immediately has to ask 'Where and who am I?' but also 'What went wrong here?'. Another example is *Breath of the Wild*, which starts with you waking from the dead a century after a certain sequence of events have concluded.

Once you've hooked players with an intriguing plot (and fun gameplay, of course) then you can begin revealing how things got to the game's start point through dialogue and environmental storytelling during play. The clues that allow you to put together Rapture's downfall in *BioShock* are a great example. *Gone Home* is another, as the game would be completely ruined if we had simply followed the events before the player arrives: asking 'What happened?' is the entire point of the game.

Because we've skipped the setup, however, we have a lot of information we need to tell the player at some point, so care must be taken in how this information is relayed in order to avoid 'info dumping' later. One approach is to reveal backstory through your characters, as the way they look, speak, and act can subtly communicate a lot of information. Be careful to avoid falling into the trap of having characters ostensibly speaking to each other but actually talking to the player (a handy rule is if ever you have one character saying to another "Well, as you know...", then you've crossed into 'exposition dumping'). If your game doesn't have characters then you can also use your environment to fill in your backstory, as demonstrated by *Unpacking*.

Although in media res is predominantly a narrative technique, you could consider whether it might be applied to your gameplay, too. For example, a *Tetris* mode that begins with half a screen full of blocks might loosely be considered to be using in media res, as does a race that puts you in the driving seat midway through a lap, rather than on the start line.

Another approach is to include flashbacks, revealing events that happened before the game began, with bonus points if these are actually playable. You can even go as far as ➔



## IS IT GAMEPLAY?

Something important to consider when beginning in media res is which of your game's mechanics are supposed to be challenging and which could just be 'automatic'. For example, unless you want moving around your environment to be a skill that players learn, then you should try to ensure that players can move where they want without even thinking about it. *Ocarina of Time's* auto-jump or *Uncharted's* auto-climb help here, allowing players to focus on the elements the designers actually wanted to be challenging ('Where do I want to go and how can I get there?').

◀ *Assassin's Creed Valhalla* has a relatively traditional beginning, with several intros and playable sections before the game really begins, all relying on players sticking around.



▲ *Planescape: Torment* is an incredible example of in media res storytelling, with the game beginning as your character wakes from the latest of many deaths.

*Everybody's Gone to the Rapture*, with – spoilers! – the entire game being a flashback to earlier events. Games also have the unique ability to allow players to make decisions in flashbacks that cause plot or gameplay changes when you return to the present. An unreleased project I worked on based its heist gameplay around this idea by having playable flashbacks to when another character carried out an action that helped with the current problem. For example, if you opened a door at four minutes in the flashback then that door would open four minutes into the real-time gameplay.

### DIGGING INTO DETAILS

To dig a little deeper into how in media res works, 'normal' plots establish a situation, then

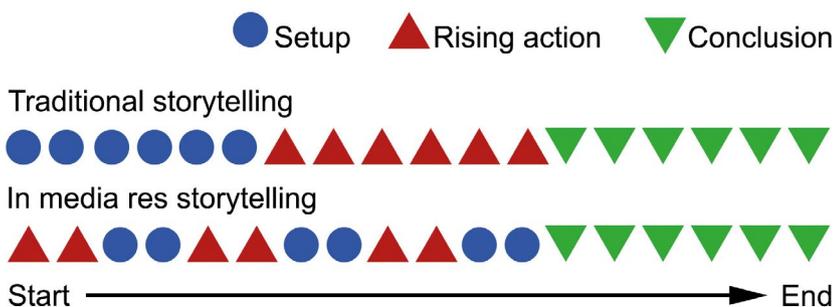
▼ Traditional storytelling moves from setup, through the inciting incident, and into the action. In media res stories skip setup to grab audiences from the start.

gradually raise the stakes and obstacles as we go along until we reach the story's climax and wrap things up. In media res stories differ because they don't start at one and ramp up to ten, instead beginning with drama and then swapping back and forth between calm and tension. Both structures can feature the same amount of excitement; in media res stories simply work out how much of the early setup they can leave until later.

Try taking a look at your game's plot and being brutally honest about which elements players really must be told at the beginning for anything to make sense. If something's simply nice to know, then consider whether you can push that information back or simply omit it and leave players to wonder. Rather than starting with 'This is X', your goal is to have players asking 'What is X?' and then revealing the answer later.

### WHEN AND WHY NOT TO USE IT

If starting a game in media res is great for grabbing players, why would you ever choose not to do it? One reason is that it can be difficult to balance your game so that it starts with a bang, but also ensures players are learning all the controls and techniques they need to play. If they're distracted by action or drama then players can easily fail to pick up instructions, or can be snapped out of all the cool events you've set up by a sudden tutorial prompt appearing. You can help alleviate this by using the 'three





stage' approach to teaching players, covered way back in Wireframe issue 44 (which you can download at [wfmag.cc/44](http://wfmag.cc/44)).

A second reason that beginning in media res might not be appropriate is that you lose the chance to show players what normality looks like before everything kicks off. By having them wake up for a normal day or sit through a long train ride to work, players see how things are supposed to be before something goes terribly wrong. For example, *Die Hard* starts with a journey rather than the bad guys turning up, using the first few minutes of the film to teach the audience several important facts in quick succession so they don't have to slow things down with exposition once the action begins.



## CONCLUSION

In media res is a useful technique to have in your mental toolbox because it allows you to look for situations that could be enlivened by having players asking questions rather than simply being told information.

How many questions your players will be happy to hold in their head as they play depends on your game's intended audience, but if you can hook them with an intriguing plot as well as fun gameplay, then you're giving your game the best possible chance of grabbing players from the very beginning. As a final example, check out *Uncharted 2: Among Thieves*, which begins with the main character having been shot and in a train that's dangling over a cliff, then jumps to a tropical paradise. The gameplay begins with a simple tutorial on jumping and climbing, but the power of beginning the game in media res means I challenge anyone to not want to know how Drake gets from one to the other, and what happens next. 🗣

^ *Fahrenheit* (aka *Indigo Prophecy*) took in media res to extremes, beginning with players standing over a dead body while holding the murder weapon.

## CASE STUDIES

*God of War* (2005) uses in media res to great effect, with Kratos apparently jumping to his death, then flashing back straight into a boss fight. We're forced to question what will lead to the intro we just saw while asking, 'If the game begins here, how crazy is the end going to be?'. On the other hand, Sam Barlow's *Telling Lies* might take the technique too far, leaving out so much backstory that not only do you have to work out what's happened and who you are, but why you should even care in the first place.



Source Code

# Make your own pixel editing program



**AUTHOR**  
Mark Vanstone

Want to draw your own sprites?  
Then Mark has the pixel editor for you

Every game needs graphics, and if you're into making retro games like us, you'll need to have a program to draw them. You could use free programs like Microsoft Paint, but alternatively, you could write your own custom pixel editing program, which we're about to do here using Python and Pygame Zero. It's relatively easy to set up the basic drawing tools that you need to start making sprites for your own games.

First, we need to set up a drawing surface in which you can see and edit individual pixels. To do this, we'll need a function that'll let us zoom into an image. If we use an area of 600 × 600 pixels and display the image six times larger than the actual sprite, that means we end up with an image which is 100 × 100 pixels in size. We can set up our blank sprite image by declaring it as a Pygame Surface. We'll also set up a variable to define which colour we're going to use as transparent (in this case magenta) and fill

the Surface with this colour, having set the `colorkey` property of our blank sprite to the transparent colour. Now we're ready to set up our drawing system.

It's useful to have a grid over the drawing area so that we can see where the individual pixels are. We'll need to draw a grid of 100 horizontal lines and 100 vertical lines, but rather than redrawing the grid every frame (which would be quite slow), we can draw the grid to a new image surface and just use that in our `draw()` function. This means that the grid will be drawn using a blit call and will be much quicker than drawing it line by line each frame. We create our grid image at the beginning of the program by making a Pygame Surface of 600 × 600 pixels. We set the `colorkey` property of the image to our chosen transparency colour, fill in the image with the transparent colour, and then start drawing the grid with two loops, one for the x direction and one for the y direction.

We'll need to set up some variables to track things like the current mouse coordinates and the current drawing colour, which we can set to something like red to start with. The three values we pass to the `pygame.Color()` function are red, green, and blue values, so (255, 0, 0) represents red. We also need to define which drawing tool we're using, but more on that later.

Let's set up our interface next. Using 600 pixels of the window for the drawing area leaves us with a column of 200 pixels if we're using the standard 800 × 600 Pygame Zero window. If we have our drawing area on the left, we can put our tools interface on the right. In this tools section, we'll need a colour palette, some buttons to switch between different drawing modes, a normal size drawing of our sprite, and perhaps a save button so that we can save our work once we're finished.

The colour palette is probably the easiest part of the interface. We just need to draw an image with a range of different colours on it. The one we're using has gradients between all the colours, so we can select any shade we want. You could use an image with fewer colours if you wanted to stick to a more defined palette. With our palette image being drawn in the tools section, all we need to do to change our drawing colour is catch the `on_mouse_down()` event and test to see if the mouse is over our palette image. If it is, we change the `curColour` variable to the colour of the pixel under the mouse.

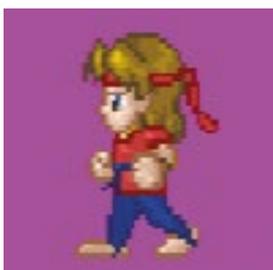
We need to show what the sprite we're drawing will look like, so we draw the surface we created for our sprite to the tool interface panel. It will be transparent to start with, so

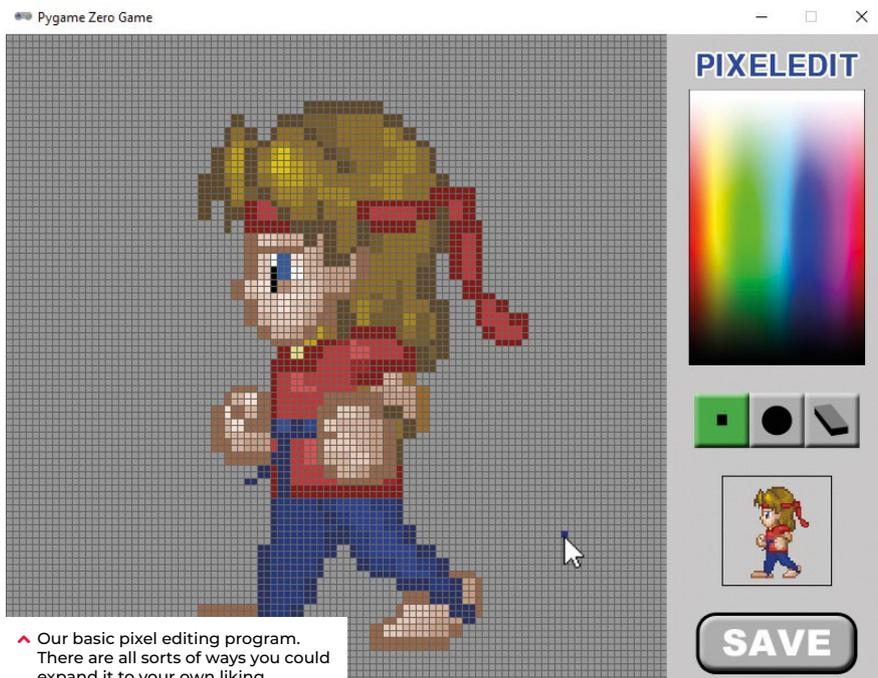


▲ Our three tool buttons: a single pixel for drawing, a circular brush, and an eraser.

◀ We define the transparent colour as bright magenta, but when the sprite's displayed, the magenta colour isn't shown.

▶ You could use any selection of colours for your palette image. This one provides the user with a huge range of colour shades.





it's probably a good idea to draw a border around the sprite so we can see where it is. We want the same image to be displayed in the drawing area but six times larger – to do this we can use the `pygame.transform.scale()` function, which will return us a surface that is 600 pixels square but a larger copy of our sprite, which is 100 pixels square. We can blit this larger surface to the screen and then blit the grid surface we made earlier over the top.

We can track the mouse movements over the drawing area by using the `on_mouse_move()` event, and in doing so, we can then draw our brush that will change the pixel colours of our sprite. This will not only show where the pixels will be changed if we click the mouse button, but also what colour is going to be used. We're going to set up two brushes: the first will represent one pixel in size, and the second a larger circle to fill in more pixels at once. As we track the brush around the drawing area, we'll either draw a square six pixels by six pixels in the current colour, or if the second tool is used, a circle of radius 24, which will end up drawing a circle radius four pixels on our small sprite.

So now we have a basic way of moving the brush around the drawing area and seeing where it's going to draw. If we click the mouse button, we want the program to change the colour of the pixels in our sprite. To do this, all we need to do is catch the `on_mouse_down` event, and after checking that we're over the drawing area, divide the mouse x and y coordinates by six to get the position on the small sprite, then either set the pixel to the

current drawing colour at that location or draw a circle if we're using the larger drawing tool. Because our drawing area is just a scaled-up version of the smaller sprite, the next time the `draw()` function is called, we will see the drawing area update.

The `on_mouse_down()` event provides us with the moment that the mouse button is pressed, but usually when we're drawing we'd want to hold the button down and drag the mouse to continue drawing a line. We can make this happen by setting a variable called `drawing` to 'True' when we get the `on_mouse_down()` event, and setting it back to 'False' when we get an `on_mouse_up()` event. Then, when we detect an `on_mouse_move()` event and the `drawing` variable is True, we know that the mouse button is being held down and we continue setting pixels under the mouse cursor as it's moved. This means we can draw lines rather than just setting one pixel at a time, or one round splodge with the larger brush.

Now we need a way of switching between our different brush sizes. We can create some buttons on our toolbar interface. To do this, we need a button image for a single pixel, a button image for the larger circle brush, and a highlighted version of both buttons. When we draw the toolbar area, we check to see if our `curTool` variable is set to '1'. If it is, we draw the highlighted version of the single pixel button – if not, we draw the normal version. We do the same with the second tool button, but checking to see if the `curTool` variable is set to '2'.

We also need the ability to erase pixels back to transparent. With this in mind, we can add a third button to our toolbox in the form of an eraser. We can toggle this on and off with a variable `eraseOn` much the same way as the other buttons, but these variables can work together so that the eraser can erase single pixels or larger circles much the same as when we're drawing with colour. All we need to do if the eraser tool is selected when the mouse is clicked is draw with the `transColour` colour, which we used to set the `colorkey` property of the sprite.

We can now draw in any colour on the enlarged drawing area with two different sizes of brush and erase any mistakes we've made, and we can also see the sprite displayed at its actual size in the toolbar interface. All we need now is a way to save our work. The simplest method to achieve this is for us to make another button on the toolbar panel labelled 'Save' and wait for a mouse-click over the button. You might want to add a highlighted state like the other buttons so that the user can see that it's been pressed. When the button's clicked, all we need to do is call the `pygame.image.save()` function and that will save our sprite image to the file name of our choosing. We'll save the image as a PNG file as that will enable us to have transparent pixels. To make sure that the transparent colour's handled correctly when saved, we'll call the `convert_alpha()` function on our sprite surface to make the transparent pixels compatible with the PNG format.

So there we have it: a basic pixel editing program. There are many more tools and features that you could add to make it more useful and easier to use. You could incorporate the Tkinter module to provide load and save dialog boxes, or have other shapes as drawing brushes. The possibilities are endless, but we'll leave you to explore those for yourself. ➔

# Pushing pixels in Python

Here's Mark's code for a pixel editing program. To get it running on your system, you'll first need to install Pygame Zero. Full instructions can be found at [wfmag.cc/pgzero](http://wfmag.cc/pgzero).

```
import pgzrun, pygame

mysprite = pygame.Surface([100,100])
transColour = pygame.Color(255, 0, 255)
mysprite.set_colorkey(transColour)
mysprite.fill(transColour)
mygrid = pygame.Surface([600,600])
mygrid.set_colorkey(transColour)
mygrid.fill(transColour)
for x in range(0,100):
    pygame.draw.line(mygrid,pygame.Color(100, 100,
    100),(x*6,0), (x*6,600))
for y in range(0,100):
    pygame.draw.line(mygrid,pygame.Color(100, 100,
    100),(0,y*6), (600,y*6))

curMouseX = 0
curMouseY = 0
drawing = False
saving = False
eraseOn = False
curColour = pygame.Color(255, 0, 0)
curTool = 2

def draw():
    screen.fill((150,150,150))
    screen.draw.filled_rect(Rect((600, 0), (800, 600)), (200,
    200, 200))
    screen.draw.text("PIXELEDIT", center = (700, 30), owidth=1,
    ocolor=(255,255,255), color=(0,0,255), fontsize=40)
    mylargesprite = pygame.transform.scale(mysprite, (600,
    600))
    mylargesprite.set_colorkey(transColour)
    screen.blit(mylargesprite,(0,0))
    screen.blit(mysprite,(650,400))
    screen.blit(mygrid,(0,0))
    screen.blit("palette",(620,50))
    if saving == True:
        screen.blit("savebuttonhigh",(625,520))
    else:
        screen.blit("savebutton",(625,520))
    if curTool == 1:
        screen.blit("tool1high",(625,325))
    else:
        screen.blit("tool1",(625,325))
    if curTool == 2:
        screen.blit("tool2high",(675,325))
    else:
        screen.blit("tool2",(675,325))
    if eraseOn:
        screen.blit("tool3high",(725,325))
    else:
```

```
        screen.blit("tool3",(725,325))
    screen.draw.rect(Rect((650, 400), (100, 100)), (0,0,0))
    if curMouseX < 600:
        if curTool == 1:
            if eraseOn:
                screen.draw.filled_rect(Rect((curMouseX,
                curMouseY), (6, 6)), pygame.Color(255, 255,
                255))
            else:
                screen.draw.filled_rect(Rect((curMouseX,
                curMouseY), (6, 6)), curColour)
        if curTool == 2:
            if eraseOn:
                screen.draw.filled_circle((curMouseX,
                curMouseY), 24, pygame.Color(255, 255, 255))
            else:
                screen.draw.filled_circle((curMouseX,
                curMouseY), 24, curColour)

def on_mouse_move(pos):
    global curMouseX, curMouseY
    curMouseX = int(pos[0]/6)*6
    curMouseY = int(pos[1]/6)*6
    if drawing == True:
        spriteX = int(pos[0]/6)
        spriteY = int(pos[1]/6)
        if curTool == 1:
            if eraseOn:
                mysprite.set_at((spriteX, spriteY), transColour)
            else:
                mysprite.set_at((spriteX, spriteY), curColour)
        if curTool == 2:
            if eraseOn:
                pygame.draw.circle(mysprite, transColour,
                (spriteX, spriteY), 4, width=0)
            else:
                pygame.draw.circle(mysprite, curColour,
                (spriteX, spriteY), 4, width=0)

def on_mouse_down(pos):
    global drawing, curColour, curTool, saving, eraseOn
    if pos[0] < 600:
        drawing = True
        spriteX = int(pos[0]/6)
        spriteY = int(pos[1]/6)
        if curTool == 1:
            if eraseOn:
                mysprite.set_at((spriteX, spriteY), transColour)
            else:
                mysprite.set_at((spriteX, spriteY), curColour)
        if curTool == 2:
```

```

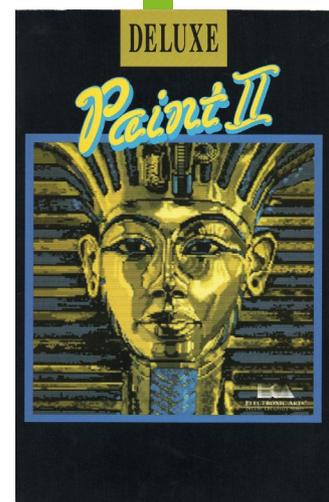
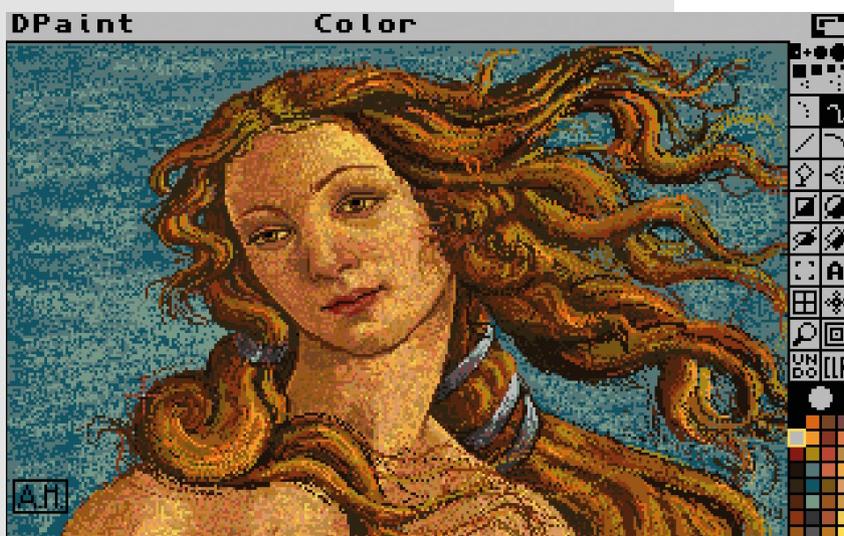
    if eraseOn:
        pygame.draw.circle(mysprite, transColour,
            (spriteX, spriteY), 4, width=0)
    else:
        pygame.draw.circle(mysprite, curColour,
            (spriteX, spriteY), 4, width=0)
else:
    if pos[0] > 625 and pos[0] < 775 and pos[1] > 520 and
    pos[1] < 585:
        saving = True
        saveImage()
    if pos[0] > 620 and pos[0] < 770 and pos[1] > 50 and
    pos[1] < 300:
        curColour = screen.surface.get_at(pos)
    if pos[0] > 625 and pos[0] < 675 and pos[1] > 325 and
    pos[1] < 375:
        curTool = 1
    if pos[0] > 675 and pos[0] < 725 and pos[1] > 325 and
    pos[1] < 375:
        curTool = 2
    if pos[0] > 725 and pos[0] < 775 and pos[1] > 325 and
    pos[1] < 375:
        eraseOn = not eraseOn

def on_mouse_up(pos):
    global drawing, saving
    drawing = False
    saving = False

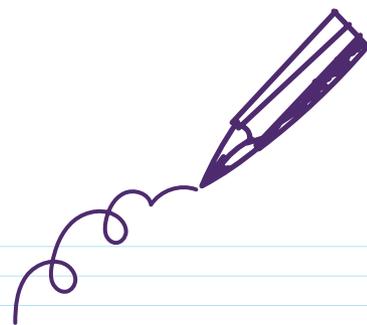
def saveImage():
    mysavingsprite = mysprite.convert_alpha()
    pygame.image.save(mysavingsprite, "mysprite.png")

pgzrun.go()

```



◀ Early pixel painting programs, like the Amiga's Deluxe Paint, offered a range of tools to create backgrounds and sprites.



## GETTING INTO GAMES

# How I became a... **Senior Lighting Artist**

**Ellen Shelley** from Firesprite Games on the importance of using light to set atmosphere and how to avoid creative exhaustion

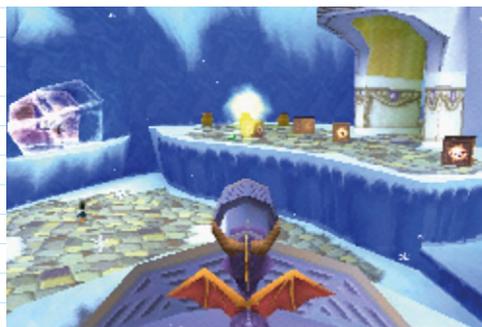


**“Lighting helps to evoke emotions to the player in all areas of the game”**

### What was the game that made you first want to work in games?

It was *Spyro: Year of the Dragon* that sent me down the path of game development. My first console was the PSone, and my first game was *Spyro* – as this was the natural order of things. Seven-year-old me thought it was incredible that you could play as a little purple dragon that also skateboards. I doubt there’s a single game that wouldn’t benefit from having more tenacious dragons in them.

I’d be doing this article a disservice if I didn’t mention my favourite game of all time, *Halo 3*. Some of my best gaming memories involve battling it out with my Xbox Live mates. The art style and world-building were so distinctive. I can still recall every detail and gun spawn point on the *Halo* maps, Valhalla and Sandtrap – especially where the snipers are.



▲ Ellen cites 2000’s *Spyro: Year of the Dragon* as a core inspiration for her wanting to make games. Well, wouldn’t a skateboarding dragon make you believe anything is possible?

### How did you break into the industry?

My journey started as a digital marketing associate in a Brighton architecture practice. VR was a new technology at the time, and they were keen to use it as a marketing tool. Knowing I had an interest in game development, I helped them develop a small VR experience for their project. I built a 3D interior that was playable inside Unreal Engine 4 and viewed through the Oculus headset.

Alongside developing VR experiences for the architects, I applied the same skills to make a handful of Unreal Engine fantasy environments. This focused portfolio of personal work combined with my VR knowledge led to my first industry job at PlayStation’s London Studio as a 3D outsource artist.

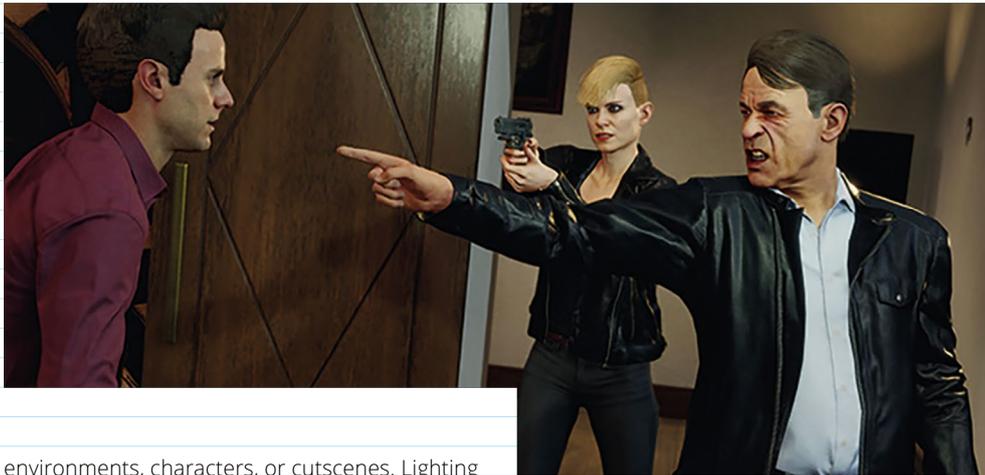
### What was the first commercially released game you worked on? Are you still proud of it?

The PSVR title *Blood & Truth* was my first commercially released game as part of London Studio. I’m still immensely proud of the title as it was the first game I worked on in industry. It was also a game that really pushed the quality bar of VR and set a benchmark for experiences it could deliver. Being a part of that process was exciting, and I learned a great deal during my time there.

### What’s the chief responsibility of a lighting artist, and how do you achieve it?

Lighting artists are responsible for implementing the overall mood and tone of a game through colour and light. Our creative process is driven by art direction when lighting game





environments, characters, or cutscenes. Lighting encompasses a variety of tools to achieve mood and depth – anything from 3D light fixtures, complete with real-world light bulbs, to fully functioning weather systems. As lighting artists, we are also responsible for technical elements such as setting camera exposure, lighting gameplay, and maintaining the target frame rate alongside other disciplines.

### In your opinion, why is lighting crucial to making a game look good or bad?

Mood and atmosphere is usually the first thing a player will experience when playing a game. It can leave the biggest emotional impact, so it's crucial to get it right. Using the right balance of colour, intensity, and atmosphere, lighting helps to evoke emotions in the player in all areas of the game, especially in story-driven moments. It's a powerful tool used to define the genre and set the tone that players will remember.

Lighting is also crucial on the technical side. In modern games, good lighting and 3D shaders go hand in hand. This is due to PBR (Physically Based Rendering), the concept of using shaders that respond to light as we see it in the real world. Lighting plays a vital role in bringing all these models and shaders together to look real, where it becomes obvious if something isn't set correctly for PBR, giving it that 'off' look. Broken lighting will quickly break the player's immersion.

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

The earliest mistake I remember resulted from rushing under pressure. I was working late on a deadline and submitted a shiny new, human-sized sci-fi drop pod for the game. Next morning, there was a company-wide email about drop pods the size of meteors raining hell down upon the world. It's safe to say junior Ellen learned her lesson from that.

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

As a young artist you have so much passion and seemingly endless enthusiasm, both of which contribute to you feeling invincible with the amount of work you can produce. But without proper pacing or rest, it can lead to burnout. Taking breaks and paying close attention to the signs of exhaustion and stress are vital skills needed for making games long term. Game development is a marathon, not a sprint!

### Would you say it's easier or harder than before to work in the games industry today?

Although it is still very competitive, the industry is a lot more open. When I started out, I was the only woman I knew pursuing a career in games. Nowadays, I see so much support for women and minorities to get into the industry. This kind of support is incredible, and it's only gaining momentum. From my personal experience, a university degree isn't required. A strong portfolio and targeted online learning can seriously bolster your chances of landing your first job.

### If somebody is thinking seriously about a career in the games industry, what's something they can do now to enhance their future prospects?

Making games requires a variety of disciplines, so it's good to get familiar with the roles and see which ones may interest you the most. Once you've found an interest, you can really drill down and tailor your learning to that specific role. Most art roles require a portfolio, and I can't emphasise enough how far you can go with a killer portfolio. 🗨

## Career highlights



### Horizon Call of the Mountain

TBA

Ellen recently returned to her virtual reality roots, taking up a senior role at Firesprite games to introduce Sony's PSVR2 with a bang. The *Horizon* spin-off looks lusciously beautiful so far, too.



### Dark Pictures: Man of Medan

2019

Just as much as good timing and creepy environmental design, lighting is an equally crucial element to nail for any horror game. Luckily, Ellen had lots to work with, as players explore the titular ghost ship.

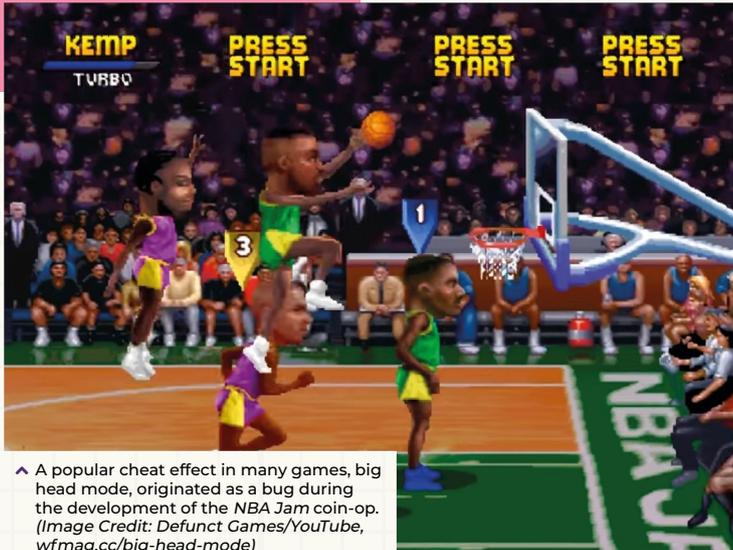


### Blood & Truth

2019

A full-fledged VR title spawned from London Studio's *PlayStation VR Worlds* demo, *Blood & Truth* put you in an original gangster adventure, and was a showcase title for the hardware.





▲ A popular cheat effect in many games, big head mode, originated as a bug during the development of the *NBA Jam* coin-op. (Image Credit: Defunct Games/YouTube, wfmag.cc/big-head-mode)

the memorable code went on to be used – sometimes in a modified form depending on the platform – in numerous Konami franchises, including *Contra*, *Castlevania*, *Teenage Mutant Ninja Turtles*, and *Dancemania*. It was also adopted by other companies to use in games such as *Crash Bandicoot*, *Kerbal Space Program*, and *Grand Theft Auto: The Trilogy – The Definitive Edition*. It has even appeared in non-gaming contexts such as web browsers, phones, and smart speakers – try saying it to Alexa, Siri, or Google Assistant.

### TESTING TIMES

As in Hashimoto's case, cheat codes would often be used for testing purposes during game development, so as to avoid replaying early levels, and sometimes end up in the final version released to the public. An early example is the code in the original Bug-Byte 8-bit versions of *Manic Miner* (1983), which was based on programmer Matthew Smith's driving licence number – typing it in brings up a level select.

Andy Braybrook, creator of classic C64 games such as *Paradroid* and *Morpheus*, says that publishers would sometimes put pressure on developers to add cheat modes “so they could see that the game is all there, or skip past a bit that wasn't working properly. They might then insist that the cheat mode is in the final master copy so they can test it first”. He notes that, “if

there's a cheat code in the final version, possibly only told to publishers and reviewers, it's going to get published sooner or later”.

Sensible Software's Jon Hare recalls using cheat codes to access different parts of games. “In *Mega-lo-Mania*, we used different start-up codes you had to type in which took you to different save games.” The finished game features an option to enter passwords to skip to later levels with extra lives. For *Wizkid*, Sensible included a novel cheat system based on the doors to the gents and ladies toilets in the first level: “It's possible to find all sorts of cheats by entering the doors in a certain sequence,” Hare says. “After a while, entering the door spits you back out into the lobby and by entering the doors in different sequences, there are a bunch of different cheats giving you extra money, diamonds, and other goodies.”

### PIG IN A POKE

Even if developers failed to include codes in their final games, that wouldn't deter some players from finding a way to cheat. No self-respecting games magazine of the 1980s or 1990s would be without a tips section featuring POKEs to ➔

### Cartridge wars

Also known as ‘freeze carts’, plug-in cheat cartridges first appeared for the Commodore 64. They could be used to freeze a game and perform a memory dump. As well as letting the player enter POKEs, this enabled the creation of snapshot copies of games for faster loading. Naturally, the latter horrified software companies worried about piracy; thus followed an arms race as they came up with new copy protection systems to foil the cartridge makers, who then upgraded their devices to circumvent them.

The first cheat cartridge was possibly the ISEPIC (pronounced ‘ice pick’) for the Commodore 64 in 1985. Others, such as the Capture and Codebuster/Snapshot 64 soon followed, along with Dattel's Action Replay, which quickly became the market leader.

In 1990, the Game Genie arrived for the NES. Designed by Codemasters, the device fitted between the game cartridge and console. Its arrival was strongly opposed by Nintendo, which in 1992 launched a lawsuit against US distributor Galoob, but ultimately lost the case. With the genie out of the bottle, numerous rival cheat cartridges appeared – for various platforms – over the next few years, including the GameShark and Blaze Xploder/Xplorer.



◀ Sitting between the game cartridge and NES console, the original Game Genie enabled users to enter eight-letter cheat codes.



◀ The Blood Code unlocked all the gore in *Mortal Kombat* on the Mega Drive, including fatalities such as Johnny Cage's head-ripping Deadly Uppercut. (Image Credit: Pug Hoof Gaming/YouTube, wfmag.cc/mk-blood-code)

## Hot Coffee

One of the most famous examples of secret content is the *Hot Coffee* minigame in *GTA: San Andreas*, depicting a sex scene with protagonist CJ and one of his girlfriends. When developer Rockstar Games was forced by the desire to avoid an 'AO' adult rating to tone down some of the game's intended graphic content, the team left it in the code but made it inaccessible to players – at least until hackers unlocked it in a modded version. This resulted in Rockstar getting into all sorts of hot water (if not coffee) with the ESRB censors board, resulting in the game's re-rating to AO and its subsequent withdrawal (no pun intended) and reissue. It even resulted in a Federal Trade Commission investigation into the affair.

▶ Accessed using a cheat cartridge, the *Hot Coffee* minigame (censored here) in *GTA San Andreas* involves rhythmic movement of the left thumbstick. (Image credit: RetelFactor/YouTube, wfmag.cc/gta-hot-coffee)

hack into and modify games to your advantage. In many early 8-bit computer games, you could simply start loading a game from tape or disk, interrupt it, enter a POKE command to insert a new value into a memory address, such as for infinite lives, then continue. Some POKE cheats would take the form of multi-line mini-programs for the user to enter.

Before the arrival of software patches, this practice might even be used to correct bugs in a game. Software Projects' platformer *Jet Set Willy* on the Sinclair Spectrum featured a notorious 'Attic' bug that resulted in certain rooms becoming impossible to navigate after Willy had visited The Attic. The company ended up issuing an official POKE to correct the bug and enable the game to be completed.

Other game publishers weren't so keen, and when they introduced machine code-based software loaders that disabled BASIC, a new way of entering POKES was required. The answer

came in the form of cheat cartridges (see 'Cartridge wars' box on previous page) such as Dattel's Action Replay, whose later versions even included a Pokefinder tool to find new cheats. Former Dattel PR co-ordinator Ian Osborne recalls: "Press a button to freeze the game, restart it, die on purpose, then freeze again, and the Action Replay would find all the values that had been reduced by one. By repeating the process, you could eventually narrow it down to one value and hack it to give you infinite lives. This could also be used for any consumable in-game item, such as ammo, grenades, etc."

Some companies didn't appreciate their games being hacked, recalls Osborne: "On the Amiga, if you froze and copied *RoboCod* with an Action Replay, the joystick direction button kept changing randomly, so the game became impossible to control." Cheat cartridges also attracted the opprobrium of the Entertainment and Leisure Software Publishers Association (ELSPA) due to the facility to break copy protection and create backup copies. On the other hand, a few game developers encouraged the hacking of their games – see 'Game modding' box, opposite.

## THE EVOLUTION OF CHEATS

Meanwhile, standard built-in cheat codes were becoming ever-more sophisticated and imaginative. In addition to infinite lives and level skips, there were all sorts of amusing effects on offer, including moon physics (*Tony Hawk's Pro Skater 2*), big head mode (*NBA Jam*), and spawning a rhino tank (*Grand Theft Auto III*).





- ◀ Paintball mode in *GoldenEye 007* on Nintendo 64, one of a host of cheat modes available in a menu that can itself be unlocked using a cheat code. (Image Credit: [mickthompson0927/YouTube](#), [wfmag.cc/goldeneye-paintball](#))
- ▼ As well as new gameplay elements, the Brutal Doom mod adds extra gore such as blood splattering and *Mortal Kombat*-style fatalities. (Image Credit: [Barabaw/YouTube](#), [wfmag.cc/brutal-doom](#))

One of the most notorious cheats was the Blood Code for the Mega Drive version of *Mortal Kombat*. By default, there wasn't a drop of blood in this apparently squeaky-clean conversion of the violent coin-op that had attracted the wrath of censorious politicians in the US. Enter the ABACABB cheat code, however, and all of the game's liberally spraying blood and gore was unlocked, including fatal finishing moves such as Sub-Zero's Spine Rip. It wouldn't be the last game to hide away controversial content from the censors – see 'Hot Coffee' box, opposite.

The 1990s and early 2000s was a golden era for the popularity of cheat codes and unlockable secrets, leading to the emergence of dedicated tips magazines such as *PowerStation*, which your author edited for many years; numerous books, including official guides by Prima and BradyGames; and websites such as GameFAQS.

The acceptability of cheating, however, was to take a downturn with the arrival of online multiplayer gaming. There's nothing quite so annoying as believing that your invisible opponent is using a game mod, such as an automatic targeting 'triggerbot', to gain an unfair advantage. Some exploits even use computer vision and AI. It has become a major issue: a 2018 Irdeto study found that 37% of players admitted to cheating. This has led to the emergence of anti-cheat software, such as Valve's VAC, to counteract the problem.

Hackers may also cheat to gain game rewards. "During the development of *Sociable Soccer* in the last seven years," says Jon Hare, "we have

constantly had to structure the game code in certain ways, to minimise the impact of new forms of cheating that can be exploited by interfering with the conversation between the client and server... if not managed correctly, it's easy for hackers to give themselves all sorts of rewards."

### THE END?

Standard button-pressing cheat codes have become a rarity in modern games, even for solo gaming, probably because they can mess up carefully designed achievement systems. In addition, some publishers have monetised extra content and even cheat modes, such as in *WWE 2K22* where virtual currency can be used to access an unlock-all code.

Cheat codes haven't quite died out altogether, though. Games such as *Fallout: New Vegas*, *The Elder Scrolls V: Skyrim*, and *Grand Theft Auto V* continue the tradition, allowing players to experiment with cheat modes while trophies and achievements are deactivated. Providing they don't ruin the game, it seems cheat codes may continue to prosper... XYZZY. ☺



### Game modding

In the world of PC gaming, a form of hacking even became a key part of the popularity of games such as *DOOM*. As well as featuring numerous cheat codes, *DOOM* was designed specifically by id Software to be modifiable by altering the game's WAD package files. Thanks in no small part to the growing accessibility of the internet, a community of modders soon built up around using a fan-made editing utility to create completely new levels and even whole games. It spawned the mod-making culture that continues to this day and has led to some modders becoming professional game designers.

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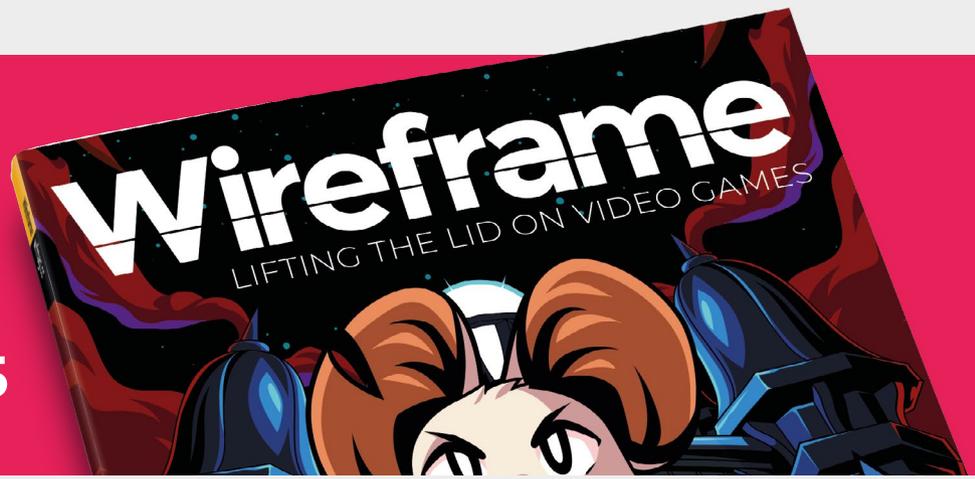


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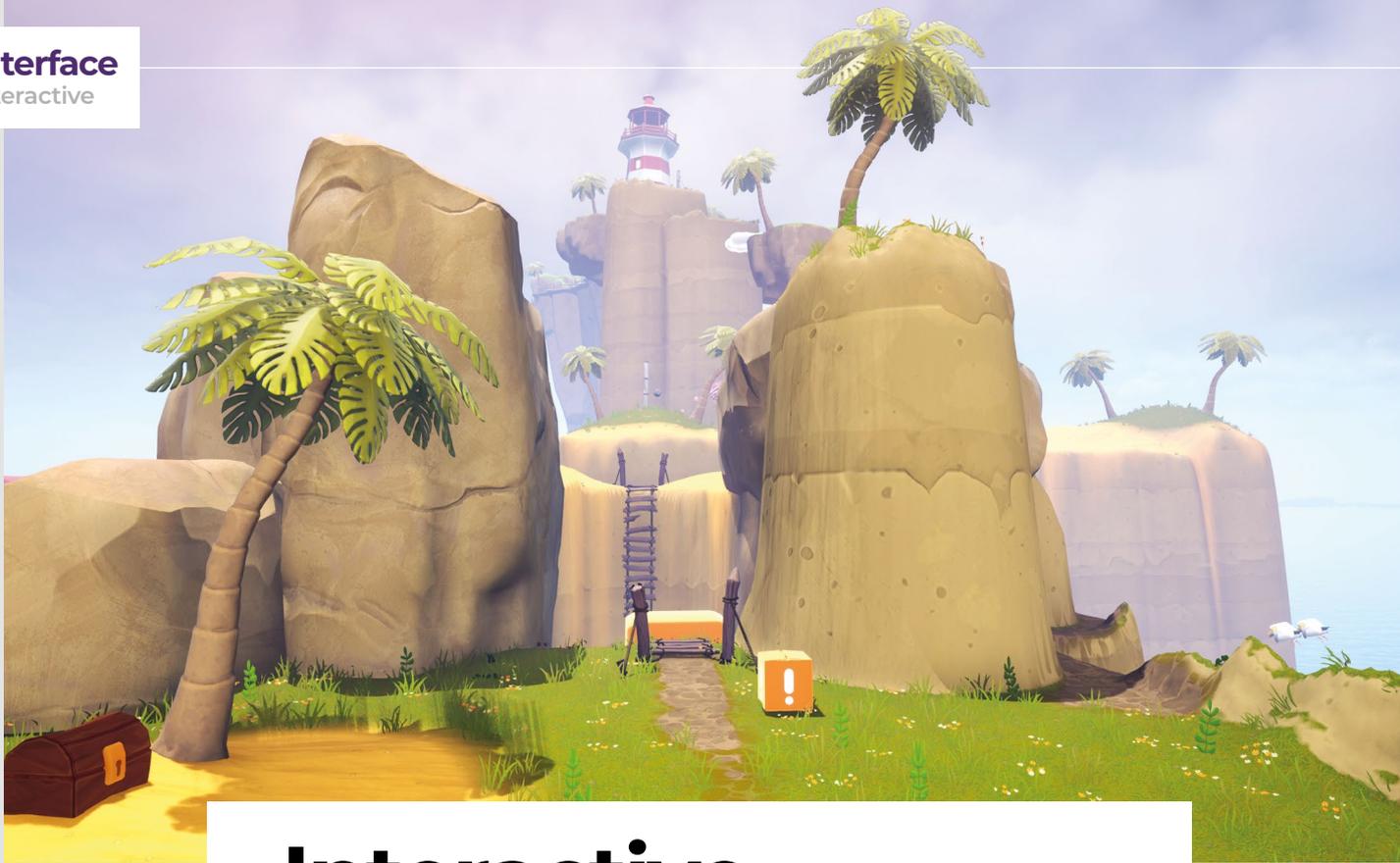
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# Interactive / Mojito the Cat

Spain's Guillem Tenza Albeldo went from architect to game designer – and has big plans for the future

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**G**ame developers can come from all walks of life, and their approach to design will often be informed by their own experience. Take developer Guillem Tenza Albeldo, for example: based in Altafulla, a picturesque town on the Spanish coast near Barcelona, he's an architect by trade but started making games in 2019. His most recent release is *Mojito the Cat*, a charming 3D puzzler in which you move a cuboid feline around blocky levels, hunting down keys to unlock doors, while other collectables will net you bonus points. For Albeldo, his training in architecture provided a sound basis for designing each level's block-based puzzles. "I've always enjoyed puzzles and jigsaws, and descriptive geometry [the process of drawing 3D

objects in 2D] was one of my favourite subjects in my architecture studies," he tells us. "I mixed both concepts and made a puzzle that has to be solved by preparing your next move and visualising the subject from all sides."

Albeldo mostly designed his levels directly within Unreal Engine, and has created a flexible system that allowed him to rapidly switch between themed blocks – lava and ice, say – as he created each puzzle. "The reason I prototyped them directly in the level editor is because I played the levels as I was designing them," Albeldo says. "Working that way helped me make decisions and keep designs that were enjoyable. When I found a memorable solution, I kept that design. If it was too repetitive or boring, I changed it."

Unreal Engine is a major reason why Albeldo got into game development in the first place; although he'd been a gamer as a youth – he was an avid player of *Unreal Tournament* – he stumbled on Epic's game engine by accident. "In 2015, I was studying for a Master's degree in Building Information Management," Albeldo recalls. "One day, while I was attending a boring lesson, I saw a familiar icon on my desktop. It reminded me of the *Unreal Tournament* logo...



► Outside game development, Albeldo's architectural work takes in things like this: a visualisation project for a prefab house.



◀ *Mojito the Cat* is the kind of light puzzler you can pick up and play for a few minutes – though the levels do get increasingly devious as you go along.

▼ Albeldo's next game, *Mojito the Cat: Woody's Rescue*, is an open-world adventure in the vein of *Super Mario Odyssey* or *Crash Bandicoot*.



Once I opened it, I saw it was a game engine. I started to study it in my spare time, and it was a hard period because I had zero prior programming knowledge."

Albeldo initially used the engine to create 3D visualisations and walkthroughs for his architectural projects. It wasn't long, though, before he started thinking about making games – which brings us back to *Mojito the Cat*, based on Albeldo's own 13-year-old, somewhat moody moggy of the same name.

Albeldo's background also helped with something other than design itself: planning. "I think that architecture studies gave me a major skill – project design and management," he says. "From the first year, I had a subject called 'Projects', which meant you started to get used to living with a big load of work on your shoulders that couldn't be finished in a short period of time... You must be critical with your work, recognise what can be improved, but also know what's fine for you. This is a lifelong skill for all areas of life."

An ability to plan and organise came in especially handy as Albeldo settled into life as a solo developer. Initially, he was fitting work on *Mojito the Cat* around his day job, working on it from seven o'clock at night until the early hours of the morning or through entire weekends.

But as the game started "shaping out", Albeldo decided to quit and funded the development of *Mojito the Cat* by doing architectural visualisation projects on a freelance basis. All the same, money was tight at times, he recalls. "When you're a solo developer and your funding source is your savings," Albeldo explains, "the biggest challenge is to face reality and accept that you won't have spare time or money. All you will do from now on is live for your project... having to

say 'no' to plans with friends and family due to the lack of time and money is definitely not easy, especially in the summer."

All-consuming though *Mojito the Cat's* development was, it successfully launched back in July for the Nintendo Switch, with Red Deer Games handling the porting duties – the PC version is due to hit Steam soon. Meanwhile, Albeldo's busy turning his indie project into a mini-franchise. *Mojito the Cat: Woody's Rescue* is billed as a 3D puzzle-platformer with a much broader scope than its predecessor – if the original *Mojito* felt like *Captain Toad: Treasure Tracker* with its compact levels, *Woody's Rescue* is a big, open-ended adventure in the vein of *Super Mario Odyssey*. It's a hefty project for a solo developer to take on, but Albeldo seems confident about the workload – partly because he's learned so much over the course of making his first game. "I didn't know how to model with Blender and I'd never done a single animation before," he recalls. "That's one of the reasons why *Mojito* is a cube, and the rolling movement is just mathematics."

Albeldo hopes to have *Woody's Rescue* ready for a Kickstarter campaign soon, but first, he wants to make a playable demo to show off what he has planned. "I want the player to have the most high-end experience possible with the demo to encourage them to support the project," he says. "My perfect plan would be finishing it in a year or a year-and-a-half." Watch this space! 🐾

## BUSTING OUT

Although *Mojito the Cat* has been Albeldo's main focus, it isn't the only project he's had on the go over the past couple of years. At the height of the pandemic in 2020, he also released *VidBuster* – an endless runner designed to encourage players to help curb the rise of Covid-19 through better hygiene and by wearing protective masks. Made for a game jam in collaboration with a couple of friends, it provided a welcome change of pace from *Mojito*. "Although it was a short project, it was enriching," Albeldo says. "At that moment, the project was like a breath of fresh air in the middle of the longer development [of *Mojito the Cat*]. I was grateful [to be] working collaboratively after a long period of solo dev."



## Interactive / Dreamed Away

Software engineer turned solo dev Nicolas Petton discusses his French-inspired homage to Mother

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▼ Combat in *Dreamed Away* purposely doesn't centre around weapons. Instead, it's about making Théo as prepared as possible with his abilities.

**M**uch like how the MCU villain Thanos exclaimed "Fine, I'll do it myself" when choosing to take matters into his own hands, indie developers have similarly stepped up to fill the series and genre gaps Nintendo itself can't – or simply refuses to – pay proper attention. *Mother 3* is a chief example of this, swiftly reaching meme status in recent years due to constant calls by fans for it to be officially translated and ported to the West. The platform holder's continued refusal is strange, given how celebrated *EarthBound*, the game's predecessor, has become in the past three decades since its arrival on SNES.

Alas, while *Mother 3* remains nothing but a pipe dream, that hasn't stopped the likes of solo developer Nicolas Petton from channelling its essence into his upcoming RPG throwback. "It was a very conscious decision," he says. "I grew up in the nineties with 16-bit consoles at home, and to this day, it is still the console generation I enjoy the most. *Dreamed Away*'s art style is loosely based on *EarthBound* (or more exactly, *Mother 3*, the third instalment in the *Mother* series), with some noticeable differences, like the colour palette and scale. It also takes inspiration from titles such as *A Link to The Past*, *Final Fantasy VI*, *Chrono Trigger*, and others."

Whereas *EarthBound* and *Mother 3* built up a zany reputation for their portrayal of small-town USA through a Japanese lens, *Dreamed Away* feels and looks distinctly homegrown by comparison. That's because Petton has based the game's location on his own country. "The game takes place in the nineties in Brittany, a Celtic region on the west coast of France, where I was born and raised," he reveals. It's not a setting portrayed in games often, and Petton hopes to take advantage of its untapped nature. "I chose this setting for its mythology, folklore, and landscapes. I really wanted to show what makes Brittany so special to me. The game also talks about a lot of Breton legends, [and] some of them play a prominent role in the story."





A developer using their own experiences for inspiration is nothing new, of course, but Petton finds himself in the unique position of being knowledgeable on an environment that most haven't explored before. This alone should be enough to imbue *Dreamed Away* with something of the otherworldly. And if not, there's the fact that young protagonist Théo will be constantly pulled from the vibrant colours of his wholesome village and into the mysterious atmosphere of the dream world. It's here where he'll be forced to duel enemies in the dark.

"*Dreamed Away* tells the story of two siblings, a boy named Théo, lost in a dark and eerie world, and his little sister, Louise," Petton explains. "Through the game, Théo tries to escape the world he's trapped in, questioning his sense of reality and sanity, and reconnect with his sister. One of the central topics of the game is this bond between the two siblings." Family is one of *Dreamed Away*'s central themes, partially inspired by the birth of Petton's second child. "I wanted to share my experience as a parent. The challenges, doubts, and constant worry for the well-being of your kids. Théo and Louise's parents play quite an important role, I think."

Splitting the game world between what's real and a dream in this way is most definitely where *A Link to The Past*'s influence is most keenly felt. And although Théo will constantly be pulled into the dark in order to try to solve his family matters, Petton has used this narrative and environmental split to ensure *Dreamed Away* won't always be doom and gloom. "There is indeed a stark contrast between the pixel art style, with its cute character sprites and

**"I chose this setting for its mythology, folklore, and landscapes"**

backgrounds, and the story that unfolds through the game," he says. "Not all chapters are as dark as what was shown in the trailer; there are also plenty of light-hearted and funny moments."

*Dreamed Away*'s combat system, as you'd expect from any game using *Mother 3* as a jumping-off point, doesn't stick to convention, either. True, fighting foes means using a form of classic turn-based combat to win duels, but there's a twist: enemy attacks are real-time minigames. "Each attack is based on bullet-dodging, rhythm, or puzzle-solving," Petton

says. And there are lots of ways to increase your chances of success. "Théo will learn abilities when levelling up, pre-equipped before combat, and each

has a different side effect. For instance, you could choose to use Love (lower all fighters' defences) and then Focus Attack (increase offence but decrease defence) to deal a lot of damage, but on the other hand, be vulnerable as well. The duration of enemy attacks is fixed, but can also be affected by abilities."

Petton isn't promising to fill the gap left by *Mother 3* completely, but he does hope to carve out his own unique homage to it using a fresh setting, relatable themes, and by recreating that all-important 16-bit pixel art. Such an endeavour hasn't been without its challenges. "I have many years of experience in software engineering, as well as a background in music and graphics, but *Dreamed Away* is my first game," he says. "I very quickly realised how much work it takes to make a game of this scale." 🎮



▲ Finding Louise (and your parents) is your primary objective in *Dreamed Away*. Don't expect it to be a smooth ride.

## Light and dark

Théo's journey to escape from the dream world has given Nicolas Petton a good excuse to play on players' perceptions of reality. Differences between the two settings will be hinted at by changes in the surroundings and art style, sure, but *Dreamed Away* will, it seems, never definitively reveal which one is which throughout most of the journey. "Who said it was a dream?" he teases. "One aspect is the music, which is much more atmospheric and sometimes even unsettling in the other world. Another aspect is the environment – scenes in the other world often take place by night or in dark places."

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## Developer Profile

# Get your skates on

Thomas Hegarty, co-founder and director at Roll7, reflects on the studio's educational origins all the way up to the skater's paradise it is today



▲ Thomas Hegarty founded Rolling Sound soon after graduating from university in 2002, selling it off in 2011 to fully focus on Roll7.

▼ *Dead Ends* was a collaboration between Channel 4, Rolling Sound, and 30 at-risk young people interested in game development.



Quite literally living up to its pun-tastic namesake, if ever there was an independent games studio that's been on a roll in 2022, it's the one behind *OlliOlli World* and *Rollerdrome*.

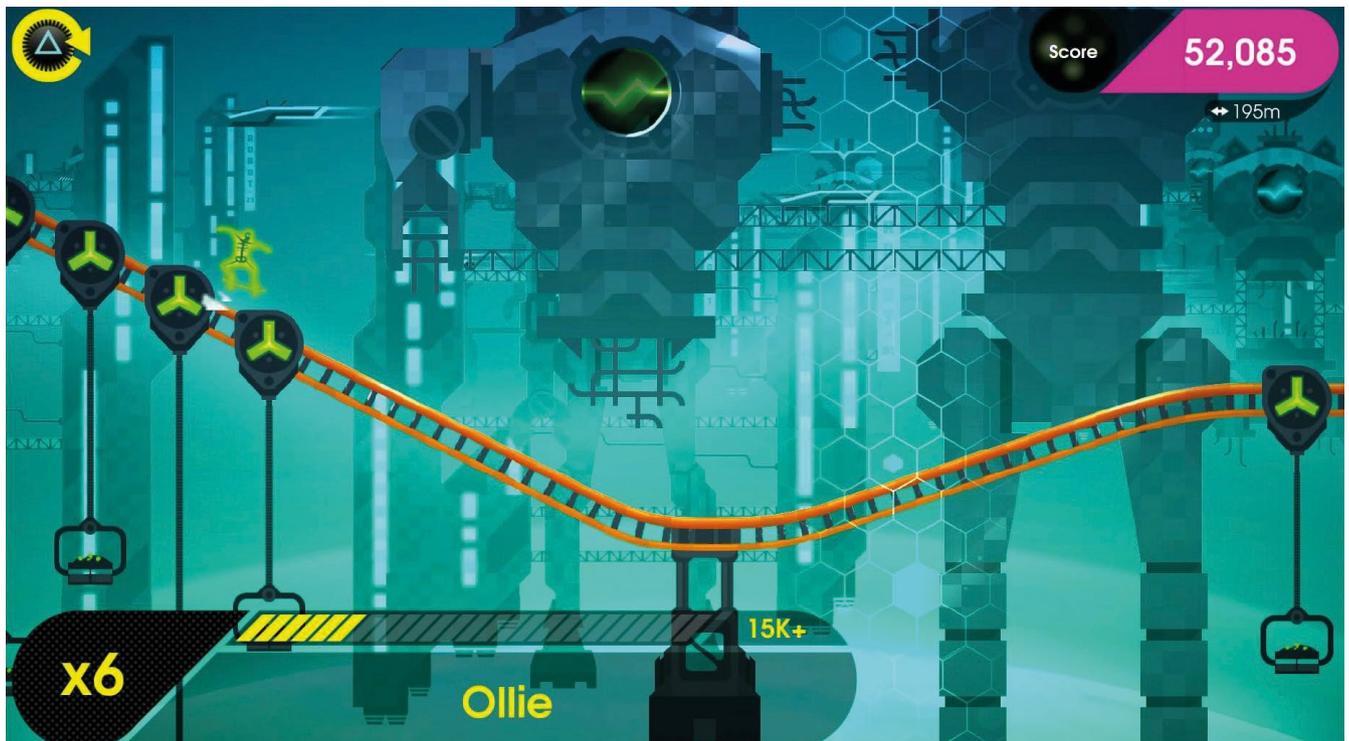
The two indie hits released within just a few months of each other earlier this year to critical acclaim, both offering unique – but very different – spins on the famously underserved skating genre. And it's a genre that has come to define London-based developer Roll7 for well over a decade now. It might surprise people to learn, then, that Roll7's beginnings weren't all that tied to skating at all. Co-founders Simon Bennett, Thomas Hegarty, and John Ribbins instead had a much more noble cause.

"The initial aim actually came from our previous business," Hegarty says. "Rolling Sound was an educational company that taught courses in creative multimedia for at-risk young people. We'd run courses in film, music, and photography, but when we opened game design options, those quickly became the most popular." This inspired the team to place a larger focus on, as Hegarty puts it, "making proper games". Not just any "proper games", but games that could also potentially impact young people's lives for the better by placing real-life issues into focus. "We made two anti-knife crime games, and after that we started broadening what we worked on."

Launched in 2008 in collaboration with Channel 4, *Dead Ends* was developed in only six weeks to help highlight the TV station's anti-knife-crime campaign. Marketed as the world's first "socially responsible" game, the visuals and gameplay are rather quaint by today's standards, but it was still downloaded tens of thousands of times, and considered enough of a success to give all three co-founders the idea to push on with their own fully-fledged studio. "We made games with colleges, we made marketing games, and even a game that worked using a brain-computer interface with the University of Wollongong [in Australia] for children with ADHD. From there, making our own IPs began to feel like a real possibility."

## 180-DEGREE TURN

Roll7's 'gun-for-hire' approach made sense at first, if only as a way they could prove to themselves that they were capable of making games broad audiences could enjoy. This ambition eventually led to Hegarty and co pursuing original game projects and ideas, with one in particular showing certain promise. "The whole time we were making games for other people, John kept tugging at our shirts telling us it was time we had a go at making our own games. The idea was it might be something we could create alongside some of the young people we'd been working with up to



[that] point. [Simon and I] were sceptical... until John showed us a prototype he'd been working on, *OlliOlliOlli*, and we were hooked. We did decide that there was one too many 'Ollis' in the name, though."

It was around this time, when the very first *OlliOlli* prototype was being worked on for mobile devices, that Roll7 started to develop a concept it would later specialise in, called 'Flow State Gaming'. Creating a good sense of flow is something that many developers have strived to achieve before, true, but it's rare to see one build their entire studio ethos around it – especially in the early 2010s. Roll7 decided quite quickly, however, that making player movements feel smooth and effortless should always be at the cornerstone of every game it produces, regardless of genre or mechanics. Much like the concept itself implies, 'flow state gaming' is an inherently flexible notion.

"'Flow state gaming' means a number of things – it's definitely a concept where the meaning has developed over the years as we make new games and come to understand what works and what doesn't," Hegarty explains. "It's something that we've often done with games that are grounded in sport, but that's just

one way to access the state of flow. At its core, flow is about kinetic movement – one move linking to the next until the controller feels like an extension of your body. It's a deeply satisfying feeling that we strive to enable players to achieve."

## BREAK AWAY

Working with the likes of Lloyds Bank, computer manufacturer NeuroSky, and even the UK Home Office on countless marketing-orientated projects might not sound all that glamorous. But the trio didn't discount the experience they gained while working with such clients, and the freedom it gave them to experiment. "It was a fun time," continues Hegarty. "We had one room to work from and it was all very bootstrapped. I remember one day walking in and one of the devs had a Wii sensor taped to his forehead, just trying to work out what he could do with that." Needless to say, nothing quite *this* zany ever made it into one of Roll7's games. "But it was all part of the process – trying things out to see what happens."

By 2011, Roll7 had started to experience what a lot of start-ups and indies face when initially starting out: cash flow problems. Working on behalf →

▲ *OlliOlli* remained a PS Vita exclusive for the year, shaking up the skating game genre through its 2D presentation.

## Awesome original

Even before *OlliOlli World* was a thing, Roll7 was seemingly determined to take the world over by releasing the original game on almost every platform going. After self-publishing the game originally as a Vita exclusive, new partnerships with Devolver Digital and Curve Digital saw *OlliOlli* ported everywhere from Linux to the Nintendo 3DS. "It translated brilliantly to Switch," Hegarty notes. "It was designed for a handheld console, and it really just made sense to release it on a newer platform. But it's great on other platforms too – I think it's on 15 or so now – and for us, we honestly just want as many people as possible to be able to experience flow state gameplay first-hand."

## Lessons learned

2018 saw Roll7 tackle an entirely different genre, with *Laser League* being a predominantly online-focused multiplayer sports game inspired by 1980s design and visuals. It enjoyed good reviews, but ultimately struggled to find an audience. "You need to have lots of people all playing at the same time," reflects Hegarty. "We just didn't ever reach that critical mass. It was coming out around the time that *Fortnite* and *PUBG* were getting properly big, and we just couldn't compete – they'd done an amazing job. So, yes, it was sad because we worked really hard on it, and the people who did play it loved it, but at the end of the day, that's just how these things go sometimes."

▼ *Gets to the Exit* was likened to *Lemmings* upon release, particularly for how you must affect the environment to control characters.

of others was all well and good at first, until it led to issues with being paid. Suddenly, relying on other parties to put food on the team's table didn't seem like it made much business sense. This eventually inspired Bennett, Hegarty, and Ribbins to sell off their initial business, Rolling Sound, in order to purely focus on game development. Luckily, they weren't starting entirely from scratch. Ribbins' *OlliOlliOlli* prototype continued to show promise as the studio's first original IP. That didn't mean there wasn't also still a large degree of risk, though.

"There were a lot of worries," Hegarty says. "But it was a fun time, and I think it was all part of what went into initially making the studio great."

It was the mobile game market that was booming most around this time, with the likes of *Jetpack Joyride*, *Doodle Jump*, and other classics birthing a whole new generation of casual gamers. That was where the money was, and with cash flow still an issue, Ribbins thought it sensible to hold fire on fully realising his skateboarding minigame idea in favour of an Android and iOS title called *Gets to the Exit* in 2012. In it, players must guide prehistoric tribesmen across three distinct worlds while avoiding such obstacles as lava, spikes, and robot frogs. Much more than a simple A-to-B 2D

platformer, Roll7's neat gameplay twist meant players controlled the ground by raising and lowering platforms, as opposed to controlling characters directly. Flow state gaming? An early form of it, certainly.

"The App Store [was] really exploding into the mainstream on iPhone, and it opened up a relatively 'easy' avenue to self-publish," Hegarty recalls. "We put aside six months and made *Gets to the Exit*, which included 45 levels and a tutorial, and got an 8/10 review from Edge. Even though we only sold about 345 copies at a whopping 59p each, that experience proved to us that making our own game – and most importantly, finishing it – was a thing we could do."

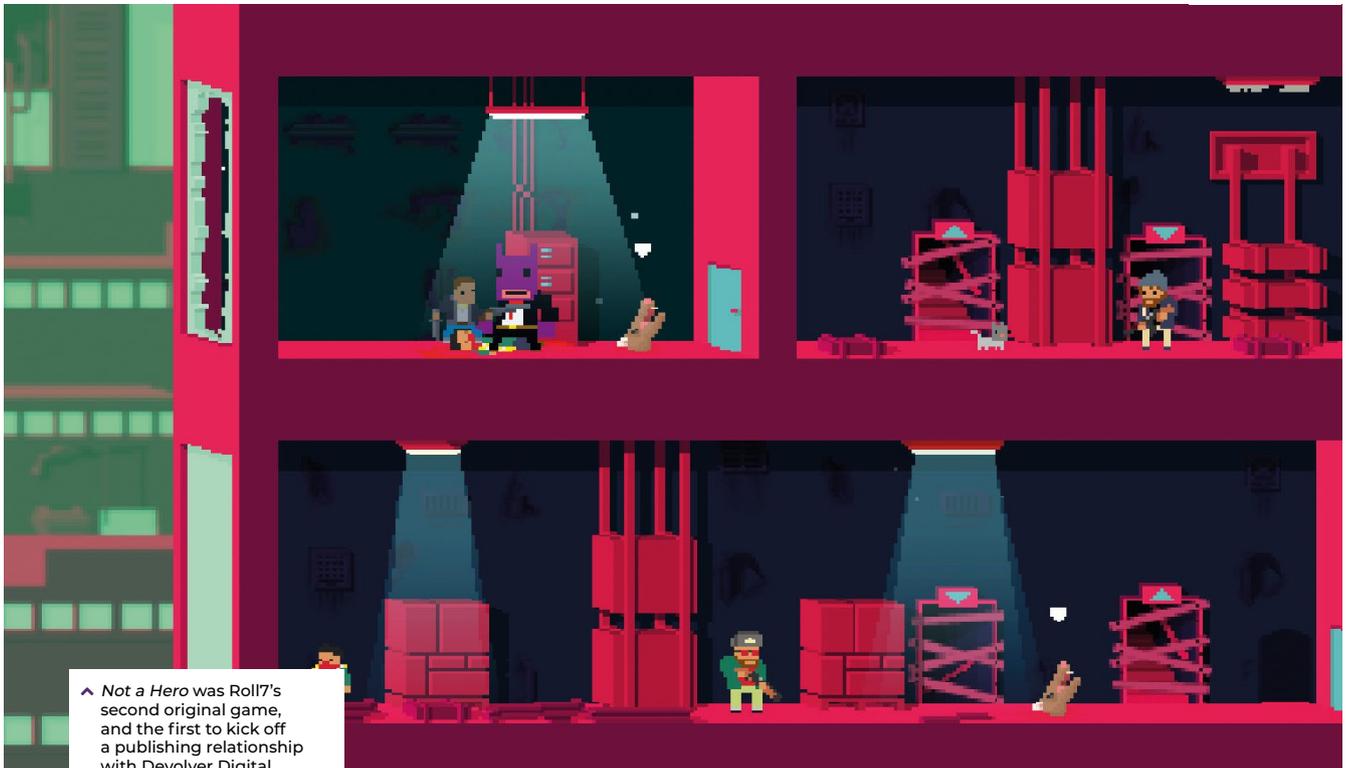
Though far from an overwhelming success, this did at least give Roll7 the much-needed inspiration to work on what would become its most important game. "That's the moment we decided to take *OlliOlli* to PlayStation."

## PORTABLE PLAY

Much like *Gets to the Exit* before it, the original plan was for *OlliOlli* to launch on iPhone too. That is until John Ribbins met and had a conversation with James Marsden, FuturLab's managing director who at the time experienced great success launching the studio's snappily addictive shoot-'em-up, *Velocity*, as a PSP mini through a partnership with PlayStation. This got Roll7 thinking whether the mobile market was the right avenue at all. Wasn't it better to be at the precipice of a new movement happening in the portable gaming space? Cultivating such talent made sense for Sony, too. Since launching the PlayStation Vita in 2011, they had been struggling to support it with enough first-party hits to stimulate mainstream interest.

The next tactic by PlayStation, therefore, was to try to make the Vita something of an ultimate indie powerhouse. *OlliOlli* launched in 2014, going on to play a crucial part of this experimental movement and continuing to ride a wave of indie enthusiasm. "*OlliOlli* was actually a PlayStation Vita





^ Not a Hero was Roll7's second original game, and the first to kick off a publishing relationship with Devolver Digital.

exclusive – that’s where the initial funding came from,” Hegarty says. “After that, we ended up publishing *OlliOlli* for a bunch of new platforms through Devolver [Digital], and I’m glad we did as it’s meant that loads more people have had a chance to play the game over the years.” Self-publishing had its benefits, but Roll7 and Devolver Digital’s combined strength saw *OlliOlli* reach greater heights. “It was a great fit for everyone involved.”

*OlliOlli*’s breakout success on Vita finally helped the small yet ever-growing team at Roll7 feel vindicated. They had tried various paths to getting their games to market before, but finally it clicked. Critics and players alike enjoyed the sense of flow this oddly minimalist take on the skating game genre employed, with Eurogamer’s Simon Parkin most notably describing the game as both a “Twitch classic” and “a startling console debut from a young British indie” when awarding it 9/10. After six years toiling away with different game ideas and trying to stay afloat through contract work, it felt like something had changed.

“We’d already made one game which – while the three or four reviews we got were very good – had commercially totally bombed,” Hegarty says. “So that dented some egos, and we were wary of the same thing happening again.

Plus, *OlliOlli* was a Vita exclusive, and the control scheme was pretty unique, and nobody had done a skate game in a while... We were very surprised and very, very happy to see how well it did.” Even prior to its release, there were some early signs that things with *OlliOlli* would be different. “We actually had journalists contacting us to ask for interviews – which was new! Normally, it had been us chasing them. So it was great to see people giving something new and a little offbeat a chance.”

## WORK IT OUT

Roll7 quickly got to work on an *OlliOlli* sequel shortly after the first one’s release. But 2014 turned out to be a busy year for the studio, as this was when development on bit-based, 2D run-and-gunner *Not a Hero* also began – the first original IP Roll7 published through Devolver. “*Not a Hero* was meant to come out much earlier than it did,” admits Hegarty. “But in the end, it was a small indie team and it all just took a lot longer than we’d anticipated.” This eventually led to both that and *OlliOlli2: Welcome to Olliwood* coming out within months of each other the following year. Not too dissimilar to *OlliOlli World* and *Rollerdrome* this year. “It actually worked in our favour. The buzz of releasing two ▶

▼ The aim with *Not a Hero* was to apply ‘flow state gaming’ to a 2D run-and-gunner, encouraging fast-paced gameplay and cover shooting.





^ *OlliOlli World* is more story-driven than the prior two games. Players play as a newcomer to Radlandia who is fully customisable.

▼ Though an original IP, *Rollerdrome* borrows a lot of ideas Roll7 created for *OlliOlli*, such as an in-game trickitronary and focus on score multipliers.

games in one year helped keep us in the spotlight and also got people's eyes on our games."

2015 was also the year when Roll7 implemented one of its most ambitious studio policies yet, as it moved to remote working. This was in part inspired by how *Not a Hero's* development was handled.

"We'd had a taste of the freedoms it could offer," explains Hegarty. What else inspired the change? "We wanted a better work-life balance, and at the time, working from home felt like the best way to do that. Unfortunately, we were still crunching at that point. It wasn't until we stopped that we got to experience the benefits of a proper work-from-home environment and a real work-life balance. But it was definitely a good first step."

Roll7 didn't know it at the time, but going fully remote would obviously set it up well for future global events to come, because while most other game developers had to adapt quickly as a result of the pandemic, Hegarty's studio was largely unaffected by comparison – fresh from shipping multiplayer sports battler *Laser League*, Roll7 also continued its work on the long-awaited *OlliOlli* threequel.

"It was definitely a blessing that we were already set up for remote work," Hegarty says, "as it meant we could focus on looking after the team rather than spending all our time setting up systems to allow them to work from home."

Sporting new 2.5D visuals, an Adult Swim-esque art style, and a pastel colour palette, the goal with *OlliOlli World* for Roll7 was always to make the series more approachable for players. True, the two preceding entries had seen great success amongst a certain player base who enjoyed their tactile, Twitch-based controls and the drive to chase score multipliers through achieving crazy tricks, but with enough time away, Hegarty's team felt it was time to welcome a new audience in.

*OlliOlli World* still retains a high skill ceiling for those who want it, yet by making landings less punishing, including multiple level paths, and humorous characters, it was ultimately no surprise to see the franchise's third outing being so well received.





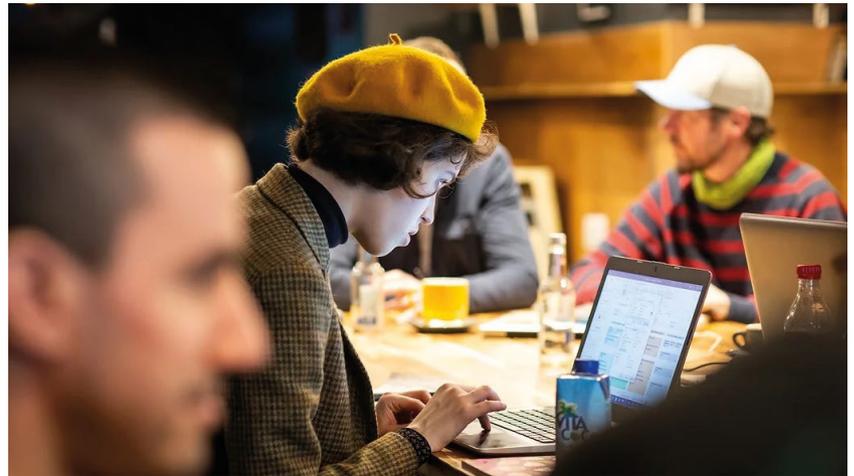
◀ The entire Roll7 team regularly meet up at least once a year in select locations like London.

## WHOLE NEW WORLD

Publisher Private Division obviously liked what it was seeing behind the scenes ahead of release, too, since it bought Roll7 into its publishing label last November. According to Hegarty, such a move had been a long time coming. “It’s been great. We’d been working together for two years before we joined the label – so it’s like we were dating this whole time, and this was just formally tying the knot,” he says. “We work really well with them, and joining the label means our days of stressing about where our next contract will come from are finally over.

“Having that support allows us to unlock our creativity – we still have a budget, but it’s a lot less stressful and we know that we can hire people for extended contracts or permanently, with no worries about how we’ll support them in the future. It’s also given us as directors the chance to focus more on studio culture and creativity, and I think you can see, given that our two latest releases are our highest rated ever, that it’s worked out extremely well.”

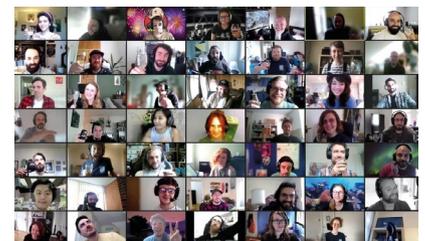
That second release is obviously *Rollerdrome*, a more experimental skating game that plays as a mix of *Jet Set Radio* (even lifting its art style) and *Tony Hawk’s Pro Skater* while mixing in Roll7’s trademark tight controls and satisfying gunplay elements. In our review in last month’s issue, we praised it for “bringing such high-flying antics into the third dimension with incredible ease”. Rather famously, *Rollerdrome* began life as a solo project by developer Paul Rabbitte before Roll7 saw a lot more potential and brought him on board. It’s not too dissimilar to how co-director John



Ribbins toiled away on an experimental prototype that would become the *OlliOlli* series, defining the studio’s approach for nearly ten years.

With a new parent partner in Private Division, a verifiably forward-thinking approach to working, and now two breakout successes under its belt in 2022 alone, it feels like Roll7 is quietly entering its next phase.

“Yes, it definitely feels like a new era,” Hegarty agrees. “I can’t say too much because everything we’re working on now is under wraps, but we’ve learned a lot over the past three or four years, and it’s really great to get to implement it all now. With Private Division’s support, we can focus on growing our studio and building an awesome team of super-creative people who will be behind the many, many cool things to come... and that’s about all I can say for now.” 🗨️



▶ All of Roll7’s operations moved to a work-from-home format in 2015, a full seven years before most other studios were forced to.

◀ Working remotely gives the Roll7 team a good excuse to enjoy special extracurricular activities when meeting up in person.

# The evolution of video games



STEVE MCNEIL

Steve likes video games. And Rob. In that order.

“Actually, scrub that. Screw you, Pac-Man”

As regular readers of this column will be aware, I pretty much owe my career at this point to *WiFi Wars*' very own 'King' Rob Sedgebeer, the Guinness World Record-breaking genius who has presented his unique social gaming tech as part of the Royal Institution's Summer Programme on no less than seven occasions.\*

I had the distinct pleasure recently of presenting a new show of ours, *The Evolution of Videogames*, to an audience of several hundred excitable children at the aforementioned institution. It was one of our 'debug' nights where we try out our latest toys, held as part of the Schools' Day of New Scientist Live's event at ExCeL London. It's been a joy building the show; a sort of hybrid of *WiFi Wars*' tech which allows the audience to compete on games beamed to their phones, crossed with some tidbits from my book about the history of video games.

This earliest incarnation of the show covered six key milestones in gaming: *Pong*, *Breakout*, *Space Invaders*, *Asteroids*, *Galaxian*, and *Pac-Man*. Each of these was very deliberately chosen to illustrate the early evolution of sound design, AI, graphics, controls, narrative, and so on.

We take colour screens for granted now, but back in the earliest days of the arcades, the only colour you got was from translucent cellophane stuck on the screen or clever tricks with angled mirrors and cardboard cut-outs. Arguably, the true baton-carriers of the modern age are not your Ubisofts or EAs, but rather small indie teams who make creative virtues from technical or financial constraints.

It was lovely to introduce children to some hands-on experience of these early titles, and provide an insight into the debt we all owe them. Young people might not have heard of Atari's *Breakout*, but they've almost certainly heard of the company its creators went on to found: Apple. *Space Invaders* might not beat *Fortnite* in any playground arguments, but it introduced the idea of a high score to beat, and a microprocessor that meant the abstract rectangles of *Breakout* became the spaceships, aliens, and bullets that birthed narrative in gaming. Without the introduction of the cutscene in *Pac-Man*, we may never have had the pleasure of Hideo Kojima's epic animations in *Metal Gear Solid 4*. Actually, scrub that. Screw you, Pac-Man.

It only occurred to us while on stage that this year marks the 50th anniversary of *Pong*'s inauspicious arrival on Earth at Andy Capp's Tavern in Sunnyvale, California. And yet its gameplay remains compelling enough to have children in 2022 screaming in excitement at the outcome. There can be no stronger testament to its enduring power, or the magnitude of its legacy. Truly, we are standing on the shoulders of giants. And *Pong* is pure. Games. 🎮

\*I owe Rob money and am hoping sycophancy will buy me some time.

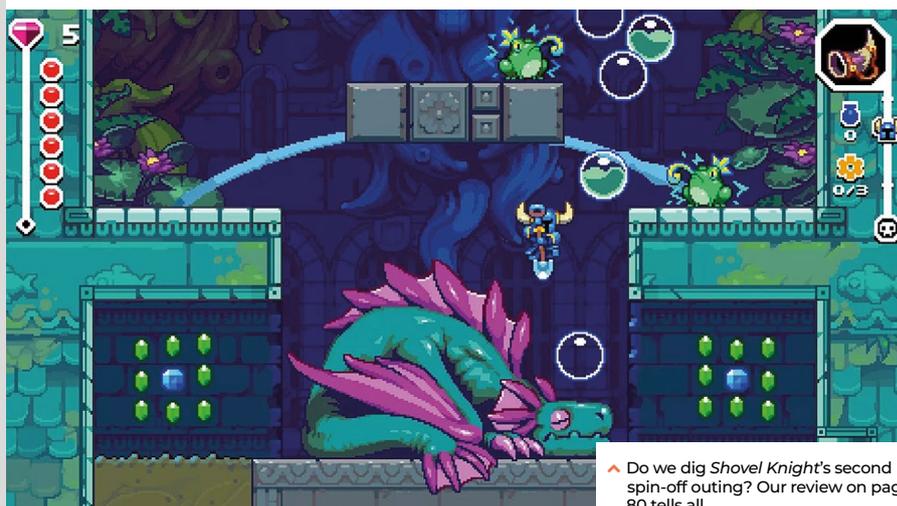


▲ Is Pac-Man responsible for the *Metal Gear* franchise's hour-long cutscenes? Quite possibly.

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Reviews, retro games, and lots more besides

- 78. A Plague Tale: Requiem** PC, PS5, XB X/S, Switch
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- 82. You Suck at Parking** PC, XB X/S, XBO, Switch, PS4, PS5
- 83. Session: Skate Sim** PC, PS5, PS4, XB X/S, XBO
- 84. Vampire Survivors** PC, Mac, Linux
- 85. Serial Cleaners** PC, PS4, PS5, Switch, XBO, XB X/S
- 86. Itch.io roundup** PC



▲ Do we dig *Shovel Knight's* second spin-off outing? Our review on page 80 tells all.

## OUR SCORES

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

## PLUS

- 87. Stream of Consciousness**  
Kinda Funny's Andy Cortez on making streaming his full-time job
- 88. The HOTLIST**  
The top PC games you can play right now, ranked and rated
- 90. Backwards compatible**  
Game Gear mods, mini arcade cabinets, and more
- 94. Now playing**  
Finding out if the original *Dead Space* still scares, 14 years on



▲ Aaron revisits the blood-drenched halls of the *USG Ishimura* on page 94, asking: How can next year's *Dead Space* remake improve on perfection?



Review

# A Plague Tale: Requiem

▲ It might not run at a silky 60 fps, but *Requiem's* rendition of 14th-century France is still highly detailed and beautiful to look at.

## Info

**GENRE**  
Third-person action, stealth

**FORMAT**  
PS5 (reviewed) / XB X/S / PC / Switch

**DEVELOPER**  
Asobo Studio

**PUBLISHER**  
Focus Entertainment

**PRICE**  
£43.99

**RELEASE**  
Out now

## Far from innocence

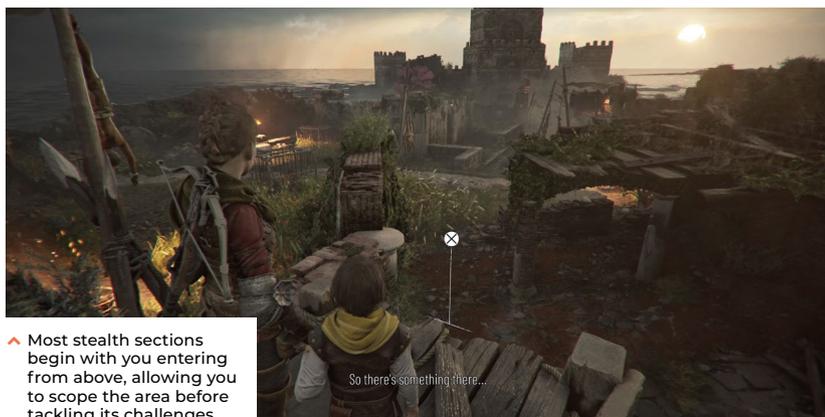
**P**oor Amicia and Hugo can't catch a break. You'd think that after surviving mild torture, the French Inquisition, and a supernatural priest (with a penchant for rodent control) in the first game, things might look up for this brother and sister duo, but not so. Instead, *Requiem* picks up a mere six months later, where the rat-filled plague has followed them from a ravaged Guyenne to the far more diverse location of Provence, and an entirely fresh set of stealth-based challenges await. No doubt this is about as confident a sequel as one could expect, especially to an initial hit as unexpectedly fully formed and emotional as 2019's *A Plague Tale: Innocence*. It's a worthy follow-up adventure, for sure, even if some areas of narrative and mechanical innovation don't always deliver.

At the heart of this story once again, quite rightly, is Amicia and Hugo's familial bond. *Requiem* does a brilliant job at continuing to evolve how the two siblings feel about each other, given the previous game's final events, which more than verifies that both – wrongly or rightly – have blood on their hands. This bleak revelation constantly lingers in the background of almost every thematic beat during a sizeable 15–20-hour tale, surfacing more as the De Rune children embark on a journey to learn about Hugo's worsening condition and seek a potential antidote. Amicia, in particular, has matured a lot in the time since we last saw her, and not always in a way that is empathetic. Is it fair for a woman as adolescent as her to actually enjoy killing? That's partially for your actions to decide.

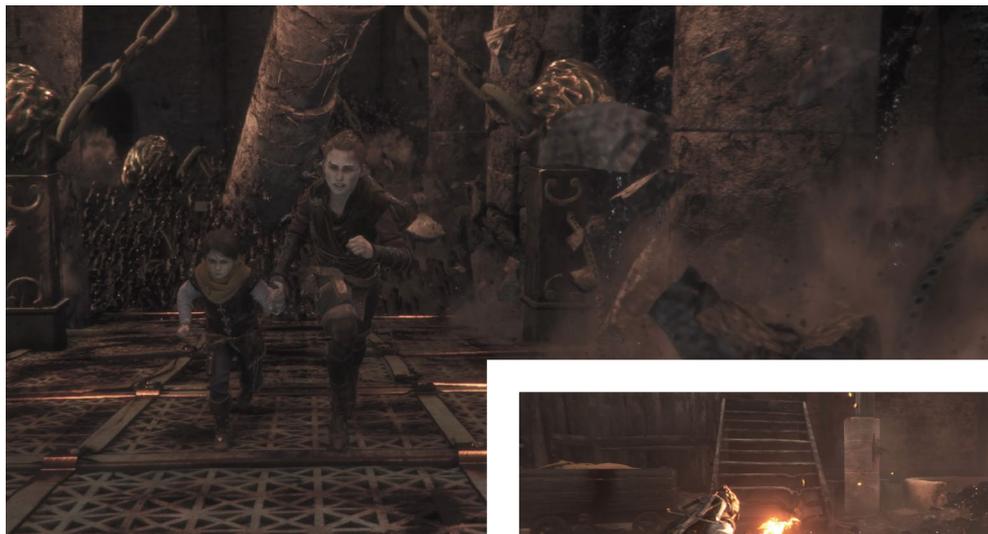
I say this as, rather than leave gameplay mechanics and narrative completely disconnected, there's an attempt here by Asobo Studio to marry them by infusing almost every combat and stealth scenario with a strong element of choice. As before, Amicia immediately comes equipped with her trusty sling with which to take out foes, of course, but should you choose to have her sneak up to one and strangle them or kill them with a bolt from afar using her new crossbow, companion characters will often comment and criticise her questionable methods. Surprisingly, these canned vocal barks were enough to make me rethink my strategy on more than one occasion.

There's now plenty of opportunity to do so, too, thanks to environments this time around

REVIEWED BY  
Aaron Potter



▲ Most stealth sections begin with you entering from above, allowing you to scope the area before tackling its challenges.



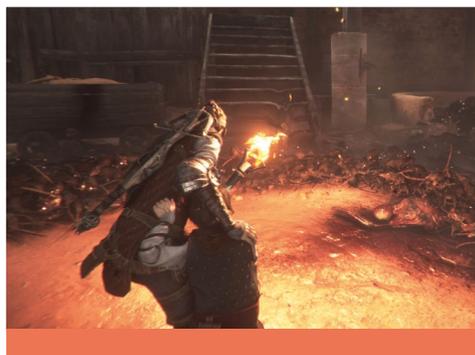
being far more open. Whereas sneaking encounters in *Innocence* mostly felt like they were guiding you down a linear path, with slight options to dart from this element of cover to that in a bid to light the next rat-dispersing bonfire, *Requiem's* are a totally different beast. Because in addition to being able to, say, creatively change the flow and direction of rat hordes using Amicia's bag of alchemy tricks (Ignifer, Exstinguis, and other projectile recipes return), entire chunks of environment can pass you by, depending on your approach.

Skipping through an enemy gauntlet without exploring lessens the risk of getting caught, sure, but will also rob you of any discoverable resources that could otherwise upgrade Amicia and prepare her for tougher sections later.

A slightly more haphazard approach to this increased freedom is found in *Requiem's* newly embedded skills system. Good in theory but only limited effect in execution, skills sit separately from the returning upgrades tree, functioning organically in that you have no control over when or how Amicia gains them. Split into three categories – Prudence, Aggressive, and Opportunism – she'll learn each naturally, depending on your chosen style of play.

Problems quickly arise, however, because later skills in any given category are kept hidden, which may drastically influence the one you may wish to focus on. Then there's end-game sections that purposefully impose stealth, leaving players who have prioritised Aggressive inherently handicapped through no fault of their own. This isn't to say that skills detract from this sequel's broadened scope; they just don't necessarily add much, either.

### “A whopping 300,000 rats on screen at any one time”



Due to the significant advances made to Asobo's engine, much has been said about *Requiem's* ability to depict a whopping 300,000 rats on screen at any one time compared to *Innocence's* 5000. And I'm pleased to report

that it's more than just a nice soundbite to stick on the back of the box. True, scenes containing this colossal amount of rabid little blighters are mostly reserved for set piece moments where you're forced to run, or simply step back in awe and take it all in, but it's a great intimidation tactic that excellently raises the stakes of whatever task next lays ahead of you. Hugo's new-found ability to command rats from a first-person view is far more game-changing, by comparison, helping you make light work of enemies providing you don't push the boy past his limit.

*A Plague Tale: Requiem* makes some excellent strides developing the relationship between its two central characters, and the sheer amount of creative freedom it allows players to undertake using Amicia and Hugo's expanded skillsets.

However, with many of its newly implemented mechanics only having a peripheral impact on gameplay, and a meandering, ill-paced plot compared to that of the original, this second outing is a tad less focused. Still, don't let that dissuade you from experiencing one of the most heartfelt and nuanced sibling portrayals seen in gaming. 🐭

◀ The full force of *Requiem's* colossal rat numbers mostly come into play in set-piece chases.

◀ Just as in the original, keeping the rat hordes at bay is sometimes as simple as keeping a torch lit.

## HIGHLIGHT

Hugo's rat-controlling powers are so overpowered, *Requiem* cleverly finds ways to take this ability out of the equation at certain points, either by separating him from Amicia or making rats absent. This makes sequences where you're allowed to overrun guards using an army of rodents even more thrilling.



## VERDICT

**Narratively and environmentally broader in scope but slightly messier as a result, *Requiem* is still a worthy sequel.**

# 76%

Rated  
Review

## HIGHLIGHT

It goes without saying that *Shovel Knight Dig* looks gorgeous. With an expanded colour palette compared to the original *Shovel Knight*, its characters – both new and returning – are more vibrant and packed with personality than ever. Dandyish shopkeeper Hoofman is a particular favourite.

^ *Dig* can be tough, especially in the early going, but there's a wealth of accessibility options if you want to blunt the challenge a little.

Review

# Shovel Knight Dig

Fun down under

**Y**ou're on a constant knife-edge in *Shovel Knight Dig*. Between success and failure; between elation and fury; between ending a run in gem-studded glory and dying alone at the bottom of a pit. In collaboration with British studio Nitrome, Yacht Club Games has taken the bouncing shovel attack mechanic from the original *Shovel Knight*, fused it with the vertically descending stages of *Mr. Driller*, and wrapped it all up in the semi-random generation framework of a rogue-lite. The result is an action-adventure that constantly urges you to dig deeper into the hazard-filled caverns below – a swinging circular blade loitering above you providing added motivation – while simultaneously teasing you with shiny diversions on either side.

Often, the temptation of risk and reward can be agonising, because you're having to make decisions in a fraction of a second: do you test your jumping skills to get to an out-of-the-way treasure chest or other trinket, or do you ignore it and continue your descent? The agony's made all the more delicious because the assorted trinkets are so vital to your progress – sooner or later, you're going to die, but you can at least spend the gems you've amassed in the hub world back on the surface.

As you progress, the little community on the surface grows with colourful new characters, and several of them – a flamboyant shopkeeper here, an armourer there – will offer permanent upgrades you can buy with your hard-earned gems. Other items, meanwhile, can't be purchased directly – instead, crossing a merchant's palm with gems will only give you the *chance* of stumbling on your chosen

item on the next dig. It's a design choice that highlights just how harsh *Shovel Knight Dig* can be: on one hand, its stages shower you with the tiny dopamine rushes of overflowing treasure chests and hidden rooms stuffed with loot, but on the other, it's constantly snatching away your earnings with a randomly placed spike or some other trap that you've barely had time to avoid.

One run was cut brutally short when a floating enemy miniaturised me at just the wrong moment, leaving my tiny knight unable to leap up to the one platform that would lead me to safety. A few fruitless jumps at the agonisingly out-of-reach ledge later, and I'd been slaughtered by that ever-descending blade.

Such moments are infuriating but thankfully rare. All the same, you'll have to get used to a considerable amount of repetition in *Dig*, at least until you start to unlock things like fast-travel and better equipment that will help you make it through some of the more difficult, later stages and their increasingly ornery bosses. With that repetition, though, comes an increasing appreciation for what *Dig* gets so wonderfully right. The controls feel intuitive and spot on; the joy of heading into the mouth of danger and retrieving the three cogs that unlock extra upgrades at the bottom of the current stage is difficult to understate.

In more cynical hands, *Dig* could've wound up as one of those mobile games that constantly nags at you to spend real-world cash on upgrades. Instead, it's another *Shovel Knight* spin-off that beguiles you with its charming presentation, and sometimes dazzles you with the breadth of its ideas and secrets, even as it infuriates you with yet another streak-ending death. 🗡️

## Info

### GENRE

Dig-'em-up

### FORMAT

PC (reviewed) / Switch  
Mac / iOS

### DEVELOPER

Yacht Club Games,  
Nitrome

### PUBLISHER

Yacht Club Games

### PRICE

£19.49

### RELEASE

Out now

### SOCIAL

@YachtClubGames

### REVIEWED BY

Ryan Lambie

## VERDICT

A hectic rogue-lite made with palpable affection and craft.

81%

HIGHLIGHT

Every now and then, the game will throw in a pixel-art close-up at dramatic moments or when key characters are introduced. It's a neat cinematic trick, adding to the disconcerting atmosphere. In particular, the sudden appearance of a ghoulish cat near the beginning is a brilliant piece for foreshadowing.

Review

# The Excavation of Hob's Barrow

This is a local shop for local people; there's nothing for you here

**H**ave you ever watched *The Blood on Satan's Claw*? It's a deep cut, I know, but it's also a masterclass in 1970s British folk horror – and the film that immediately sprang to mind when I started playing *The Excavation of Hob's Barrow*. I suspect the developers are fans.

Both the film and the game involve villagers digging up something that really should have been left in the ground. In the case of the 1971 movie, it's a deformed skull of possibly demonic origin. In the case of the game, it's whatever lies inside Hob's Barrow – which I won't spoil for you here. But suffice to say that when you do eventually discover the grave's secret, it kicks off one of the most memorable and disturbing video-game denouements I've seen.

Not that the game's particularly scary, per se. This is a slow burner, a delightful exercise in building tension and cultivating an unsettling atmosphere, punctuated by the occasional wyrd happening with an emphatic 'y'. We're in folklore territory, and the locals don't welcome outsiders.

You play as Thomasina Bateman, a Victorian archaeologist invited to the remote village of Bewlay to excavate the ancient and mysterious Hob's Barrow. But when you arrive, your contact – the wonderfully named Leonard Shoulder – is nowhere to be found, and the locals are far from keen on your presence.

It's strongly reminiscent of *The Wicker Man*, with a city-type blithely blundering around

in a rural society that has its own ways of doing things.

The game sees you pointing and clicking your way around Bewlay, collecting and combining objects in the age-old fashion of *Monkey Island* and its ilk: indeed, the graphics themselves are a wonderful pixel-art ode to the LucasArts point-and-click classics of the early nineties.

That said, there are a few modern quality-of-life improvements to ensure the game is never quite as frustrating as its glorious but occasionally annoying forebears: a tap of the space bar highlights all interactive objects in each area, and a map screen allows you to zap between areas in an instant. A hint system would have been a useful addition, but generally the puzzles are intuitive enough to see you get by without too much trouble. The only irritations I encountered were when searching for a way to progress the story. Often, it's a case of wandering around to see what's changed.

But what a story! I found myself fully drawn in by this eerie village of strange characters, each of them richly drawn in a figurative sense if not a literal one. It helps that the dialogue and voice acting are excellent throughout, and Thomasina herself is a likeable Victorian heroine, a headstrong feminist pioneer in a man's world, tirelessly fending off queries about why she doesn't have a husband. In short, Cloak and Dagger has created a world that is a delight to spend time in. I'm just glad I don't live there. 🐾

▲ The Plough and Furrow pub is your main base of operations in Bewlay

Info

**GENRE**  
Point and click

**FORMAT**  
PC (reviewed) /  
Mac / Linux

**DEVELOPER**  
Cloak and Dagger  
Games

**PUBLISHER**  
Wadjet Eye Games

**PRICE**  
£11.39

**RELEASE**  
Out now

**REVIEWED BY**  
Lewis Packwood

VERDICT

A brilliant slice of British folk horror that charms and unsettles in equal measure.

82%

Rated  
Review

## HIGHLIGHT

Taking the reverse gear away is a bold design choice: the moment you stop, your attempt is over. But it pays off, not just differentiating *You Suck at Parking* from a slew of similar games, but also severely reducing your margins for error and raising the stakes every time you accelerate.

Review

## Info

### GENRE

Arcade racer

### FORMAT

PC (tested) / XBO /  
XB X/S

### DEVELOPER

Happy Volcano

### PRICE

£16.99

### RELEASE

Out now: PC / XB  
TBD: PS / Switch

### REVIEWED BY

Alexander  
Chatziioannou

## VERDICT

Engaging enough if you're competing with friends, *You Suck at Parking* meanders otherwise.

54%

# You Suck at Parking

P marks the spot

**Y**ou'll be relieved to know it's not a personal reproach: judged by Happy Volcano's exacting standards, most of us fall short. Even if you've aced real-life parallel parking, driving school never took your reverse gear away and asked you to slide onto the P slot while frozen solid into a sedan-sized block of ice, buffeted by hurricane-force gusts, or reduced into a smouldering wreck by a bounce-happy police car. Oh, and there's no curb to gently bump on if you slightly misjudge your steering, either. You simply plunge into the watery abyss below, while an angelic choir accompanied by a bubbly pop tune croons (mockingly? sympathetically?) "You suck at parking".

The game's suspended tracks and zoomed-out perspective recall Funselektor's *Absolute Drift*, but both the hypersensitive physics and sense of urgency betray a deeper debt to *Trials HD*. Your task is to drive, tumble, or skid onto a series of designated spots as fast as possible, with success measured on the fractions of a second you managed to shave off previous attempts (or your friends' best times), and whether you've completed the course without crashing. It's a design philosophy that relies on players' muscle memory doing the heavy lifting, the nuanced demands of each short dash etched on your synaptic pathways after every botched try.

Complicating things are a number of environmental hazards, from the oversized pinball bumpers that violently eject you at the slightest contact, to revolving gates you have to perfectly time your drift to swerve through. At first glance, advanced courses are intimidating,

wild tangles of criss-crossing asphalt flanked by amusement park props suggesting myriad different trajectories, despite their relatively contained acreage. Once you start focusing on individual parking spots, however, the ideal route to each becomes almost immediately (perhaps even a bit underwhelmingly) clear.

Of course, knowing the route is the easy part. The real challenge is retaining grip over a 90-degree incline or landing on a tiny stretch of road after jumping across a gaping chasm to get there. Controls are instantly pleasing, nailing a perfect balance between responsiveness and skittishness, so the basic act of steering never loses its sheen, even when other elements in the game begin to tire. In particular, there's something calculating about the way *You Suck at Parking* chops up its levels into uniformly manageable challenges, an almost assembly-line sensibility in its rationing of just-so difficulty: a couple of disastrous runs followed by triumph, an assortment of superfluous progression rewards, then being rushed off to the next course.

The aura of cynicism is reinforced by the Games-as-a-Service philosophy that permeates the periphery of the experience, from the heavily monetised (yet still bland) customisation options to the banners about in-game purchases plastered all over the introductory screen. Pleasantly chaotic multiplayer matches aside, the initial appeal of *You Suck at Parking* soon wanes. Whether undermined by the strictures of an anti-creative business model or simply uninspired level design, its gratifying driving mechanics end up wasted in service of a disposable product. 🗑️

## HIGHLIGHT

New York City, Philadelphia, and San Francisco provide so many excellent skating spots to hit up. You can switch between them in an instant, and roaming around these locales listening to lo-fi beats is delightful; there's a real calming quality to *Session* despite its challenging control scheme.



Review

# Session: Skate Sim

Heaven is a well-timed kickflip

**S**izing up the environment, I lay down my session marker. This is the spot. Ahead of me, a rail overlooking the street below offers the perfect opportunity to showcase my skills. A hardflip into a frontside noslide is the goal, and I'm already thinking about the quality footage I'm going to edit in the Replay Editor. I roll the board out in front of me and build up some pace, mistime the ollie, and bail, so I go again. Only this time I hit the rail and crash to the floor.

Forty-five minutes pass. I've stopped even attempting the hardflip and I'm focused solely on the noslide. I time it to perfection, with just the right speed, and I'm grinding along only to spot a bin a little further ahead. I have no time to adjust my feet before the board clips the bin and I go tumbling to the ground. It takes me a further ten minutes to land something worthy of recording, and only then do I realise it's taken me an hour to land one trick.

*Session: Skate Sim* is marketed as an ultra-realistic skateboarding game made by and for skaters, and this couldn't be more accurate. It's a technical marvel – albeit with a few technical hiccups – and epitomises this new era of skateboarding on a home console. Where *Tony Hawk* games were arcade-orientated, and *Skate*

a little more sim-like, *Session* doubles down to deliver an incredibly complex game that isn't for the casuals.

Gone are the score multipliers, the outrageous 900 spins, and the oftentimes ridiculous level objectives. Instead, *Session* provides a playground that you can explore at your own pace either on foot or on board. You'll size up jumps, spot new rails, and craft interesting lines that you'll pour hours into perfecting. It's a game all about self-motivation.

When things aren't going to plan, you can head to the settings and tweak options like the truck tightness, the wheel grip, and even the friction while on a grind. You can go one step further and adjust gravity, the pop height, and even your body rotation rate. There's a serious amount of customisation available, which makes the game slightly more approachable to the average player. It's necessary, too, because those twin-stick controls are difficult to master.

crea-ture Studios Inc., the indie development team from Canada, has also included a story mode of sorts which attempts to act as a tutorial. But, sadly, it's poorly executed, with little direction, no voice acting, and mission objectives that don't always register. This attempt at a story simply wasn't needed, especially as *Session* is all about mastering the art of skateboarding over time, and it very much feels like an afterthought.

There's a section within the menus aptly labelled 'Experimental', giving players the option to enable features that are currently in an early stage of development. *Session* feels very much an experimental game – one you'll either absolutely adore, or quickly skate over. 🤖

## Info

**GENRE**  
Simulation, sport

**FORMAT**  
PS5 (reviewed) / PS4  
XB X/S / XBO / PC

**DEVELOPER**  
crea-ture Studios Inc.

**PUBLISHER**  
Nacon

**PRICE**  
£49.99

**RELEASE**  
Out now

**SOCIAL**  
@actionofcreate

REVIEWED BY  
Shaun Hughes

## VERDICT

*Session: Skate Sim* is delightfully difficult, extremely technical, and oh-so-satisfying.

# 75%

✓ The ragdoll physics help to develop a sense of realism – the results are either remarkably accurate or absolutely hilarious.



Rated  
Review

## HIGHLIGHT

Despite what might appear to be limited gameplay mechanics, over its months of Early Access, *Vampire Survivors* has been lovingly chiselled, reaching a delicate balance of risk/reward and choices/automation.



Review

# Vampire Survivors

Sucking up blood, pasta, and all your time

**H**ow and why a hit is born is not an easy thing to explain. Sometimes it's about reaching a devout audience or filling a specific niche, other times just being in the right place at the right time. For *Vampire Survivors*, it was definitely all of the above. The action RPG took off suddenly at the start of 2022 and has been on a winning streak ever since.

*Vampire Survivors* hits a sweet spot, straddling the line between being a hardcore 'one more run' experience and yet one that's also oddly relaxing. The gameplay loop is all about choosing a character (usually a family member named after a famous Italian cheese) and going out to hunt creatures of the night. Attacks, however, are performed automatically, with player interaction limited to just moving around to pick up XP gems, coins, and bonus items.

Collect enough gems and you'll spin the wheel. In which direction will your character level up: attack, defence, or magic? Each choice influences the run in many ways and, with characters having different strengths and weaknesses, there are endless approaches in which to tackle the stages. Perhaps you want to command an aggressive

run as a whip-slashing Belmont-like warrior, or a *Bewitched*-influenced broom-riding witch. Or, perhaps, it's one of those days where you want to be a dog which farts deadly flowers. Seriously.

Along with coins, your chances of surviving are enhanced by collecting health-restoring items like turkeys, along with gobbling down spicy fried salami that can incinerate enemies. By reaching certain achievements, you unlock new weapons, new stages, and loads of hidden bonuses as well as new characters. Enemies usually come in waves, and while they might be few at the start, it won't be long until the stage will be chock-full of skeletons, mummies, and carnivorous plants. The ensuing chaos comes rendered in 8-bit style graphics, which have an understated simplicity as far as its obvious *Castlevania* inspirations go.

*Vampire Survivors* is all about secrets and memes, many of which will fly over the heads of non-Italian audiences (like the weapon 'Eight the Sparrow', a direct translation of Italian band Latte e i Suoi Derivati's cult hit, *Otto il Passerotto*). Still, they're entertaining to experience, like garlic creating a deadly aura or a skeleton character called Mortaccio (quite close to a rude word in Roman dialect) who throws his own bones around. Furthermore, there are Arcanas: tarot cards that further modify the gameplay – for example, by making projectiles explode on impact or halting XP progression.

Cheaper than pizza, *Vampire Survivors* offers hours of entertainment and tons of content, with developer Poncle promising that new stuff will also be added following this full release. While the slight lack of interactivity might not make it ideal for players who love to spend hours wracking their heads over the best strategy to defeat a boss, it does mean everyone can easily sit down and enjoy a slice of vampiric goodness. 🍷

## Info

**GENRE**  
Action RPG

**FORMAT**  
PC

**DEVELOPER**  
Poncle

**PUBLISHER**  
Poncle

**PRICE**  
£3.99

**RELEASE**  
Out now

**SOCIAL**  
@poncle\_vampire

**REVIEWED BY**  
Damiano Gerli

## VERDICT

*Vampire Survivors'* delicate balance of risk and reward makes for an almost-perfect action RPG, providing endless replayability spiced with tons of Italian-related humour.

89%



▲ It's not often you get to play as a guitar-wielding winged demon firing deadly spikes.

BLOOD

BODIES - 4

EVIDENCE - 2

Rated  
Review

Review

# Serial Cleaners

All Cops Are Bozos

**M**embers of the police force might be embarrassed by their representation in *Serial Cleaners*. Not because they're shown to be corrupt or racist, though, just irredeemably stupid. This nineties-set sequel to *Serial Cleaner* distils gamified stealth systems down to such abstractions that they lose all connection with reality. The result sees you conspicuously park your car right outside a crime scene and proceed to clear the place out right under the cops' noses. Should they spot you, simply retreat and hide behind the vehicle you've been casually stuffing with bodies and they instantly turn back to their stations.

Still, there is something amusing about passing unnoticed right behind an officer of the law with a corpse slumped over your shoulder, and the simple rules in *Serial Cleaners* help the game flow. The aim on most levels is to dump all bodies and evidence then clean up the blood with, erm, a vacuum cleaner. To do so, you criss-cross neatly crafted playsets peppered with unlockable shortcuts, noise distraction items, and hiding spots. They're neat because your activities naturally prompt you to learn the ins and outs of an area, figuring out the best routes to each macabre prize, while displays of dotted lines provide clear indication when you're in sight or sound range of a cop.

Although layouts become more complex as the game progresses, the routines barely change. You control one of four cleaners, in levels made to accommodate their specific

abilities – creeping through air vents, for example, or knocking out cops by throwing objects – but the difference is largely negligible. Because guards are so dim and inattentive, often you may as well simply dart into the spaces behind them, clean until they notice, run and hide for a bit, then repeat. For all the intricacy in the maps, they never feel like masterful puzzle boxes, even when you're given the opportunity to switch between characters mid-level to call on bespoke skills.

The repetition also grates because *Serial Cleaners* lacks a strong story to act as mortar between the bricks. Chapter interludes paint a seedy picture of 1990s gangland New York, and biographical flashbacks are meant to add pathos, but elsewhere your crew are no more than flat cartoon characters – one is called Psycho and carries a chainsaw, one a young hacker who litters her speech with ageing internet abbreviations. You won't LOL. Indeed, there's a tonal incoherence to the script in general, as gangsters call each other "bozos" in one scene, while another is peppered with f-bombs.

*Serial Cleaners* is thus neither a gritty crime scene cleaning sim nor properly slapstick and comedic. Either it needs to give its characters dramatic power and add serious detail to its mechanics, or drop any such pretence and capitalise on the sheer silliness of a game about stealth hoovering. As it stands, the only thing that's consistent here is police incompetence, which may be vaguely satirical, but rarely makes for an arresting experience. 🗑️

## HIGHLIGHT

One character that does make things a little more exciting is would-be artist Lati. As well as distracting cops with hastily sprayed graffiti, she can interact with scenery more than the others, by vaulting low walls or shifting trolleys out of the way. This adds a dynamism that the game otherwise lacks.

## Info

### GENRE

Third-person stealth

### FORMAT

PC (reviewed) / PS4  
PS5 / Switch  
XBO / XB X/S

### DEVELOPER

Draw Distance

### PUBLISHER

505 Games

### PRICE

£11.39

### RELEASE

Out now

### SOCIAL

@SerialCleaners

## REVIEWED BY

Jon Bailes

## VERDICT

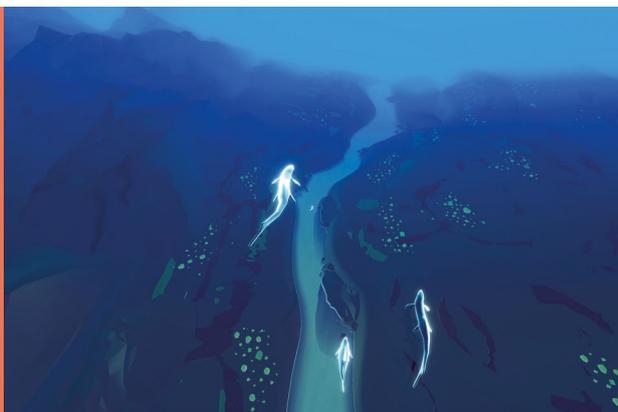
Repetition and tonal inconsistency mar an otherwise passable stealth game.

# 52%

Why not try...

# Itch.io roundup

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



## Atuel

Matajuegos / Name your own / [wfmag.cc/atuel](http://wfmag.cc/atuel)

Named for the Argentine river and canyon, *Atuel* describes itself as a 'surrealist documentary'. Bright visuals and a mesmeric soundscape accompany spoken interviews on the river's history, geology, and its significance to both conservationists and indigenous peoples. Inhabit fish, clouds, birds, and the river itself as you flow along with it. Save a fox from a forest fire, then bound along the plains as the same fox, your coat glowing from the low-hanging moon. A meditative game about the magic in the mundane.

## Tenjutsu

Deepnight Games / Free in browser / [wfmag.cc/tenjutsu](http://wfmag.cc/tenjutsu)

This isometric beat-'em-up lets you do two things to defend your besieged dojo – attack and dodge. Now, these are both satisfying enough on their own. A springy, responsive dodge roll gets you out of harm's way with ease, and a punch-punch-kick combo pairs with crunchy sound design to keep combat engaging. But the real trick here is in the name. You can't kill enemies at first, only knock them out, which generates collectable skulls. Collect the skulls and attack, and the enemy becomes 'marked'. Every ten seconds, all marked enemies go down for good. Throw in elites that take a few more skulls than normal, and *Tenjutsu* becomes a wonderfully measured action-puzzler full of bite-size violence.

## Betrayal at Club Low

Cosmo D / \$9.99 / [wfmag.cc/clublow](http://wfmag.cc/clublow)

While perhaps a higher profile than your average pick, *Betrayal at Club Low* embodies Itch's anarchic DIY spirit like few other games. You play as either a spy disguised as a pizza deliverer or a pizza deliverer moonlighting as a spy. I'm still not entirely sure, but hunting down rare ingredients to give bonus 'pizza dice' in tough encounters is consistently brilliant. If you enjoyed the scene right at the beginning of *Disco Elysium* where you can accidentally have a heart attack after switching on a light bulb, and fancy a whole game of similarly chaotic consequences at the whims of a surprisingly addictive dice minigame, this one's for you.



## Still Ridge Prologue

Jaybee / Name your own / [wfmag.cc/stillridge](http://wfmag.cc/stillridge)

This point-and-click puts you in the shoes of Omar Fletcher, a therapist with the ability to travel through his patients' dreams and subconscious, brought to life through "cutting edge graphics and effects from the year 1996". I was drawn in by a tone between surreal and horrific, but never nihilistic, and clever puzzles that don't overstay their welcome. But *Still Ridge's* greatest strength is how deeply empathetic and grounded in human struggle its conflicts are, in contrast to the detachment that can accompany some surrealist approaches to storytelling. 🗨

This month's bonus game, it turns out, was inside of us all along.

# ▶ STREAM OF CONSCIOUSNESS

## Kinda Funny's **Andy "Nitro Rifle" Cortez** on making a career out of streaming

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

*Mass Effect 2* sort of began a new phase in gaming for me. It reignited my passion for the hobby. Not only do I love big space adventures, but forming bonds and friendships with crewmates was so much cooler than I ever could have imagined. Knowing that some characters may not show up in the game if I killed them in the first *Mass Effect* blew my mind. The fact that 2 used the first game's save data to bring that information along was so next-level for me. As much as I loved the original *Mass Effect*, I rushed through it to get to the sequel, and I wasn't really able to digest the nuanced storytelling and themes about humanity until I replayed it more recently.

### Is there a type of game you prefer streaming over others? If so, why?

I love playing multiplayer shooter games because you can turn your brain off and just have fun with friends. Most people got healthy or learned how to garden or cook during the pandemic. I learned how to play PC shooters on keyboard/mouse, and it's always fun challenging myself to get better. As much as I love streaming single-player games, my brain isn't always prepared to absorb the story, solve puzzles, and take down bosses while also trying to entertain and make people laugh. I end up not hearing certain lines of dialogue or missing the most obvious hints or items. Damn ADHD.

### Has there ever been a time where you feel like you needed to take a break from gaming/streaming?

I've never felt the need to take an extended, purposeful break from streaming. Since we're usually on camera performing and talking during the day at Kinda Funny, I don't mind taking the night off if I'm feeling too tired. I'm so thankful

we have a community that understands [if] I'm not always up for it. Sometimes I'll take unintended breaks from streaming if I'm playing a game for review and can't stream it due to embargo limitations.

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

Streaming is my part-time job, and I try my best to treat it as such. Having the extra revenue stream is so helpful when living in San Francisco. I also love streaming because I sort of look at it as a catalogue for my gaming history. Near the beginning of the pandemic, I started a YouTube channel because I noticed there was a demand from the audience that wished they could watch my playthrough of *Bloodborne*. It's one of my biggest gaming regrets. *Bloodborne* became an immediate top-five game of all-time for me, and I wish there was a way I could see myself react to certain moments again. Almost like looking through a photo album and thinking about where you were in your life during that time. 🗨️

Watch Andy regularly stream on Twitch at [wfmag.cc/maximumcortez](https://www.twitch.tv/maximumcortez)



**"I wish there was a way I could see myself react to certain moments again"**



# The Wireframe **HOTLIST**

Wireframe's best-reviewed PC games, with something for all tastes



## 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 Games / **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)

**Immortality** / Sam Barlow, Half Mermaid / **88%** (Issue 67)

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

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

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

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

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

# PC Top 10



## The games for... HIGH-INTENSITY PLAY

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

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

**Vampire Survivors** / *Luca Galante* / **89%** (Issue 68)

**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)



## The games for... CURING THE INDIE ITCH

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

**Can Androids Pray**

/ *Natalie Clayton/Priscilla Snow/Xavier 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)



**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.

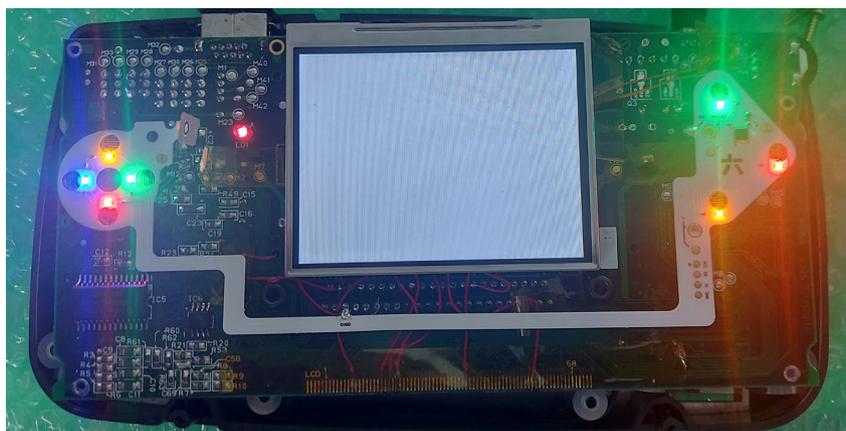
# Backwards compatible

WRITTEN BY RYAN LAMBIE

## The Light Fantastic

The Sega Game Gear may be the handheld console equivalent of those people in red shirts from *Star Trek* (sooner or later, they always die...) but there's now an abundant supply of mods that help you (and your soldering iron) rescue these leaky, ageing devices from their sorry fate. But let's say you've replaced all your Game Gear's capacitors, added a modern display, and maybe even modern LiPo batteries and a USB-C charging port. What then? What's left for the Game Gear that has everything? The next logical step, we'd argue, is to add a bit of bling. With this in mind, we got our hands on RetroSix's new CleanLight GG – a svelte mod that adds tiny LED lights to the console's D-pad, buttons, and (optionally) the power indicator.

Like many of RetroSix's recent offerings, it comes on a flexible PCB with soldering points clearly marked, which means there's no need for any fiddly wiring. You'll still need to be at least somewhat proficient with a soldering iron, but let's face it, if you own a Game Gear and it actually works, you're probably a confident repairperson already.



The first step is to take your Game Gear to bits; the CleanLight fits to the front of the console's motherboard, which means it has to be completely removed from its shell. This means the removal of a fair number of screws, not to mention some careful handling to avoid getting unsightly finger prints on your screen or disturbing any mods you've already carried out. With the motherboard facing you, screen side up, the CleanLight fits neatly over the button contacts as shown in the images you can see here; you'll then need to solder a handful of points to secure the mod to the motherboard at the points marked ground, 5V, Start, and Button 1.

If you want to take advantage of the CleanLight's replacement power light, you'll have to remove the existing LED lamp from the Game Gear's motherboard. Not that this is tricky to do; heat up the solder on the back of the component, and it should come away quickly and cleanly. If you'd prefer to keep the existing light, you can fold the part of the CleanLight's flexible board nearest the LED under itself (as we did) or trim it away entirely.

With that done, the mod's essentially finished. What you will need, though, are a set of clear rubber pads and some translucent buttons. We couldn't get our hands on the latter this month, but we'll rectify this next issue and show you the results. What we can do, though, is see the LEDs working, and they're pretty dazzling – which makes the built-in brightness function all the more handy. Hold down Start and Button 1, and the LEDs will cycle smoothly through lighter and darker phases. Once you've picked a brightness you're happy with, the CleanLight will remember that setting – even after you've turned the console off. Pretty nifty.

So there it is: an easy-to-install and, at £8.40, relatively affordable mod for your Game Gear. It's available in a variety of colours as well as the rainbow version you can see here, and there are also other flavours of CleanLight designed especially for the Game Boy Advance and Game Boy Color.

Now we just need to order a set of those translucent buttons...



## Posh Boy

On the subject of adding bling to handheld consoles, this recently unveiled replacement shell for the original Game Boy caught our eye this month. Designed by US firm Boxy Pixel, it's a straight swap for the Game Boy DMG's existing plastic shell, and comes with a wider aperture to support modern replacement screens. Machined from solid aluminium, it's sleek and luxurious-looking, and available in an assortment of colours if plain metal isn't your thing. All this luxury does have a hefty price tag, though: the equivalent of £127.54 at the time of writing, and that's before you've added matching aluminium buttons or shipping. If you're feeling flush, the full range is at [boxypixel.com](http://boxypixel.com)



## Castle Masterstein

We've seen *DOOM* appear on everything from a digital camera display to an ATM, but how about *Wolfenstein 3D* on the Master System? Thanks to homebrew programmer 'under4mhz', id Software's 1992 first-person shooter is in the process of getting a belated port to Sega's 8-bit console. This might not sound like much of a tall order, given that *Wolfenstein 3D* came out while the Master System was still in production. But when you bear in mind that the console was underpinned by an ageing Z80 processor running at 4MHz, the scale of the porting challenge becomes clearer.

Basically, under4mhz has managed to get *Wolfenstein 3D* running on the same processor used in the ZX Spectrum and Namco's *Pac-Man* arcade cabinet. Inevitably, compromises have been made: the game jerks along at about seven frames per second, there are no textures on the walls or doors, and there are currently only two types of enemies to shoot. Still, it's an impressive feat, and its creator plans to add more features that will bring it closer to the original DOS classic. You can read a lengthier breakdown on how the port works at [wfmag.cc/masterstein](http://wfmag.cc/masterstein)



## Waterworld: the indie game

Post-apocalyptic opus *Waterworld* made a cultural impact when it landed in 1995, just not the kind its star, Kevin Costner, probably wanted. A soggy box office disappointment, it became the butt of a particularly memorable joke in an episode of *The Simpsons* two years later: Milhouse encounters a *Waterworld* coin-op at a local arcade, which costs a gouging \$10 to play for a few measly seconds – a pointed nod to the original film's vast budget. A quarter of a century

on, and itch.io dweller Macaw45 has made that *Simpsons* sight gag into playable reality. Yes, you too can experience the joy of walking along for a bit, getting a Game Over screen, and then having to shovel fistfuls of quarters into the coin slot to continue. Instant game of the year. You can download this wry, surprisingly well-made masterpiece for yourself at [wfmag.cc/costnerworld](http://wfmag.cc/costnerworld)



# Backwards compatible

WRITTEN BY AARON POTTER

## One more quarter

Nestled in the corner of a restaurant staircase-turned-exclusive press area (true story) after a busy day EGX-ing at London's ExCeL convention centre, I'm treated to a beautiful sight for retro enthusiasts. No fewer than four quarter-scale replica arcade cabinets: *Polybius*, *Ms. Pac-Man*, *Teenage Mutant Ninja Turtles*, and its sequel *Turtles in Time*, all displayed and fully playable. The coin-ops come courtesy of Numskull, a merchandise company that has made some major strides in the retro gaming space in recent years, including the TUBBZ line of collectables that turns everyone from Shadow the Hedgehog to Leon S. Kennedy into a cosplaying duck. Just because!

The quarter-scale cabinets, meanwhile, have been around for a while, but this is the first time anyone's been able to get hands-on with Konami's recently reinvigorated two *Turtles* games in this form. The arcade shells themselves are built to a high standard, as you'd expect: they're made from metal and

premium wood to really recreate the feel of playing their authentic, full-scale predecessors from back in the day. A Numskull representative informed me that the company did once test out versions made using cheaper PVC, but that just didn't sit right and wouldn't do justice to the legitimacy the designers were hoping to capture.

In this and almost every other instance, wood is good. Especially since both *Teenage Mutant Ninja Turtles* cabinets are expected to put up with some relentless hammering, coming complete with four joysticks and eight buttons to truly emulate the original games' local four-player fun. Getting four game journalists hunched over and crowded around the quarter-scale *Turtles in Time* cabinet was a test, but eventually we managed it, and were battling members of the Foot Clan in no time. (Everyone knows that Donatello is the best turtle to play as due to the glaringly superior reach of his bo staff.)

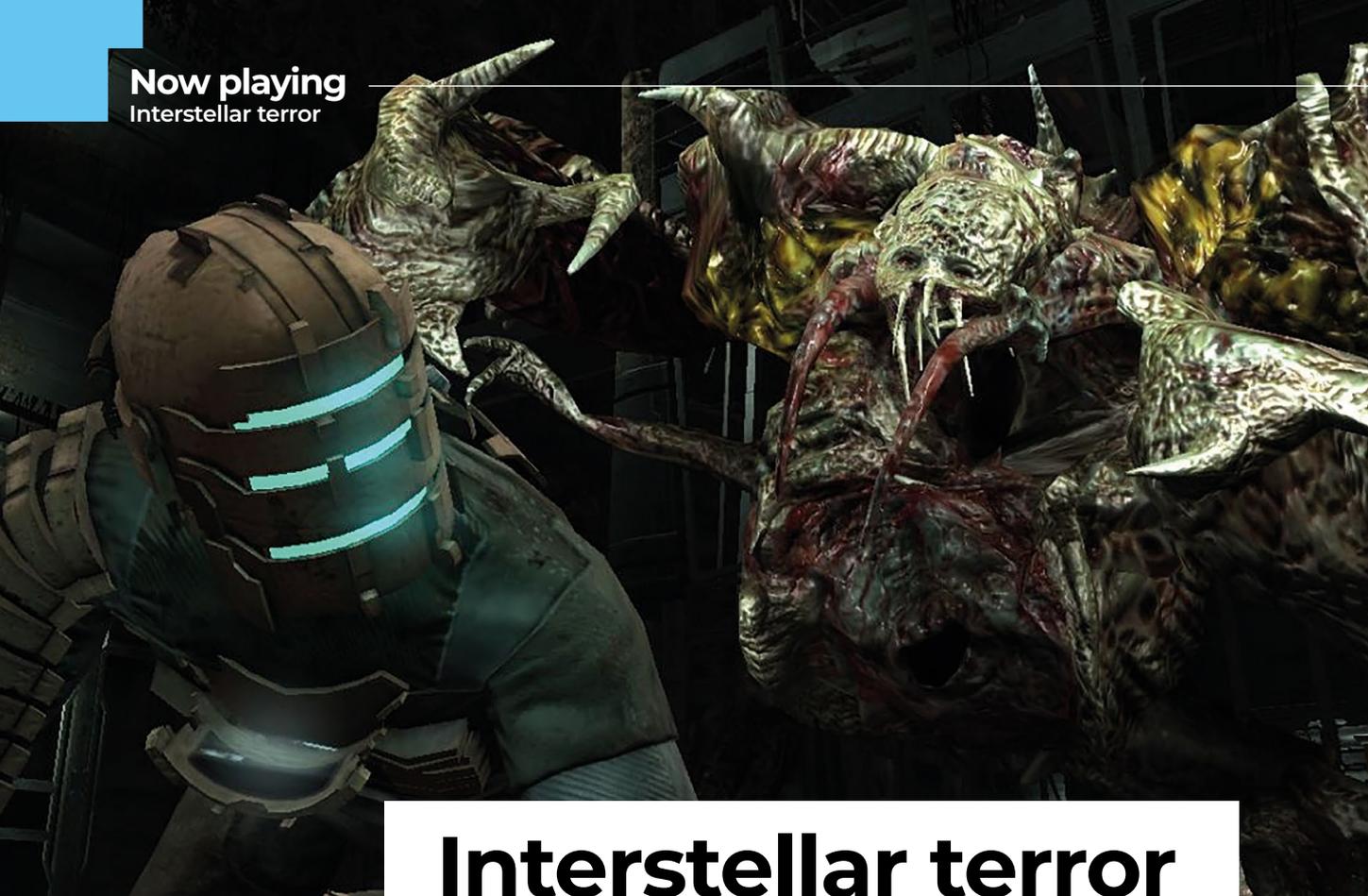
This brief instance playing Numskull's new cabinets does lead me to question just how much of a novelty they are, as opposed to a genuinely feasible way for new and old players to experience these classic arcade beat-'em-ups. With *Ms. Pac-Man*, for instance, it's extremely easy to enjoy the game comfortably despite its shrunken size, but I can hardly picture

a group of friends or a family of four opting to play the entirety of *Turtles in Time* all bunched up. Doubly so now that the recently released *The Cowabunga Collection* makes both games playable on modern home consoles.

That said, Numskull's quarter-scale cabinets were never really about ease of use; they're more interested in paying tribute to a specific moment in time, when a person could step into a room with a decent stack of coins and have fun getting lost in the bright lights of their favourite arcade screens. If either *Turtles in Time* or the *Teenage Mutant Ninja Turtles* arcade game was that for you, then the memories should flood back with one of these mini machines in your home. Grab one here: [wfmag.cc/four-quarters](http://wfmag.cc/four-quarters)







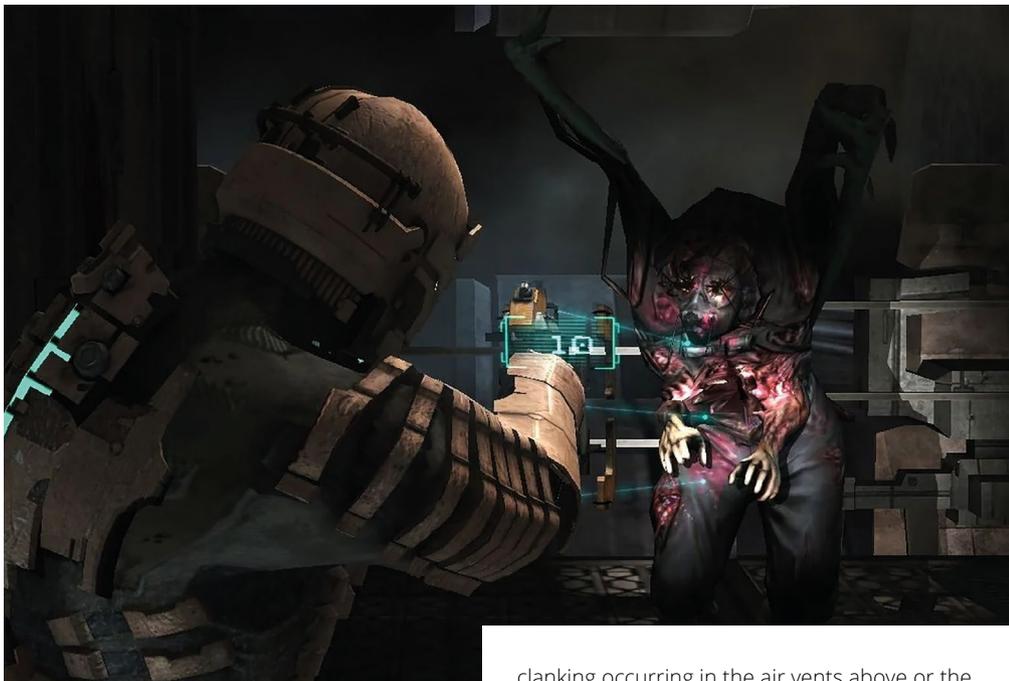
## Interstellar terror

Ahead of the *Dead Space* remake, Aaron boards the USG Ishimura to see whether its horror still cuts through

**M**aybe it's because I'm steeped in all things Halloween at the time of writing, or more likely it's a result of Graeme Mason's utterly excellent series retrospective featured in the last issue, but revisiting the original *Dead Space* this month has been an absolute thrill ride. Skulking around the dank, blood-drenched halls of the USG Ishimura, being mindful to check every corner with trusty Plasma Cutter raised, this is a survival horror game unafraid to take its time and bask in a slow pace. The dread constantly builds, and this confidence combines with some seriously effective scares to make me ponder: do we even need next year's remake at all?

Thanks to the miracle of Xbox Backward Compatibility, diving into *Dead Space's* gory delights is still an easy prospect for today's audience. It just depends on whether you have the stomach for it. One person who definitely has (although not by choice) is Isaac Clarke, the space engineer turned Necromorph-killing badass who serves as this story's unlikely protagonist. Docking with the USG Ishimura in the hopes of fixing the space freighter and finding out what happened to his girlfriend, Nicole, it isn't long before infected humanoids with way too many limbs start to pose a threat. Fortunately, the aforementioned Plasma Cutter is the perfect tool – literally – for the job. Slicing off legs, arms, and really anywhere but the head simply feels good, bringing with it a punchy weight as each round is fired off. Such a visceral sense of feedback is present in almost all of the weapons available to Isaac, really reinforcing the idea that he's just a regular Joe forced into an unfortunate situation. The entirety of *Dead Space* is built around this core act of dismemberment. And almost 15 years after it was first introduced, there's nothing else in survival horror quite like it. Targeting specific enemy parts avoids encounters from descending into endless firefights. Instead, you have to always think tactically, too. I will say that some of Isaac's weapons are more





successful in selling this sci-fi horror power fantasy than others. The Pulse Rifle, for instance, really is just the game's version of an automatic machine gun, only useful for keeping swarms of mini critters from getting too close and clawing your face off. Other weapons, meanwhile, feel like a natural extension of the Plasma Cutter's core capability. In-universe, the Line Gun was originally intended to cut down ore but works wonders for taking Necromorphs' legs out from under them at speed, while the perfectly-named Ripper allows you to temporarily control a spinning razor to cut around the torso any which way you prefer.

Such freedom in combat was unlike anything else at the time, and it still feels fresh now. I can only imagine what new horrors EA's remake will throw at us this January, but I can guarantee that they'll be fun to maim and destroy using this suite of engineering gear. Roughly two-thirds of the way through – after travelling from the mining deck to the bridge and back again – is when tougher variants of enemies are introduced. They move more erratically too, twitching in such a way that makes it much harder to get a lock on their limbs.

Equally as scary as the mutant abominations are the instances where you don't know where they are. These are the moments where *Dead Space's* eerily excellent sound design fully shines through to keep you on edge, whether it's the

clanking occurring in the air vents above or the constant creaks of the freighter settling. Yes, just settling... developer Visceral Games uses the USG Ishimura's mining systems as a means of keeping you constantly on edge; the dull, mechanical sounds smartly contrasted by the Necromorphs' ghoulish screeches – which, to be fair, is good encouragement to silence them sooner rather than later.

**“He’s just a regular Joe forced into an unfortunate situation”**

Whereas the sequels veered more towards horror action in an attempt to appeal to a broader audience, focusing less on the strict survival aspects, there's a purity to the first *Dead Space* that, for me, easily renders it as a modern classic.

Isaac Clarke might merely be a wordless vessel, but through him, players experience a sci-fi horror first promised by the likes of Ridley Scott's *Alien* way back in 1979: “In space, no one can here you scream”.

From everything we've seen of the remake so far, EA seems to have understood what made players fall in love with *Dead Space* in the first place. It's just a shame it's taken over a decade for them to return to it in any meaningful way. Regardless of whether this newly revamped version of Isaac's bad day at the office energises the series or falls on its face, the original remains a perfectly executed balance of creative combat and increasingly tense scares.

Don't be fooled by its title: *Dead Space* will always remain alive in the hearts of horror fans everywhere. 🗣️

## Wireframe Recommends



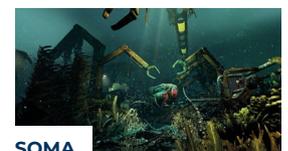
### **The Evil Within 2** PC, PS4, XBO

The sequel to Shinji Mikami's *Resident Evil 4* spiritual successor is stacked with creative ideas and sequences that explore the horror of the mind. It's not just your average missing persons case...



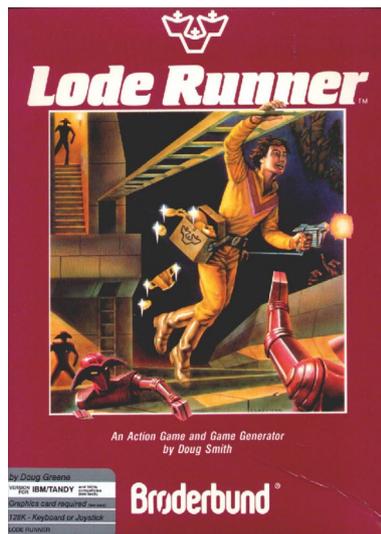
### **Resident Evil: Revelations** PC, PS4, XBO, Switch

What first started out as experimental spin-offs quickly returned the *Resident Evil* series back to its roots. The story in *Revelations* is messy, but its stormy ship setting really has atmosphere.



### **SOMA** PC, PS4, XBO

What makes us human? That's the question at the centre of Frictional Games' underappreciated first-person horror set beneath the sea. Just as scary as its *Amnesia* series.



# Lode Runner

How the eighties platformer's level editor gave players the chance to awaken their inner game designer

DOUG SMITH / 1983 / APPLE II, VARIOUS

Visually, it looked simplistic, but *Lode Runner* was forward-thinking in every other area of game design that mattered. The intricacy of its levels meant that collecting gold blocks and avoiding enemies required more thought and planning than most action games of the era. That the game shipped with 150 levels also gave *Lode Runner* more longevity than many other games released in 1983. What made *Lode Runner* a true cornerstone of gaming, though, was its level editor. Was it the first game to include such a feature? The do-it-yourself nature of the early games industry, where developers could self-publish their work and sell it through classified ads, makes it difficult to verify; certainly, it was the first high-profile commercial game to include such an editor. What's beyond doubt is the scale of *Lode Runner's* success, with worldwide sales numbered in the millions. This success meant that, in the space of a few months, *Lode Runner* turned a generation of players into unwitting level designers.

The brilliance of *Lode Runner's* level editor shouldn't be underestimated. The design of the game itself – all tiny 8x8 pixel tiles and simple enemy sprites – meant that creating your own stage layout was simple to grasp. The interface was also straightforward: move a flashing cursor around the screen and press any numbered key to lay a particular block (ladders, destructible floors, gold blocks, enemies, and so on). For anyone in the eighties who felt intimidated by the mere thought

of learning a programming language, *Lode Runner* offered a friendly, approachable means of getting into game design.

Computer magazines certainly recognised the possibilities of *Lode Runner's* level editor. US outlet Computer Gaming World ran a competition in a 1984 edition, with a prize of \$50 for the best-designed level. Entries were judged on their level of challenge, complexity, and “visual appearance”.

Nor was *Lode Runner's* level editor restricted to its home computer versions. The NES port, first released in Japan in 1984, was heavily revised by publisher Hudson Soft, but still retained the editor; users could even save their creations to tape via the Japan-exclusive Famicom Data Recorder.

*Lode Runner*, then, was one of the first games to challenge players' creativity as well as their dexterity, and other developers quickly took note. Hudson Soft put a similar map editing function in the NES version of its 1983 platform-puzzler, *Nuts & Milk*.

Not long after, Nintendo released *Excitebike*; the Japanese version featured a Design Mode which also allowed users to create and save their own tracks. The level editor continued to proliferate through the eighties and nineties, either as functions built into games (*Solomon's Key 2*) or as separate creation systems (see box, opposite). The hunger for designing levels for games was such that some cunning programmers even wrote their own unofficial editors for commercial games; British magazine *Your Sinclair* published a type-in listing for a *Gauntlet* level editor in a 1987 edition,

**“Lode Runner turned a generation of players into unwitting level designers”**



for example. This allowed the end user to design maps, save them to tape, and then load them into the official game. At the time, it felt revelatory.

All of which built to the great-grandparent of moddable games, *DOOM*, released in 1993. Although id Software's shooter didn't contain a level editor as such, its open design and use of WAD (Where's All the Data?) packages meant that end users could easily add their own level designs, sound, and graphics using such shareware tools as Doom Editing Utility (DEU). Like *Lode Runner* a decade earlier, *DOOM* helped turn a generation of gamers into amateur designers, and some of those amateur designers eventually turned professional – one example being Jon McKellan, whom we interviewed in *Wireframe #67*. He cut his teeth designing mods for *DOOM* and *Quake* as a teenager, which planted a seed that eventually flourished later in life when he crossed over from graphic design to game development, first at Creative Assembly with *Alien: Isolation* and later at his own studio, No Code, and its BAFTA-winning space thriller, *Observation*.

Today, there are all kinds of games that foster creativity, from *Minecraft* to *Roblox* to *Hot Wheels Unleashed* and its track editor. All of them have, in one way or another, the potential to turn their players into the game developers of tomorrow. As for *Lode Runner*, it's still going strong – having been ported to just about every system imaginable, *Lode Runner Legacy* updated the platforms-and-ladders formula for the PC, PS4, and Switch in 2017. Naturally, that pioneering level editor is still present and correct. 🎮

## Under construction

Away from games that contain level editor modes, there's a separate subcategory of software that lets the end user create their own experiences. Among the very earliest was *Pinball Construction Set*; designed by Bill Budge and released for the Apple II in 1982, it lets users design their own pinball tables and share the results as standalone disks. *The Arcade Machine*, published in 1982 by Brøderbund (the same company that first released *Lode Runner*), let users create their own shoot-'em-ups. Like Sensible Software's *Shoot-'Em-Up Construction Kit* (or *SEUCK*), released in 1987, it allowed you to draw your own sprites, create unique sound effects, and draw your own enemy attack patterns, all without having to program a line of code. For people growing up in the eighties, they were about as close as you could get to the likes of Media Molecule's *LittleBigPlanet* or *Dreams*.



# Next Issue

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Inside a hand-painted puzzle-platformer that's out of this world

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### Editorial

#### Editor

Ryan Lambie  
Email [ryan.lambie@raspberrypi.com](mailto:ryan.lambie@raspberrypi.com)

#### Features Editor

Aaron Potter  
Email [aaron.potter@raspberrypi.com](mailto:aaron.potter@raspberrypi.com)

#### Sub-Editors

David Higgs, Vel Ilic

### Design

#### Head of Design

Jack Willis

#### Designers

Sara Parodi, Natalie Turner

### Contributors

Jon Bailes, Alexander Chatziioannou, Antony de Fault, Damiano Gerli, Craig Grannell, Shaun Hughes, Kim Justice, Phil King, Lewis Packwood, Nic Reuben, Paul Rose, Mark Vanstone, Howard Scott Warshaw, Jack Yarwood

### Publishing

#### Publishing Director

Russell Barnes  
Email [russell@raspberrypi.com](mailto:russell@raspberrypi.com)

#### Director of Communications

Liz Upton

#### CEO

Eben Upton

### Advertising

#### Commercial Manager

Charlie Milligan  
Email [charlotte.milligan@raspberrypi.com](mailto:charlotte.milligan@raspberrypi.com)  
Tel +44 (0)7725 368887

### Distribution

Seymour Distribution Ltd  
2 East Poultry Ave, London EC1A 9PT  
Tel +44 (0)207 429 4000

### Subscriptions

Unit 6, The Enterprise Centre, Kelvin Lane, Manor Royal, Crawley, West Sussex, RH10 9PE

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#### Subscription queries

[wireframe@subscriptionhelpline.co.uk](mailto:wireframe@subscriptionhelpline.co.uk)



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