Wireframe

ビデオゲームの秘密を明らかにする

THE ENDLESS MISSION
Learn Unity in a genre-bending sandbox

MURDER BY NUMBERS
Solve pixel puzzles to catch a killer

ANNIVERSARY EDITION

The **25** finest games of the past **12** months

1st BIRTHDAY ISSUE

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The myth of the video game auteur

Forget the breaking news. Flip past the features, the tips, tricks, and top ten lists. No, the true joy of old gaming magazines lies in the advertising. After all, video game advertisements offer a window into how the industry understands its products, its audience, and itself at a specific moment – timestamped snapshots of the medium's prevailing attitudes and values. Of course, sometimes you stumble across a vintage ad that's so peculiar it merits further attention. That was certainly the case when I recently encountered a 1999 advertisement for Interplay Entertainment.

At the time, Interplay was enjoying the success of titles like *Fallout* and *Baldur's Gate*, and I imagine this advert was intended as a victory lap. It features a photo of twelve male game designers sitting around a swimming pool at a palatial estate, purporting to be "Interplay Worldwide Headquarters." The men are styled and posed identically – wearing all black with matching sunglasses, feet exposed, elbows on their knees, holding bottles of water. In the background, standing poolside with their backs to the camera, are nine blonde, bikini-clad models. Captions identify each of the designers by his latest hit and his next big project. To drive the message home, a banner proclaims, "And on the seventh day, they rested…"

While the swimsuit models are a questionable choice from the vantage point of 2019, their presence in the ad isn't entirely surprising. After all, if turn-of-the-millennium game advertising was known to dial up the sexualisation and objectification of women, 1999 was arguably the industry's annus horribilis. It's also worth noting this was the era of the booth babe, transplanted poolside for this ad from the convention halls of E3 and CES. Even the bizarre, all-in-black styling of the designers – conjuring images of some ritualistic SoCal cult – doesn't seem so terribly out of place when *The Matrix* was one of the year's biggest blockbusters.

Instead, what struck me most about the advert was its underlying message about video game authorship.
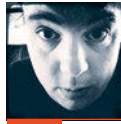
JESS MORRISSETTE

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

#26

Years earlier, Interplay had adopted the corporate philosophy of creating products "by gamers, for gamers," and that motto appears prominently in the ad. Yet, everything else about the campaign seems to communicate precisely the opposite. Game designers aren't like you. They're rock stars. They're rich. They live in mansions and hang out by the pool with models. By 1999, an industry that once refused to even credit its developers was now portraying them like gods.

Of course, the idea of the triple-A game designer as an auteur, wholly responsible for the driving vision behind a particular title, is alive and well in 2019. For evidence, look no further than the recent discourse surrounding this controversial (and perhaps mistranslated) tweet from *Metal Gear* designer Hideo Kojima: "A HIDEO KOJIMA GAME means the declaration of me doing concept, produce, original story, script, setting, game design, casting, dealing, directing, difficulty adjustments, promoting, visual design, editing, supervising the merch." The elevation of game designers to the status of auteurs, while perhaps valuable from a marketing standpoint, downplays the contributions of the dozens or even hundreds of developers working behind the scenes on all aspects of game production. In doing so, we also tend to shine an even brighter spotlight on already powerful men in the industry.

In reality, we know auteurs like Kojima spend about as much time poring over new merchandise designs as the team at Interplay once spent partying with swimsuit models. Yet, the myth of the auteur continues to shape popular perceptions of the game industry, overshadowing the teams of crunching developers still waiting for their day of rest. Ⓦ

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WELCOME

It only feels like yesterday that Wireframe was just a few ideas typed out in a Google document, but here we are: 8 November marks the magazine's first birthday. Since then, it's been a non-stop flurry of writing, commissioning, checking pages, drinking coffee, playing games, and maybe drinking a bit more coffee.

Like all decent video games, the past year's been intense, challenging, and satisfying (almost) all at once – and we wouldn't have made it this far without a bunch of great human beings around us. We can't possibly name you individually in this little space, but here's to all the writers, designers, sub-editors, and Raspberry Pi people who've worked so hard on the magazine over the past 26 issues; to the developers who've supported us and patiently answered our bewildering questions about their games; and to the artists who've created some amazing artwork for our covers.

This edition's cover is, we're sure you'll agree, a particularly corking one – so thanks to the mighty Wil Overton for taking such a vague brief ("I was thinking of something a bit like the SNES box art for *Parodius*, but with a bunch of other game characters we like on it") and turning it into a lovable riot of colour.

Finally, a big thanks goes, of course, to you, the reader: the magazine wouldn't exist without you, and your support is enormously appreciated.

Ryan Lambie
Editor

NEVER
ENDING
STORY
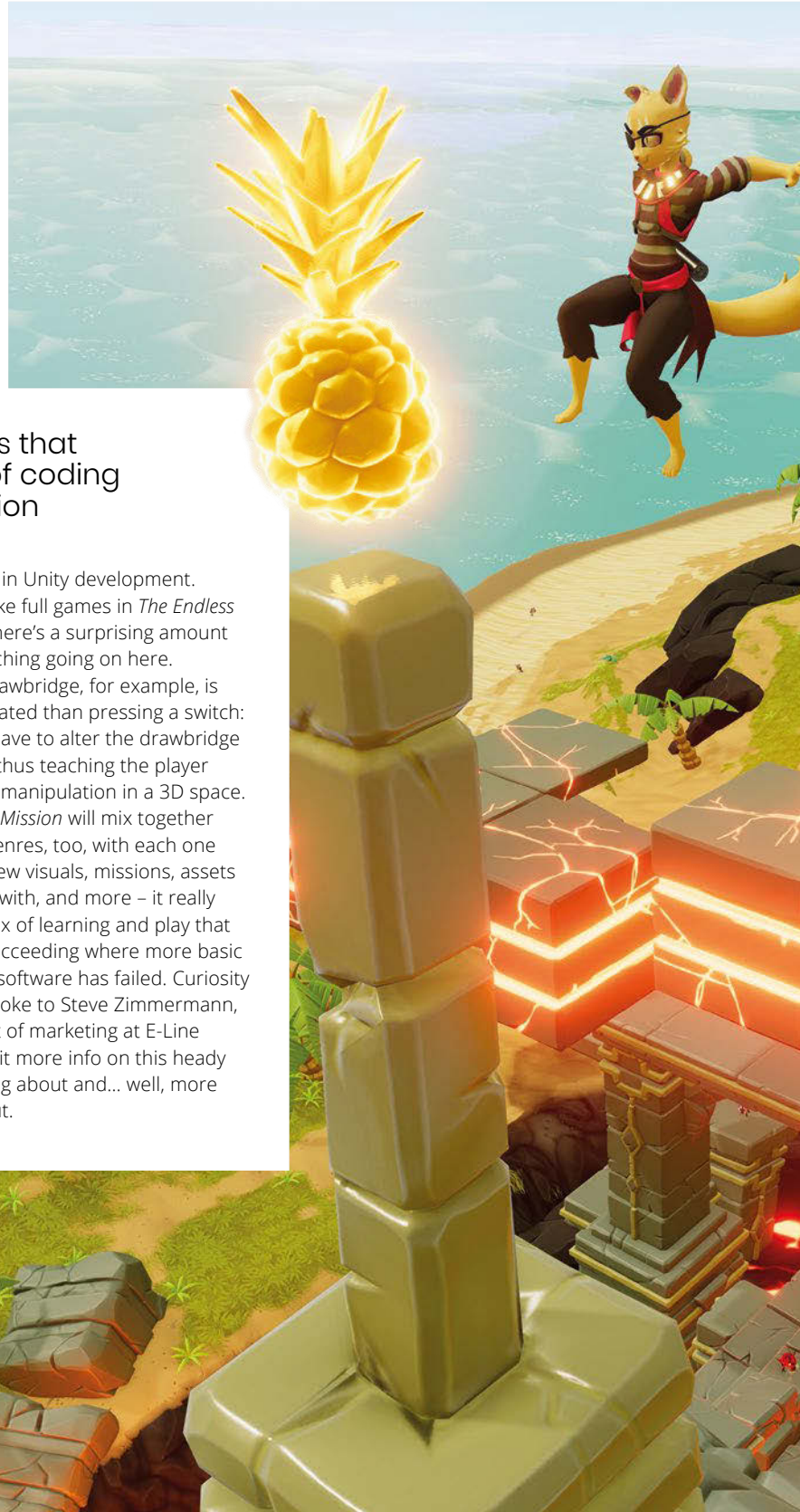
A game with glossy production values that also teaches you the fundamentals of coding in Unity? Say hello to The Endless Mission

The Endless Mission has you rushing into a besieged town alongside a few other heroic types; the landscape's blocky and *Minecraft*-like, the upbeat music rings in your ears, and the sense of drama's high. A peasant is stuck in their homestead, voxelly flames are licking at their eyebrows, and they're unable to extricate themselves from a fiery death without your help. But just when you expect to see a prompt like, 'Press X to smash a wall in and make a quip', *The Endless Mission* goes a different route.

Rescuing the trapped villager means opening your edit menu and figuring out what's gone wrong in the game's coding and logic. Are they stuck in the world's geometry? Does their AI not understand the concept of fire? Is their vision cone wide enough to spot the exit to their side?

Made in Unity, *The Endless Mission* is, in case you're still a bit confused, a mix of game and coding educator that hooks players in via some handsomely produced missions, then sneaks in a lot of practical coding elements as they play.

The game's developer, E-Line Media, has a history of making educational titles of one sort or another, including game/design tool hybrid *Gamestar Mechanic*, and *Never Alone*, a platformer steeped in Iñupiat history and mythology. *The Endless Mission* takes things a step further: with it, the studio aims to have players who complete *The Endless Mission* receive

a certification in Unity development. You won't make full games in *The Endless Mission*, but there's a surprising amount of stealth teaching going on here. Lowering a drawbridge, for example, is more complicated than pressing a switch: instead, you have to alter the drawbridge asset's axis – thus teaching the player simple object manipulation in a 3D space.

The Endless Mission will mix together a few game genres, too, with each one introducing new visuals, missions, assets to play about with, and more – it really is a unique mix of learning and play that we can see succeeding where more basic edutainment software has failed. Curiosity piqued, we spoke to Steve Zimmermann, vice president of marketing at E-Line Media, for a bit more info on this heady mix of mucking about and… well, more mucking about.

▲ **Mix up genres, modify assets, and learn to code – it's all in a day's work for *The Endless Mission*.**

in it, what they think is going to be easy isn't going to be what the layperson thinks is easy. If you've got a basic idea of Unity and coding and game mechanics, you should be able to do pretty well with [*The Endless Mission*] – you can just look at the editor system and then jump straight into [making things]. Or if you've played other games like *Minecraft*, *Roblox*, *Garry's Mod*, things like that, you should be comfortable with it, too.

So we looked at the story and the adventure as the opportunity to tutorialise and familiarise beginners with some of the other features that go into the game. It's trying to make it a compelling ramp up to that, and there's some trial and error. We've had a great a bunch of testers that have been playing the game from the very beginning.

Which came first? The story-led campaign or the coding side of it?

That would really depend on if you ask the guys who are writing the story or the guys developing the other side of the game! I'm sure it's a chicken and egg situation.

The game came about as a concept where we wanted to somehow give players the ability to make games, [modify] games, and share them. From around that, we built a structure of how it all works in terms of the story, which serves as a tutorial, as well as the tools that let you [make and modify games].

How does the balance come about? It has to be fun, but also capable of teaching, which can't be easy.

It takes a lot of trial and error in terms of what features we think players are going to want from the start; what do we need to bring people up to a particular skill level? I mean, if you have a game studio like ours, with a bunch of game developers

What challenges have you faced trying to bring all of these elements together?

One of the biggest challenges is what we call the entity system. The entity system is what allows players to go behind the scenes and, in a real runtime environment, hack and change game mechanics and other features.

It's very difficult to implement and to get to work across a wide variety of genres. So when you're playing the game, you have the ability to play a platformer or an RTS – and eventually, [we'll be adding] a racer. So then, how do those elements in each genre translate? And then if you can bring assets from a racer into a platformer, how does that work? What's the consequence of changing the physics in the world?

That was probably the biggest challenge, and something that we're [developing] and polishing. We're building each game to obviously have the sustainability to do all that. That's what took a while. What came together nicely was the story ➡
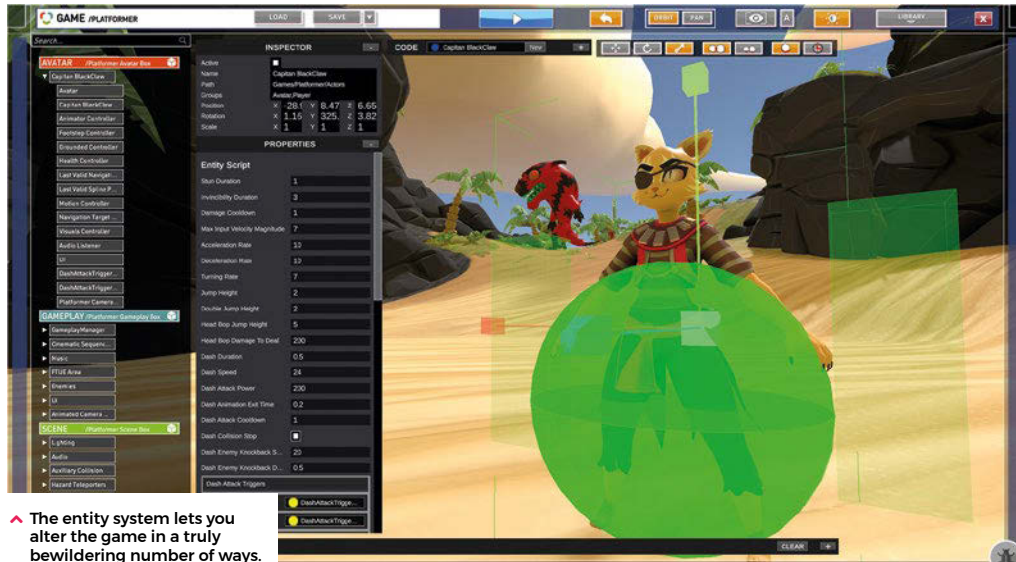
The game's progressed hugely since the early build we tried in 2018.

The entity system lets you alter the game in a truly bewildering number of ways.

and the tutorialisation around it. We've got one really passionate guy in the office, who's like, 'I want to be able to tackle this [aspect of the game].' And then he just kind of brain dumped all [the story ideas] in there. Then we started massaging the pieces together to come up with this fairly compelling world where – even if you're not looking to change and modify it – you can still play the game and have fun. You can have a good time with it. And if you take a little bit more away from it at the end of the day, and you would like us to add other genres, great. But the more important part is that it's fun.

You don't usually associate educational titles with such polished presentation – professional voice actors are involved, for example – how did that approach come about?
It came about mostly because we had the vision of creating a game that, like we said before, can appeal to those two different kinds of audiences. If you want to jump in, then great, you can. If you want to actually follow the story, you can do that. But we look at things like *Garry's Mod*, which is just straight up [construction] – you go in, and you build and create. So we were like: 'All right, what if there's a story around it? What if there was a compelling adventure that could carry people through?' Having that level of polish, and getting people like [voice actors] Courtenay Taylor and Jennifer Hale involved in the project was a dream of ours. It was, like, 'Oh, it would be great if we could have somebody like…' – and then we got them.

So we felt very lucky, and we wanted to make sure that we were taking advantage of that [talent]. The voice actors love the project as well, which we were also very

"It's why it's taken us about two and a half years – it's a big, heavy lift. It isn't easy. Especially making sure everything works – in a game that, by its nature, you're hacking and breaking in any kind of capacity."

Laura Bailey, Sara Amini, and Alix Wilton Regan also lend their voice acting talents to the game.

lucky about, and we've just kept on going from there.

Looking at the game side and asking the cheap-and-dirty question – how long are we looking at for the campaign, to play it through?
At the moment, with the campaign itself, you're honestly going to be able to play through it in, I guess, maybe an hour-and-a-half, two hours. But here's the thing: it's serialised. And so with each content drop, there'll be story drops that unveil more of the world of the Terminal and the Academy and why you're there and so on.

So each [add-on] is going to take you to another place, and another place, and another place. And along with the story drops, you're also getting new mechanics for the creation side as well. So as we unveil more of the world, you can actually experience and interact with it in new ways – there'll be snippets of code that you can instantly incorporate into the games that you're making, which allow for more possibilities. And there'll be more asset drops that you can also take and add to the game.

And what kind of level are you expecting to be able to get people to? Say they were coming from a total beginner level when it comes to coding and so on?
Well, one of E-Line's things is, we've always had an educational side to the company – *MinecraftEdu* is our product, we have

another one called *Gamestar Mechanic* that's out now, and there are hundreds of thousands of games that have been made by the students playing it. So it's always been a core focus of ours as a company – making sure we create commercial games that are fun, but also have the other [educational] side.

The Endless Mission is sort of a blend of both. You could basically go from *Gamestar Mechanic*, which would then lead you into this, which will then familiarise you with Unity. We're setting up what we're calling a pro quest, which is tutorialised with classes and things that will take you all the way through to, ideally, what will end up being a Unity certification. You can then take that and go off and make games, or put it on your résumé, or things like that. So we're using this as a stepping stone to get people all the way through the [learning] process.

How many people have been working on the game, roughly?
It's varied during the entire two-year process. At the moment, we've got about ten people that are banging against it on a regular basis.

It sounds like a lot more work than ten people could take on.
It's why it's taken us about two and a half years – it's a big, heavy lift. This isn't easy.

E-Line is set to add a racing game to *The Endless Mission* soon.

^ An online content portal will allow players to share their weird and wonderful creations.

Especially going in there and making sure that everything works at all times – in a game that, by its nature, you're hacking and breaking in any kind of capacity.

Our QA department is fantastic. They are throwing themselves against it with a vim and vigour that you don't often see, and the rest of the team is dedicated because this is something that – I mean, granted, I'm just the marketing guy saying this – but it's something special that we haven't seen out in the world before. And so they're dedicated to the cause of bringing this thing to life so that others can experience the dream of making games and having fun and sharing it with their friends.

It sounds like you'd be telling QA, while they're looking for bugs, 'No, leave it, it's supposed to be there!'
They're going to find new ways to break things on a regular basis, and that's one of the reasons that it's great coming out to conventions and things as well, because we've had hundreds of people who play through and we're like, 'Oh, we've never seen that before. How'd you do that? OK, cool. Is it a bug? Is it a feature?' We might leave that in.

The best example of this is, we had somebody at Rezzed 2018, I think it was, who realised they could play with the scale of the main character and basically turn it into a super-thin character that could fit

through areas we didn't necessarily intend them to.

They could solve the puzzles we'd set up in a way that we never anticipated… and you're like, 'Wow, that works! That's *totally* a feature', because the game is meant to be fiddled with.

Finally, your history with educational software makes me wonder – are you aiming for *The Endless Mission* to get a place in schools? Do you still have links with educational facilities?
We do. Going back to the beginnings of E-Line, we do have relationships with a lot of universities and schools that use our products, like *Gamestar Mechanic*, for example, and particularly *MinecraftEdu* for a while as well.

Our last commercial game, *Never Alone*, we know is in museums and schools all around the world, and people kind of build curriculums around it. It's a similar thing – we'll be putting *The Endless Mission* out there to schools at some point as well.

But first and foremost – before it goes and hits all the educational notes – it's a commercial product.

You're fooling players into learning.
Yeah, we're kind of sneaky like that. ⓦ

The Endless Mission **is out now on PC in Early Access; a full release will follow sometime in 2020.**

Roll with it

ACE Team gets weird once again with The Eternal Cylinder

Info

GENRE
Open-world survival

FORMAT
PC / Console

DEVELOPER
ACE Team

PUBLISHER
Good Shepherd
Entertainment

RELEASE
2020

⌄ **Ever get the feeling that you're being watched?**

If you've watched your share of nature documentaries, you'll understand that life is brutally unforgiving, and that the fight for survival begins almost from birth. This is also true in *The Eternal Cylinder*, where your QBert-like creature, called a Trebhum, has only just hatched from its egg when a David Attenborough-esque voice inside its head tells it to run. But rather than fleeing a hungry predator (more on those later), the immediate danger is the titular cylinder – huge, ominous, like the Monolith from *2001: A Space Odyssey* – as it slowly but surely rolls and crushes everything in its path.

It's a bizarre premise for sure, but one that the Bordeu brothers of ACE Team (named after the founders' initials, Andres, Carlos, and Edmundo) are right at home with – their previous games include the eccentric first-person fighting game *Zeno Clash*, and the *Python*-esque *Rock of Ages* series. *The Eternal Cylinder* began life in 2015 outside the company, as a passion project of Carlos Bordeu's. "I did this sort of small simple

setup with a colleague where we basically had this large cylinder and this little creature," he says of the project, then titled *The Endless Cylinder*. "It was just this weird little game design experiment, but the video got a lot of traction on social media and our YouTube channel, and lots of people were interested. So we started thinking, 'OK, this is actually something that we need to move forward with as a proper ACE Team title.'"

Years later, it's the largest title the studio has made to date, as *The Eternal Cylinder* has evolved into an open-world survival game. It's not quite as free-roaming as its counterparts, and players shouldn't be expecting to build a home or base either, since the cylinder's looming presence means you're constantly being pushed to find a path forward. There are, however, towers you'll come across that, when activated, will stop the behemoth in its tracks for a little while, giving you some respite.

Of course, your Trebhum is still left to fend for itself against the bizarre and hostile creatures that roam the planet. There's something of *Pikmin* crossed with Will Wright's *Spore* to this part of the game, as you gradually find other Trebhums to band together. The reference to *Spore* becomes clearer once you use your creature's trunk to hoover up nearby materials and food. While being a survival game means you need to keep your critters topped up on water and sustenance as a matter of course, certain foods actually cause them to mutate and gain new abilities to survive this most trippy take on Darwin's theory of natural selection.
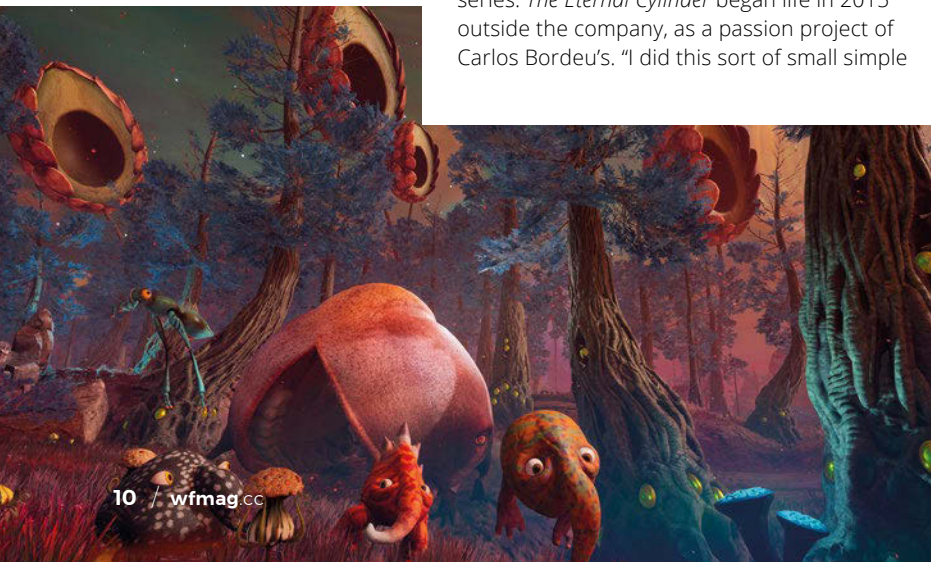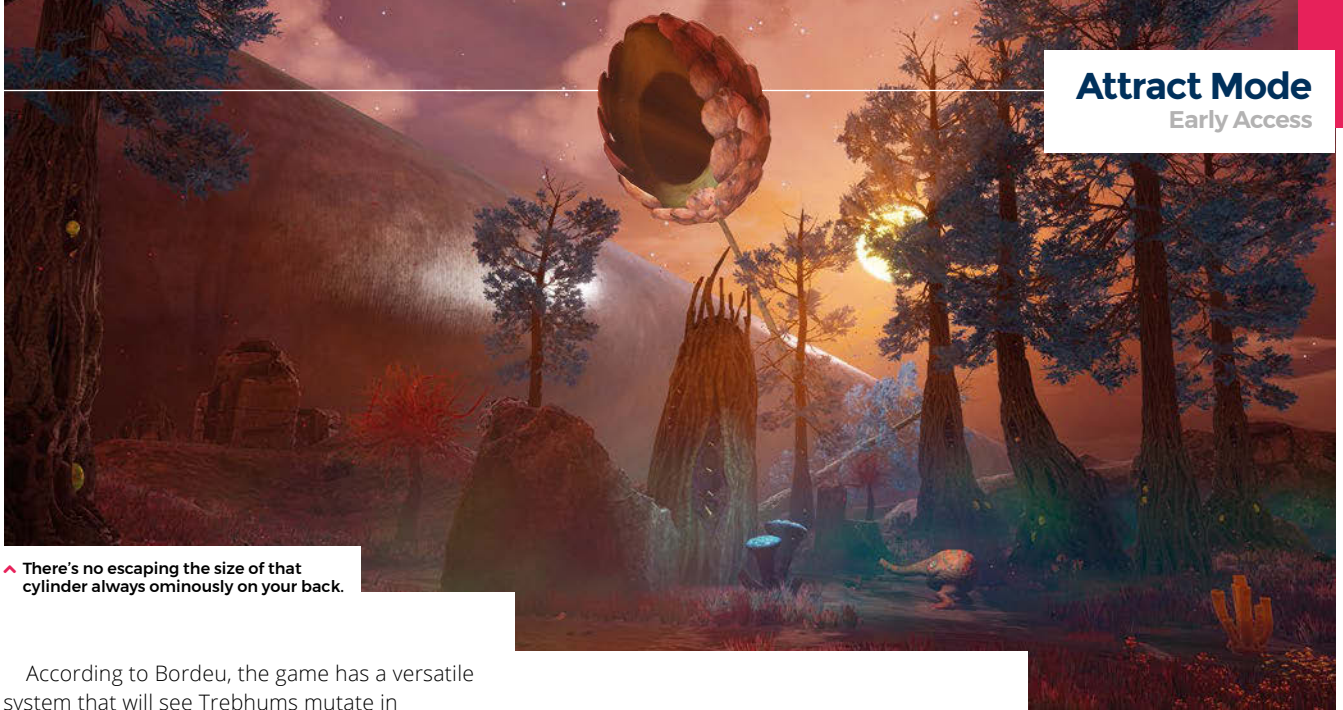
▲ There's no escaping the size of that cylinder always ominously on your back.

According to Bordeu, the game has a versatile system that will see Trebhums mutate in hundreds of different ways, with their eyes, body types, legs, and insides all capable of change. These changes were a bit too numerous to fully appreciate in the early demo I played, although early on I happened on some frog-like creatures on my travels, which left behind a mysterious substance – by eating it, my Trebhum's stubby legs suddenly grew, allowing it to jump to new heights. Later on, I came across colder environments that made it impossible to linger for long unless I could feed on something that would make me immune to the new climate.

These alien environments and the surreal creatures that populate it also had me thinking of the peculiar discoveries in *No Man's Sky*, although Bordeu is quick to clarify that this world is only semi-procedurally generated. "I don't like that word entirely because it's not fully procedural," he says. "We have an endless open world where the content is randomised in different ways. But the creatures are all custom-built. Their behaviour is extremely different, too – it's not like we just have different skins for the same type of creature. Each one functions differently to the other."

One creature I encountered that's still burned in my mind is what can be best described as a nightmarish version of *Pikmin*'s Bulbmin, albeit with its mouth facing down. From the

"There's something of *Pikmin* and *Spore* to this part of the game"

announcement trailer alone, however, it's clear we can also expect more gargantuan foes, which will further underline just how far down the food chain our Trebhum is. In its initial stage, the creature's only defence is its ability to suck up water and squirt it out of its trunk.

Bordeu explains that as your Trebhum evolve, they can get better at repelling enemies, in some cases even kill them, or play nature against itself. Nonetheless, he also clarifies that combat isn't a focus, and neither are boss encounters. "We have events; definitely – 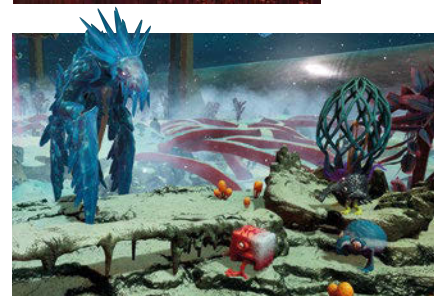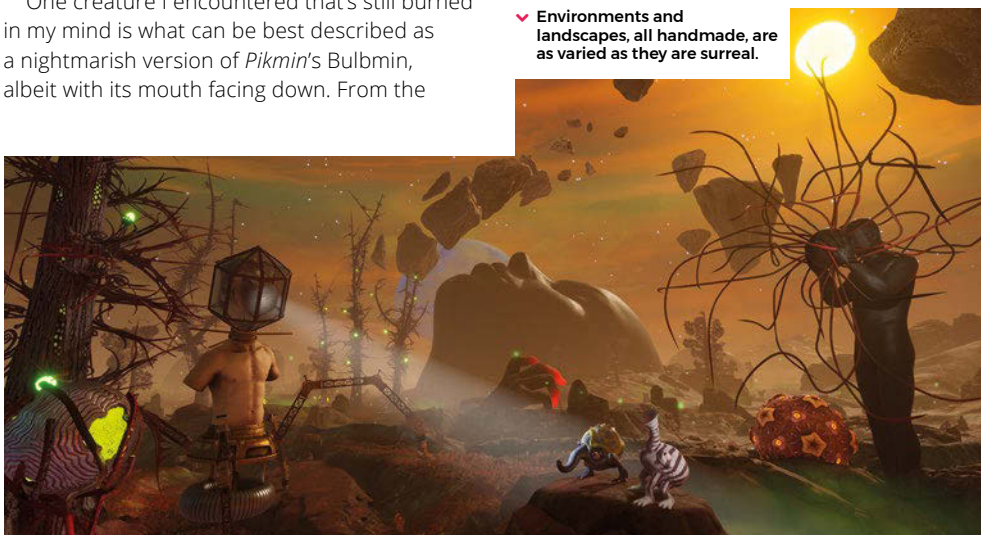there are special events that are more driven by the story, but I wouldn't call them boss battles," he says. "You already have about 30 creatures, and that variety is what we're focusing on rather than, say, boss battles."

A world that looks as strikingly weird as *The Eternal Cylinder* would certainly be wasted on something as banal as a combat game. But as strange as its creatures look, *The Eternal Cylinder* also has a simple, universal theme at its core. "What you're really building," Bordeu explains, "is your family." Ⓦ

▲ Expect to traverse different biomes with different conditions your Trebhum will need to adapt to.

▼ Environments and landscapes, all handmade, are as varied as they are surreal.

ROLLING TO THE END

Unlike most systems-driven survival games, there's actually a story ACE Team is trying to tell – after all, there has to be a reason why a giant destructive cylinder showed up in the first place. "You won't see chapters, but we do go deep into different aspects of the story," says Carlos Bordeu. "When you reach certain objectives, it will allow you to progress and give you further insight. There is an end goal." Nonetheless, you'll still be able to explore long after that. Will the titular cylinder still be in the post-game? That's something we'll have to find out for ourselves.

The game's afoot

Solve puzzles to catch a killer in Murder By Numbers.
Designer Ed Fear gives us an early tour

⌄ **Hato Moa's character designs – and accompanying nineties fashions – do much to make** *Murder By Numbers* **stand out.**

Becky
Oh, I'm sorry, Honor. You're not an *idiot...*

T he murder's brutal; the fashions are criminal. It's 1996, and actress Honor Mizrahi – who plays a detective on TV – is forced to become a real-life sleuth when she's wrongly accused of murder. Fortunately, Honor has an ally in her quest: a cheerfully glitchy robot named SCOUT, who can scan crime scenes and help locate vital clues. Such is the backstory for *Murder By Numbers*, a hybrid of visual novel and puzzler currently in the works at British developer Mediatonic. It sees designer and co-writer Ed Fear (who previously penned the dinky RPG *The Swords of Ditto*) partner up with Japanese artist and indie developer Hato Moa, the mind behind the fantastically strange visual novel, *Hatoful Boyfriend*.

Anyone who's played a Picross game will recognise the cerebral challenges on offer in *Murder By Numbers*: squares on a grid are filled in by cross-referencing the numbers that run down the side; correctly fill in the right squares,

and an image is revealed. The twist here is that each Picross completed puzzle yields a clue to solving *Murder By Numbers'* overarching mystery. So as well as moving between locations and questioning subjects, you'll also use SCOUT's scanning powers to hunt for pieces of evidence, which in turn trigger puzzles which need to be solved to progress. The initial idea for *Murder By Numbers* first emerged about a decade ago, as Ed Fear was playing a Picross game on his Nintendo DS; what if, he thought, there was a narrative reason for solving the puzzles? "I was massively addicted to them," Fear says. "I was thinking as I was playing it one day – because they were just collections of puzzles, you know – what if solving these puzzles had some kind of gameplay value. That's where it came from – this idea that they'd become clues in an investigation."

After several years of pitching the concept around, it finally found traction at Mediatonic where, in early 2018, Fear started making a rough prototype over the course of about six weeks. In the process, he began thinking about the kind of story that could bind all of it together, which is where the detective element came in. "The solution to the puzzle is an image, so the first thing I thought of was, 'How could that image be usable as a gameplay mechanic?'," Fear says. "Literally, the first thing that came into my head was, well, what if it's a clue in a mystery or something? It was there from that point. I'd always been a huge fan of the *Phoenix Wright* series and *Professor Layton* and things like that, so it felt like a natural fit."
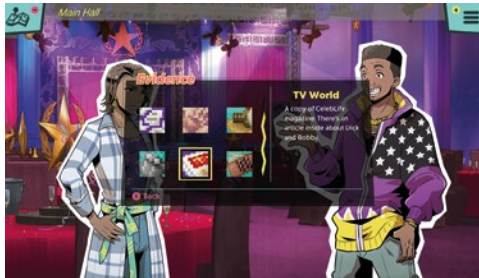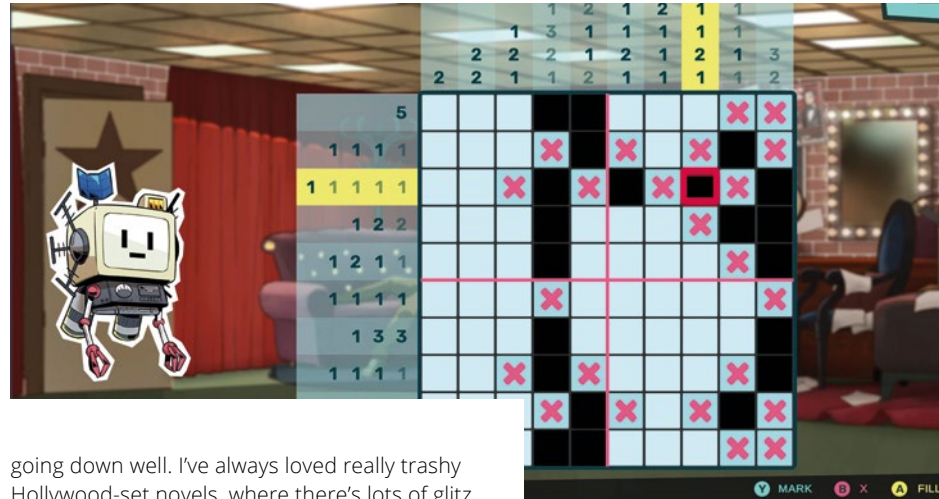
Once solved, the puzzles form pieces of evidence you can use to solve the game's cases.

Planning and writing the mysteries that bind the game together was itself a logical puzzle, Fear tells us. Early in development, he enlisted the help of fellow Mediatonic writer Murray Lewis (who previously worked on *Fantastic Beasts: Cases from the Wizarding World*) to help write the individual cases Honor will encounter through the game, while Fear concentrated on writing the overarching story. "Writing a mystery is really difficult, because it's so much about planning, and because you work from the end backwards in a lot of ways," Fear says. "For each case, we have a very long flowchart that indicates how things come together – what order the player can find things in, because it's linear but there's a degree of non-linearity in what order you do things."

As for the other elements of the plot – its nineties Hollywood setting, its pairing of a TV actress and a robot – those came from a few disparate sources. "The nineties thing came about because I'd just decided that I was really in love with nineties fashion and how awful it was," says Fear. "I'd noticed some of my friends dressing up in more kind of nineties styles, and I thought it was amazing... In terms of the TV station stuff – the Hollywood setting – I'd originally thought of some different concepts, but they weren't really

going down well. I've always loved really trashy Hollywood-set novels, where there's lots of glitz and glamour, but there's a seediness behind it all. That appealed to me. But the idea of having a TV actress and a robot actually came to me in a dream."

But while the Hollywood setting and its seedy underbelly might suggest we're in for a detective game with a dark, noir twist worthy of Raymond Chandler, Fear says *Murder By Numbers* will be "quite the opposite" – instead, he says, it's a "bright and poppy" bit of counter-programming to the more heavy, philosophical indie games we've seen of late. "I felt like a lot of the indie games I was seeing around were very meaningful or very serious," Fear tells us. "I think that's great, and I enjoy playing those. But I had the feeling in my heart that I wanted to make something that was primarily fun and enjoyable, something you could play to cheer yourself up if you weren't feeling great. The tone is the opposite of what noir is, really. I don't know [quite] what the opposite of noir is: I guess like a blaring light shone in your face or something!" ⓦ

> ## "Writing a mystery is really difficult, because it's so much about planning"

Puzzles are a key part of the game, but don't expect it all to be too punishing – *Murder By Numbers* is meant to be entertaining rather than tough, Fear tells us.

NINETIES FASHION

Murder By Numbers' nineties setting is brought vibrantly to life thanks to Japanese artist and game designer Hato Moa. With Fear and Moa collaborating from opposite sides of the planet, working on the game has meant a regular back-and-forth of emails, with Fear sending across pieces of story and character briefs, and Moa replying with designs for each member of the game's cast. "I've worked with some Japanese character designers who really only want about two or three words, and then there are artists who like as much information as you can give them," Fear explains. "I think Moa's closer to the [latter], so we'd give a bit of information about their background, their personality; we'd suggest what their hair might be like, or what their body shape may be, or what sort of clothes they wear. But then we leave it to her to fill in the gaps to that, or we were even open to her turning around and saying, 'Actually, I think it would be better if we went with this...'. So it was very iterative and very close."

SCOUT's your sidekick, and integral to the plot: "As you're investigating, you're also helping SCOUT rebuild his memories, which is the game's overarching story," Fear says.

Headlines
from the virtual front

02

03

01

01. You suck

Vampire: The Masquerade – Bloodlines 2 was set for an early 2020 release, but it has been delayed, likely to give us enough time to say its full title out loud. The game will now arrive at an undefined 'later' in the year, with the stated goal being to avoid the buggy mess situation that accompanied the original game's release back in 2004.

A statement from Hardsuit Labs' Andy Kipling and Brian Mitsoda read in part: "There's the responsibility to avoid some of the issues that plagued the first game, which was famously launched too early. Over the last few months, it became clear that to stick to our original date would risk repeating that mistake. We won't do that. In the end, everyone working on this game wants to offer you the best *Bloodlines 2* we can."

Hopefully it'll be worth the wait.

02. Riotous

The controversy around Blizzard's reaction to political statements in the world of esports has a new commenter on the sides: Riot CEO Nicolo Laurent. Speaking with Kotaku, the *League of Legends* studio boss chose his words in an equivocal fashion, but his support appears to fall more in line with Blizzard's company line.

"When we make an esports broadcast, we want the focus to be on the game," he says. "It doesn't mean that you can't talk about anything else, but there are a few topics we'd rather not bring up to the camera, including highly sensitive political topics. I don't think you want Americans debating Trump impeachment during a broadcast, I don't think you want Russian players to talk about Putin on the broadcast, you don't want Chinese players to talk about the South China Sea. You don't want to set that precedent."

Wouldn't want to hurt that bottom line, would we?

03. #$*&!

Xbox owners will be able to use a swear filter by the end of 2019, which will allow people to set a different strength wall to stem the flow of bad language written on Xbox Live. Friendly, Medium, Mature, and Unfiltered – friendly replacing naughty words with a warning, medium allowing some through, and so on. It's a great addition for parents and those fed up with rampant online abuse, so kudos to Microsoft there.

"Text filters are designed to be additive to the existing work we've done to ensure everyone has a safe and enjoyable experience on Xbox," said Dave McCarthy, corporate vice president of Xbox Operations. "Ultimately, our vision is to supplement our existing efforts and leverage our company efforts in AI and machine learning technology to provide filtration across all types of content on Xbox Live, delivering control to each and every individual player. Your feedback is more important than ever as we continue to evolve this experience and make Xbox a safe, welcome, and inclusive place to game."

Modder ZombieAli replaces *Resident Evil 2*'s Mr X with a goose

Pokémon GO **Battle League announced; ranked fights for trainers**

04. Epic stain

The debate around the Epic Store rages on, with walls of angry people on the internet disgusted at the notion of competition in a capitalist framework. But, increasingly, we're hearing people offer an alternative viewpoint. Nathalie Verweij, UI/UX designer at Coffee Stain Studios, is one of those people.

"I think as an indie studio it's nice to have that security that you know that your game is going to get out there and you don't need to worry about making certain financial deadlines," Verweij told PCGamesN. "You can just focus on making a good game. Of course, we had some backlash, but I think it's a loud minority.

"I think it's a good thing that Epic is trying to do. Of course, the users will only see the end of, 'Oh, it's another launcher, it's another store' but Epic is trying to do something for game developers to make it better for them so we can deliver a better quality of products, basically."

Send your own opinions to the usual address.

05. Stadiums (again)

Google's Stadia is set to launch on 19 November, which may well have already happened if you've picked up your copy of Wireframe issue 26 late in our fortnightly run. If that's the case, you might as well safely pop us down for a few minutes while you try out the new tech, before returning to the comfortable world of print media.

Those living in the pre-release world, though, will maybe want a few more details. From 9 am on the 19th, games like *Red Dead Redemption 2*, *Mortal Kombat 11*, and *Kine* will immediately unlock for those who've purchased a Founder's Edition of Stadia. The Premiere Edition clocks in at £119 for the plug-in Chromecast Ultra and controller, along with three months of Stadia Pro (the subscription) included. After that runs out, you can continue the sub at £8.99 a month. Or you can subscribe to Wireframe for a lower monthly price! Ahem.

06. Finally

The initial plan might have considered plenty of other entries to the series – notably *VII* – but Hivemind founder Dinesh Shamdasani explained to IGN why his studio went with *Final Fantasy XIV* for its take on a live-action series: "Ultimately, *XIV* was the one that we thought, 'Actually, everything we want to do is here'," he said.

"Our hope is that we build something cool that goes for a long time," he continued. "*Final Fantasy XIV* is, by virtue of its format, able to continue to expand itself, add itself in there. Hopefully it can be some cross-pollination where they can say, 'This is a new expansion,' and we say, 'Great, we're going to lean into that in the new season' or 'We're going to lead to this (in the) new season,' and they say, 'Great, we're going to do an expansion that includes those elements,' and it can feel more (of) a piece, which is rare."

And yes, there will be chocobos. Hivemind's other live-action gaming adaptation, *The Witcher*, will be on Netflix some time very soon. It might even be now. Quick! Go check!

Ken Levine's next game is 'an immersive sim'; nobody even slightly surprised
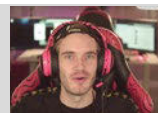
PewDiePie banned in China; nobody even slightly surprised

Incoming

NIGHT IS COMING
PREPARE TO SURVIVE

10 Miles To Safety ⬆

Why yes, dear reader, it is a literal, actual ten miles in distance – that was our first question to Trickjump Games, developer of this twin-stick shooter/construction survival game. You start in a world overrun by the undead, hear there's a chance of survival ten miles away, and go on your way. In the daytime, it's a case of fairly slow and methodical exploration and a bit of combat, with the daylight zombies operating as little more than a shuffling nuisance. By nightfall though, you need to get inside, and you need to build. Your enemies in the dark are quicker, more numerous, and far more deadly – barricades need to be constructed, buildings have to be defended, and backs will end up pressed to walls. It's a satisfying flip between one style and another, and offers a neat little twist on what would have otherwise been a standard twin-stick affair.

Throw on top of this the ability to play through with three others in co-op, and you have the recipe for… a… satisfaction… pie? A fun time, basically. Along the way, you encounter events to mix things up, grab gear and new weapons, and generally enjoy that sense of chugging progress as you make your way ten miles, at your own pace.

CHANGE: A Homeless Survival Experience ⬇

You never know which way these things are going to go, but *CHANGE* looks like it should fall just on the right side of 'worthy'. It's a casual survival game in which you play as a person – from a selection of characters – who has just been rendered homeless through no fault of their own. From there it's a journey of discovery as much as survival, finding out just how much the deck is stacked against itinerant citizens as you try to improve your lot and make it, any way you can, back off the streets. Devoid of context, it's a light-but-satisfying survival game. In context, it could well be able to raise some awareness.

I just need a little change...

⮐ Kickflip

A mix of styles you probably wouldn't expect, *Kickflip* blends skateboard tricks with an FMV game – by that we mean it's a case of inputting controls to carry out a trick while a video plays. Billed as 'playable skate videos', it's going to need something pretty meaty behind it to move beyond being *Dragon's Lair*, but with skateboards.
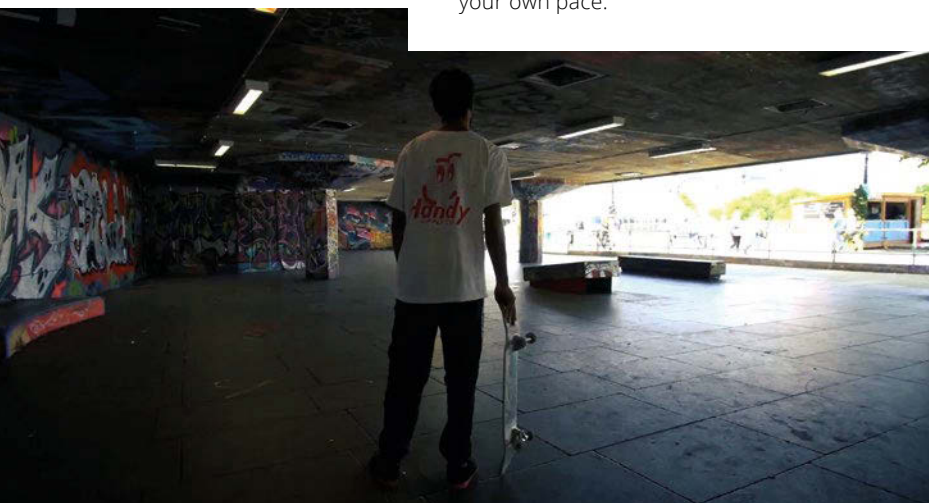
Welcome to Elk ⬆

This gorgeous, jauntily animated narrative tale tells the story of Frigg, a young carpenter who has travelled to the island of Elk for an apprenticeship. The USP here is that the stories you encounter on the island are all true – or at least based on the stories told by real people. Funny, dark, uplifting, and devastating along the way, this could be a story-led title to keep an eye on.

Yes, Your Grace ⬇

There's something uniquely satisfying about this kingdom management genre, and *Yes, Your Grace* looks like it'll be another winner in the world of making decisions-'em-ups. Players take the role of King Eryk, whose decisions range from helping villagers in their day-to-day issues, all the way up to battling monster attacks. It's something of a balancing act along the way, and how *Yes, Your Grace* makes your decisions count will be the crux of the game come its 2020 release.
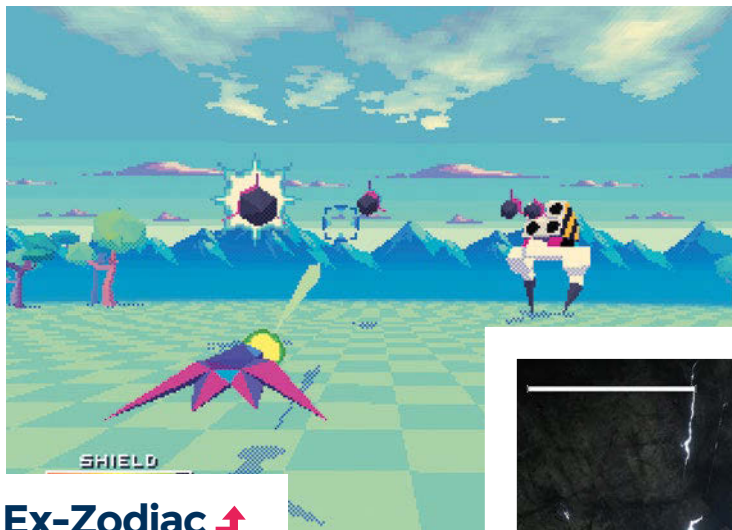

Ex-Zodiac ⬆

Basically, this is *Star Fox*. An homage, sure – but a very direct one. You control an Arwing-alike in a world of simplistic polygons, travelling on rails and shooting at enemies as they approach from the front or rear, before taking on a boss with glowing weak spots. It is *very Star Fox*. And you know what? That's in no way a bad thing – it's early along, but so far *Ex-Zodiac* captures the feel and fun of Nintendo's SNES great.

Ultra Age ⬇

Your quick comparison is as follows: imagine *Devil May Cry*, but with a small sprinkling of *Monster Hunter* on top. *Ultra Age* has you facing off against monsters in pacey combat situations, trying to land endless combos and switching up your kit to tackle the beasties. Could be a laugh, all things considered.
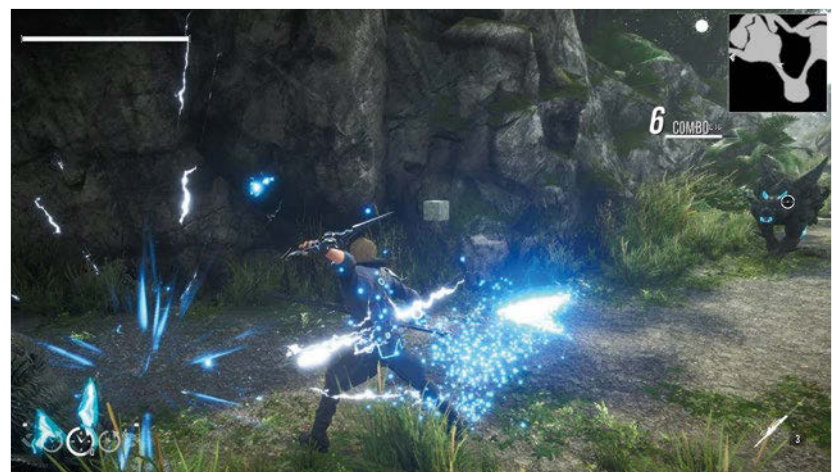
Wireframe's

Fave games from its first year of existence

To mark our first anniversary, here's our pick of 25 utterly
spectacular games released over the past 12 months

WRITTEN BY
RYAN LAMBIE & IAN DRANSFIELD

On 8 November 2018, something truly wonderful happened: there was a two-for-one offer on bagels at our local supermarket. At the same time, something else equally wonderful happened: the first-ever issue of Wireframe was published. A year later, we thought it only right that we mark the occasion by looking back at the many, many fine games we've enjoyed over the past 12 months. A year is a long time in the fast-moving world of video games, so this is by no means a definitive list of all the strategy titles, shooters, platformers, puzzlers, RPGs, and other oddments we've fallen in love with – instead, it represents a broad spread of 25 games that, we'd argue, were (and remain) downright unmissable. W

My Friend Pedro

Former Media Molecule developer Victor Ågren really surprised us with this nimble, effervescent action platformer. The varied abilities – being able to pirouette through the air in slow-motion, shooting enemies on either side of a room with the game's patented 'split aim' mechanic, for example – are remarkably intuitive. What sounds on paper like a repetitive format (move from left to right, gunning down goons) emerges instead as part puzzler, part ultra-violent esport. Why yes, *My Friend Pedro*, I think I *will* attempt to ride a skateboard through a window, shoot a frying pan into the air, and deflect bullets from its surface at a man hiding behind a crate.

Astral Chain

PlatinumGames – purveyors of *Bayonetta*, *NieR: Automata*, and Wireframe favourite, *Vanquish* – made a game about detective work, giant brawling monsters, dystopian sci-fi, and litter-picking appear somehow coherent. As busy and chaotic as *Astral Chain*'s world sometimes is, it's always grounded by its action, which feels rock-solid throughout. You play a futuristic cop who fights crime with the help of a monster tethered to their side, which gives the combat a refreshingly different twist. Whether we were fighting creatures lumbering through a hole in time and space, or investigating the aftermath of a strange crime (more than likely caused by those creatures, to be honest), we were kept absorbed from beginning to end.

They Are Billions

The RTS genre has fallen by the wayside since its golden years, but every now and then a developer does still pop up with something to remind us why it was such a beloved way to play. *They Are Billions* spent years in Early Access – often a help to a game's active development – with its final release bringing a honed and perfected take on the real-time strategy basics, mixed in with some tower defence and horde mode elements for good measure. Backing it all up was some magnificently mangy presentation, everything taking place in a world that's so patently disgusting, it actively makes you feel a little bit sick. A wonderful advert for a genre many appear to have forgotten.

HONOURABLE MENTION
OBSERVATION
Playing the role of a computer aboard a space station proved to be both claustrophobic and cinematic.

Blazing Chrome

While we're sorry to report that Konami's *Contra: Rogue Corps* isn't the triumphant series return we'd hoped for, we can at least say that *Blazing Chrome* channels its manic, bullet-soaked spirit. Rendered in glorious, nineties-style pixel art, this is a throwback to *Contra*'s 2D glory years, with waves of enemies, huge boss battles, and even bigger explosions. Weapons have that old *Contra* heft, and the controls are as tight and responsive as we could want in a game this retro. We would say that *Blazing Chrome* also reintroduces some of that old-school *Contra* difficulty, though we've since found videos of people completing the game in 40 minutes. In Hardcore mode. Without losing a life. We'll just sit in the corner and sulk.

Monster Boy And The Cursed Kingdom

After years of silence, Westone's erstwhile *Wonder Boy* (or *Monster World*) series is experiencing a bit of a revival of late. Lizardcube's modern remake of *The Dragon's Trap* was a delight; Game Atelier's *Monster Boy*, essentially a belated sequel, is perhaps even better. Long in development, the action RPG went through numerous revisions, and its creators' desire to get every element just right shows in the finished game, from the dazzling anime cutscenes to the precision of its attacks and character design. *Monster Boy* sticks to the Metroidvania template of entries like *The Dragon's Trap*, but the need to switch between multiple animal forms in order to progress is taken a step further here – the level design is genuinely ingenious in places. Plus, we absolutely adore that one-eyed pig.

Void Bastards

Jon Chey and his Blue Manchu studio selected a few seemingly disparate elements – comic books, procedural generation, first-person shooters, and comedy – and somehow pieced them together into one of the best games of the past 12 months. *Void Bastards* is really just very good, there's no more verbose way of saying it. You take control of a line of rehydrated prisoners on the long journey to Find Different Things, stopping off at ships full of antagonistic creatures and looting them until you can loot no more. Or until you die, in which case begin again at 'You take control…'. The ideas behind it are simple, but the execution is superb – no one element feels like it shouldn't be there, like it's half-baked, or like it was an afterthought. *Void Bastards* is the *Spelunky* of the sci-fi FPS world, no doubt about it.

Resident Evil 2

And to think some of us thought the Dreamcast re-release of *Resident Evil 2* is the best it would ever get. No, Capcom completely went back to the most basic of planning stages for this remake, taking just the basic themes of the 1998 original and, after many years of rumours and waiting, presenting what has to rank as one of the best remakes we've ever seen in video games. What makes it a true great – aside from the whole 'it's good fun to play' bit – is the incredible balance: there's a genuine respect for the source material, but it never strays into blind reverence. Your sacred cows are there to be slaughtered, and the result is a familiar setting that ends up being constantly and consistently surprising. The *Resident Evil 2* remake was also home to the genuine terror of Mr X. What an absolute bugger he was…
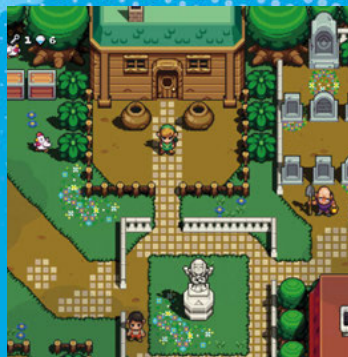
Cadence of Hyrule

It's not often Nintendo gives an indie developer the keys to one of its most treasured properties, but we're very glad they took a chance on Brace Yourself Games. In fairness, the studio already proved its worth with *Crypt of the NecroDancer* – its top-down, rhythm-action roguelike, first released in 2015. *Cadence of Hyrule* follows the same bouncy, button-tapping groove, and it's a testament to the strength of the first game's design that it all meshes so cleanly with *Zelda*'s long-established characters and lore. Aside from the brilliance of the game itself, there's also the look of *Cadence* to consider. Pixel art Hyrule – how we've missed you.

The Legend of Zelda: Link's Awakening

Some may scowl at Nintendo's tendency to raid its own archives, but *Link's Awakening* is more than a cynical rehash. The game was always a surreal experience – originating, as it did, as a Game Boy spin-off from 1993 – but developer Grezzo's new version, which replaces the old monochrome sprites with 3D models that look like varnished figurines, makes it feel all the more dreamlike. Compact and intimate where *Breath of the Wild* was cool and epic, *Link's Awakening* feels perfectly at home on the Nintendo Switch. Yes, some of those puzzles feel a bit obtuse in places, but otherwise, *Link's Awakening* is proof that great game design really is timeless.
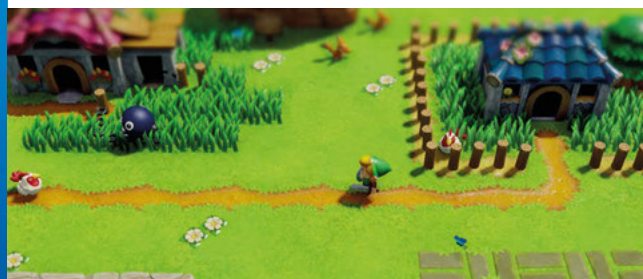
Assassin's Creed Odyssey

It's an absolute juggernaut of a franchise and needs no praise from simple folk like us to give it any kind of leg up in the world, but the simple fact is *Assassin's Creed Odyssey* is the best the long-running series has ever been. It's not in transplanting the game to Ancient Greece and the truly stunning environment that comes with it. It's not in the refinements of the decade-plus old systems. It's not even in the addition of stronger RPG mechanics, allowing players for the first time to make real decisions with genuine outcomes they've actually had an impact on. It's all of this coming together in a package made by a team that has the confidence, experience, and ability to craft a gigantic, multimillion-dollar video game with skill, panache, and – sometimes – even a bit of courage.

Black Bird

We've long had a soft spot for the games of Yoshiro Kimura, who brought us the likes of *Little King's Story*, *Chulip*, and *Dandy Dungeon*. We were delighted, then, to note that *Black Bird* contains just as much charm, ingenuity, and unhinged design as those earlier games. It's a traditional 2D shooter, in essence – the kind where you can freely scroll left and right, akin to Atari's *Defender*. As an avenging crow spirit, you're tasked with blasting through levels, destroying enemy towers, and collecting the jewels that will make you larger and more powerful. As Chris Schilling put it in his review back in Wireframe issue three, *Black Bird* is best described as a shadowy mirror image of Sega's *Fantasy Zone* – there's not only plenty of humour and whimsy, but a broad streak of darkness running through its heart, too. Ah, Kimura: never change.

Telling Lies

Poring through footage, typing keywords into a search box, taking careful notes… *Telling Lies* does a great job of making the player truly feel like a detective. This is partly because the quality of the video recordings makes the viewer feel like they're seeing something that was meant to be private – like eavesdropping on a conversation – and partly because the performances (from the likes of Alexandra Shipp and Logan Marshall-Green) are uniformly excellent. Developer Sam Barlow previously made that other enthralling neo-FMV genre entry, *Her Story*. If anything, *Telling Lies* is even better: taut and disturbing, it's a near-flawless interactive thriller.

Tetris Effect

Just when we thought we'd seen all the permutations of *Tetris* the world had to offer, along came designer Tetsuya Mizuguchi to give the game a welcome dash of zoned-out psychedelia. *Tetris Effect* uses the ambient music and trippy wireframe graphics of Mizuguchi's earlier work – *Rez*, *Child of Eden*, and the like – to create a rhythm-action spin on the falling-block puzzler. Together with some brand new rules entirely of its own devising – including an invaluable Zone mechanic to help players out of sticky situations – *Tetris Effect* made a 35-year-old staple of gaming feel fresh, surprising, and new again.
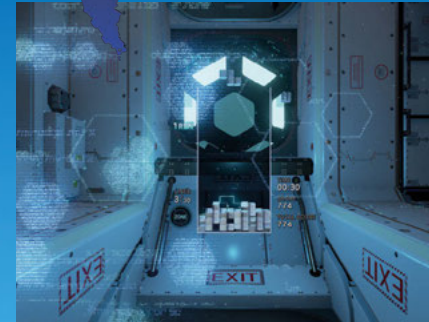
Hitman 2

We won't pretend for a second that we're great at *Hitman 2*, but we'll certainly insist that we've had an absolute blast playing around with its murderous sandbox. Whether we were attempting to sabotage someone's Formula One car at a glitzy race track, or figuring out a way of sneaking into a drug lord's heavily defended mansion, we were reliably engrossed by the process of carefully observing, planning, and then trying to pull off the perfect assassination. Yes, it's a formula that IO Interactive have been tinkering with for a while now, but *Hitman 2* truly feels like the pinnacle of the series so far.

Baba Is You

Box-pushing puzzles have been around since the era of shoulder pads and phones with huge aerials, but *Baba Is You* proves there's plenty of life left in careworn genres if they're approached with a bit of imagination. In fact, we'd go further, and say Arvi Teikari's game has more than a hint of genius about it. Puzzles are solved by pushing blocks, which in turn can act as switches that fundamentally alter the game's rules: this might mean turning off a wall's collision; allowing once-deadly blocks to be pushed, or even switching your player character for an inanimate object. Beneath its unassuming exterior lies one of the most absorbing puzzlers we've played all year.

Ape Out

Some of the best video games deliver an experience we didn't know we wanted until we tried it. We didn't realise how much we needed a game that brings together an out-of-control gorilla, lashings of gore, and a backwash of jazz drumming, but after *Ape Out*, we can't imagine a world without it. The top-down perspective and violence may immediately recall *Hotline Miami*, but the lashings of mesmerising colour, and the way your primal fury syncs up to the percussive soundtrack, make *Ape Out* an entirely different proposition. To mangle a phrase from the Oscar-winning movie *Whiplash*, *Ape Out* is very much our tempo.

HONOURABLE MENTION

SUNLESS SKIES

Failbetter's trains-in-space simulator bewitched us with its atmosphere and world-building.

Sekiro: Shadows Die Twice

Not sure if you've heard, but FromSoftware is a studio that makes hard games. Seems to be a point most of the online community is obsessive about, barking 'git gud' at each other and judging those who don't offer a difficulty level in their games on a par with Hidetaka Miyazaki's output. What's often ignored in this cacophony of willy-waving is that these games are actually a hell of a lot more than just 'hard'. *Sekiro: Shadows Die Twice* is probably the most accessible game Miyazaki has made, balancing a level of actual explanation with the director's typically enigmatic presentation, and once again bringing a harsh but fair level of difficulty to proceedings. When you fail, it really is your fault. And when you fail, you learn. And when you learn, you get a bit better. And better. And better. It's not about the difficulty – it's about the journey to becoming a genuinely better player than you were to begin with, and *Sekiro* does this in a fashion you can actually understand while doing so. Which is a bonus.

Outer Wilds

Exploration and translation – as well as survival – have been running themes over the past 12 months, but it was *Outer Wilds* that brought all these elements together in the most unique fashion. Your goal is to explore the galaxy around you, to find out about the others who were on these worlds before you, to piece together a history and figure out your place in the cosmos, and to do it all in a fairly short amount of time because – fun! – your local star is going supernova in 22 minutes. Enter the *Majora's Mask* effect (well, technically the *Ocarina of Time* effect, but who's keeping score really): that 22-minute day is relived, over and over, each time with you learning new things and garnering new information, pushing ever forward to a world where maybe, possibly, you could just make it a bit longer than that oh-so-short time you do get. A magical, contemplative experience.

Blood and Truth

Imagine the classic piece of motion picture history, *John Wick*, mixed in with a bit of Guy Ritchie's overbearing mockney world of gangsters and London's underbelly, in VR. Sound good? Well, yep, it is. *Blood and Truth* is limited, but in the best way – you are limited to having a fantastic, immersive experience in one of PlayStation VR's best titles. There's story and acting and all that stuff they want you to pay attention to, but really the big draw is those exhilarating shoot-outs and chase scenes, masterfully crafted for the VR environment and as engaging as they are fun. On paper it's a simple idea, in practice it's close to a masterstroke.
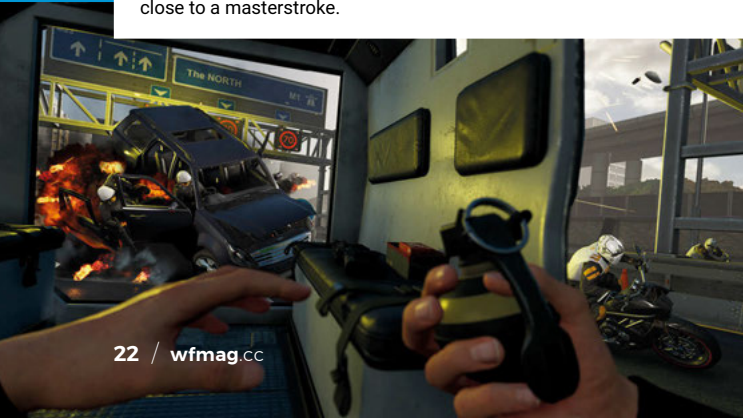
Gato Roboto

From its opening seconds, we were immediately charmed by doinksoft's platform-adventure, *Gato Roboto*. Cast as a tiny cat whose astronaut owner's trapped following a crash-landing, you set off on a hazard-filled quest to find help. The monochrome pixel art looks lovely from the outset – but then you find an upgradeable mech suit for the cat to wear, and from this point on, *Gato Roboto* never looks back. Yes, most of us have played Metroidvanias of this sort many times before, but it's difficult to argue with the precision of this one's design, or its adorable presentation.

HONOURABLE MENTION

DEVIL MAY CRY 5

Capcom's rediscovered its mojo lately, and this current-gen hack-and-slash really got our pulses racing.
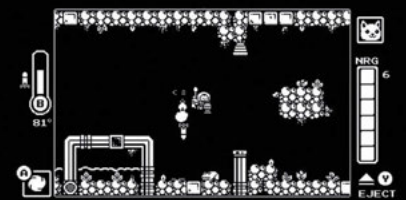
Can Androids Pray

A relatively brief conversation between two parties, in a situation neither is about to get up and walk away from any time soon. Two voices, one place, not much more beyond that – but *Can Androids Pray* still managed to be one of the most intense and affecting games out there in the last twelve months, the last twelve *years*. Free from the tyranny of pixel-perfect platforming, cover-based shooting, or any other traditional gaming enterprise, the boiled-down simplicity works wonders. Developed by Natalie Clayton and spearheaded by some truly evocative narrative by writer Xalavier Nelson Jr. (not forgetting Priscilla Snow's superb soundtrack), *Can Androids Pray* is a short story you truly need to experience.
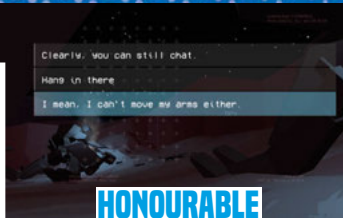
HONOURABLE MENTION
PIKUNIKU
A charming puzzler that's stolen far more of our Switch's battery life than we'd like to admit.

HONOURABLE MENTION
SAYONARA WILD HEARTS
An arcade action game with some of the most dazzling music and visuals we've encountered all year.
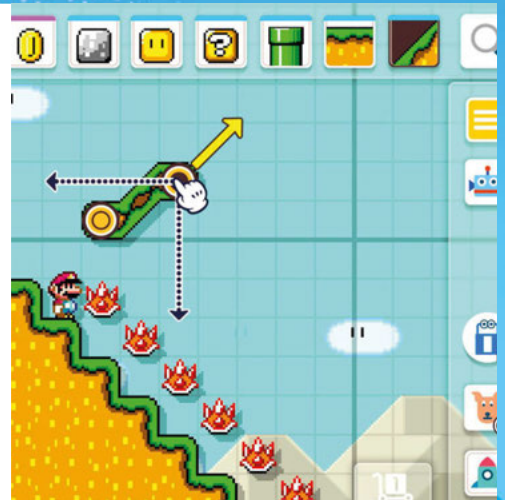
Red Dead Redemption 2

The criticisms stand: *Red Dead Redemption 2* has plenty of core aspects of its main game that are very much stuck in a rut, set in their ways from a decade ago. It's often awkward, sometimes clumsy, and hasn't taken many mechanical cues from the open-world titles out there that have done it better since John Marston and co. first rode out from Rockstar HQ. But even with that heavy dose of second-guessing going on, there can be no doubt *RDR2* is a phenomenal piece of work. One of the finest stories Rockstar has ever told in a game, riffing on Cormac McCarthy's *Blood Meridian* and bringing with it some huge chunks of pathos at the same time, it's a very *real* world and one you will happily lose yourself in for dozens of hours. Very much more than the sum of its parts.

Super Mario Maker 2

Other than bringing it to a wider audience that missed it on the Wii U and 3DS, we initially wondered what else Nintendo could really add to its follow-up to 2015's *Super Mario Maker*. As it turned out, quite a bit. Once again, it's a modular construction kit that allows players to make and share their own Super Mario levels, and as expected, *Super Mario Maker 2* introduces a wealth of new elements for us all to mix and match. But while there are few genuine surprises here, its clarity, ease of use – not to mention the huge possibilities its assortment of blocks, switches, and swinging claws provides – makes *Super Mario Maker 2* a delightful package. Most of all, it's fascinating to rummage through all the ingenious, weird, and sometimes downright cruel level designs that players have made with it all.

No Man's Sky Next/Beyond

Don't read the comments. It's the simple rule we all try to live by online. It's not worth the hassle. And yet, if Hello Games hadn't read the comments, it might not have doubled down on *No Man's Sky*. We might not have seen the *Next* and *Beyond* updates offered free to everyone who owned the base game. We might not have seen one of the greatest turnarounds in public opinion video games have ever seen. What launched as a bag of vague ideas loosely strung together has become, over the course of a few years, a truly special experience – one of feeling like a real explorer, visiting alien worlds, and discovering things nobody else in the universe has. Bringing your friends along for the ride – the promise we never expected to come true – just made it all the better. And VR too? Well, hello there, Hello – you really are spoiling us now.

Dusk

Modern life being rubbish, as we all definitely think, we're grateful things like *Dusk* exist to remind us that the past was better and every game from the nineties is better than anything modern ever could be. What do you mean it came out in 2018? *Look* at it! Yes, *Dusk* took its inspiration wholeheartedly from the *Quake* and *Blood 2* games of the nineties, but this Unity-based shooter brought with it a whole host of modern sensibilities (and technology) to lift the experience beyond mere imitation. People started to pay attention because of its retro-aping, but they stuck around because of the simple fact that *Dusk* is absolutely brilliant. Riotous, fast-paced, nonsense-fun.
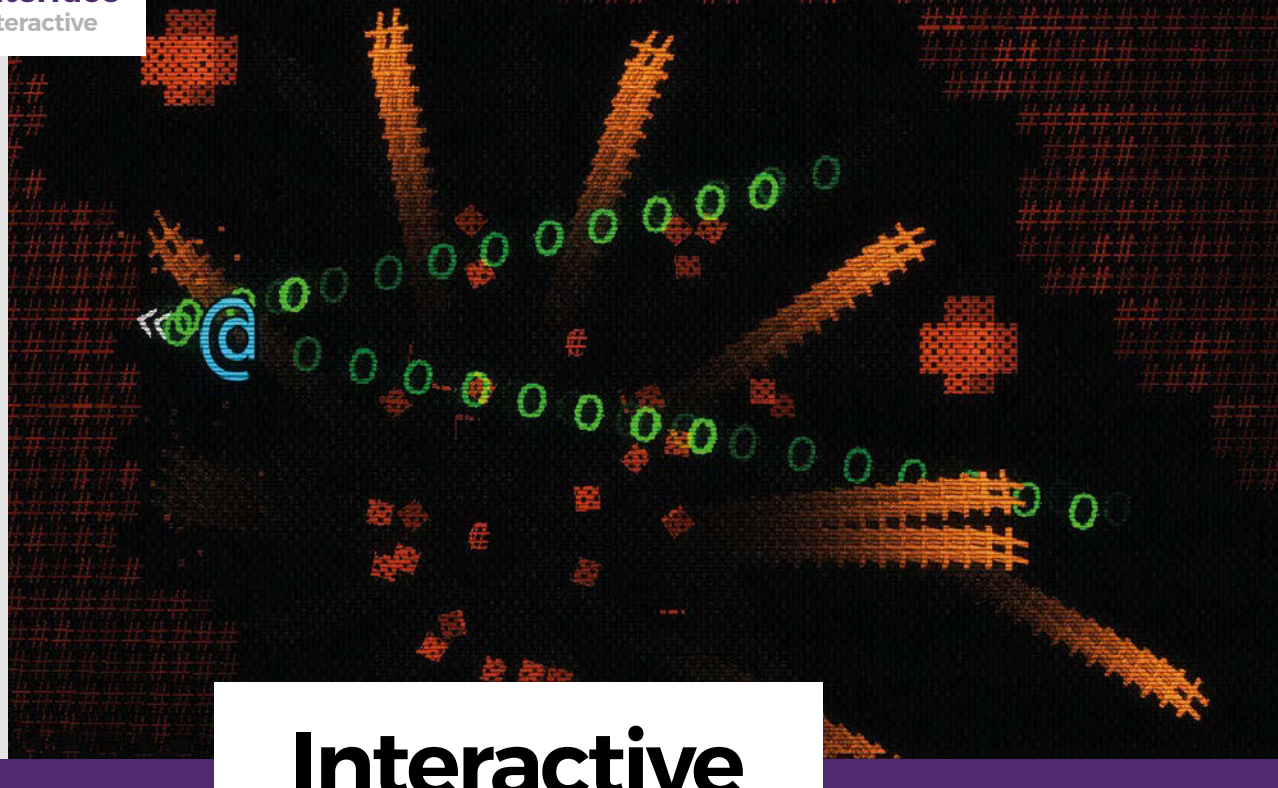
Interactive

Gemstone Keeper

We chat to the solo developer behind Gemstone Keeper, an ASCII art shooter getting a second life on the Nintendo Switch

▲ **Blasting rocks and collecting gems means you can spend your earnings on modular weapon upgrades.**

I n the two-and-a-bit years since its launch, the Nintendo Switch has provided a welcome platform for indie developers of all sizes. And while the eShop itself is getting a bit crowded these days, it's still a viable alternative to the heaving marketplace that is Steam, which sees dozens of indie games pile onto its servers every week. For Leamington Spa-based developer Tim Stoddard, the eShop gave him the chance to revisit a game he originally released on PC back in 2017: the twin-stick shooter and rogue-lite hybrid, *Gemstone Keeper*.

"Actually starting the process felt very mysterious," Stoddard says of submitting the game to Nintendo. "You either had to know someone or send a pitch to a specific address and see what they said. I did the latter, writing a lengthy pitch about the game, what makes it stand out, and how it would be ideal for the console... It took a while to get the word that I'd been granted access, and it was exciting when it did happen. That feeling changed to worry as I realised how daunting it was."

The Nintendo process was, Stoddard says, quite different from Steam, where filling in a few forms and then uploading a finished build was pretty

"That feeling changed to worry as I realised how daunting it was"

much all that was required to get the game in front of prospective players. "Not only was I going to handle getting the game to work on the Switch, but also have my game vetted by Nintendo, who have strict guidelines for both functionality and in-game terminology," Stoddard says.

Fortunately, the way Stoddard built the game made it a solid fit for the Switch: *Gemstone Keeper* uses an engine Stoddard created himself, called the Vigilante Game Framework, and the set of libraries it's built on use OpenGL – something the Switch happily supports. With a little help from Swiss developer Ironbell, *Gemstone Keeper* took around three months to port across to Nintendo's hybrid console. "The biggest challenge was the audio library since the code it uses had no support on the Switch," Stoddard says. "We ended up having to rewrite most of it with Nintendo's native audio functions. In total, it took us nearly three months to get [the libraries] feature-complete and fully operational on the Switch. By the end of March [2019], I had *Gemstone Keeper* running on an actual console, which was just a fulfilling moment as a game developer."

If *Gemstone Keeper* has an experimental look about it – all blocky ASCII art, eye-searing colours,
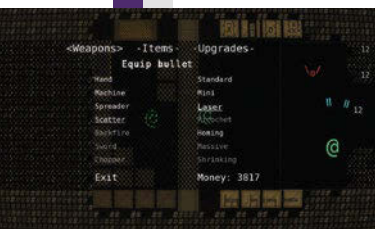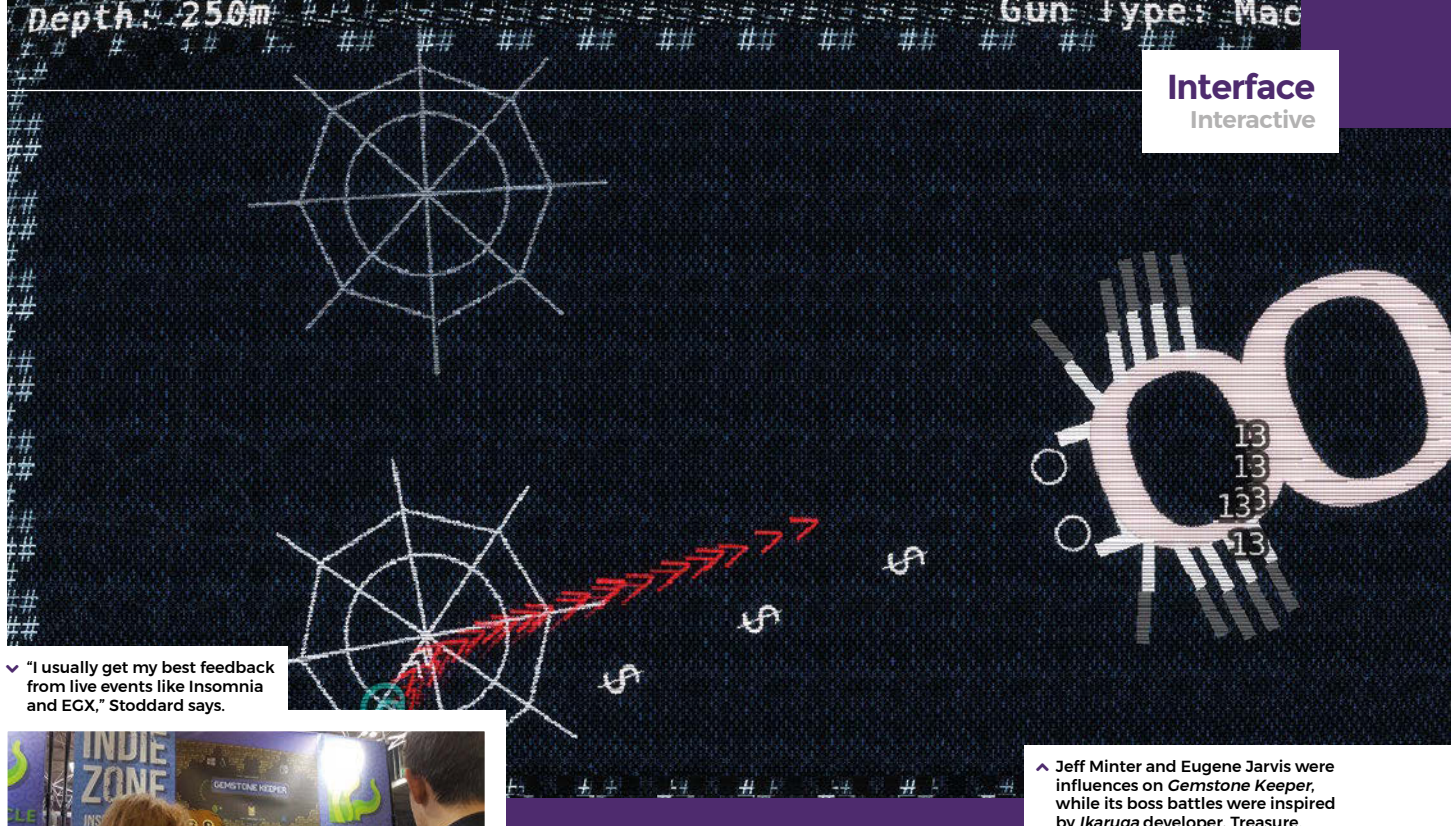
⌄ "I usually get my best feedback from live events like Insomnia and EGX," Stoddard says.

⌃ Jeff Minter and Eugene Jarvis were influences on *Gemstone Keeper*, while its boss battles were inspired by *Ikaruga* developer, Treasure.

⌃ The finished game's ASCII art was nowhere to be seen in its initial incarnation, pictured here.

and monitor scan line effects – then that's partly because it began as a tech demo, designed to show off a tool Stoddard made for his final year thesis. "The tool was used to create and preview procedurally generated levels by setting and changing the parameters of multiple algorithms," explains Stoddard. "The demo was much different from what *Gemstone Keeper* ended up being; the exploration was a part of it – because I wanted to demonstrate the level generation – but because I'm a fan of arcade shoot-'em-ups, the gameplay in that demo was much more rigid and focused."

Stoddard continued working on *Gemstone Keeper* once his thesis was completed, adding a handful of RPG and roguelike elements to what was initially a straight twin-stick shooter. "I was getting more interested in roguelike games, where there is more of an emphasis on preserving your character and planning your route, as opposed to the games I typically play where you go straight in, guns blazing," Stoddard says. "As I got more into them, the more I felt I should focus on the exploration and relaxed vibe, and that was part of the reason why the game has its ASCII aesthetic."

Those ASCII graphics, where a 2D world is created from a shimmering assortment of hashtag symbols, guillemets, and at signs, provided their own challenges. "There was a lot of experimentation and trial-and-error to get the ASCII art to look right," explains Stoddard. "All the ASCII art is generated in-game using a

single font file: the design of sprites, objects, and walls were planned out and then I wrote out which characters should be rendered and where individually. Unfortunately, with the nature of fonts, you can't guarantee that the individual characters would be rendered in the right place, so eventually, I wrote out a function to print out all the generated textures so I could properly inspect them and make necessary adjustments."

Porting *Gemstone Keeper* to the Switch also gave Stoddard the chance to give the graphics an overhaul, with the resolution doubled to 720p; as a result, he says, "all the positions, sizes, the movement calculations, and other details had to be checked by hand, line by line."

While all this was going on, Stoddard also decided to beef up the game with a new survival game mode – a hectic side attraction that adds some multiplayer competition to complement the solo campaign.

All told, the new mode took three weeks to build – a pretty impressive feat, given that, like the rest of *Gemstone Keeper*'s development, it was all put together in Stoddard's spare time.

And with the game due for release on the Switch this November, Stoddard is already thinking about his next solo project; this time, he says, it'll be a Switch exclusive.

"It's a great console to make games for, and I think it deserves more indie stuff that is built [with] the system in mind, instead of just being ported over for the sake of it," he says.

"I've been writing out one game concept that I want to start trying out as soon as *Gemstone Keeper* has set sail, so maybe next year I'll have something to show." ⓦ
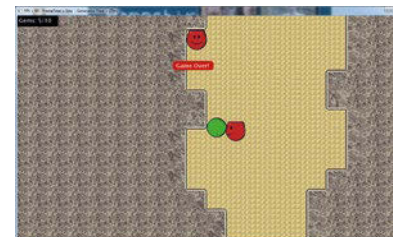
LEARNING FROM THE MASTERS

Although we often look back on games of the past with a nostalgic eye, Stoddard points out that there's also a practical reason for returning to the classics. "I think it's important for developers to look at early games to understand how they have had a lasting appeal," he says. "[They were] able to create something so creative and enjoyable despite being restricted to the technologies of the time they were made. I'm personally a firm believer of the idea that you are more creative when you have constraints set against you, because those constraints take more effort to work within than having little to no constraints at all."

A very happy Wireframe-iversary!

STEVE MCNEIL
Steve just turned 40.
It's not a big deal.
But it is.

"I love this magazine. It seems to me to be a rare success created with affection"

Wireframe magazine has just turned one year old, like a baby.

Anniversaries are weird things. From new years to marriages, from birthdays to the death and resurrection of our Lord and Saviour, Jesus Christ, we seem hardwired to bestow significance upon essentially arbitrary dates, based on the position relative to the sun the planet was in when we previously did a thing. It's doubly strange when you consider 365 isn't even a nice round number. Sometimes it's not even 365*.

Having said all that, it was my 40th birthday on 1 September, and I recently celebrated two years of making that online 'content' everyone else is producing these days, too. It would have felt weird not to mark either of these as it's an opportunity to reflect on what I've achieved so far.

Alas, as far as my YouTube channel goes, some of my videos would still get more viewers if I just stood outside my house and screamed the words at passing cars.

But, is this a cause for concern? I don't make those videos in the hopes of becoming the new Lady Gaga – for me, they're a way to keep my hand in on writing about games in whatever free time I have available, and the people that do watch them seem to like them. So that's nice. Many Twitch streamers (and I was guilty of this myself too when I started out) have statistics displayed on screen the whole time with targets for followers and subscribers, but this can have the opposite effect to that intended, increasing the risk of spending one's time frustrated at the fact that you're 68 followers short of 10,000, rather than recognising and celebrating that 9,932 have chosen to tolerate another alert on their phone whenever you choose to poo an idea into the internet.

I've no idea what Wireframe's readership is (I know they always send me a copy – even the ones I'm not in, as of last month, so that probably helps a bit), but I don't care. I love this magazine. It seems to me to be a rare success created with affection in a market that has been declining, seemingly for decades, and I am truly grateful to every single one of you reading this that help make the whole thing possible. But my love does not come without caveats. I knocked my pile of Wireframes off a shelf the other day and was sad when they fell on, and broke, my Toad amiibo. Which, by the way, was a birthday present.

And thus it comes full circle. But what does it all mean? It means I've written the contractually required 450–500 words, and hopefully given you an amusing diversion for a couple of minutes. And in the end, isn't *that* the true spirit of Christmas?

Happy birthday, Wireframe. ⓦ

▲ Steve McNeil's YouTube channel. Not pictured: a Toad amiibo flattened by a pile of Wireframe magazines.

* Leap years, for any thickos.

Toolbox

The art, theory, and production of video games

Hideo Kojima's *Snatcher*: just one of the pivotal 16-bit cities explored on page 28.

A/B testing helped make *Candy Crush* an addictive mobile smash. Find out how on page 36.

A history of 16-bit and CD-ROM cities

The era of 16–bit graphics, untextured polygons, and choppy FMV gave us some of gaming's most memorable cities

AUTHOR
KONSTANTINOS DIMOPOULOS

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

Honourable Mentions

We couldn't hope to cover over ten years of virtual urbanism in just two pages, so here are a couple more places worth exploring: the original *Silent Hill* and *The Simpsons: Virtual Springfield*. The first remains a masterclass in design, with its clever use of fog, sound, architecture, and planning to generate a pervasive atmosphere of dread. The relatively obscure *Virtual Springfield*, on the other hand, recreated the Simpsons' home town using a combination of real-time 3D exteriors and detailed 2D interiors. It was an exercise in abstracting and reimagining a 2D setting in a 3D space, and the result was one of gaming's first interactive cartoon towns.

The 16-bit powerhouses that were the Amiga, Mega Drive, and SNES, as well as the constantly evolving MS-DOS PC, brought colourful graphics, rich sounds, smooth animations and, eventually, simple 3D geometries to bear on gaming and its virtual cities. The late eighties and early nineties gave us some increasingly detailed settings and fascinating innovations.

This was a time when the medium was dominated by adventure games, which in turn gave us all kinds of immersive and well-designed cities – places like the domed megacity of Terrapolis from Ubisoft's *B.A.T.*, released in 1989, which was presented via static but wonderfully detailed first-person views. Terrapolis offered a rich tapestry of characters, alien creatures, distinct neighbourhoods, and thoughtful takes on real-world architecture. It was an urban simulation where NPCs dynamically reacted to the player's decisions, and where the variety of possible interactions approximated the richness of a real-world city.

The first two *Monkey Island* games – both genre classics – sensibly scaled down their urbanism, but still managed to provide a multitude of vibrant and memorable settlements. Their towns and villages formed part of a map which spanned several islands and seamlessly incorporated all sorts of anachronisms and jokes. *Monkey Island 2*'s Woodtick was a particular high point: a town made entirely of wrecked ships, it was brought to life through the warmth and sheer quality of its hand-painted artwork, the vividness of its inhabitants, and its dynamic musical score.

Lure of the Temptress, a point-and-click adventure released in 1992, wasn't quite as successful as LucasArts' *Monkey Island* games, but it did introduce Revolution Software's ground-breaking Virtual Theatre game engine, which was capable of depicting more realistic cities where non-player characters convincingly milled around the streets. The same studio's dystopian *Beneath A Steel Sky* put the system to good use: in its Orwellian setting, Union City, a sense of culture, history, and structure were all showcased via its archetypal and often paranoid inhabitants. It all added believability to a cityscape influenced by Fritz Lang's *Metropolis*. (Unusually, Union City inverted that film's vertical class geography by putting the poor at the top of vast towers, while the rich lived at the bottom.)

On the horror side of things, Sierra's *Gabriel Knight: Sins of the Fathers* (1993) imagined a fictional New Orleans of voodoo and serial murder; it's an example of how a realistic-seeming city can be created with thorough research, evocative art, and great writing.

▼ A town built from the carcasses of old ships, Woodtick is one of the most evocative locations in the entire *Monkey Island* series.
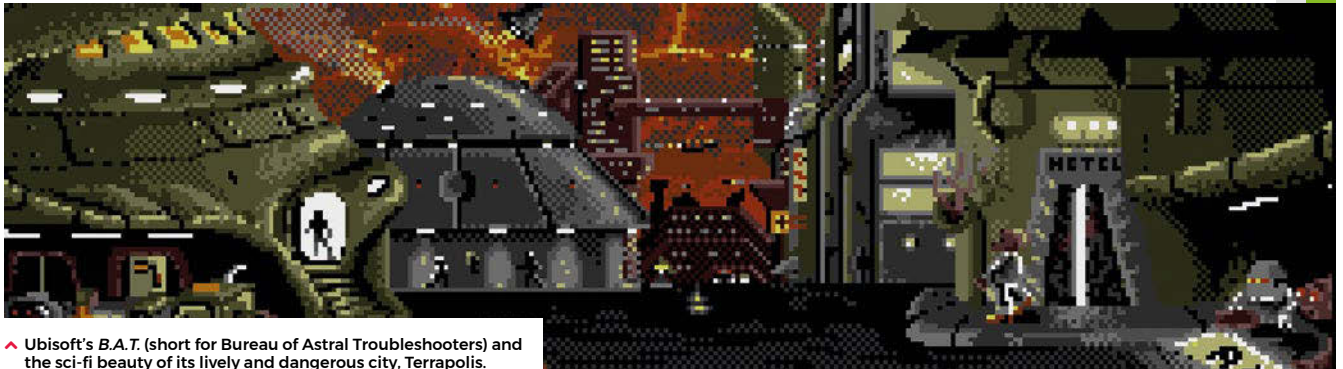
⌃ Ubisoft's *B.A.T.* (short for Bureau of Astral Troubleshooters) and the sci-fi beauty of its lively and dangerous city, Terrapolis.

The complex and maze-like fantasy cities of Sierra's RPG-adventure series *Quest for Glory* are also worth exploring, as is the vast map of Legend's post-apocalyptic *Superhero League of Hoboken*, where zany superheroes battle mutated bureaucrats under decaying landmarks like the Statue of Liberty. Meanwhile, traditional RPGs such as the *Ultima* series, MicroProse's surprisingly accurate medieval RPG, *Darklands*, and the *Wizardry* series, kept growing and evolving their cities and settings throughout the nineties. *Ultima VII*'s spacious Britain was one of the finest RPG cities of its time; it was lively, detailed, and believable.

It was the first two *Elder Scrolls* games, though – *Arena* and *Daggerfall* (released in 1994 and 1996 respectively) – that provided the blueprints for the future, with their vast open worlds and first-person, texture-mapped 3D cities.

AN ERA OF CD-ROMS
As the advent of CD-ROMs allowed for the playback of several minutes of compressed video, there was a brief moment where game designers began to think that FMV was the way forward. Games could now begin to mimic the look of movies more closely than ever before, and a variety of filmed and digitised cities began to spring up. Often consisting of little more than a selection of static photos and short clips, these depictions of cities were often empty and lacking in player interaction – but then again, the excellent *Gabriel Knight 2* used FMV to conjure up a believable version of Munich.

CD-ROM games also allowed for advanced, refined, and more complex cities. The city of *Baldur's Gate* got two classic games to itself; the brilliant *Fallout* games featured a selection of unforgettable post-apocalyptic settlements, while the city of Sigil in *Planescape: Torment*

"CD-ROM games allowed for more complex cities"

stood out thanks to its sheer oddness. A constantly reshaping urban environment connected to every plane of existence, it was an alien place wonderfully rendered in digital form.

Hideo Kojima also took advantage of CD-ROM technology in the nineties, with an updated version of his 1988 visual novel *Snatcher* appearing on the PC Engine Super CD-ROM and Sega's Mega-CD (or Sega CD in the US). Its cyberpunk Neo Kobe was a *Blade Runner*-like metropolis that unfolded via a series of animated vignettes and lengthy dialogues.

Final Fantasy VII's city of Midgar, the most iconic location in the series' universe, was a place riven by class division. It was a huge, intimidating, but beautiful and easily readable city, introduced via breathtaking cutscenes, with the imposing Shinra Building at the centre of its tiered layout. The game's plot masterfully drew tension from Midgar's design, and played with its obvious structural flaws, while the need for pre-rendered backgrounds led its designers to come up with carefully selected, elaborate shots that provided a highly curated tour of the city. It was *Final Fantasy VII*'s depiction of daily life for ordinary people that, in the midst of an otherwise harsh and cruel setting, brought a sense of vibrancy and warmth. ⓦ

⌄ Hideo Kojima's cyberpunk Neo Kobe really shone in the Mega-CD version of *Snatcher*, released in 1994.

The Wright Stuff

No survey of 16-bit era cities would be complete without at least a brief mention of *SimCity*. Released in 1989, the game quickly proved to be one of the most important of its age: designer Will Wright's management simulation allowed players to construct and maintain their own bustling civic sprawls. Suddenly, the wonders of urban planning were within the hands of gamers everywhere, as *SimCity* appeared on just about every system imaginable.

⌄ FMV-powered cities, when done right, can feel deceptively real – even in a low-resolution game like *Gabriel Knight 2: The Beast Within*.

The mysteries of closing and shipping

Zapping bugs, databases, endless meetings:
Reid on the hellish process of finishing a game

AUTHOR
REID SCHNEIDER

Reid is the producer of *Splinter Cell*, *Battlefield Vietnam*, *Army of Two*, *Batman: Arkham Origins*, and *Batman: Arkham Knight*. Follow him on Twitter: **@rws360**

When I started working for Ubisoft back in 1998, times were quite different. Back then, first parties like Sony, Microsoft, and Nintendo would do both compliance testing and deep functional testing. Compliance testing is when manufacturers ensure that all error messages, console terminology, and anything related to their hardware is compliant with their standards. While this might sound simple, it isn't – and standards can change at a moment's notice. Functional testing is the more traditional type of quality assurance, where bugs and large issues are found and fixed.

In that prehistoric era, if first-party companies found a fault of any kind, it was automatic grounds for failing the game, meaning it would have to be resubmitted and the whole process started again. In short, there were no patches, no updates, and whatever shipped on the disc was what players would play. Full stop.

Today, almost all games are patched on the day of release. Only today, one of our engineers here at Typhoon mentioned that, on day one, Obsidian's *The Outer Worlds* will have a 38Gb patch. This most likely means that players who get the patch will be re-downloading the full game. This is a win for players, since it means they can get the best version of the game. But how do we get a game to this point? And what actually happens as part of that debugging process to get a game to consumers? Let's take a look.
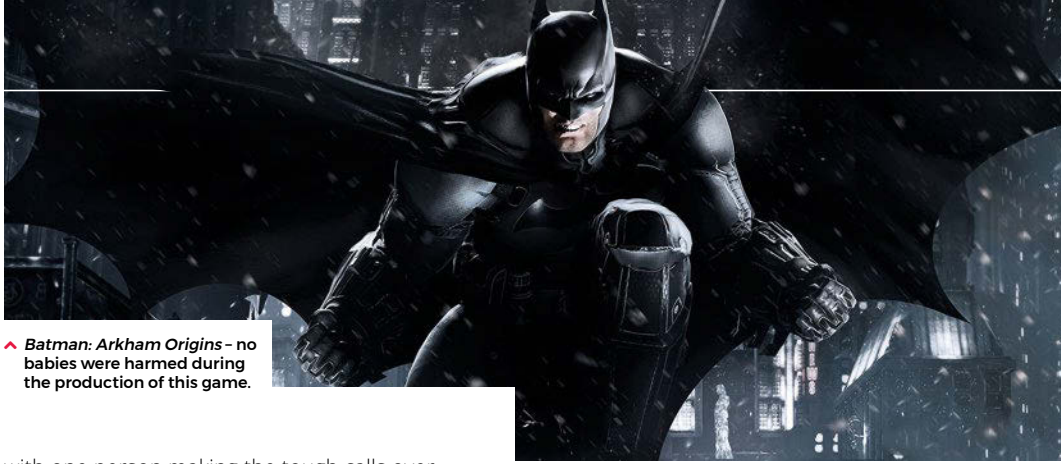
TRIAGE

One of the first steps on the road to shipping a game is called a Triage Meeting. This is where the project leads, directors, etc will go through a laundry list of bugs, usually numbering in the hundreds or thousands. This is a *long* meeting – and one where priorities are at the forefront. For example, if you're on the way to Alpha, or even Beta, you'll prioritise qualitative fixes and improvements over anything else. This is where you take a game from a rough draft to something players might actually enjoy.

Unfortunately, it's never that simple. Often, disciplines from each department (graphics, gameplay, audio) will have differing opinions on what needs to be fixed first. At Typhoon, we've made a point that these decisions need to be creatively driven rather than production-driven,

▼ *Army of Two* featured a panoply of rocket launchers, sniper rifles, and other military hardware. No landing 747s on aircraft carriers, though.

▼ Landing a Boeing 747 on an aircraft carrier. Don't try this at home, kids.

▲ *Batman: Arkham Origins* – no babies were harmed during the production of this game.

with one person making the tough calls over which improvements go first. In our case, it's the creative director who will decide if something is P0 (critical), P1 (high priority), P2 (medium priority) or P3 (low priority). In short, which elements of polishing will happen, and which will die.

This means that, most of the time, anything below P0 or P1 won't make the cut. It's just a reality of game development, as time and resources are tight. In this process, a producer manages a database using a piece of tracking software (for us, Jira) which shows each bug and its relative severity. It's a continuing process that needs to be done on a regular basis; we do it weekly, or even daily, to ensure we always have the team focused on the right things.

DEADLY MEETINGS

When I was at Warner Brothers Montréal, and we were in the Alpha/Beta phase of shipping *Batman: Arkham Origins*, I got invited to a meeting named the 'Baby Killing Meeting'. I had no idea what I was in for at first, but any meeting with a name like that was clearly unmissable. When I got there, the agenda was to discuss all the features in various phases of completeness – a normal part of the development process. On *Arkham Origins*, we would hold this meeting every couple of weeks: the project leads would meet, and sometimes, "babies would need to die." In this case, the babies were partially finished features or ideas. This can be a particularly gut-wrenching discussion, because in most cases there's been significant time and effort already put in by some really talented people.

These 'babies' can sometimes be almost fully grown, but again, cutting them is the right thing to do. It's always better to have the team focused on key features that will stand out to players.

If you're ever having trouble with this idea, something to keep in mind here is the notion of 'Sunk Cost Fallacy'. You need to forget about the time, money, and energy you've already invested in something – what really matters is how much time, money, and energy you'll have left to get to the result, or the return on investment, that you might want.

❮ Developers at Typhoon use the Jira tracking system to manage a game's bugs and their severity.

> **"The only way to get a quality game released is through hard work"**

NO SHORTCUTS

When I was working at EA, and we were closing the first *Army of Two*, we had a meeting with a certain vice-president who our studio head had been told was a "genius in operations." Operations, in this case, meant getting a final master version of a game onto shelves in record time. His go-to analogy was, "Shipping a game is like landing a 747 on an aircraft carrier."

Two points. One: 747s don't land on aircraft carriers. Two: he was so far removed from the production of the game that even if you assume a 747 *could* land on an aircraft carrier, he was nowhere near the cockpit.

Anyhow, this sounded really good to us, so of course, we were quite excited to learn his secrets. As we sat down for the meeting, it became quite clear that he had zero ability to speed things up; what he was really good at was cutting corners. The more we talked, the more it became clear that his approach was to simply push things through the pipeline, only for the team to have to later fix all the issues in a day-one patch. Long story short: there are no shortcuts.

The only way to get a quality game released is through hard work, tough choices, and unbridled passion in the face of epic amounts of stress. One more concept to keep in mind is Hofstadter's Law: doing something complex "always takes you longer than you expect." Game development is complex, with a ridiculous number of moving parts. Budget for more time than you think you need, as it *will* get used. Anyone who says otherwise hasn't gone through the hell that shipping a game can be. Ⓦ

Tutorials: breaking with conventional wisdom

Your game has an unusual mechanic, but you don't want to bombard players with tutorials? Kenneth has a solution

AUTHOR
KENNETH DUNLOP

Kenneth Dunlop is a game designer at Plasma Beam Games. He's worked at EA, Lionhead, and NaturalMotion, but broke away to create *Super Space Slayer 2*. **@KennethEGDunlop**

Back in the old days (or the eighties and nineties), games didn't tend to have tutorials and the idea of a 'tutorial' as we understand it now didn't exist. There are a few reasons for this. Before Steam and digital distribution, when you bought a game, it was likely all you had to play for at least a month. Unlike today, you weren't in a position to just quit the game and move onto something else if you got stuck. You had to persist, buy a game guide, or quit and lose your investment in the game. At a time when video games were a relatively small, hobbyist market, you were more likely to be playing a weird project some bedroom programmer wanted to make –

someone who didn't necessarily have the end user's comfort in mind.

As the industry became more mainstream, games did more 'hand-holding' to make sure everyone knew how to play. Again, there are multiple reasons why this happened. Having more and more information about what players were doing in their games, designers wanted to make sure that users knew how to play, particularly as competition from *other* games heated up. Nowadays, if you don't understand how to get to the next part of a game, you can just pick up your phone and download something else for free. Another reason was the increasingly massive and risk-averse triple-A games market. With ever more depressing statistics available, which showed how few players actually finished the games they bought, designers were eager to make sure anyone who started their game both knew how to play and didn't miss anything important. The quest for the Widest Possible Audience meant games had to be playable by anyone – no gamer left behind.

This transition is a mixed blessing. On one hand, games have become more inclusive, better-designed, and less obtuse. Less time is wasted because the player won't be trying to figure out the basics – they can just get on and play the game. On the other hand, you could also argue that they've become bland, reduced the scope for players discovering how to play by themselves, and introduced teaching mechanisms that will slow down any player who

⌄ That hand graphic is known as the 'Hand of Shame' because it only appears if you've failed to do something in the game.
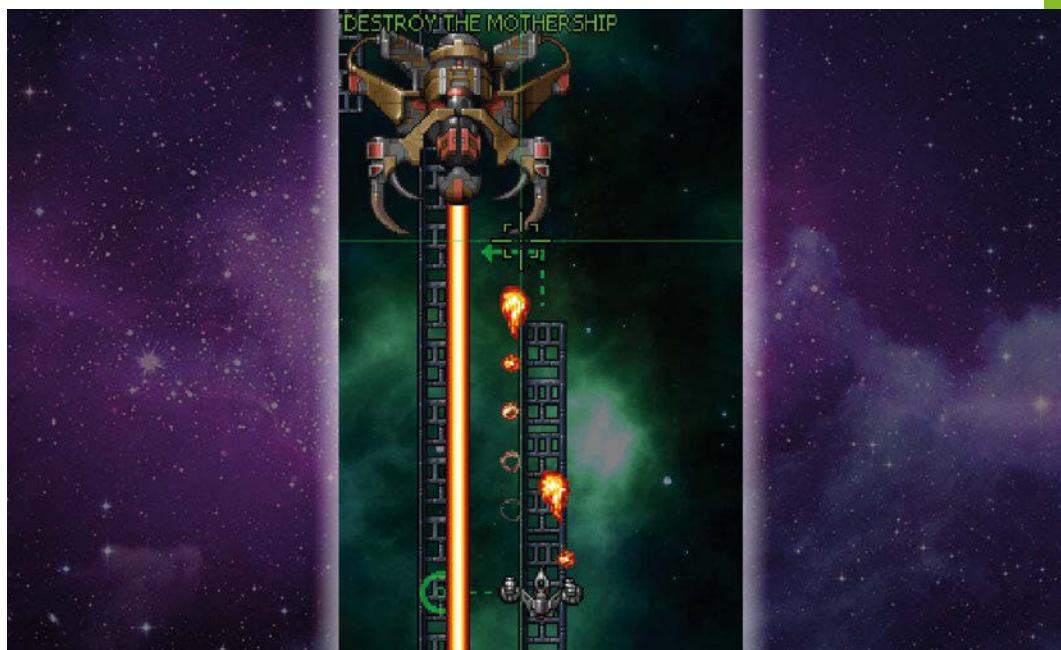
In *Super Space Slayer 2*, the shooting mechanics are only explained if the game notices the player hasn't mastered the controls.

already knows what they're doing or doesn't want to be guided.

There's something rather annoying about being told what to do so openly – so *obviously* – by a game you bought. I take orders all day at work, and now my video games are trying to tell me what to do too? Personally, I only like tutorials when I feel like I need them. One of my favourite gaming examples is figuring out most of Dante's sword moves in *Devil May Cry* by myself, which was done by opening the menus and reading everything. The sense of discovery and freedom that method instilled would have been lost had they just brought up game-disrupting instruction boxes *telling* me to learn those moves.

When I was planning my shooting game, *Super Space Slayer 2*, I had to navigate between these two extreme approaches to tutorials. I knew that my game was unusual and players would have to be introduced to its three main mechanics: tap the screen to shoot; swipe to move left and right; tap your ship to deflect enemy bullets. The question was what form this all-important tutorial would take. I knew mobile games especially could live or die by their opening level since it was so easy to download a different game on the same phone. *Super Space Slayer 2* is also free to download, making the tutorial even more crucial. In a free

game, the player has no prior investment, and no marketing 'hype' to compel them to persist with the game if it doesn't intrigue them straight away.

I worked at NaturalMotion Games at the time and asked around for advice. My co-workers readily formed a consensus: "You have to include a tutorial, but you have to make it optional." This seems to be the conventional wisdom about tutorials. Almost everyone said that the game needed a tutorial of some kind. After all, how else could you make sure players understand the game when they start? ➡
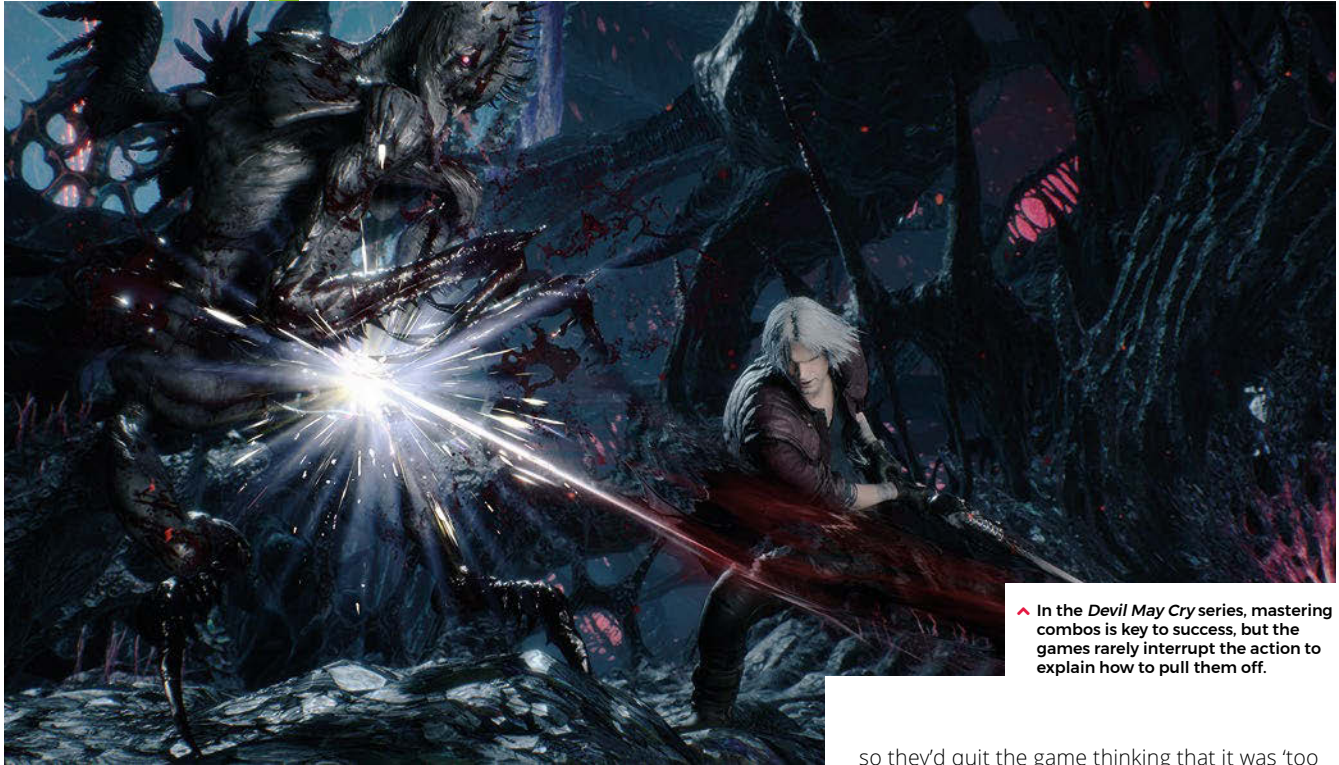
> **"How else could you make sure players understand the game when they start?"**

At the time, I was confident that the tutorial would stay this way, but game design can be a surprising journey.

^ In the *Devil May Cry* series, mastering combos is key to success, but the games rarely interrupt the action to explain how to pull them off.

OBSCURITY AS FEATURE

Despite the modern trends in tutorials, some mega-successful games like *Minecraft* are famously obtuse. It's hardly obvious that the first thing you should do in that game is punch a tree, and there's a host of obscure things like crafting recipes that the player is unlikely to discover by themselves. Still, given that you can just look these things up on the internet, this all serves to give the game a sense of community, as fans will browse to communal wikis to figure it out.

MANDATORY, YET OPTIONAL

As I pondered this, I couldn't deny it, but something nagged me about it, too. It didn't seem to go far enough. I wasn't yet ready to understand the next step with tutorials, so I implemented what I thought was a 'standard' tutorial in the game. I set up a prompt at the start of the game that said, 'Welcome to Super Space Slayer 2. Would you like a tutorial?' It was the first decision the player had to make. Not a very 'fun' decision to be sure, but a necessary and important one.

If the player tapped the 'yes' button, they were taken to a three-stage tutorial that introduced the basics of the game – the moving, shooting and deflection mechanics mentioned earlier. It worked well as a way to teach players the controls, and it was all over quickly, within a minute. I thought my work was done.

When I showed the game at the Insomnia gaming festival, however, I found a problem with the design. It was fine if the players tapped 'yes'. But if they said 'no', they'd enter the first level not knowing how to play. Because the experience was designed around short, mobile-friendly sessions, they could easily die in the first level within ten seconds. At this point, they didn't know the levels were only 22 seconds long (in some shooters I tried, they're six minutes!),

so they'd quit the game thinking that it was 'too hard', little knowing that they were only seconds away from the end of a level.

This is the part where bad game designers like to blame the player. It's a tempting move if you're invested in a tutorial you worked hard to implement. "It's not my fault the players chose not to play the tutorial! It's not my fault they quit the game!" I call this the 'It's Fine So Long As You Do It Right' excuse. When you're a game designer, everything in the game is your responsibility – a game that only works when you 'Do It Right' does not work reliably.

TAKING RESPONSIBILITY

I was faced with a dilemma. I didn't want to remove the tutorial ("You have to include a

^ In *Minecraft*, complexity and lack of hand-holding are features, not bugs. You'll have to decide whether this is also true of your game.

tutorial"), but I didn't want to make it obligatory to players, either ("You have to make it optional"). For a long time I was stuck, making notes, pondering the problem in my favourite coffee shop, waiting for inspiration to strike. It's at times like these when a designer has two choices: give up and keep the game the way it is despite your misgivings, or learn something important so you can improve it.

Then the eureka moment hit. It's no use asking a player if they 'want' a tutorial because the truthful answer is always no (ask any child if they *want* to eat their vegetables). What I needed to know was not whether the player *wanted* a tutorial, but whether they *needed* one.

The problem with this question should be obvious. At the very start of my unusually designed game, the player is in no position to know if they need a tutorial. Indeed, I'd be asking them if they knew how to play my game at the very time they knew the least about it. Some games try to get around this by asking if you've played similar games before, but that would be no good here, either; as far as I know, there simply *are* no games like *Super Space Slayer 2*.

Instead, the game would have to judge whether the player needed a tutorial itself. I got the game to keep track of things like whether the player had shot their ship's guns, if they moved, or if they got hit by an enemy bullet. On cue, they would be prompted to shoot, move or deflect, but only if these things were needed. The old individual one-minute tutorial had effectively been split into its three component parts. Players who did everything right the first time would never experience these prompts, and would never even know they existed. The tutorial also did a few things to ensure the player couldn't die in their first attempt: they were forced to shoot at least one enemy, and if they got shot by enemy bullets, the game forgave them and prompted them to tap the ship and deflect the bullets. As far as I know, it's simply impossible to die in your first run in *Super Space Slayer 2*.

I'd managed to not only include the conventional wisdom, but build on it, too. The tutorial was 'optional' – it just wasn't a choice the player made explicitly. Instead of asking the player up front if they needed a tutorial, the game itself checked if they needed it. A tutorial had certainly been implemented, but it lurked quietly in the background, ready to appear at a moment's notice, and to disappear just as quickly if the player showed they knew what to do.

Once I started showing the new, improved *Super Space Slayer 2* at events again, I found that players understood the game very quickly. It was rather satisfying to watch them play, knowing that my creation was seamlessly nudging them into completing that crucial first level. It was a lot of work to set aside my old, 'standard' tutorial and rethink everything, but seeing how absorbing the game was after that, it was clearly worth it. If you're making a game and planning a tutorial, what I discovered could be of use to you, too. ⓦ
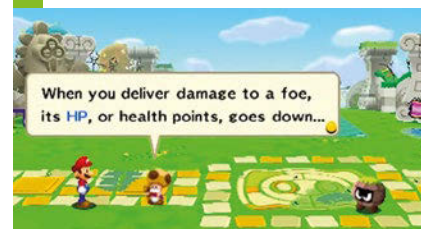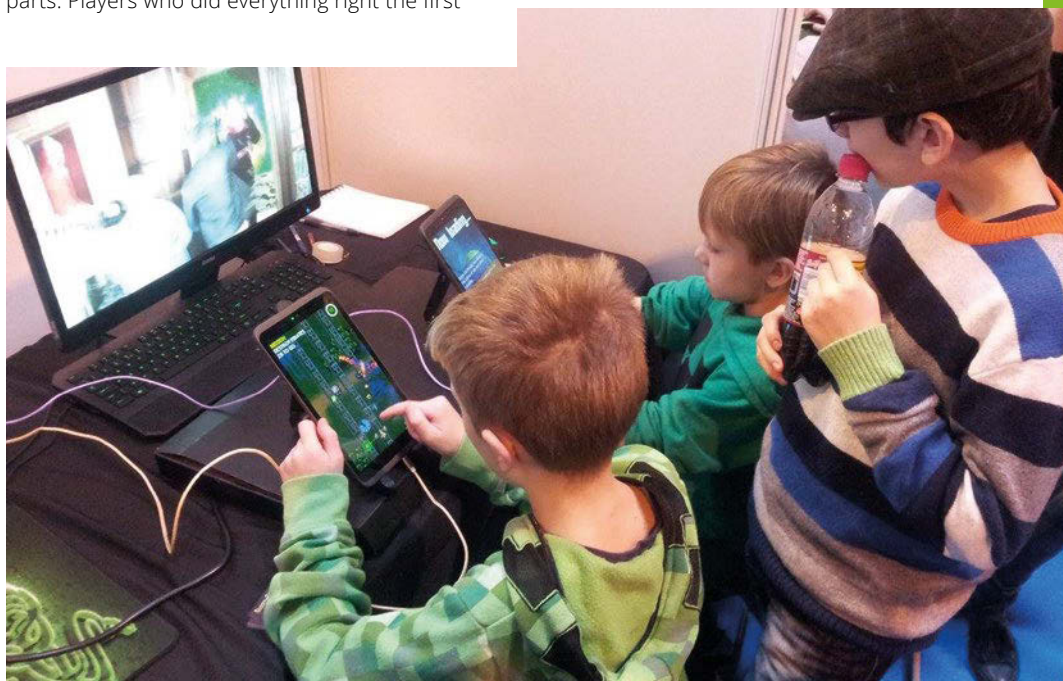

▲ There's plenty to enjoy in *Mario & Luigi: Dream Team*. Your mileage may vary with its sea of tutorials, though.

▼ Some eighties arcade games, like *Pang*, included brief tutorials in their attract mode.

‹ Kids make the most ruthless game testers.

A/B testing: what it is and how to use it

It's the technique that defines the games as a service model. Eric digs into the secrets of A/B testing

AUTHOR
ERIC MCCONNELL

Eric McConnell has been an engineer, game designer, and product manager at companies such as Rockstar Games and Zynga. He's now a product manager at Google where he works on Google Assistant games.

MODULO ARITHMETIC: EXPLAINED

Modulo arithmetic is one of the most important mathematical operations in programming. It can be thought of as the remainder after a division or the position after a wraparound computation. It is used in the form of A mod B, where the answer is the remainder of A divided by B. If A mod B = C then A = (B * k) + C where k is a constant.

Have you ever gone back and forth on multiple design decisions, wishing you could implement all of them and have players tell you which one they like best? Ever wondered how small reward changes could have a butterfly effect on major metrics? Modern game developers are implementing design experiments in live games: A/B testing is about applying scientific testing principles to game development, and provides a framework to test out design ideas. You start with a hypothesis, set up testing and control variants, run the experiment, and measure the results.

This can be used for finding which rewards increase a feature's engagement, how various level-tuning curves affect retention, and what properties to matchmake players on to ensure close skill levels. The best uses of A/B testing are for elements of your game that don't impact the player's expected behaviour. If the player expects a combination of buttons to shoot a fireball in your fighting game, then you can't change the result of those inputs to, say, an upper-cut.

THE SETUP

The first step to implementing and running game design experiments is to compile data from your gameplay. All the numeric values in your gameplay should be driven by a formatted data file, the most common format being JSON. This also lets you modify gameplay balance without recompiling your codebase.

The next step is identifying what you're testing and how you expect the experiment to turn out based on your current knowledge – referred to as a hypothesis. Do you think increasing daily rewards will increase session times? Are you expecting lower round times to also lower rage quit rates? As well as identifying your hypothesis, you also need to know what metrics you're using to measure success. Are you measuring daily active users? Are you looking at the average time spent in a specific game mode?

Next, identify the success threshold. If the difference between success metric variants is 1 percent, does that justify a winner or loser? Is a 10 percent delta – or change – considered a success, or 8 percent? Finally, identify how long you want to run your experiment for. The experiment length should be the same

> **Figure 1: The final results of Match-Pay-Win's two-week experiment.**

Date	Control	Variant 1	Variant 2	Var 1 vs Control	Var 2 vs Control
3/1/2019	0.41	0.47	0.5	15%	22%
3/2/2019	0.63	0.69	0.72	10%	14%
3/3/2019	0.58	0.68	0.71	17%	22%
3/4/2019	0.39	0.45	0.41	15%	5%
3/5/2019	0.38	0.45	0.33	18%	-13%
3/6/2019	0.4	0.43	0.33	7%	-18%
3/7/2019	0.4	0.42	0.32	5%	-20%
3/8/2019	0.39	0.4	0.31	3%	-21%
3/9/2019	0.56	0.61	0.4	9%	-29%
3/10/2019	0.59	0.62	0.39	5%	-34%
3/11/2019	0.42	0.43	0.32	2%	-24%
3/12/2019	0.4	0.41	0.31	2%	-23%
3/13/2019	0.39	0.38	0.29	-3%	-26%
3/14/2019	0.39	0.39	0.3	0%	-23%
Avg	0.45	0.49	0.40	8%	-12%

	Control	Variant 1	Variant 2
ARPU	0.45	0.49	0.40
Delta		7.61%	-11.78%
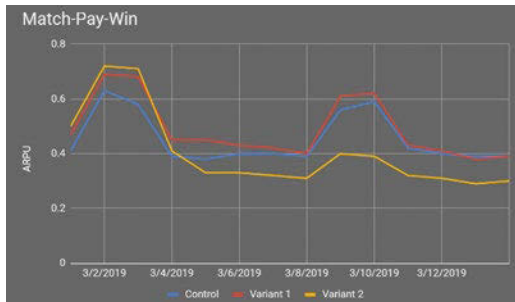
▲ **Figure 2:** Variant 2 started off strong but quickly dropped against Variant 1 and the Control.

▲ **Figure 3:** Variant 1 has a slow linear decline, whereas Variant 2 has a sharp delta drop.

as other, similar experiments, so that you can accurately compare results.

Let's create an imaginary game: Match-Pay-Win. It's a match-three puzzle game where the player completes levels by clearing tiles, with each level having a set move count. If the player runs out of moves, they can buy more moves and continue the level. I have a hypothesis: if I decrease the moves per level, I can increase revenue from each user. The metric I will track is Average Revenue Per User (ARPU) – the summation of revenue divided by the number of unique users. I'm going to say that, for this strategy to be considered successful, I need to see an ARPU increase of 10 percent, because anything less could equate to a rounding error. Finally, I'm willing to run this experiment for two weeks.

It's now time to designate your testing variants. A testing variant is a set of modified gameplay data that will be served to a group of players to test your hypothesis. One variant might get higher than normal rewards while another will get lower than normal rewards. While testing, you need to maintain a control variant, or a variant that maintains the status quo. For existing gameplay experiments, the control variant won't change the gameplay data, and neither will the control variant see new features.

The classic testing variant setup is 50/50, with half the players receiving the control variant and the other half receiving the testing variant. This can be expanded to support any number of scenarios. Maybe you have low, medium, and high rewards variants – if so, you could split your testing group into four, with the three subgroups each receiving low, medium, or high rewards, while the fourth subgroup serves as a control variant. For Match-Pay-Win, I want to test both my hypothesis and a more extreme version of it. Testing both at once can potentially save me an extra experiment if my hypothesis ends up

being true. I'll run a control variant, my hypothesis variant (Variant 1), and a more extreme version of my hypothesis (Variant 2). The experiment will be run on a 34/33/33 percent split – the extra 1 percent going to the control variant won't hurt the results, because ARPU is normalised.

TIME TO EXECUTE

Now you can set up your gameplay data on your server according to your testing variants. How your game is programmed will dictate how this variant data reaches your players. The two most common implementations are sending gameplay data files down at the start of the game or having the gameplay logic sit server-side and dictate which variant to make gameplay calculations for.

To determine which variant a player falls in, you can use modulo arithmetic (see boxout). All modern game platforms have a user ID that you can retrieve and apply these calculations to.

Take the player ID and mod it by the number of variants – this will give you the index of the variant for that player. If your player ID is 123456789 and you have three testing variants (Variant 1, Variant 2, and Control), your formula will be 123456789 % (mod) 3 = 0. The player will be in the 0th index, which is Variant 1. Now the only thing left to do is run the experiment and track your metrics of success.

In Match-Pay-Win (see **Figure 1**), the more extreme Variant 2 performed much worse than the Control variant – it started well, but quickly dropped to performing the worst of the three (see **Figure 2**). Maybe players started quitting due to the increased difficulty? We'd have to check other metrics to find out. Variant 1 performed better than the Control variant, but didn't meet our 10 percent threshold for success (see **Figure 3**). Variant 1 showed the most promise, so it may be worth retuning this experiment and running it again to find out more. Ⓦ

> **"If I decrease the moves per level, I can increase revenue from each user"**

GOOD IDEAS, BAD IDEAS

One of the best uses for A/B testing is for rewards; testing loot tables, event rewards, or any place where randomised rewards are given out in a game. Reward experiments are great for measuring the short-term effects on player re-engagement and measuring long-term effects on the in-game economy and player wallets. New features are another great place to run experiments, because the player has yet to establish an expected behaviour for them compared to longer-running features.

▲ Developer King Games makes constant use of A/B testing to balance *Candy Crush Saga*'s difficulty and player retention.

Getting work as a game writer

Networking, honing your craft, and catching a stage play: Rebecca's tips for breaking into game writing

AUTHOR
REBECCA HAIGH

Rebecca Haigh is a freelance writer for games, including *Dance of Death: Du Lac & Fey* and *ATONE*. She recently graduated with a degree in games development, specialising in writing.

As a collective, game writers happen to be a rather social bunch, which runs counter to the usual writerly stereotypes – the ones where we lounge in a coffee shop all day with a laptop, or sit at home in our dressing gowns, or pace our stylish apartments in the early hours with a steaming mug of coffee. We still do all of those things – we're just constantly telling one another about it on Slack or Twitter.

So, if you are seeking a role in game development that avoids the team-working, hyper-social aspects of the job, then don't be a writer. A friend told me, half in awe and half in a sort of awe-inspired terror, that she had never seen anything quite like the game writer community. "You guys know everything about everyone. You just talk – constantly." We do. But that's all part of the job.

Joking aside, you'll spend much of your time networking. It's vital to be plugged in, as the vast majority of jobs getting thrown your way will be through word of mouth alone. Networking is as much online chatter as it is patrolling events and conferences. It's coffee dates. It's Slack debates. It's making friends. I can't begin to tell you the amount of work that's been thrown my way simply because I'm a nice person on Twitter – not because I go to conferences shooting business cards out of a Nerf gun, but because I sit at home in my pyjamas and check up on people every now and again. Being kind, contributing to the community, and generally being a decent person won't necessarily secure you the work, but it'll make sure you hear about the work in the first place.

But how *do* you secure the work? Or, more importantly, how do you get into a position where you're considered in the first place?

1. BE GOOD
Not just good – brilliant. Bloody brilliant. Writing for games has become its own competitive realm. Gone are the days when written work was an afterthought thrust onto the nearest designer. It should go without saying that you should be a good writer if you want to write for a living.

2. CONSUME
Don't end your media consumption with what you can get on your PC or console. Having an understanding of the way games have implemented their narrative is hugely important to your own process, but appreciating the

For Wildboy Studios' 2D adventure *ATONE*, Rebecca wrote the dialogue and in-game text.

▲ *Du Lac & Fey* **required a deep dive into Victorian history for its scriptwriting.**

way other forms of storytelling deliver their characters and dialogue is vital to your future as a writer for games.

Watch a lot of television. A lot of it. Pay to see your films in the cinema and see how they use space. How is it different from watching it at home? Speaking of space – visit the theatre. Go to an opera. How are people doing Shakespeare differently? How are the performers using the stage and interacting with the audience? What made that particular show on Netflix so popular? How did that crime thriller subvert the usual tropes to make itself memorable?

Lastly – print. Read books. Lots of them. Subscribe to and read magazines. What does a magazine choose to pull out and draw your eye to? I realise this is probably becoming a little bit meta now, so I do apologise. Learn the basics of layout and graphic design, the way designers use grids, then think of this in terms of the way you write. What do you want your player to see? What words jump out at them? I think you get the point.

3. MAKE

Being a good writer is one thing, but having hands-on experience in game development or interactive fiction is the icing on the cake and the cherry on top. If you're fresh out of education and new to game development, I suggest seeking out local developers and seeing what extra-curricular activities they have on offer. Facebook is a goldmine for networking groups to help you meet like-minded folks, and it'll allow you to begin work on something you can call your own. You need to be able to say, "I did that."

Game Jams happen all the time, and are a great way to join talented communities. The buzz around these events can be amazing.

"Gone are the days when written work was an afterthought"

More often than not, you need hands-on experience already if you're looking to work in game development, so Game Jams are one of the ways you can gain this experience without necessarily having to work for a game company.

It's important to remember that the life of a freelancer and that of an in-house writer are very different. Both come with their own set of skills, and they're very much a lifestyle choice that you must work on as much as your craft. Freelancing, for example, takes a regime. It's important to work without distraction, or your workday ends up bleeding into your personal life. Set a 'space' where you work, and close the door on it at the end of the day.

The principles of writing for games remain the same regardless of whether you work from home or in a studio. Your fundamentals are a toolkit you can hone and take with you from job to job, and there are plenty of articles and books to help you with this. These are your oneshots and your barks, your linear versus non-linear dialogue. The lifestyle that surrounds writing for games is what differs from person to person, and this is the advice I wish I'd been given when I first stepped out into the big wide world.

Finally, remember that tea and coffee are your best friend. Invest in the good stuff if you can – you'll thank me later. ⓦ

GET HANDS-ON

You don't have to rely on others to help you build your portfolio; some lovely people have designed some free software, so you could make your first game by yourself. For writers, software like Twine and Inkle allows you to develop branching, text-based experiences which are great for creating interactive fiction pieces, or if you want to add another layer to your writing samples. Game engines like Unity are free to download and play in, and so are plugins like Fungus, which make the implementation of text a breeze. All of the above have online documentation and active communities, so if you ever have an issue there's always an answer to be found somewhere.
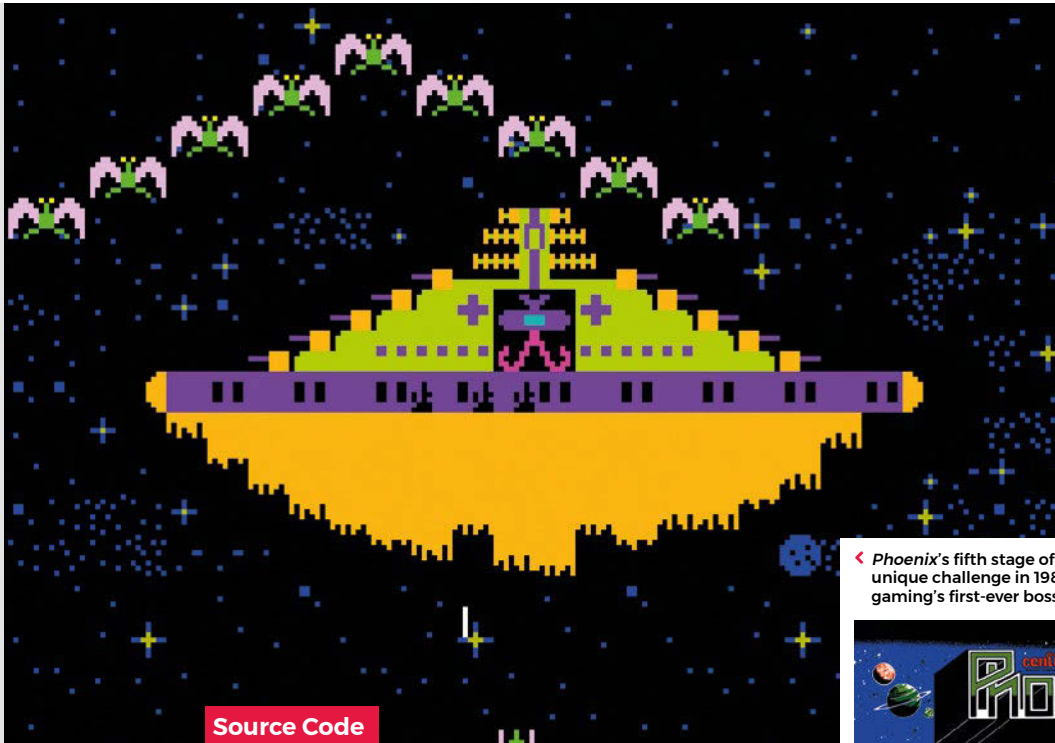

▲ **Made by indie developer Snozbot, Fungus is an open-source Unity plugin that allows users to make narrative games without writing code.**

▼ **Rebecca Haigh with Salix Games writer Philip Huxley at Pinewood Studios during the making of** *Dance of Death: Du Lac & Frey*.

Source Code

Code a Phoenix-style mothership battle

It was one of gaming's first boss battles. Mark shows you how to recreate the mothership from 1980's Phoenix

AUTHOR
MARK VANSTONE

First released in 1980, *Phoenix* was something of an arcade pioneer. The game was the kind of post-*Space Invaders* fixed-screen shooter that was ubiquitous at the time: players moved their ship from side to side, shooting at a variety of alien birds of different sizes and attack patterns. The enemies moved swiftly, and the player's only defence was a temporary shield which could be activated when the birds swooped and strafed the lone defender. But besides all that, *Phoenix* had a few new ideas of its own: not only did it offer five distinct stages, but it also featured one of the earliest examples of a boss battle – its heavily armoured alien mothership, which required accurate shots to its shields before its weak spot could be exposed.

To recreate *Phoenix*'s boss, all we need is Pygame Zero. We can get a portrait style window with the **WIDTH** and **HEIGHT** variables and throw in some parallax stars (an improvement on the original's static backdrop) with some blitting in the **draw()** function. The parallax effect is created by

"The mothership is made up of several Actor objects which move together"

having a static background of stars with a second (repeated) layer of stars moving down the screen.

The mothership itself is made up of several Actor objects which move together down the screen towards the player's spacecraft, which can be moved right and left using the mouse. There's the main body of the mothership, in the centre is the alien that we want to shoot, and then

we have two sets of moving shields. In this example, rather than have all the graphics dimensions in multiples of eight (as we always did in the old days), we will make all our shield blocks 20 by 20 pixels, because computers simply don't need to work in multiples of eight any more. The first set of shields is the purple rotating bar around the middle of the ship. This is made up of 14 Actor blocks which shift one place to the right each time they move. Every other block has a couple of portal windows which makes the rotation obvious, and when a block moves off the right-hand side, it is placed on the far left of the bar.

The second set of shields are in three yellow rows (you may want to add more), the first with 14 blocks, the second with ten blocks, and the last with four. These shield blocks are fixed in place but share a behaviour with the purple bar shields, in that when they are hit by a bullet, they change to a damaged version.

Phoenix in Python

Here's Mark's code snippet, which recreates that pioneering boss battle in Python. To get it running on your system, you'll first need to install Pygame Zero – you can find full instructions at **wfmag.cc/pgzero**.

```python
WIDTH = 600
HEIGHT = 800

mothership = Actor('mothership', center=(300, 100))
bullet = Actor('bullet', center=(0, -10))
alien = Actor('aliendude', center=(300, 110))
ship = Actor('ship', center=(300, 700))
barShield = []
lowerShield = []
backY = count = mothership.frame = gameover = 0
for b in range(0, 14):
    barShield.append(Actor('bar1'+str(b%2),
center=(310+((b-7)*20), 140)))
    lowerShield.append(Actor('shield1',
center=(310+((b-7)*20), 160)))
    barShield[b].frame = lowerShield[b].frame = 1
for b in range(0, 10):
    lowerShield.append(Actor('shield1',
center=(310+((b-5)*20), 180)))
    lowerShield[b + 14].frame = 1
for b in range(0, 4):
    lowerShield.append(Actor('shield1',
center=(310+((b-2)*20), 200)))
    lowerShield[b + 24].frame = 1

def draw():
    screen.blit("background", (0, 0))
    screen.blit("stars", (0, backY))
    screen.blit("stars", (0, backY-800))
    mothership.draw()
    if gameover != 1 or (gameover == 1 and count%2 == 0):
alien.draw()
    for b in range(0, 28):
        if b < 14:
            if barShield[b].frame < 5:
                barShield[b].draw()
        if lowerShield[b].frame < 5:
            lowerShield[b].draw()
    bullet.draw()
    if gameover != 2 or (gameover == 2 and count%2 == 0):
ship.draw()


def update():
    global backY, count, gameover
    count += 1
    if gameover == False:
        backY += 0.2
        if backY > 800: backY = 0
        mothership.y += 0.1
        mothership.frame = int(count/10)%14
        alien.y = mothership.y + 10
        for b in range(0, 28):
            if b < 14:
                x = (((mothership.frame+b)-7)*20)
                if x >= 140: x -= 280
                barShield[b].y += 0.1
                barShield[b].x = (mothership.x+10)+ x
                if barShield[b].frame < 5 and barShield[b].
colliderect(bullet):
                    barShield[b].frame += 1
                    if barShield[b].frame < 5:
                        barShield[b].image =
"bar"+str(barShield[b].frame)
                    bullet.y = -10
            lowerShield[b].y += 0.1
            if lowerShield[b].frame < 5 and lowerShield[b].
colliderect(bullet):
                lowerShield[b].frame += 1
                if lowerShield[b].frame < 5:
                    lowerShield[b].image =
"shield"+str(lowerShield[b].frame)
                bullet.y = -10
        if alien.colliderect(bullet): gameover = 1
        if ship.colliderect(mothership): gameover = 2
        if bullet.y > -10: bullet.y -= 5

def on_mouse_down(pos):
    if bullet.y < 0: bullet.pos = (ship.x,700)

def on_mouse_move(pos):
  ^ship.x = pos[0]
```

There are four levels of damage before they are destroyed and the bullets can pass through. When enough shields have been destroyed for a bullet to reach the alien, the mothership is destroyed (in this version, the alien flashes).

Bullets can be fired by clicking the mouse button. Again, the original game had alien birds flying around the mothership and dive-bombing the player, making it harder to get a good shot in, but this is something you could try adding to the code yourself.

To really bring home that eighties *Phoenix* arcade experience, you could also add in some atmospheric shooting effects and, to round the whole thing off, have an 8-bit rendition of Beethoven's *Für Elise* playing in the background. ⓦ

> **Like the original *Phoenix*, our mothership boss battle has multiple shields that need to be taken out to expose the alien at the core.**
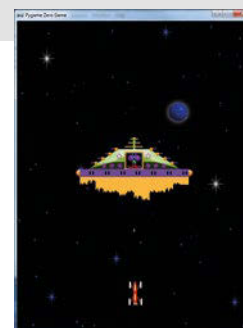
PsychTech 2019
Mental Health and Digital Technology Conference

Discover more about the moral panics surrounding new technology in this November's PsychTech conference

22 November 2019
Hamilton House, London

PsychTech is an annual event hosted by East London NHS Foundation Trust. This year's theme is 'Future dystopias now!', and will explore the idea that new technologies are scapegoated because the more urgent problems in society – such as social deprivation and exclusion – feel too overwhelming and unmanageable to deal with.

The conference will cover the following topics:
- Consider the moral issues and (lack of) evidence base when debating the potential benefits and risks of new technologies
- Advocate for reasoned debate and set an expectation that psychiatry is used to offer a credible and balanced point of view in speaking out against sensationalist media statements
- Call for support to develop a convincing evidence base. Complaining about the lack of evidence should come with an obligation to do something about it

- Argue against moral panics becoming a distraction from truly important issues: social deprivation, isolation, inequality, lack of access to effective support, and treatment for mental illness

The aim for PsychTech 2019 is to present the 'ethical NHS view' on engaging with new technologies, offering a balanced, evidence-based perspective on topical issues including:
- Social media, screen time, and internet gaming disorder (IGD)
- Virtual reality, mobile apps, and video games for mental health assessment and treatment
- AI and machine learning, and the use of big data for healthcare delivery and population health

Find out more
For further information, and to book tickets, head to **psychtech.uk**.

> **A genuine social problem, or a distraction from more urgent issues? This year's PsychTech conference explores moral panics in tech.**
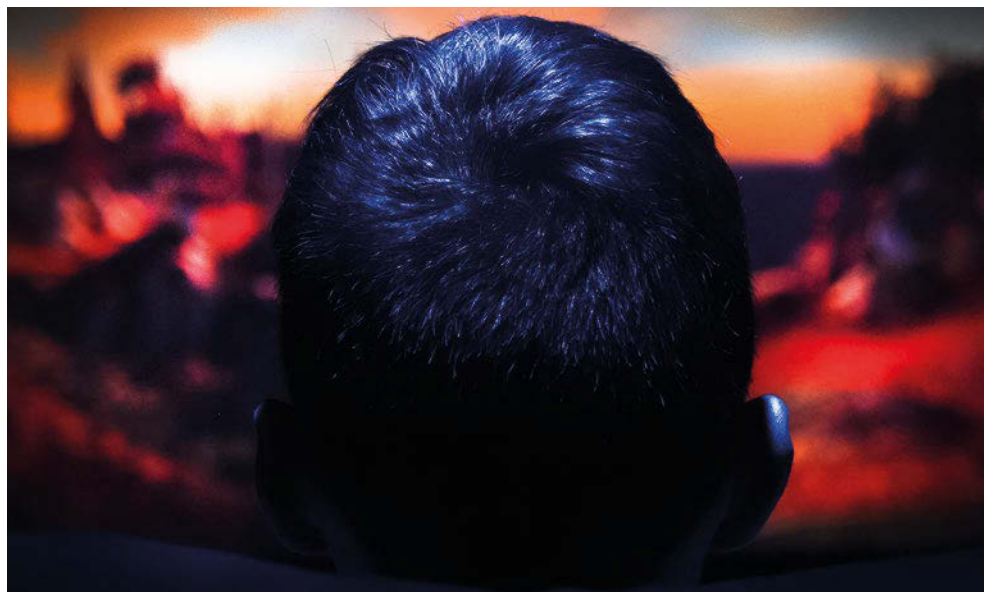
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Neo-RETRO

Modern games that build on the past

WRITTEN BY ADAM BARNES

How do you design a retro game with modern sensibilities?
We chat to the developers perfecting the art

f you're over a certain age, then you've probably been drawn to a new video game because it reminds you of something you've played before. It doesn't matter what genres you were into as a youth – you'll almost certainly find a recent release that captures the essence of those old experiences. These modern homages sometimes use nostalgia as a lure, building up an audience by appealing to our rose-tinted memories. Whether you're craving a classic turn-based RPG, *Mega Man*-style platformer, or point-and-click adventure, there's bound to be a game released in the last couple of years that fits the bill – and with a booming indie scene and old-school franchises regularly brought back through Kickstarter campaigns, it's clear there's a lot of love for those classic experiences.

"Retro is always going to resonate with a lot of people because it's instantly recognisable," says Dave Oshry, the producer of retro-inspired shooter, *Dusk*. "It's the past of video games meeting the future."

Dusk takes its cues from a nineties wave of pioneering first-person shooters – it draws on *Doom*, *Quake*, *Half-Life*, and many others for its fast-paced gunplay. "Jumping and moving and shooting is never going to go out of style," says Oshry. "Is retro ever going to be as big as stuff like *God of War* and *Spider-Man*? I don't think so. *Red Dead Redemption* and *GTA* are always going to be these giant experiences, but there's definitely a market for the retro stuff."

We've seen a definite shift towards retro game design in recent years, whether it's *Pillars of Eternity* rejuvenating a very specific style of ➜

The idea for *Dusk* first came about in the mid-2000s, but development didn't properly begin until 2015.

Released back in 2014, *Shovel Knight* has long been seen as a shining example of how to do neo-retro properly.

RPG, or the countless remasters and re-releases of franchises like *Crash Bandicoot* and *Spyro*. Evidently, there's a ready market for revivals like these – after all, without the demand from players, none of these games would exist.

"I think [this interest] has always existed, but the games seem to come and go in waves," says Sebastian Mayer, lead programmer on *Parkitect*, the theme park sim inspired by *RollerCoaster Tycoon*. "In 1994, there was *Theme Park* by Bullfrog, which *RollerCoaster Tycoon* then drew a lot of inspiration from, so I'd say we're currently in a sort of second revival of this genre."

For Mayer, it's the way technology has evolved – and become ever more affordable – that has helped bring about a rise in the number of retro-inspired games like his. "Audience interest certainly is a variable," he suggests, "but I think a bigger factor for not seeing games like these earlier was a lack of opportunities. For a while, it just wasn't possible at all for smaller teams to release games on consoles or Steam, and the tools for making big games were missing. Bigger developers tend to keep their risks as low as possible by making 'safe' games due to long development times and high costs."

This is something Garret Randell, *Parkitect*'s lead artist, agrees with. He notes how "prohibitively expensive" it once was for small indie teams to gain access to game engines and development tools. "These days, it's much easier to jump into making a game and learning the tools," says Randell. "Graphical techniques have also improved and become easier to create for, and that helped our tiny art team a ton."

Ask any indie developer what engine they use to create their game, and you'll most likely get one of two answers: Unreal or Unity, with the latter in particular the more prominent of the two.

And while these engines can be used to create all kinds of games – from sprawling 3D environments to smaller 2D titles – using Unity to recreate a specific, low-poly look can also be tricky, according to *Dusk*'s Dave Oshry.

"*Dusk* is ugly on purpose, right?" Oshry says. "David [Szymanski, primary developer of *Dusk*] specifically used a lot of the same limitations they had back in the nineties, but Unity kept trying to make the game look better. He had to fight with the engine a lot to make sure the game stayed ugly."

For *Streets of Rage 4* developer Jordi Asensio, meanwhile, creating a bold new look for Sega's belt-scrolling brawler series created its own challenges. "Even though consoles and PCs can now handle large textures, 2D games with large 2D sprites are pretty rare," he says. "There are a lot of gorgeous pixelated games out there, but I think *Streets of Rage 4* is one of the few games using hi-res hand-drawn graphics."

According to Asensio, the sheer size of the characters and background textures meant his team had to "invent our own production pipelines" to ensure the game ran smoothly at 60 frames per second.

LIVING IN THE PAST

The challenges of reviving a series like *Streets of Rage* aren't purely technical, however. The industry has, after all, been driven forward by the passion and determination of developers looking to overcome those restrictions.

Instead, the greater challenge creators of neo-retro games face comes from the weight of expectation. When you're reviving a game or genre that's already well-known to a generation of fans, you're dealing with an audience that has its own idea of what it would like to see from a homage or sequel. "There are expectations of course," says Asensio, "but they can be really different from one gamer to another. Some want to see retro pixel art graphics but with modern mechanics, others want beautiful new graphics but with old-school gameplay. Others just want the full retro experience. There are as many expectations as there are gamers, because we all have and want different experiences."

For Texel Raptor, the team behind *Parkitect*, their central task was to create a game that

Development on *Parkitect* began in 2014, with Kickstarter and Steam Early Access guiding it to release in 2018.

recalled *RollerCoaster Tycoon*, but also stood on its own two feet. "The theme park sim genre was dominated by *RollerCoaster Tycoon* so heavily that we would inevitably get compared to it," says Mayer, "so we needed something to clearly distinguish ourselves."

For *Parkitect*, this meant coming up with new ideas, like backstage management: players now have to perform tasks like restock their stores and provide designated parking spaces for employees. "This makes a big difference in how the game plays and how you design your parks compared to other [theme park sim] games," Mayer explains.

When it came to *Dusk*, its developers were conscious that its design wasn't "trying to pull from any one specific game." Instead, the team wanted to capture what it was that gamers – themselves included – loved about those old-school shooters. "*Dusk* isn't really a slave to the old designs," says Oshry. "It's how you remember the old games."

He adds that certain modern "concessions" were made that helped make the game more approachable for modern players. "Things like having full air control, slides and flips, and really easy movement systems," he says. "It wasn't super-purposeful, it's just that we wanted to make a game that was really accessible that anyone could play, but that reminded you of all those games from the nineties or early 2000s."

ACCESSIBILITY

Then there's the word that seems to be on the lips of so many neo-retro developers we spoke to: accessibility. "There's a difference between knowing what gamers think they want and what they actually want," Oshry explains. "I think a big part of it is making it accessible so that anyone can get into it, not just hardcore retro shooter fans."

The topic of accessibility raises an important point about returning to games from the past: while we might think back on those experiences

fondly, actually playing them again can often spoil the illusion. Platformers that once thrilled us now seem repetitive and cruelly difficult; adventure games whose characters once charmed us now seem slow and ungainly to interact with.

Modern retro games need to take all this into account, and find ways of taking the best of those old games and combining them with new approaches. It's something Jordi Asensio and his fellow developers were conscious of during the development of *Streets of Rage 4*.

"One line of thought we have is to identify frustrations from old games," says Asensio. "For example, enemies going outside the screen is very annoying, so we tried to fix that with screen boundaries."

His colleague, Cyrille Lagarigue, agrees that the challenge of making a new *Streets of Rage* lies in finding the balance between old and new: "We want to add moves to the characters, new ways to use them, new possibilities," he says, "but we don't want a game that has a feeling that is too different from the originals. So we're always adjusting to find the right balance." ➡

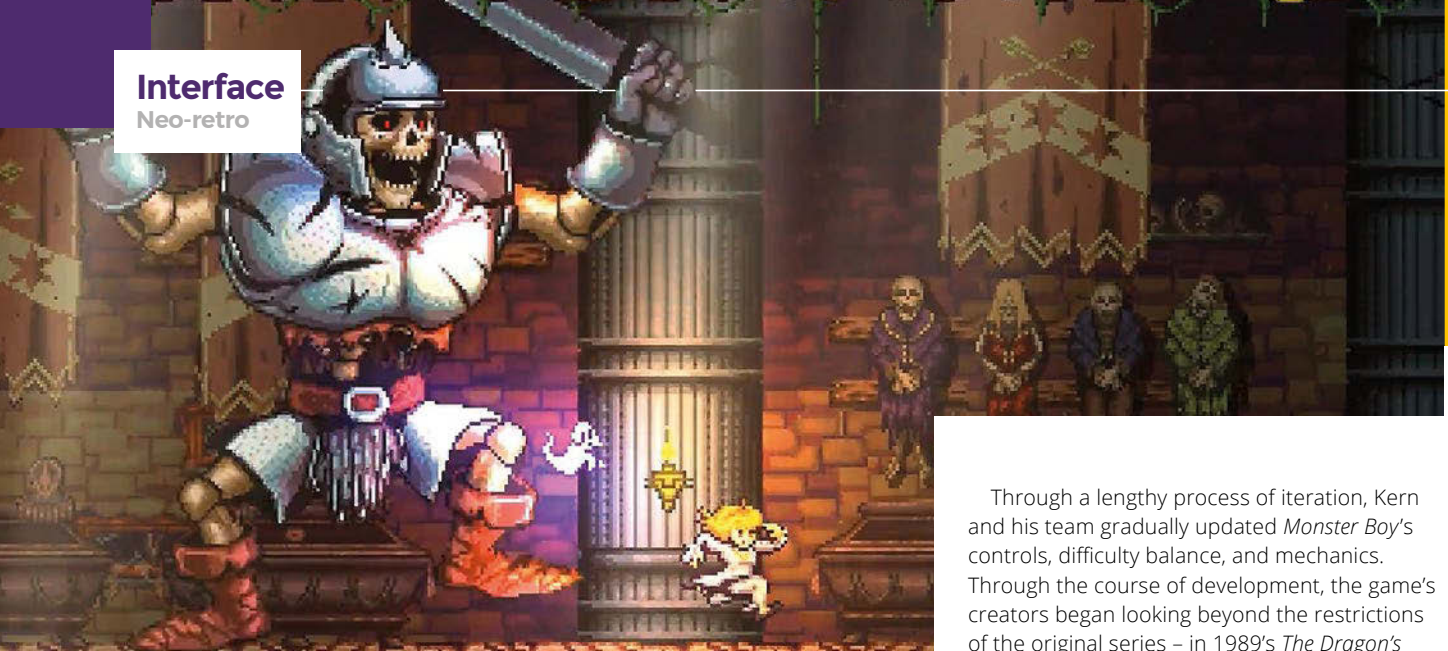> "*He had to fight with the engine a lot to make sure the game stayed ugly*"

After the success of their *Wonder Boy* remake, *The Dragon's Trap*, DotEmu were given the chance to work on *Streets Of Rage 4*.

Modern retro games like *Battle Princess Madelyn* need compromises to appeal to a contemporary audience, which means adding in features that weren't available in the eighties.

Earlier this year, Wireframe caught up with producer Thomas Kern, who at that stage was putting the finishing touches to *Monster Boy and the Cursed Kingdom* – French developer Game Atelier's homage to the *Wonder Boy* action-adventure series. Although *Monster Boy* retained the 2D perspective and Metroidvania format of the *Wonder Boy* series' most fondly remembered entries, Kern was also keen to update some of the more frustrating aspects of those earlier games.

"I have to admit that it was a slow and painful process to find the right pacing and not fall into those old game design traps and tropes," Kern told us. "When remembering old games, you often tend to forget the more painful and less glorious times. These include things like having to replay the same zone over and over, slow controls and high difficulty which was compounded by long walkways, high enemy respawn rates, and heavy damage taken from enemy attacks."

"You often tend to forget the more painful and less glorious times"

Through a lengthy process of iteration, Kern and his team gradually updated *Monster Boy*'s controls, difficulty balance, and mechanics. Through the course of development, the game's creators began looking beyond the restrictions of the original series – in 1989's *The Dragon's Trap*, for example, the player could transform into other creatures, whose powers could be used to pass obstacles and defeat specific enemies. It was only possible, however, to transform at predefined points on the map.

"The first version of the game only allowed [the player] to transform in certain spots, which limited the freedom but meant it was also easier to design levels," Kern explained. "It was a typical trope from ancient times when hardware limitations had an impact on the freedom of player interaction. We challenged ourselves by allowing [the player] to transform on the fly. The further you go in the game, the more it unfolds, and once you unlock all forms, the amount of possibilities is huge. We designed puzzles and traps around that and noticed how much more fun the game became."

GHOSTS OF GAMING PAST

There are some indie developers, meanwhile, who want to capture the essence of retro gaming in its purest form. Take Chris Obritsch, creator of *Battle Princess Madelyn* – a game closely modelled on Capcom's screamingly difficult *Ghosts 'n Goblins* series. The horror-themed run-and-gun franchise hailed from the mid-eighties era of coin-munching arcade cabinets and repeated deaths, and for Obritsch, recreating the challenge of games like *Ghosts 'n Goblins* – and its 1988 sequel, *Ghouls 'n Ghosts* – was as important as getting the pixel art and jumping mechanics just right. "I'm super-old-school – my retro collection is nuts," Obritsch says. "I like a challenge. I don't want things handed to me."

The development began when Obritsch's then-four-year-old daughter Madelyn said she wanted to be in *Ghouls 'n Ghosts* so she could defeat the game's first boss herself. Again, Obritsch's original plan was to authentically

Revised multiple times over the course of its development, *Monster Boy and the Cursed Kingdom* capably balanced old and new.
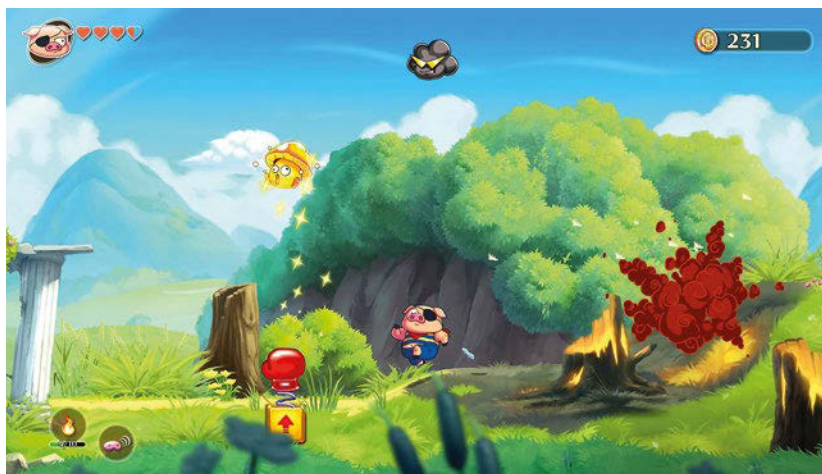
replicate Capcom's original hit, but he soon found out that developing and releasing a retro game to a modern audience needs compromise.

"One thing I'm getting a lot of heat for right now is not having a map," Obritsch says. "Everybody is like, 'If this was a more modern game, you would have put a level map in so people can find their way around.' The levels aren't really that big, and usually, if there's a door, the key is within a screen or two.

"But for some reason, even in story mode, everyone wants to run to the right, it's the weirdest thing. You can go left, up, right, down, but they don't look. So I'm putting a map into the game now. We're also putting some extra hints into the game for people who just aren't used to older games, and I've actually redone three of the maps for the levels."

KNOW YOUR AUDIENCE

As Obritsch has discovered, players frequently want different things from a neo-retro experience. With this community of potential players all pulling in different directions, the developers we spoke to say it's important to listen to their feedback – these are, after all, the people who will likely be purchasing the final product. "We spent a long time working with and supporting the community, and I think that's paid off," says Randell.

"We basically came up with the core gameplay and features and steered the project," adds Mayer, "and then lots and lots of details got filled in by the community." No neo-retro title is truly its developer's then, it seems; *Battle Princess Madelyn* wouldn't have had so many characters if not for its Kickstarter stretch goals, for example – something that Obritsch laments as being "kind of a mistake."

"We should never have done a lot of tiers," he says. "[Putting in] all those extra tiers kind of wrecked the original design."

Nevertheless, the developers we spoke to have all been driven by their passion for games of the past – which is, of course, something they share with their enthusiastic communities. "When we see all the love that people have for *Streets Of Rage*," says Lagarigue, "it's an honour and a pleasure to be able to make the game they have been waiting for for such a long time. There's pressure, but it is the good kind of pressure that makes us want to do the best work that we can." ⓦ

THE RETRO
Developers

PARKITECT

Though the small team at Texel Raptor comprises a variety of developers, Sebastian Mayer and Garret Randell are its two core developers that started the project. The *RollerCoaster Tycoon* inspiration is clear, but the developers are keen to ensure their take on the theme park simulator has ideas of its own.

DUSK

It was developer David Szymanski's teenage dream to create *Dusk*, but producer Dave Oshry was key to the process: he used his experience of remastering titles like *Rise Of The Triad* and *Duke Nukem* to ensure the first-person shooter felt faithful to such nineties genre entries as *Doom*, *Quake*, and *Half-Life*, while still staying accessible to a modern audience.

BATTLE PRINCESS MADELYN

Chris Obritsch was inspired to create his *Ghouls 'n Ghosts*-styled platformer when his daughter Madelyn said she wanted to fight the game's first boss, but insisted that "girls can't be knights". This personal story soon gives way to a tricky platformer that remains true to the deviously tricky heart of Capcom's original series.

STREETS OF RAGE 4

Having taken on the tricky task of reviving one of 16-bit gaming's most beloved franchises, three studios – DotEmu, Guard Crush Games, and Lizardcube – are collaborating to recreate what made the *Streets of Rage* series so popular on the Mega Drive. At the same time, they're modernising the visuals and ironing out the frustrations that sometimes bubbled up in those nineties games – enemies stubbornly lurking just beyond the edge of the screen will be a thing of the past in *Streets of Rage 4*, we're told.

Game Arts

The studio that brought us some classic JRPGs,
and the teenage founder behind it all

The recent HD rerelease of the first two *Grandia* games helped remind us just how good Game Arts were at making JRPGs. Although the Japanese developer also made its fair share of action games – and those were pretty great, too – Game Arts will likely be remembered for the guileless charm of its role-playing games: with *Grandia*, its two sequels, and the popular *Lunar* series, playing them always felt like looking through a window into a gentler, happier world.

That sense of innocence was partly informed by the design philosophy of Game Arts' co-founder, Takeshi Miyaji, who often said that he was interested in making games that had a certain amount of humanity in them. "The characters are all basically good people," he once said of *Grandia*, the RPG first released for the Sega Saturn in 1997. "Hardly anyone is evil to the core in this game... In the midst of so many cynically dark, savage games, I suppose it's rare to have a game like *Grandia* which is decidedly not savage and bleak. That's also why *Grandia* is a game all ages can enjoy. I think the player will be left with good, warm feelings after completing it."

If Game Arts' JRPGs had a sense of wide-eyed innocence about them, this may be because Miyaji was still a teenager when he started the studio in 1985. He was just 15 when he got his first job as a programmer at a company called ASCII, and only 19 when he co-founded Game Arts with his brother, Yoichi Miyaji, four years later.

From the beginning, Game Arts displayed an apparent keenness to

^ Featuring character designs by animation studio Gainax, *Alisia Dragoon* was one of the Sega Mega Drive's best third-party action games.

^ The recent HD remasters gave us an excuse to dive back into the *Grandia* games once again.

explore the boundaries of established genres. *Thexder*, released not long after the studio was established, was a free-scrolling action game that featured a transforming mech – probably influenced by the popularity of *Transformers* and *The Super Dimensional Fortress Macross* – and a laser system that automatically locked onto nearby enemies. *Silpheed*, released in 1986, boldly forged a fast-moving shoot-'em-up from filled polygon graphics – this was, remember, a time when most developers were still pushing sprites around the screen.

SILVER STARS

While the developer put out its share of baseball and mah-jong titles through the late eighties and nineties, these were reliably intermingled with flashes of creative brilliance. *Alisia Dragoon*, released for the Sega Mega Drive in 1992, saw Game Arts team up with anime studio Gainax – who'd later find international fame with *Neon Genesis Evangelion* – to create a side-scrolling fantasy action game. What if, the two collaborating studios wondered, they could create a game with the intensity

of a shooter, but without the repetition? The result was one of the best original titles made for the console: its titular heroine could fire lock-on energy blasts from her hands (an idea carried over from *Thexder*), and call on a variety of monsters to lope into battle and fight on her behalf.

Then, of course, there was Game Arts' JRPGs. The *Lunar* series for the Mega-

> ## "In the midst of so many cynically dark, savage games, it's rare to have a game like *Grandia*"

CD, beginning with *Lunar: The Silver Star* in 1992, told an epic fantasy tale from the perspective of a boy on the cusp of adulthood. The *Grandia* series, which began on the Sega Saturn in 1997 and ended with the PS2's *Grandia III* in 2005, mixed a detailed, vast-seeming steampunk world with likeable characters and an engaging combat system. According to Miyaji, the first *Grandia* game was written as a response to other JRPGs, which he believed had a tendency to focus too heavily

on 'save the world' plots rather than their protagonists. "If the world needs to be saved, it isn't enough to just tell the players about it – they should be shown, right?" He said in a 1997 interview translated by Shmuplations.com. "That's why the story of *Grandia* doesn't begin with a 'save the world' trope. In fact, the story doesn't really start developing in that direction until the second disc; the first disc gives players time to get thoroughly acquainted with the characters and the game world."
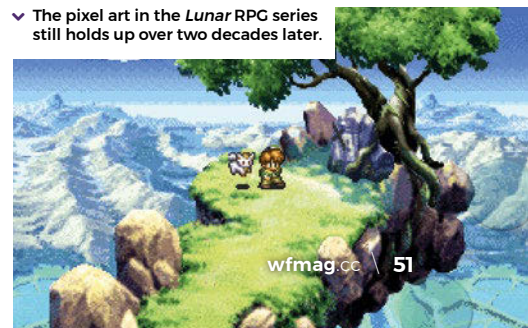
Game Arts continued making games in the new millennium, including rereleases of the *Grandia* and *Lunar* games on modern systems, as well as original titles like *Dokuro* for the PlayStation Vita. Tragically, though, Takeshi Miyaji died from a complication following brain surgery in 2011. He was just 45 years old. Only a few weeks before his untimely passing, Miyaji gave an interview with Famitsu magazine, in which he aptly summed up his contribution to gaming.

"Games are a form of communication," he said. "The makers communicate something to the player, and then the players give that something to each other as well. Otherwise, what's the point in spending all this time playing the game? If you ask me what I want to give to players while they're spending time on my games, I'd have to say it's love. If my games make players think a little about what love is about, then I've realised my goals." Ⓦ

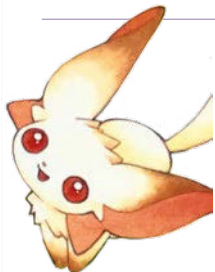ᵛ The pixel art in the *Lunar* RPG series still holds up over two decades later.

A matter of time

If you think a lot of modern triple-A games tend to be long and demanding of your time, then rest assured that developers were aware of the problem over 20 years ago. Speaking in 1998, Game Arts co-founder Yoichi Miyaji talked about the proliferation of what he called "full-course meal" games, and the importance of making shorter, more contained experiences as a contrast. "Lately, I feel like there's been a lot of 'full-course meal' games," Miyaji said. "I think 15 minutes is a very important concept for a game – 15-minute increments. It's key that the game be able to satisfy you in that time… The balance is off in the market right now – I mean the balance of light, casual games and big, epic games. There's too much long, heavy stuff now… every developer has caught 'epic-itis'."
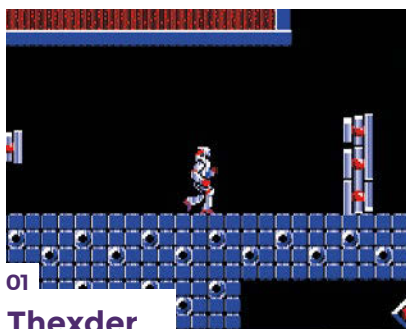

Art for art's sake
10 of Game Arts' finest

Giant mechs, space battles, and epic fantasies

01
Thexder
PC-98 / MSX / NES − 1985
Game Arts' first release (along with *Cuby Panic*, which we've never played). *Thexder* was a free-scrolling shooter featuring a transforming mech. Solidly made and with some novel design ideas (the lock-on firing was an original one at the time) this was a key release for the studio. The terrific *Alisia Dragoon* (see later) began life as a shooter in the mould of *Thexder*.
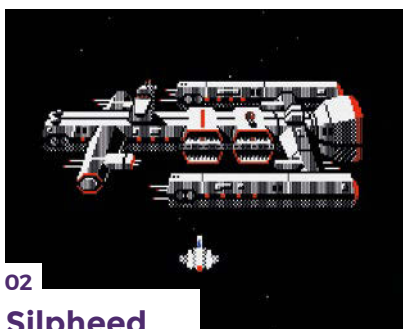
02
Silpheed
PC-88 / Sega Mega-CD − 1986
At a time when most developers were still working with pixels and sprites, Game Arts made the polygon-based action game, *Silpheed*. Beneath the high-tech imagery, it's a vertical shoot-'em-up, but the use of filled polygons added a hint of depth to an inherently flat genre. Game Arts teamed up with Treasure to make the PS2 sequel, *Silpheed: The Lost Planet* in 2000.

03
Alisia Dragoon
Sega Mega Drive − 1992
By collaborating with Gainax, Game Arts created an action-adventure with style to spare. Your intrepid heroine comes armed with lasers that emanate from her hands, and a terrific menagerie of monsters she can select to follow her into the fray. A cult classic, *Alisia Dragoon* got a surprising but welcome revival on the Mega Drive Mini this year.

04
Lunar: The Silver Star
Mega-CD − 1992
With some superb character design and animation from the great Toshiyuki Kubooka, *Lunar: The Silver Star* summed up Game Arts' ability to tell a simple yet charming story, packed with engaging characters and an innovative hybrid combat system. The seeds of the equally disarming *Grandia* were arguably first sown here.

05
Gungriffon
Sega Saturn − 1996
Numerous games attempted to simulate the thrill of piloting a colossal mech, but Game Arts were one of the few that managed to make the activity feel thrilling rather than slow and cumbersome. The popular wisdom was that the Saturn was ill-suited to fast-moving 3D games; *Gungriffon* – part sim, part first-person shooter – put paid to that myth.


06
Grandia
Sega Saturn / Various − 1997
Yes, there are elements in *Grandia* that haven't aged all that well, but it remains a key entry in the JRPG genre: a sprawling fantasy packed with a roster of unforgettable characters, gorgeous world design, and loaded with an engaging character progression system that, brilliantly, relied on practice to improve skills rather than grinding repetition.

07

Grandia II

Dreamcast / PS2 / PC — 2000

Game Arts opted for more typical battle and progression mechanics than its predecessor, and the full-3D graphics (as opposed to 2D sprites against a polygonal backdrop) give *Grandia II* a less cosy feel. All the same, this is another cracking fantasy opus – certainly one of the best on the sorely overlooked Dreamcast, and still worth playing today.
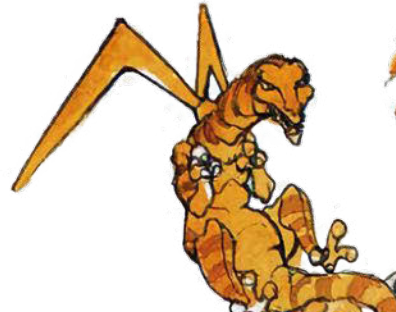
08

Gungriffon Blaze

PlayStation 2 — 2000

The mech-blasting series moved from the Saturn to its Sony rival at the turn of the millennium, and lost little of its explosive appeal: again, the aim was to pilot a two-legged war machine into battle against other pieces of military hardware. The graphics looked a bit rough, even at the time, but the action, pace, and cheesy metal soundtrack made up for this.
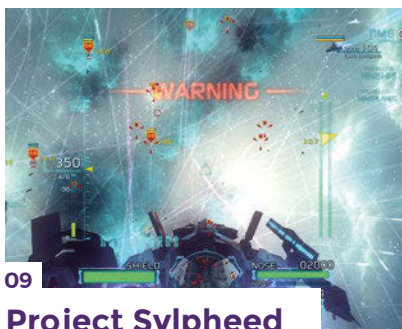
09

Project Sylpheed

Xbox 360 — 2006

Only loosely based on the vertical shooter mentioned earlier, *Project Sylpheed* provided a welcome mix of 3D space combat and anime-style melodramatics (Sample line: "Oh, it's just another partially developed planet, but it does still have a lot of nature"). The game's also surprisingly trippy, with its starfighters weaving colourful trails that glimmer the inky void.
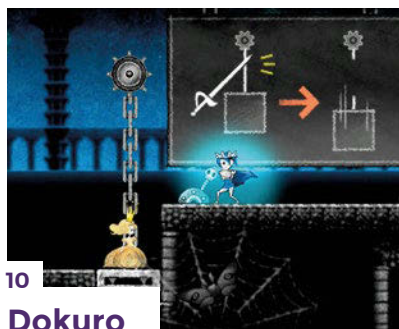
10

Dokuro

PS Vita / iOS / Android / Windows — 2012

Here's a seldom-discussed game from director Noriaki Kazama, who previously made *Ninja Gaiden Sigma* for Team Ninja. Decidedly less violent than that franchise, *Dokuro* marks a 180-degree turn for the developer: it's a platform puzzler with an engaging sketchy art style and some devilishly head-scratching environmental challenges.

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HIGHLIGHT

As ever, nothing beats emerging fresh from a completed dungeon with a new ability to test on the world. The most unusual here – the Roc's Feather – is the first you receive because it enables Link to jump. Beyond the primary function of leaping small gaps, it allows the game to experiment with light platforming sections and adds another dimension to combat.

⌄ **The dungeon builder is one fully new feature, where you construct layouts from predefined pieces then explore for extra treasure.**

Review
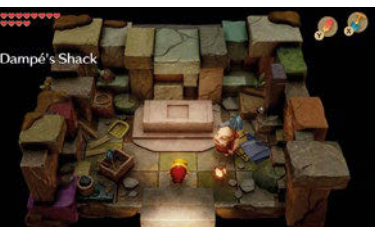
The Legend of Zelda:
Link's Awakening

A remake that's not just another link to the past

Zelda has always had a strangeness to it. For all its epic qualities, it's not fantasy adventure so much as fairy tale, steeped in folklore about haunted forests and secret grottoes, backed by enchanted melodies, and populated by eccentric NPCs. Yet even within this heritage, *Link's Awakening* stands out as an oddity, both in its original 1993 form and in this remake – uncannily familiar but somehow not part of the same reality.

For one, this is a *Zelda* game without a Zelda, as Link is transferred to a little island called Koholint where nobody's even heard of Hyrule. Here, faces from other Nintendo games bleed into the universe and characters explain tutorial points before admitting they have no idea what they mean. It's an enclosed world surrounded by endless seas that's nevertheless infused by echoes of other places.

The sense of falseness is accentuated by the visual style – this remake's most obvious modification. Smooth textures turn the whole island into a plastic toy set, full of scenery and action figures that are there purely to be played with, while an out-of-focus blurring smudges the edges of your view, as if it only comes into being with Link's presence. It's at once glossy and makeshift, solid, and ephemeral.

Underneath the sharp colours, much less has changed from the old Game Boy game. Layouts, puzzles, and enemies are near-identical, albeit boosted by greater clarity and fluidity. There are modern tweaks to improve the experience, not least spreading control across six buttons rather than two, as well as minor expansions, with more heart pieces and shells to find and some bolstered minigames. But mostly this is *Link's Awakening* as it was 26 years ago.

And mostly, that's no bad thing, as there's plenty here that's still surprisingly fresh. Given its handheld beginnings, this is a necessarily simple and compact *Zelda*, but for those forged by today's indie sensibilities that's largely a positive. Control is tidy and intuitive, especially the basic rhythm of block and riposte with sword

⌄ **Enemies are an eclectic mix of *Zelda* staples and indigenous creatures.**
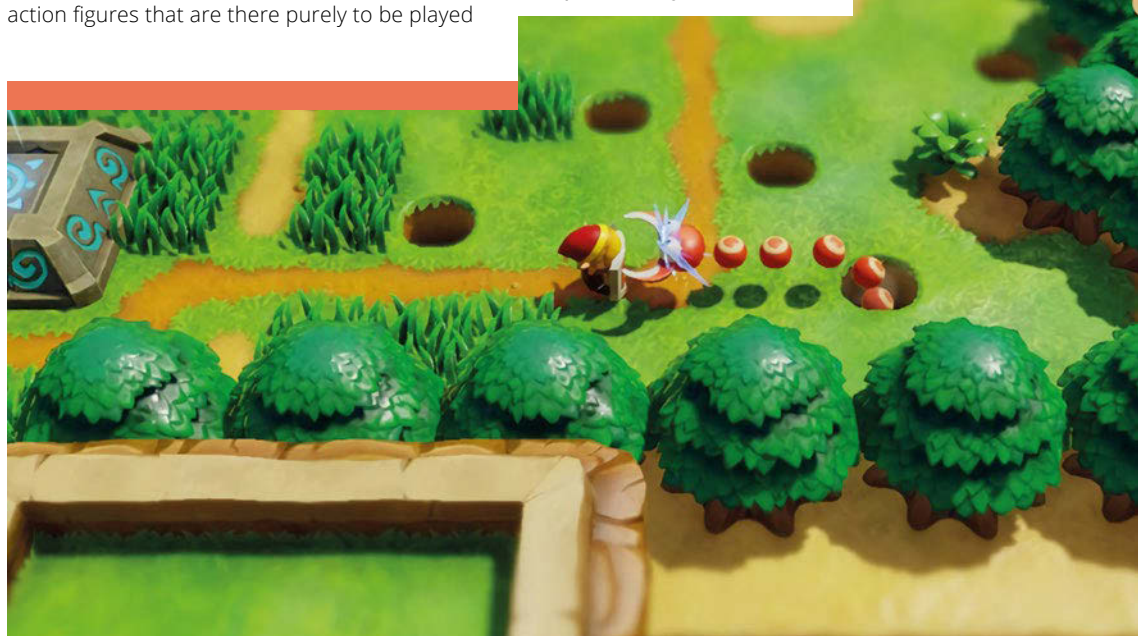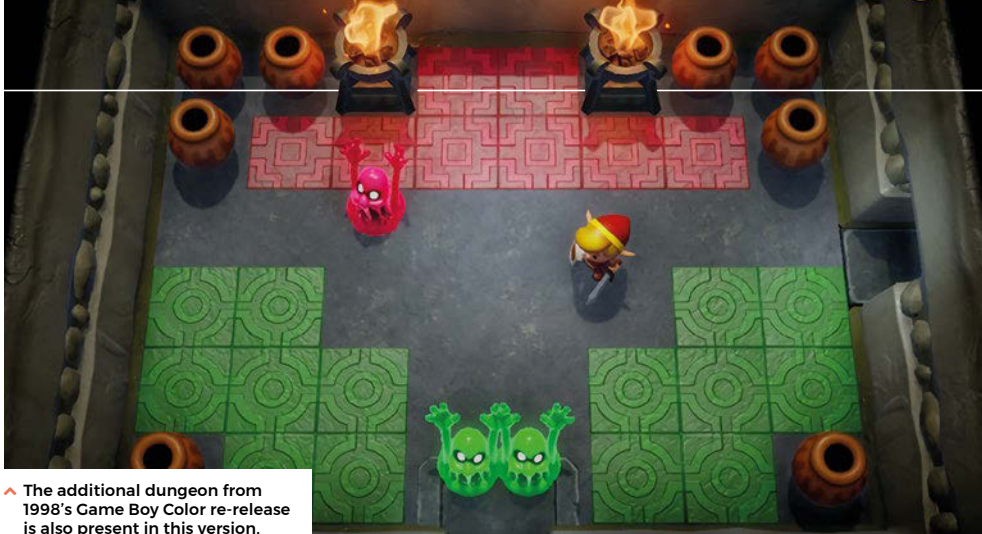
▲ The additional dungeon from 1998's Game Boy Color re-release is also present in this version.

▼ The NPCs' designs and disarming chatter are one of the game's real high points.

and shield. Playful twists, such as occasional shifts of perspective or introduction of companions, resemble the kind of genre riffing we're used to these days. And with the restricted map space, there's no padding.

Indeed, with less space to play with, *Link's Awakening* makes the most of *Zelda*'s signature layered design. The top-down view, more than any side-scrolling Metroidvania, enables a landscape that constantly reveals new modes of traversal, shortcuts, and points of interest in the same spaces. Areas evolve over time with a transparent logic, turning tight, winding mazes into open fields, and stacking vertically with hills, rivers, and hidden caves. The pacing is immaculate too, with completion of each early dungeon significantly expanding your routes through the overground.

As for the dungeons, they're confined to small grids of square rooms, with a map and hints that help you plot the overall composition. Locked doors and one-way systems create intricacy, and a few have multiple connecting floors. As ever, dead ends signpost the need for new equipment to advance, forcing you to work through puzzles and monsters until you find that next key item and use it to reach the boss.

It's a timeless formula, but here the game's frugality is less of a blessing. Making a small number of rooms feel substantial means lots of circling around, revisiting the same chambers from different angles, or triggering switches before heading back to see what's changed. It's particularly tiring on the few occasions that puzzles are too obtuse, or hints cause more confusion than clarity, as you wander about fending off respawning enemies.

Not that you'll be stuck very often, as it's mostly easy to advance through *Link's Awakening*, perhaps even more so than before. With a few extra hearts under your belt, damage from monsters and traps becomes almost negligible, and top-ups are common, so you can simply barge through some obstacles, rather than

navigate them properly. Most bosses are also quaintly basic in their attack patterns, and surrender quickly once you've located their weak spots. It all makes for a pleasant loop of chilled, continual progress, but equally an opportunity missed not to have injected some extra imagination.

But the brilliance of *Link's Awakening* was always in how it framed its pared-down structure. Narratively, it dwells on a paradox, and mocks the tropes of the series itself, highlighting how the cycle of dungeons and upgrades never really makes sense. Maybe this is Link's fantasy of a tropical island paradise. Or, given how the non-*Zelda* world invades Koholint, it's the player's fantasy, a place whose only purpose is to strip Link of his powers so he can unlock them all again, repeating the heroic quest line for its own sake (which, with a double irony, this remake sees you do yet again).

This mild meta-fiction was ahead of its time in 1993. Now, among games such as *Undertale*, it fits perfectly in place. And it's this, along with the relaxed simplicity and aesthetic overhaul, that turns *Link's Awakening* into the ideal counterpart to *Breath of the Wild*'s majesty: quirky, diminutive, yet curiously contemporary. Ⓦ

> **"This mild meta-fiction was ahead of its time in 1993"**

▼ The various residences of island inhabitants are personalised in luscious detail.
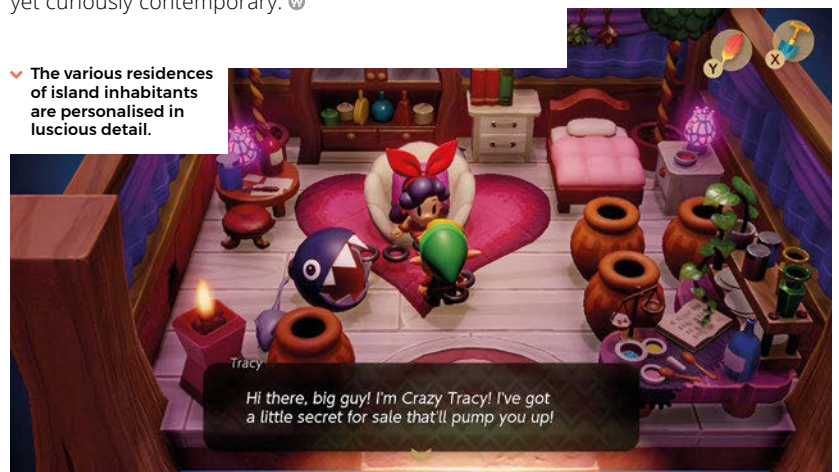
Tracy

Hi there, big guy! I'm Crazy Tracy! I've got a little secret for sale that'll pump you up!

VERDICT

A shiny reimagining that's mostly vindicated in staying faithful to its source.

80%

Mutazione

Neighbours, everybody needs good (mutant) neighbours

∧ The pace throughout, even when the tension does ratchet up, is sedate. Take your time; let the story take you on a journey.

It's rare for a game to thoroughly fill you with a sense of place like *Mutazione* does. Some wow you with photorealistic recreations of real-world locales, or blow your mind with endless, sweeping sci-fi vistas. Some form an amalgam of the real and fantastical and let you coo at the fidelity of their bushes. A lot manage to draw you in, to capture you with their atmosphere and let you enjoy your time with them. But Die Gute Fabrik's narrative adventure does something more: it masterfully crafts a place, a time, and a *sense* of feeling, along with a bunch of people who bring the whole thing together. There were more than a few times while playing through *Mutazione* where I thought, "I want to live there."

This is the story of a teen girl, Kai, making her way to the titular island enclave to meet her ailing grandfather for the first time. There's mystery, confusion, even some obfuscation from the beginning, but this isn't an exercise in melodrama or high fantasy. It's simply a case of a girl who didn't meet her granddad because her own mother fell out with him. That's the first time you encounter what ends up being *Mutazione*'s great strength: its grounded, realistic writing. Because you see, the place where the story occurs, as you may have guessed from its name and the screens on these pages, is one full of mutants. It was once a resort town some

100 or so years ago before being struck by a wayward meteor. Few survived the devastation, and those who did suffered mutations – and not just the people. It's your job to go in there and eliminate that threat using powerful guns and harsh langua… wait, no, not that.

No, it's your job to go in there and nurse your ill grandparent while also getting to know him and the rest of the island's few inhabitants. There's your grandpa, Nonno, and Graubert – or Graub – the ship's captain who brings you to the island and is awaiting the birth of his first child with Ailin, his partner and operator of the local bath house. Tung is the doubt-riddled teen who has just about outgrown his tendency to Hulk-level tantrums (and has a fondness for Italian soap operas), while his grandma Mori is as keen to feed everyone in the village as she is to gorge on gossip. There are, of course, more – and they're all deep, fleshed-out characters with histories and stories and motivations and hopes and dreams and, often, a true, heartfelt sadness about them. *Mutazione* describes itself as a 'mutant soap opera'; what could well be a daft tagline to draw some eyes towards it is actually the perfect descriptor. After playing it, there's no other way I would want to describe it.

I haven't mentioned much of what you actually *do* here, because really there isn't much point. It's running around the island, mainly in the

MEDISTI

Why won't it stay still and be marketed to?

PRAZKY

I don't think this is working.

The sausages are devout capitalists, always looking for the next opportunity to innovate and sell something. They're also objectively hilarious.

village, chatting to people and seeing their interactions with each other. At certain – key – points you do start to tend musical gardens, a wonderfully Zen experience that you can put a fair bit of time into if you want, but one that is largely just a tool to trundle the story along. Oh, as well as a key plot point, but I won't ruin that with detail. You're thrown into this world with little clue as to what's going on, but it's that human element that quickly makes you comfortable. Tung's dad left the family when he was a young boy, and this abandonment resonates through the massive teen to this day. Miu is sometimes harsh towards her adoptive father, Spike, though you

> **"There were more than a few times while playing through *Mutazione* where I thought, 'I want to live there'"**

soon figure this might be because of something she's keeping under the surface. Oh, she's also a cat-like mutant, but that's not particularly important. The problems, the issues, the lives these people have might have been forged in intergalactic fire and take place in a part of the world almost alien to our own, but their experiences are the great leveller. What could have been a circus sideshow of 'Hey, look at the freaks' actually ends up being one of the warmest, purely *human* stories I've ever experienced in gaming.

Ripe with quality humour and genuine gut punches of sadness, *Mutazione* is just one of those things where you have to rely on some back-of-the-box descriptions of what it entails in a review like this.

To tell you more would be to ruin the fun of experiencing it all, and you definitely should be going out and picking this one up if you have space in your life for a genuinely touching tale of love, life, loss, and finding your place (in a mutant outpost set aside from the world of 'regular' humans). I do so hope we see more of Kai and her friends, because I really *do* want to live in Mutazione. 🄦

Even the characters who aren't mutations of humans or animals are riddled with character; you'll end up just as attached to them as any other.

JELL-A
Correct.

HIGHLIGHT

The tippity-tap, clickety-clack, typety-type each of *Mutazione*'s characters vocalises their speech with is equal parts cute, brilliant, and oddly calming. Unique? Not in the slightest. Crafted with obvious care and attention? Why yes, just like everything else in the game. Utterly lovely.

VERDICT

Engaging, warm, funny, melancholy; *Mutazione* is an absolute treat.

86%

HIGHLIGHT

Tech scrap, the series' metallic alternative to EXP-granting souls, now refills your health gauge when you pick it up. This incentivises waiting until you really need it, but means you may lose it entirely if you wait too long. A brilliant risk-reward choice.

Review

The Surge 2

A slow-motion dismemberment sequence plays out whenever you pull off an execution. Gross? Badass? Excessive? All three? You decide.

The second cut is the deepest. Dismemberingly so

Info

GENRE
Souls-like

FORMAT
PS4 (tested) /
XBO / PC

DEVELOPER
Deck13

PUBLISHER
Focus Home
Interactive

PRICE
£43.99

RELEASE
Out Now

REVIEWED BY
Andrew King

VERDICT

The Surge 2 isn't perfect, but Deck13 has finally come into its own.

72%

Deck13 gets more interesting with each game it makes. The developer behind *The Surge 2* has come a long way since 2014's *Dark Souls* clone, *Lords of the Fallen*. In 2017, the studio transplanted that game's challenging combat to a sci-fi setting in *The Surge*, a game with satisfying combat that was dragged down by frustratingly cryptic boss fights and a drab warehouse world. Over a pair of substantial expansions, Deck13 proved it could deliver on setting, taking players to a corporate amusement park and a Wild West challenge dungeon. With *The Surge 2*, Deck13 has created a fascinating cyberpunk city that I thoroughly enjoyed exploring.

It helps that the series' action combat remains great. Combining *Dark Souls'* methodical, light-and-heavy attack-driven battles with *Dead Space*'s dismemberments was an interesting formula in the original, and it continues to work well here. As you fight through streets patrolled by cybernetically enhanced enemies, you'll alternate between vertical and horizontal slashes, using the right stick to target specific body parts. Striking where an opponent's flesh is exposed will reap damage dividends, but opting to hit protected areas will result in the opportunity to sever a limb and, potentially, gain an armour schematic.

This risk-reward decision-making is complicated by this entry's addition of a battery meter, which fills as you successfully land attacks. It takes one segment of charge to execute a finishing move, but you can use that same bar to heal. Taking cues from *Bloodborne* and *Doom* (2016), regaining health in *The Surge 2* is a reward for success in combat, a choice that has jettisoned the original game's Estus Flask-like system. And that's good! You'll never need to worry about turning back to replenish health items. Instead, kill a few low-level enemies and you'll have all you need.

> "The series' action combat remains great"

Easier said than done, though, right? *The Surge 2* begins with the knock-in-the-teeth that *Souls* players have come to expect. That's par for the course. My biggest frustration here is that *The Surge 2* leans too heavily on grinding. The areas that you're definitely supposed to be in are often patrolled by enemies that are much stronger than you, so you'll spend a lot of your time running the same areas ad nauseam to level up.

But, the rest of what *The Surge 2* does is compelling enough that I was willing to throw on a podcast and grind it out. It's a marked step up from the first and Deck13's best stab at the genre yet. ⓦ
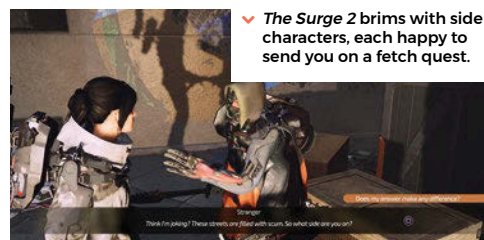
The Surge 2 brims with side characters, each happy to send you on a fetch quest.

The fairy tale art is reminiscent of a child's storybook.

Review

Little Misfortune

Misfortune favours the brave

When little Misfortune Hernandez ventures away from her home and into the woods one day, her life is changed forever. An imaginative girl living in a household fraught with sadness, she sets out to bring back eternal happiness as a present to her mother, who spends her days crying and drinking lots of 'juice'. She's guided on her adventure by Mr. Voice, an ominous, invisible being who frequently speaks to her.

Little Misfortune plays like a standard point-and-click adventure. This should come as no surprise to fans of Killmonday's earlier *Fran Bow*, with which this game shares its universe. You follow Misfortune as she discovers the world around her, have her examine objects, and make choices that affect how the playthrough turns out. Meanwhile, Mr. Voice acts as narrator for the story and a chaperone for you, giving hints when needed and providing a narrative gateway between you and the events taking place.

Being a child of utmost curiosity, Misfortune makes choices on her adventure, and as Mr.

"As Mr. Voice stresses, there's no right or wrong"

Voice himself stresses, there's no right or wrong, only consequences. It feels like decision-based storytelling can be a cop-out in many games of today, where you're presented with the illusion of choice rather than something meaningful. This could be true of *Little Misfortune*, as the story meanders its way in an almost linear fashion, but there's a greater amount of variation in the smaller details, meaning that multiple playthroughs are still necessary to experience everything it offers.

While *Fran Bow* used puzzle-solving as part of its core, *Little Misfortune* spends its three-hour playtime focused on narrative and character. Secret Easter eggs are still aplenty, encouraging more inquisitive minds to seek these hidden surprises, but if there's one thing Killmonday loves, it's minigames. There are short moments in the story that have you doing something besides pointing and clicking, such as cracking a computer password or partaking in games at the carnival. There's a great variety in these, and it helps to break up the pacing.

Little Misfortune shines brightest when developing the titular character. She's a sweet, innocent child suddenly exposed to a darker world of exploitation and oppression. She sees the good in others; she understands everything not for what it is, but what it could be. And despite the unspeakable horrors that befall her, she picks herself up, brushes them aside and continues with her quest. She teaches us not to despair in our limitations but to turn them into strengths. ⓦ

VERDICT

Stronger than its predecessor, *Little Misfortune* plays all the right cards for a story-focused point-and-click adventure.

75%

Random notes you find help to fill out the world and characters.

I found a picture of me when I was younger! Time goes fast. The cake looks yummy.

HALLOWEEN
Halloween costume ideas: Little Lady Fox.

HIGHLIGHT

The robots have a limited amount of memory for scripts, forcing you to break complicated tasks down into small, manageable processes. It's a deeply satisfying way of solving puzzles and is a key logic skill for coders. Although the game has no stated aspirations as an educational tool, it's a lovely way to teach those concepts by stealth.

ᐯ The initial pitch for *Halo 6* was deemed "problematic" by insiders.

Colonist Evolved!

Review

Autonauts

You autonaut miss this one

Imagine the Borg Queen was Barbara from *The Good Life*, and running a crèche. Also, imagine that's you, because *Autonauts* casts you in the role of a robot-assisted planet coloniser, whose job is to plunder the natural resources of procedurally generated flat earths in order to sustain a population of weird giant babies – tending to their needs in exchange for 'wuv'. The requirement to gather this resource means you need to fund research into, erm… more ways to plunder resources to sustain populations of weird giant babies.

OK, back up a second. At its core, *Autonauts* is about using technology to get out of busywork. The to-do list is vast, and requires huge amounts of resources to be harvested – so, the only thing for it is to build little robots, and program them to do stuff for you.

'Program' isn't quite the right word here. You can't just give a robot a set of instructions; these automatons learn by rote. So, you get scripts lodged into their little brains by getting them to watch while you do something – chopping down a tree, for example. Once you've shown them the task, each of the steps can be tweaked, looped, and rearranged.

Although this combination of showing and telling does involve some very basic coding principles, players shouldn't go into this expecting a game about actual coding, which the process resembles about as much as making a car in Lego resembles, erm, making a car.

The system is simple, but remarkably versatile and powerful. Plant life is set to sprout rather quickly – trees grow from saplings to maturity in minutes, fruit bushes are always plump with berries – so much of the game is spent setting up self-replenishing systems to generate resources from. Otherwise known as, y'know, farms.

The choppy robot chops the trees down. The diggy robot digs the holes. The planty robot plants the trees. The choppy robot chops them down again. Soon, you'll have more wood than you know what to do with. You can write your own jokes – this is a family mag.

ᐯ **"What do you mean this isn't on Switch?!"**
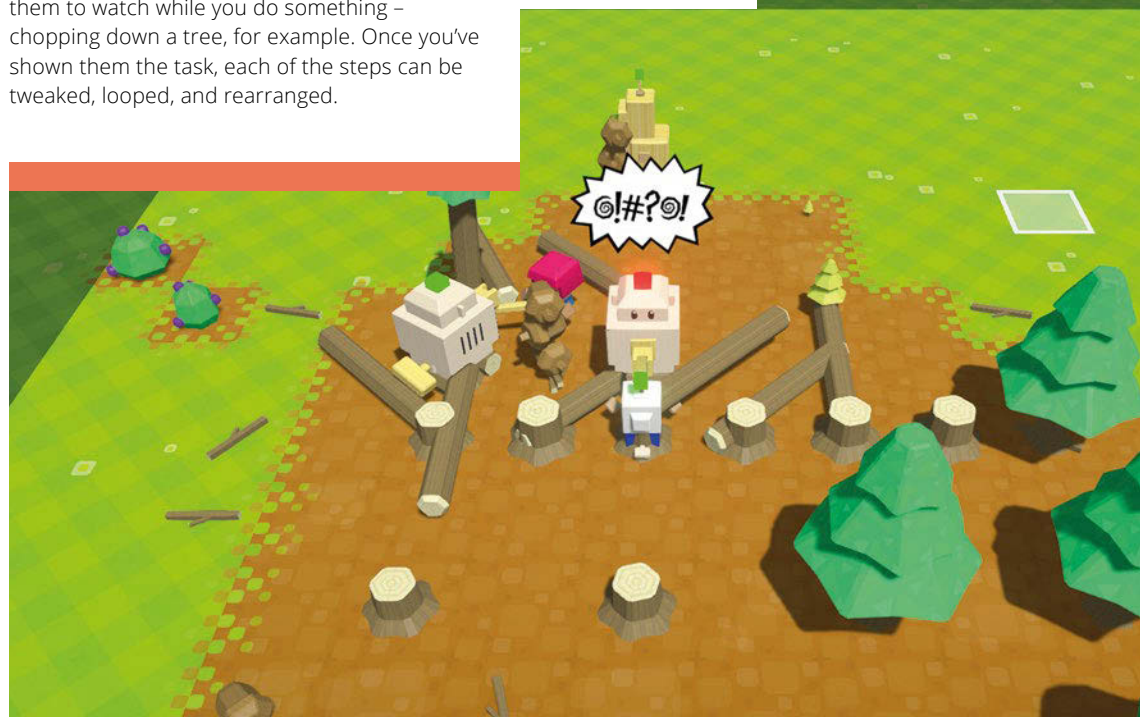
▲ The programming system is crude and simplistic, but the trick is in how you make multiple scripts work together.
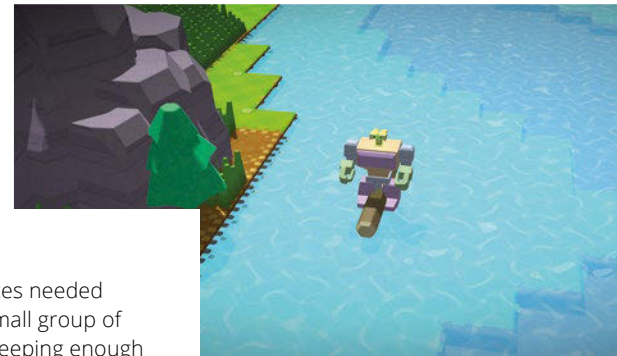
▲ After *Short Circuit 2*'s lacklustre performance at the box office, Johnny took up kayaking, and died shortly after because he weighs eight tonnes.

The wood allows you to build storage for more wood, so you can set up a supply chain for wood. Eventually, you'll have pallets full of wood, crates full of stone, and little factory lines for making tools, which are sent back to the farms to replace broken ones (every axe, spade, pick, and mallet has a health bar). Elsewhere, you'll have fruit and vegetable farms, growing and picking enough food to sustain a small group of colonists.

The colonists, the aforementioned weird giant babies, need to be kept fat and dry in order to keep producing 'wuv', the one commodity that all this faff is for and the only reason you don't just leave the idle little tossers to their own devices and take off for Risa, because it allows you to power your research stations and unlock better stuff, levelling up your fledgling civilisation to make such advancements as upgrading your wooden huts to stone houses, or changing the colony's diet from fresh berries and mushrooms to cooked meals that have dead animals in them. Nothing says progress like a cholesterol epidemic.

Nothing says progress, either, like "taking bloody ages." After an initial flurry of triumphs, with great pangs of satisfaction coming every time you figure out how to solve the first batch of problems, the pace slows to a caterpillar-tracked crawl. For a game that's all about finding efficient ways to do things, it feels like it takes 5000 years to get anything done. At least there's plenty of time to admire the scenery – the world gleams with character. The chunky-chibi art style and animation contains a lot of subtle, visual comedy that really tops the experience off. Robots have expletive-filled speech bubbles when their tools break. Colonists lounge about the place being fed grapes like Roman aristocracy, except if you zoom in you can see where they poop from. Which is funny, see. And it's a welcome relief, because frankly, the whole experience can be a little… dreary.

The sheer scale of the resources needed to furnish the needs of even a small group of colonists is almost exhausting. Keeping enough of them happy to make sufficient quantities of 'wuv' to unlock the game's later goals requires armies of machines, vast swathes of land turned to agriculture, and an inordinate amount of your time in running around making sure things don't fall over, which they frequently do, because with the best will in the world, every system has flaws.

Intentional or not, there's a stark environmental message here, arguably a bit more of an effective one than getting beaten up in Canning Town tube station while owning a ponytail.

For fans of instant gratification, the game does sport 'free' and 'creative' modes alongside its campaign, and one suspects that as with *Minecraft* and *LittleBigPlanet*, these modes are where the real fun will be forged, once the game builds itself a community full of the sort of ingeniously creative players who can coax a fleet of wood-chopping robots into being a hideously unusable square root calculator or something. Of course, there's no guarantee that will actually happen, but *Autonauts* absolutely deserves the chance. ⓦ

> **"*Autonauts* is about using technology to get out of busywork"**

VERDICT

It's a Cylon version of *The Settlers*, for people with an improbable amount of free time.

73%

▲ If they're not put into storage, crafted objects will just stack infinitely. So the main reason to make crates to put them in is to stop the map looking a bit stupid.

HIGHLIGHT

The soundtrack is a collaboration between producers from the club music scene, though, in fact, their contributions amount to individual instrumental loops rather than whole songs. There are around 420 different loops across multiple dance genres. Since you're in control of these loops and edits, it means a set never sounds the same each time you play.

^ This drum fill section cuts closest to traditional rhythm-tapping action, as well as moments of bouncing along to the crowd during a set.

Review

Hexagroove: Tactical DJ

There's more to DJing than just pushing play

Info

GENRE
DJ sim / Musical RTS

FORMAT
Switch

DEVELOPER
Ichigoichie

PUBLISHER
Ichigoichie

PRICE
£29.99

RELEASE
Out now

REVIEWED BY
Alan Wen

VERDICT

Hexagroove will click with any aspiring DJ who has the patience to master its creativity and depth.

70%

I'm of the old-school mentality that the best club nights are about the good vibes emanating from the dance-floor of a dark basement; where it's just about the people and the music, and less of the rock star DJ shenanigans and expensive light shows that define the EDM scene today. It's a different matter when it comes to music games, though, which are as memorable for their aesthetics as much as their soundtracks. So it's initially disappointing that *Hexagroove* looks a little too clinical compared to the offbeat personality of, say, *Gitaroo Man* and *Elite Beat Agents* from Japanese studio iNiS, where one of Ichigoichie's founders is an alumnus. But what it lacks in style, *Hexagroove* more than makes up for in its offbeat approach.

As a DJ sim, *Hexagroove* isn't about messing with turntable controllers, but more about the science and theory behind the decks. It's a 'musical RTS' about reading and leading the crowd, rather than following a predetermined rhythm chart. At your fingertips is a wide range of musical loops used to create live tracks and build up the room's euphoria, as you progress from DJing a pool party to basement and forest raves, culminating in your billing at the cheekily named Yesterday Festival.

Sets are structured so that once you max out euphoria, displayed as a growing pink circle in the centre of your loop wheel, you queue up your next loops before segueing into the next song via

> *"Hexagroove isn't about messing with turntable controllers, but more about the science and theory behind the decks"*

either a rhythm-tapping or steering minigame, while you can finish up with a bang or fade-out.

The crowd, represented as swaying and bouncing cylinders, aren't particularly difficult to please, while the game changes loops at the end of a bar so beat-matching isn't a concern. While rhythm-tapping still crops up, it's just one of six elements you're judged on, such as how fresh your selection is or whether you're creating enough drama in loop changes, all the while ensuring you're not wearing out or turning off the crowd. Suffice to say there's more to DJing than simply dropping bangers – indeed, on the harder difficulty, it's actually crucial to take away loops entirely so that you don't end up tiring out the crowd too quickly.

In all likelihood, much of the theory will go over your head at first, while even the most dedicated of wannabe DJs may have trouble remembering what each loop even sounds like on multiple playthroughs, which means it can often feel like you're winging a set, or otherwise relying on observing loop attributes to make your choices. It's not an instantly gratifying music title then, but one that takes patience and practice to really appreciate its depths, ideally in the freestyle mode where you can play ad infinitum without worrying about health. Nonetheless, it's refreshing to play a music game that, rather than simply testing your dexterity, challenges your understanding of what makes a good DJ set. W

"P&M Pizza"
Tomato Sauce, Cheese, Pepperoni and Sausage

tap this ticket to cook!

Next Page

Idiot sandwich

It's more than just Pot Noodles in Cook, Serve, Delicious!

Real-life cooking is great. The sense of pride involved in making a bunch of vegetables and some brown cubes and dried leaves taste amazing is something we're all capable of achieving, with a little bit of practice. Cooking is a great leveller, eating together one of the finest social pursuits, sharing a meal the thing that makes us so very *human*. It's also hard to find time to do proper cooking; there's always the mess to deal with, and, really, all you do to make something nice is make sure there are onions and garlic in the base, and you've salted it just enough. Sticking to virtual cooking is much easier to do in the long run.

So it is that I've been drawn to *Cook, Serve, Delicious!* – a 2012 release from Vertigo Gaming in which you take ownership of a run-down restaurant in an office block and are tasked with cooking your way to the hearts of everyone who enters. It's part management game, with equipment and recipes able to be purchased, upgraded, and tweaked, and part massive ball of stress right there in your hand. The customers arrive and place their order, see, and you only have a limited time to get it sorted. More come and place orders, and more, and then you have to flush the toilet (don't forget to wash your hands), more orders, a burning steak, that guy didn't want cheese on his nachos, *don't spill the beer*.

What starts out looking like it'll be a nice, Zen-like experience in mucking about and putting together pretend culinary masterpieces very quickly reveals itself to be an incredibly

> **"It's part management game, and part massive ball of stress"**

harsh taskmaster. You are made to *work* in *CSD*. Rush hours at lunch-time and when office hours end push many more customers your way, you have to balance the books behind the scenes, your reputation is always on the line, and – again – that toilet needs flushing because people are *disgusting*. Then you're introduced to the fact your menu is getting stale and it needs revolving to keep people interested, thus meaning you can't learn four recipes and coast through the game. It really does push you surprisingly hard.

And it's brilliant for it – the uniqueness of working in a kitchen isn't something we can all experience for real, but the stress of it is something we all know in microcosm from our own culinary preparation efforts. *Cook, Serve, Delicious!* manages to bring with it a hectic balance of stress and satisfaction, and is – still – utterly captivating. And you don't even have to clean up afterwards, unless you get a bit too worked up and drench your phone in sweat.

These aren't the sorts of games I would really bother with in a single-player, console/ computer-bound fashion – it has to be either multiplayer or portable. As such, the sequel has largely passed me by (it was on Switch, but I'm looking at it as a phone game), but the third game, releasing in 2020, has piqued my interest somewhat: you roam around a post-apocalyptic world in a food truck, and elements like flushing toilets have been done away with. Sounds like bliss... but if it stays away from smartphones, I'm unlikely to stray far from the original. There are *burgers* to be cooked, people. And, yes, toilets to be flushed. ⓦ
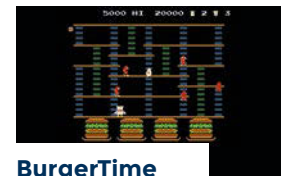
Gears of War

Sometimes more captivating than the game itself: active reloading

EPIC GAMES / PEOPLE CAN FLY / THE COALITION / 2006–ON / X360, XBO, PC

There are plenty of elements in the *Gears of War* series that are legitimately beloved. For some reason, a fair few people love the characters and story. Others might look at the shockingly tight moment-to-moment action of nearly every encounter in the series. Others still coo at the big bosses. For me, though, it's always been the active reload system – a game-within-a-game that makes a simple, regular action something so much more than you'd ever think it could be.

A quick primer: as with most games, the *Gears of War* series has you killing things with bullets, which are shot from guns. When said guns run low on bullets, you reload. In most other games this involves pressing a button, sitting through a short animation, and carrying on with your deathbringing. In the *Gears* series, though, pressing reload results in a small meter appearing on-screen next to your weapon, with a couple of highlighted sections. Hit the highlights and you're rewarded with a quicker reload and, sometimes, more powerful bullets. Miss, and you're penalised with a slower reload than standard.

It is one of the finest risk/reward systems in all of gaming, and while it has been borrowed by other titles through the years, it's never really caught on in the way I expected for such a... well, killer feature. Active reload makes a standard, banal, necessary action something that peps you up a bit

> **"Active reload makes a standard, banal, necessary action something that peps you up a bit every time"**

every time – enthusiasm, a hint of excitement, expectation. You pay close attention to the most ignored of actions, hoping your timing won't let you down this time and you'll bag that temporary boost. You slip up and berate yourself for making such a simple mistake; a slip of the thumb that ends up keeping you under pressure in an encounter for longer than you should be. It makes the process of reloading your gun – in a game about bean-headed people shooting monsters – capable of bringing about an actual emotional reaction. What a ridiculous, brilliant thing it is.

In literal *minutes* of research, I've struggled to find another example of the active reload system in anything pre-*Gears*. It does feel like it has to be there – it's a feature that, while brilliant, does feel like something someone would have come up with a long time ago. So maybe there are earlier examples, that wouldn't be a surprise. For now, though, we'll just stick with *Gears of War* as being the originator and still – to this day – one of the few flag-bearers of what really should be a standard shooter feature. The one thought swimming through my head sees it used in a survival game: a combination of *Gears'* active reload and the reloading systems of *Alan Wake* or *ZombiU*, the resultant form one that rewards success with a standard reload, and failure with a completely nadgered-up reload. Wouldn't that be brilliant? No, really, I don't know. Would it? Answers on a postcard. ⓦ

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