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Supporting adequate support

With all the chatter about Keanu Reeves, a new Xbox, and *Watch Dogs Brexit*, you may have missed the true biggest news at E3 2019: the "censorship" of Tifa's bust. The *Final Fantasy VII* character, resplendent in a stylish vest, black skirt, and red boots with knee-high socks in the upcoming remake, was "restricted" according to one English-language site's translation of a Famitsu interview: she now has a black sports bra under the vest, and rockin' abs.

The usual suspects on YouTube and Reddit were quick to interpret this change as shrinkage and cry boobie censorship, reminding me of a viral tweet that went around a few years ago in which one such internet genius complained that the Western version of *Tokyo Mirage Sessions #FE* removed the female characters' "vagina bones". Square Enix is so terrified of offending feminists with unrealistic breasts that they've had to change the whole character! It's political correctness gone mad.

As it happens, that original report was based on a shaky translation: "secure" might be a more apposite word than "restrict". Director Tetsuya Nomura told Famitsu that they wanted a more athletic, military-inspired look for Tifa – hence the MMA-style gloves and sporty underclothes. Tifa's original white vest might have been fine for static 1997 polygons, but in a state-of-the-art 2020 remake, it was going to look wildly unrealistic in action scenes. One cosplayer tweeted a video of herself jiggling away in Tifa's original outfit, thereby inadvertently proving the point. If you're going to be moving around a lot, you need a supportive garment: ask literally any woman who's ever gone for a run without one. Ever tried playing football with D-cups and no sports bra? Good lord, the pain.

Anyway, amusing as this all is, it's really highlighted that games have come far since 1997 – not only in terms of female representation and graphical realism, but in terms of fashion, too. Tifa's look is awesome: strong, stylish, not completely impractical. Character designs across the board these days not only feature more realistic anatomy, but much better outfits. I remember being surprised and pleased by the redesigned Lara Croft in Crystal Dynamics' 2013 *Tomb Raider* reboot: cargo pants instead of hot pants! It makes so much more sense! *Splatoon*, meanwhile, clearly inspired by Harajuku fashion, has some of the coolest looks in all of gaming. And have you seen Bayonetta? I am simultaneously awed and slightly frightened by her outfits. I would absolutely wear them, if I were tall enough and had twice as much body confidence.

Disingenuous people often like to try and boil this entire topic down to people being offended. This is stupid. I highly doubt anyone was ever *offended* by the original Lara's triangle-boobs, or by Tifa's vest. But they were unrealistic and, frankly, quite boring: now that we finally have the technology for detailed clothing and hair, why not give characters better clothes? If you think Tifa's new look is less sexy because her boobs won't bounce around everywhere, I feel slightly sorry for you. Nobody wants all characters to be dressed in resolutely unrevealing sweatpants and hoodies; boiling decades of interesting and informed criticism of female portrayals in pop culture down to "sexy is bad and offensive" is a gross oversimplification. People just want outfits that look cool, and not horribly uncomfortable. For me, the nadir of female outfits is *Metal Gear Solid V*'s Quiet, who, far from rocking desert fashion, looks like she hasn't finished getting dressed (and desperately needs some new pairs of tights).

There are still plenty of games in which most of the women wear little more than underwear or drastically impractical armour: take a bow, *Dead or Alive*, although even its famously proportioned fighters have been brought slightly more in line with reality in recent years. They cater, perhaps, to a diminishing sector of gamers who like to beat off to their beat-'em-ups. Isn't it a relief, though, that they're no longer the default?

KEZA MACDONALD

A games journalist for more than 13 years, Keza MacDonald is currently video games editor at The Guardian newspaper. She once dressed her baby up as Pikachu for Halloween

#18

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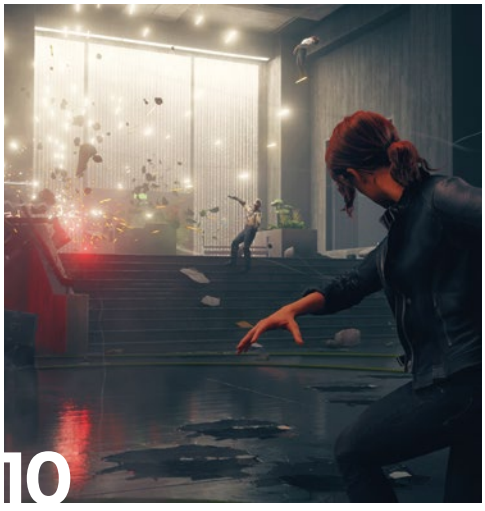

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WELCOME

Even if you weren't around to experience the impact *Street Fighter II* had on gaming, there's an easy way to see how it affected the fighting genre: simply play a few examples released before 1991. While it would be unfair to say that all fighting games were rubbish before *Street Fighter II*, it's at least true that none were as tactical or complex. Data East's *Karate Champ* introduced a bit of strategy with its measured pace and blocking moves, but there was nothing approaching the scale of kicks, punches, and combos seen in *Street Fighter II*. Konami's *Yie Ar Kung-Fu* featured a roster of colourful fighters and a decent number of moves, but bouts could still be won by cornering an opponent and mashing the same attack button. Even the original *Street Fighter* was, inevitably, a bit of a rough draft: early versions of the coin-op had large pressure-sensitive pads that left players with sore hands from hitting them; these were swiftly replaced by the six standard buttons that would become the series' standard.

Street Fighter II, unlike any one-on-one beat-'em-up before it, required skill, memorisation, and a solid understanding of each character's strengths and vulnerabilities. Its success did, however, have another unforeseen effect: the fighting genre became so complicated that it put all but the most seasoned players off. But as Matteo Lupetti's feature on page 18 points out, a generation of developers are attempting to rebalance the genre; rather than return to the simplistic button-mashers of old, they aim to mix tactical depth with more accessible mechanics. That, surely, can only be a good thing.

Ryan Lambie
Editor

Ape Escape

Ancestors: The Humankind Odyssey – Patrice Désilets' first game for a decade packs in eight million years of evolution

The pressure's on. Patrice Désilets is still a formidable presence when it comes to gaming's creative minds, but it's been almost ten years since the man saw a project actually finish and release. *Ancestors: The Humankind Odyssey* will break the silence, coming via Désilets' own studio, Panache Digital, and Take-Two's indie publishing wing, Private Division. Aiming to stuff in several million years of human evolution in a survival game based on the entirety of the human species' development, *Ancestors* is not a straightforward project to return with.

Tasked with developing their lineage and starting around eight million years ago somewhere on the African continent, players must ensure the survival of their band of apes. You eat, sleep, breed, and evolve as you choose, with the overarching goal of becoming something more *human*. Learning to identify foodstuffs, becoming adept at carrying items, even learning to use tools – it's a survival game in the purest sense of the term.

Being hunted by predators is one thing, but you're also at the mercy of the world around you, potentially consuming poisonous foods or, as Désilets explained when he spoke to us, falling from a tree and breaking bones. His tale of survival – an emergent one created just by playing, with nothing about it predetermined – whet our appetite no end, so we asked him about eight million questions.

Eight million years in one game – just how do you go about cramming it all in there?

It's true that it was a big challenge for us – things on my side, on the design, has been quite hard on me. How do we move forward that many years, right? And so it was really designed around [compressing] time. So when you don't do anything, [when you're stood still], time passes with one second equalling one second. If you leave your game on and don't move the controller and come back 24 hours later, 24 hours would have passed. It's the same. And then as soon as you move, time moves a bit faster. So 24 hours… that takes around 12 to 15 minutes.

And then you make babies, then move forward 15 months, and then you can pass a generation, and that's 15 years, and eventually, you can try to evolve. Then – because we're tracking all the things you can do in the game as feats, or missions, depending on what you've done in those missions, different amounts of time pass. We tack on a certain number of years to each mission to pass it, and you're evolving, and eventually, you will evolve thousands – or millions – of years, eventually evolving into a new species. And you can try to beat science, too.

How exactly do you 'beat science'?

If, for example, you discovered a way to cure poisoning – but eight million years ago – we'll say, 'Oh that's great. That gives →

you 125,000 years of evolution plus a bonus because you've done it earlier than what science is telling us.' So you might get a bonus of 65,000 years or so, meaning that you evolve 200,000 years... That's how we can do a game of 40 hours and make you pass through millions of years.

So is that how evolution works? Purely through discoveries?

When you try to evolve, it's really a conscious decision for yourself, on the part of the player. It's like finishing a level somehow. But, it's like, 'OK, I've been playing for an hour or so,' I try to evolve. Then you go, and we'll tell you, 'Yes! You've done that!' It's the number of years that you grew up and then eventually at the end of this sequence you'll be elsewhere, and your character may have evolved into a different species, or you'll have a different look, but also you'll have some new abilities to use.

Is there any real push to drive players on? There's no minimap or obvious 'Go here" on-screen, so how do you keep people motivated, and make sure they know what to do?

We don't push. We kind of pull more than push. We give incentives to go forward, but it's not like you have to talk to someone and they'll give you a mission and then on your minimap, you go from dot to dot and then you say, 'OK, that's the game, and I finished it'. But it is this dance between the game and the player. Our job right now is to make sure that you kind of forget all the other games you've played before. Our challenge right now is to say this is not the video game you're used to.

The learning process is, as you'd expect, very much part of *Ancestors*' gameplay.

You're not alone with the *2001* vibes.

Once you get the rhythm that we're trying to make, well then it's quite an experience, and we know because we're all gamers here. So we know there is this first step of 'Whoa! It's so different.' I'm not telling you what to do. So all the decisions you'll make are your own.

We did some press tours, and I saw lots of journalists just running in the jungle, and then they would tell me it was tough, they got killed or injured. But they ran into a jungle without any preparation – I didn't tell them to do it, they did it. So I asked, 'Would you ever do it for real? Running into a jungle without preparation?' Obviously not. But that's what they did, it was their decision, so it was their fault. This is the experience. In the playtest we did here in Montreal, a guy said 'Oh, I got lost. But I felt it was my fault.' *That's* what we're trying to give – the sensation we want to give. It's not the game's fault. It's how you attack the game that is the core element of it all.

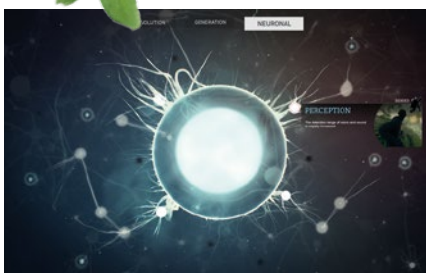
"This focus on the player's freedom became our creative freedom at the same time"

If I would have asked you, 'Go in the jungle now to do X, Y, Z,' and then it was a bit tough or not clear enough, that's my fault... But the more you play, the less scary it becomes, and at the end, you can handle it all because it's consistent. From the beginning to the end of the game, it's consistent. The rule set is there at the beginning, and while I'm not telling you everything, it will be the same at the end. It's how you really go with those rules and all the emergent gameplay, which is just for you – you make the decisions to go left, instead of right, so you have a different experience.

What's the process been like, heading up a smaller indie-like studio? How does it compare to the past?

In four years, we have a 100 percent retention rate. So we're not sleeping in the office every night, if ever. So it's been great. I'm always in awe of what they're giving me in general. They go beyond my expectations, personally. I've got a team on a mission. They're making a game about human evolution... There's something important about bringing that objective of love and art to the world, so they really want to do their best.

We don't have regular meetings, or any at all on Mondays. We see each other at a stand-up meeting on Wednesdays, and we play the game. I play the game with everyone in our media room on Friday afternoons with a beer or some wine – and this will never change. This is how it works. Then in the middle of all of this... it's total chaos, and it's all about creativity and finishing your task, or coming up with new ones, and we discuss things. I might be in charge, but everybody designs and everybody continues. But it's important to be really clear to everyone that I'm in charge, because if the game's good it's because of them, but if the game's shit it's all my fault. I can deal with all the interviews and everything, but it's not like I'm their dictator.



Evolution is a case of choosing what to try to improve, as and when you're able.

Erm, has anyone else noticed the large, incoming, angry rhino?

It's an ambitious project for a small team. Was there always scope for Panache to do something this big?

The first two years were all about Panache, building a new team, and also trying to make a game at the same time. Since we were smaller and we didn't have Private Division there at the beginning, we went for the episodic model just to make something smaller so we could ship sooner and make some revenue. And that was the business model that made sense on paper for us. But as soon as Private Division came in… 'Well, you know what guys? Let's do a real game.' We forgot about episodic and switched to a different kind of game.

So I decided we need to make a bigger world, an open-world game. Then it was all about, instead of being about the design of one single theme of evolution – let's say the first episode was all about walking on two legs – I was like, 'No! Let's add all this knowledge into one game world and let the player create their own path to evolution.' And from there, this focus on the player's freedom became our creative freedom at the same time.

It was also important that from day one, because there weren't a lot of people at the studio, I wanted to have the game always playable. So we'd been working on the same map from the outset, if you will, the same little region. At the beginning of development, it has to be playable – if somebody comes into the studio to see the game, it's got to be ready. So we've been working as if the game was live since day one – we've been iterating on the same objects from the start.

It's kind of like juggling with the subject, the products of the game, and the resources. You've got to make that game. And then my job is to be creative in all this, and to help make sure that at the end you have something unique, special, and fun.

Is there a core narrative to the game?

Not really. It's not something I wrote for you to play through. We came up with the game world for you to write your own adventure. I've been telling some stories that I'm creating myself, like that time I took one elder female and I just went away from my clan – in my mind, I was writing a story of her not wanting to die in front of her clan and just wanting to die alone. I played for two and a half hours of that story that I wrote myself… and then she lived through a bunch of adventures and eventually, she got eaten by a snake, and that was it.

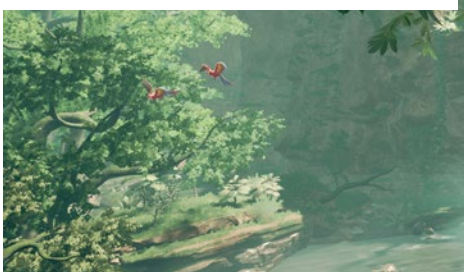
There's also a story that I wrote the other night when I was alone. I was the last adult with two babies, and I felt like I was saving humanity because if the characters died, it was over for all of humanity. But the last adult was injured and bleeding – eventually, I managed to survive, and I passed a generation, and the two babies become adults, and I saved humanity. And I was so happy.

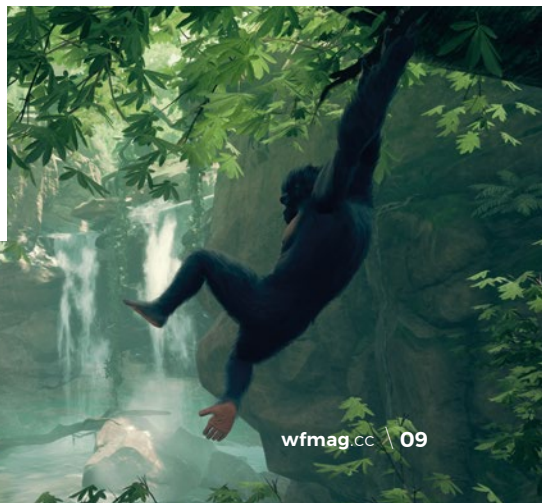
It's been almost ten years since your last release (*Assassin's Creed: Brotherhood*, 2010) – is there a lot of pressure with *Ancestors*?

Stop telling me! That's my problem: I don't think about it, then people tell me about the amount of pressure and… I know. It's been ten years, but I have worked on games in those ten years, I just couldn't share a lot of it with the world. But I'm the designer so I know there's some pressure.

We're doing our best. The game will be what it is. Some people will really love it. Some people won't. I'm not in charge of the response. I'm in charge of trying to make the best thing I can with my team and with the time we've got. But people are telling me you *should* have some pressure. And I'm like 'Yeah, I know… but I don't *want* to know.'

***Ancestors: The Humankind Odyssey* releases 27 August on PC, PS4, and Xbox One.**





Take it back

Master your destiny in Remedy's mysterious shooter, Control

Info

GENRE
Action-adventure / Third-person shooter

FORMAT
PC / PS4 / XBO

DEVELOPER
Remedy Entertainment

PUBLISHER
505 Games

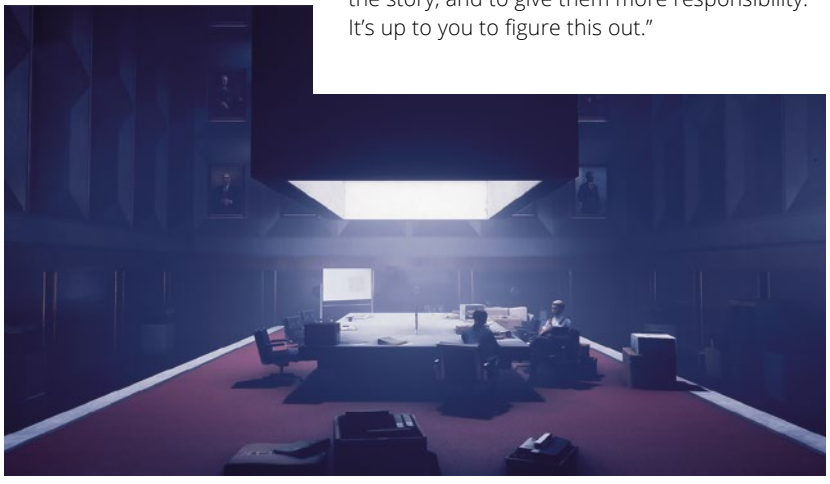
RELEASE
27 August

Remedy Entertainment doesn't do ordinary. Whether popularising bullet time in *Max Payne*, or blurring the lines between gaming and television shows in *Quantum Break*, the Finnish developer is always looking to try something new.

For *Control*, that new element comes as a departure from the studio's tried-and-tested formula. Gone is the over-reliance on linear levels – in its place is a title that marries player exploration with typical action and shooter mechanics.

"I personally wanted to make a game that's not as linear as we've done before," game director Mikael Kasurinen explains. "It doesn't mean that it changes the tone of the game necessarily; it's just about having a different way of expressing the game to the player, to tell the story, and to give them more responsibility. It's up to you to figure this out."

Control's environments add to the sense of apprehension players will feel throughout the game.



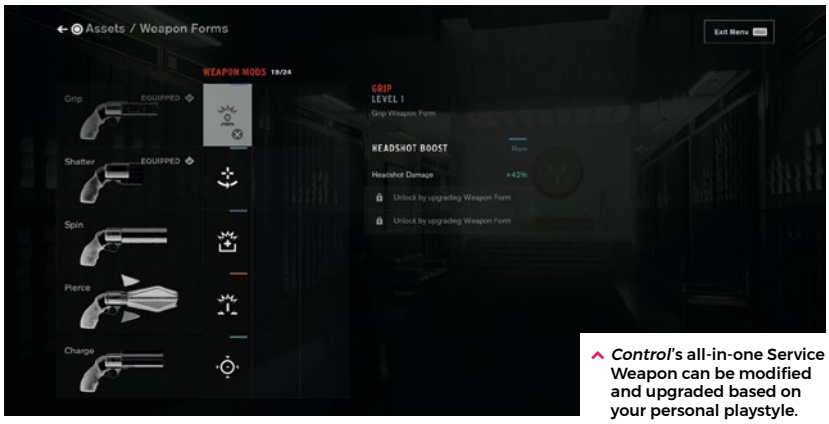
In *Control*, players take on the role of Jesse Faden, a woman seeking answers over the supernatural powers that she inexplicably possesses. Her search leads to a secret US government agency known as the Federal Bureau of Control, which studies supernatural phenomena and prevents otherworldly threats from invading Earth. The usual, then.

Jesse's arrival coincides with that of the Hiss, a paranormal force leaking in through an interdimensional rift, which kills the FBC's director and possesses all but a few FBC employees. Installed as the FBC's new chief – via, naturally, mysterious means – Jesse must defeat the Hiss and uncover the truth about her own past.

Control's synopsis poses more questions than it answers, but that's intentional. Unlike Remedy's previous games, here it was the world that came first. With ambitions on branching into non-linear mechanics, Remedy had to rewrite its rulebook and come up with a new approach to the game's development.

"When we started concepting, we didn't actually create an identity for Jesse at all," Kasurinen says. "We began with what the world was that we wanted to create and its status, and we came up with the Bureau, the Oldest House (the FBC's headquarters), and the Hiss. It was part of the overall direction that was 'Let's not start with the story this time, but let's start with the world.'"

It wasn't until *Control*'s world and themes were established that attention turned to its protagonist. For Brooke Maggs, *Control*'s narrative lead, Jesse's creation was borne out



***Control*'s all-in-one Service Weapon can be modified and upgraded based on your personal playstyle.**

of a sub-topic the game explores, and one that reflects the discussion of gender parity in the industry.

"I think it's interesting that a lot of the Oldest House directors have all previously been men," she says. "We really wanted to have Jesse come in as this breath of fresh air and a new face off the street who's experienced the strange and mysterious. She's never quite been able to understand it and, now she's here, she's the director, and I think that gender dynamic is really helpful to convey that contrast."

Like other Remedy titles, *Control* takes plenty of inspiration from other media. The 'New Weird' literary genre was one source Maggs took particular cues from, while TV shows – a medium Remedy has regularly been inspired by – also helped to develop *Control*'s story.

"We sort of cherry-picked from China Miéville's work, and people who are really good at making us feel uncomfortable without over-explaining why," Maggs says. "Storytelling is getting more complex in different media, and we need to be more complex too. I think looking at those things just from a storytelling perspective as well, such as what not to say, is really interesting."

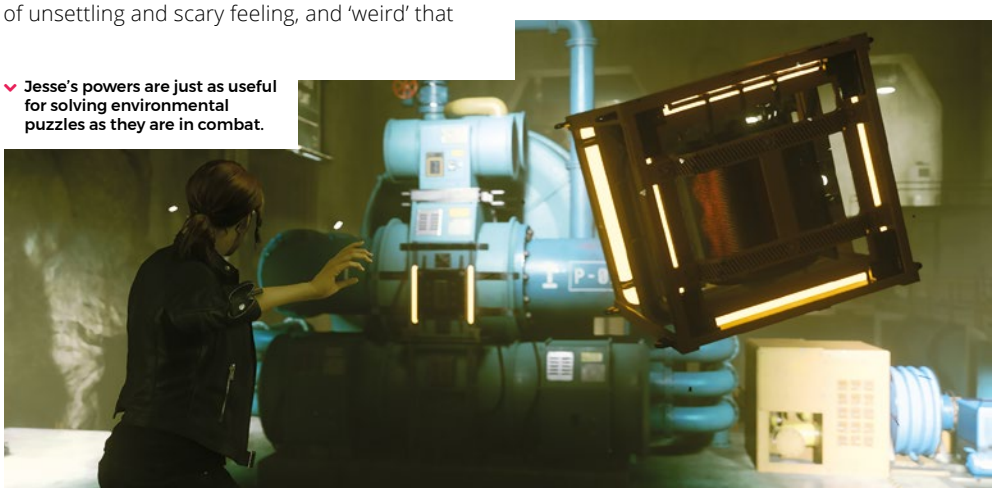
"I wanted to make a game that's not as linear as we've done before"

Control wants to make you feel uncomfortable, and its environments, enemies, and intentional mystery are supposed to make you nervous. Kasurinen, though, is at pains to stress that it isn't Remedy's desire to terrify players like horror titles do, even if fear becomes the overarching emotion at times.

"We didn't want to go too far into horror," he says. "The problem with horror is that sometimes it's something that you can see and understand too easily and it becomes boring, so we wanted to find a balance between that kind of unsettling and scary feeling, and 'weird' that you don't really understand. What's happened to these people? Why do they do this? Those questions always linger."

Control represents something of a risk for Remedy. Not only is the studio taking a detour from the linear structure it's known for, but it's also the team's first major title since *Alan Wake* without Microsoft's backing. The worry about Remedy taking a step into the unknown is unfounded, though. Moves like this are what it has become famous for, and its desire to put players in control of their own destiny is just the latest in a line of ambitious ventures.

"We don't spoon-feed the story to the player," Kasurinen says. "You have to invest yourself in it to really get the full experience. To me, creatively, those are the type of games that I enjoy a lot. I do enjoy linear story-driven games as well, or puzzles games and things like that, but sometimes I want to play games that are more open-ended and feel like it's up to me to figure this out. We don't say it out loud, but there's this message of 'pay attention' – look into the world, and listen to what people are saying. It's a puzzle and a mystery. It's up to you to solve it, and that's what we wanted to have with *Control*."



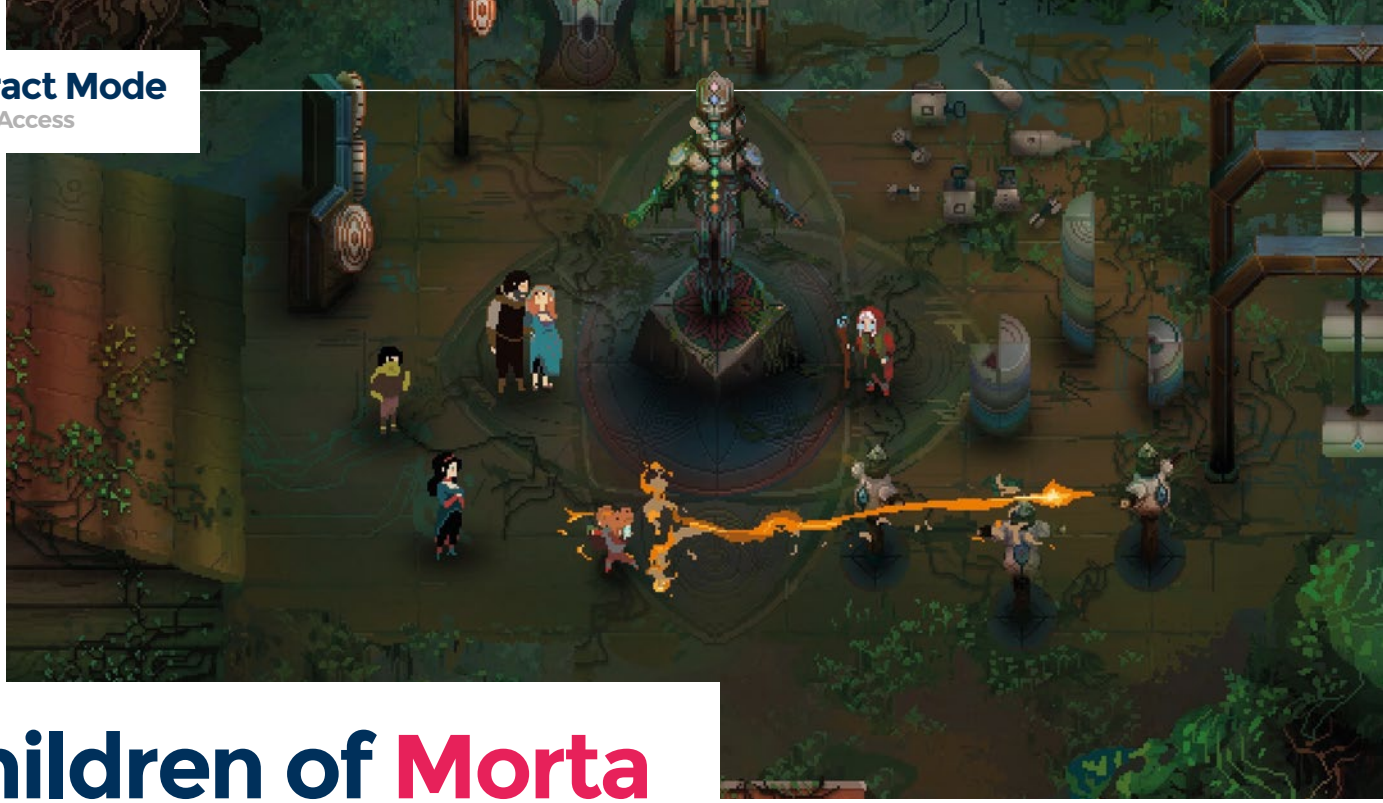
Jesse's powers are just as useful for solving environmental puzzles as they are in combat.

MARRYING GUNPLAY AND ABILITIES

"It was important that the game didn't become something where you could solve all of your problems with bullets," Kasurinen explains, "You have to use your abilities to be able to survive.

"We want the [game] to be aggressive and force you to improvise and use your abilities. If you don't, you will die, and that's part of the experience."

Admitting the approach is sometimes 'harsh', the director says it's a very rewarding approach when the player succeeds. In other words: prepare to die a lot.



Children of Morta

An action-RPG that's also about maintaining family ties

Info

GENRE
Action-RPG

FORMAT
PC / PS4 / Switch

DEVELOPER
Dead Mage Inc

PUBLISHER
11 Bit Studios

RELEASE
Summer 2019

Role-playing games are party-focused a lot of the time – even in a roguelike (or roguelite, as we're dealing with here), there's often an emphasis on assembling a team, bringing together disparate personalities, and co-operating to achieve a common goal. In *Children of Morta*'s case, your team's already been decided thanks to the miracle of genetics. Taking control of a family of guardians known as the Bergsons, players are tasked with furthering this less-than-nuclear family's role as protectors of the lands of Mount Morta.

There's far more to *Children of Morta*'s story than a family serving as fantastical security guards, however: a corruption is spreading and has taken over the family's lands. As such, each of the six members has to head out there and fight back against the corruption – while balancing the emotional pillars of familial ties. An uphill struggle against impossible odds, all while trying to keep dad happy? Why yes, this does sound exactly like Christmas dinner last year. Zing.

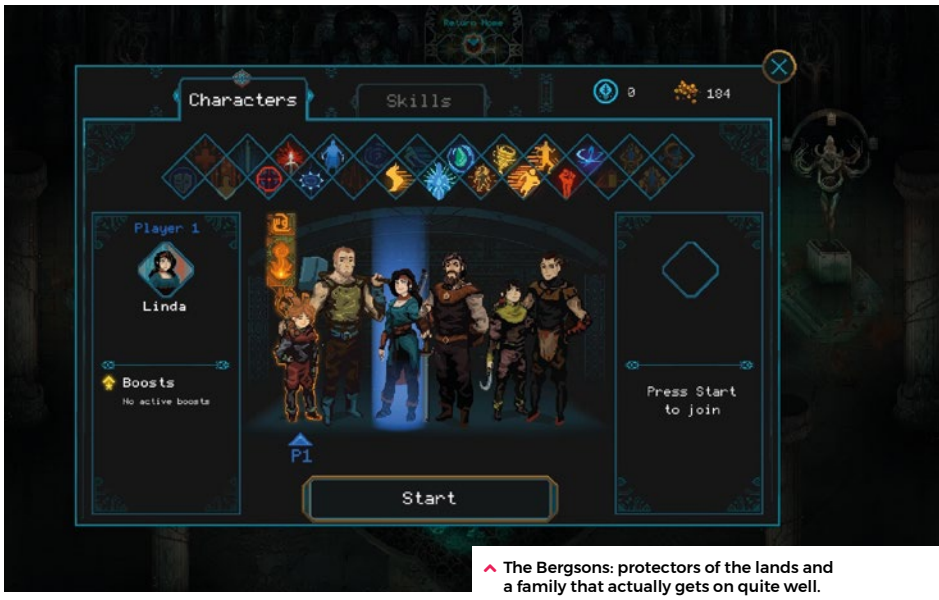
Developed by Dead Mage Inc, *Children of Morta* raised some £86k on Kickstarter an age ago (well, 2015) and is finally on the cusp of release. "The development process has had a lot of ups and downs and challenges," explains team lead, Amir Fassihi. "Obviously, it's hard to keep focus over such a long time and be motivated and not to feel burnt out. On the other hand, first we got great positive feedback from Kickstarter backers, then another wave of positive support from gamers on shows like PAX West and East, then fantastically positive previews from media. That kept us going, as we knew we were doing it the right way."

From the very beginning, *Morta* has been designed with mechanics at its core, but also with the story's emotional aspect very much front and centre too.

"Our main challenge has been to create a believable family in a fantastical setting," Fassihi says. "As the story unveils, you learn more and more about the family members, the relationships between them, and the bonds that keep them together. While fighting in the dungeons, you develop not only your chosen characters, but also skills for all of them.

"Of course, game narrative events, animations, the game narrator, the music – all the details have been created to serve this purpose,"

The focus is more on the action side of things, but never forget you've got a story-led RPG here.



The Bergsons: protectors of the lands and a family that actually gets on quite well.

he continues. "Yet, I think most importantly, it's the story and mechanics that allow you to feel like you're playing a family. So the fantastic setting just helps it, as they're fighting monsters to oppose the evil and that strengthens the bonds between the Bergsons."

In terms of action, *Children of Morta* presents players with a series of procedurally generated dungeons to work their way through on their way battling to the top of a mountain. "One benefit of procedural levels," Fassihi explains, "is that there will be variety every time for the gamer, and dungeon crawling will be always fresh. A challenge for creating procedural levels is maintaining the proper balance. With *Children of Morta* being a roguelite, we think once you go back to caverns or to the desert, you should be discovering new locations every time. As such, we just had to use procedural generation."

It's been four years since Kickstarter funded the game, and about a year longer since the very first ideas for *Children of Morta* were written down. Those first drafts nailed down the odd point, but as Fassihi says, "the real work started in 2015."

"Our challenge has been to create a believable family in a fantastical setting"

Starting with a small group, Dead Mage has grown as the project has progressed, resulting in a team of four people on the technical team, three working on both design and programming, two focusing on design and narrative, four folks in the art wing, and another two handling sound design and music. A modest success on Kickstarter has led to a 15-person studio finishing off this ambitious game, with no small amount of help from publisher 11 Bit Studios' QA team.

But special mention really does have to go to the animations, created in a glorious pixel art style. It's not something we often recommend, but move your eyes away from the page just long enough to look up some of the GIFs and videos posted by the team. It's worth it. Your eyes will thank you. But do make sure to return here afterwards, of course. "Our artists have spent a lot of time animating the characters and environmental objects pixel by pixel," Fassihi says. "It has been a big challenge.

"There's been a few people working on the animations for a few years – among other tasks, of course – polishing them, improving them, changing them. Since it's frame-by-frame work and there are many scenes in the game – not limited to the fight animations of just people but also of the numerous enemies of various shapes and forms – it's been a monstrous task. The team has made fantastic work."

Naturally it doesn't show here, but *Morta* is home to some stunning animations.

FAMILY TIES

So what are the benefits of choosing each individual family member? It mainly comes down to your playstyle, as Fassihi explains: "John, the father, is the strongest and protects the family, hence he wears a shield. Teenage daughter Linda fights from a distance with a bow. Younger daughter Lucy is a dynamic personality, so her favourite weapon is the fireball. Eldest son Mark is a quiet guy – a contemplative mind – yet also strong, so he fights using his hands, having great skills in martial arts. And then there's a distant relative of the family – Joey. He uses a hammer to nail enemies down." Ah, hammers. Nature's great equaliser.

Headlines
from the virtual front

01

02

03

01. In your pants

Retro game streaming Kickstarter success Antstream has launched for PC, Android, and Mac, with an initial monthly price of £9.99. Per month. Because it's monthly. And what do you get for this roughly every four-week price? Hundreds of retro games, officially licensed and ready to beam using space rays into your home, fresh to be enjoyed once again just like you did when life was easier and less frightening.

You're looking at titles from the likes of the Mega Drive, Amiga, ZX Spectrum, and more, with particular focus going to the likes of *Speedball 2*, *Gods*, and *Magic Pockets*. Wait, they're just Bitmap Brothers games. Hmm. There are other games available, seems we've just got a Bitmaps obsession.

wfmag.cc/inyourpants

02. More Epic drama

In more increasingly tiresome news surrounding the Epic Store, Kickstarter backers of the upcoming *Shenmue III* have been told they can get a refund for the game if they want, given it's been allocated a year-long exclusivity status on Epic's shop. Originally, backers were to get a Steam key, which they still can if they want, but it won't unlock the game until 12 months after its release.

The options are to switch it for an Epic key, suck it up and wait, or get a refund, and really, why is this a thing? Epic harvests user data? Well, so does Valve. Epic is buying up exclusives to force people to use its platform? You couldn't play *Half-Life 2* without first installing Steam. This is capitalism, kids. It's always great fun.

03. Game gobbled up

Retail chain Game has been absorbed by Mike Ashley's Sports Direct empire in a deal worth just under £52m to shareholders. The 30p-a-share offer was unanimously accepted by Game's board, and the recommendation passed down to shareholders that they should accept this offer, which is always a positive sign. Wait, not that – a negative sign. It shows a complete lack of confidence in the brand and an attitude of 'get out while you can'.

Anyway, Sports Direct said it did not believe Game could "weather the pressures that it is facing" if left to face the ever-dwindling footfall of the high street alone. As such, the saviour of House of Fraser and would-be saviour of Debenhams has stepped in once more to pick at the carcass.

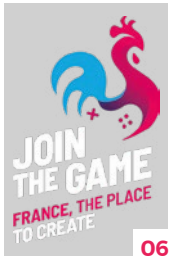
Hopefully, plenty of jobs can be saved with the move, and employees don't start to be treated like they were in Sports Direct's warehouses.

Youtuber reverse-engineers *Diablo* for Switch; Nintendo unhappy

Game devs say they'd rather you pirate their games than buy them from G2A

04

All these stories and more!
(we have more space on the internet)
can be found over on
wfmag.cc



06

04. Aka 'The Joe Danger Studio'

Hello Games founder Sean Murray opened up a bit to GamesIndustry.biz, speaking of how the ongoing reception to *No Man's Sky* has been bewildering him a mite. "Each update we've done has been significantly bigger than the one before it," he said. "Next, particularly so. We saw the kind of numbers that a triple-A game would be happy with at launch. It was very successful for us, and the player base has stayed strong."

After flirting with the option of just running away from the project, given the overblown negative reaction to its launch, Hello instead chose to work hard on making it a far better game. And it has. Murray admitted lessons have been learned, too: "When you're an indie studio working hard to survive, the one thing that doesn't cross your mind is, 'People are too excited about my game.' We are in the lucky position where we can be more cautious in future, and we will be."

05

05. Hark! Another newold machine!

Just when you thought it was safe to ignore the nagging feeling at the back of your mind that you have to buy every single re-release of an old games machine that comes out, up steps the... well, The C64. It's, unsurprisingly, a Commodore 64 made for the modern era, with your modern connections and other such doodads like a reported 64 games included.

Best of all, though, it's not a mini machine. The C64 is a full-size computer, with a working keyboard, so is less a vague facsimile and more a solid copy of the original, but with more modernity to it. The C64 is coming on 5 December, and will cost £109.99.

06. Omelette du fromage

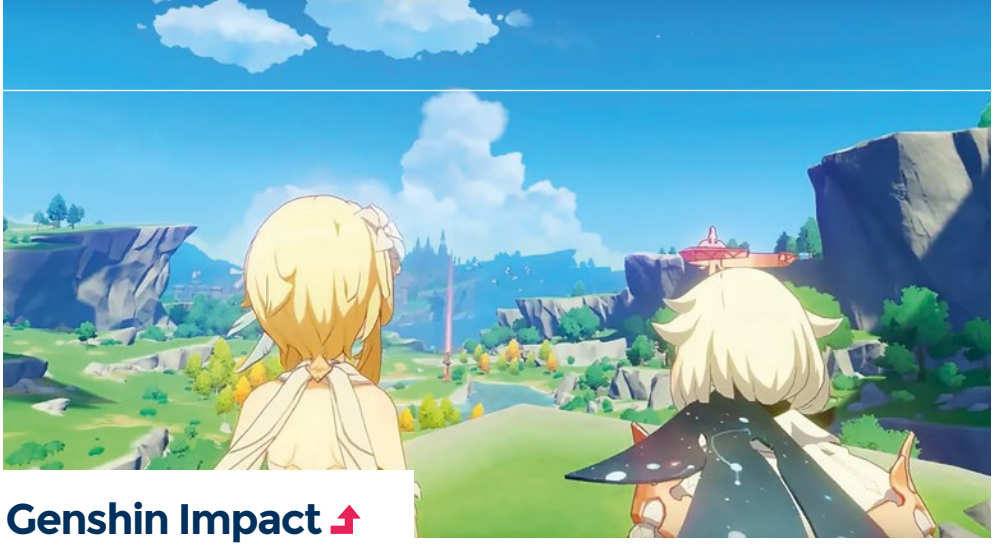
A new French endeavour – we'd say 'scheme' but that makes it sound evil – has been launched, encouraging British games developers to make the short hop across the Channel and start making games in the land of stereotypical bread/hats. Join The Game brings together a few elements of French business, including the Director-General for Enterprise, a governmental department, in making grants, funds, and tax credits open to devs making the switch.

Would you believe it, this is all related to Brexit – a potential catastrophe for the British games industry, according to the likes of UKIE. Dr Jo Twist, CEO of the non-profit organisation, said: "Continued uncertainty caused by Brexit and potential for disproportionate regulation of our industry without the support of a robust evidence base risks diminishing that positive approach – potentially turning talented individuals and businesses away from the UK."

Dr Disrespect apologises for broadcasting live from public toilet #NotTheOnion

***Alan Wake* rights revert to Remedy; multiplatform release hinted at**

incoming

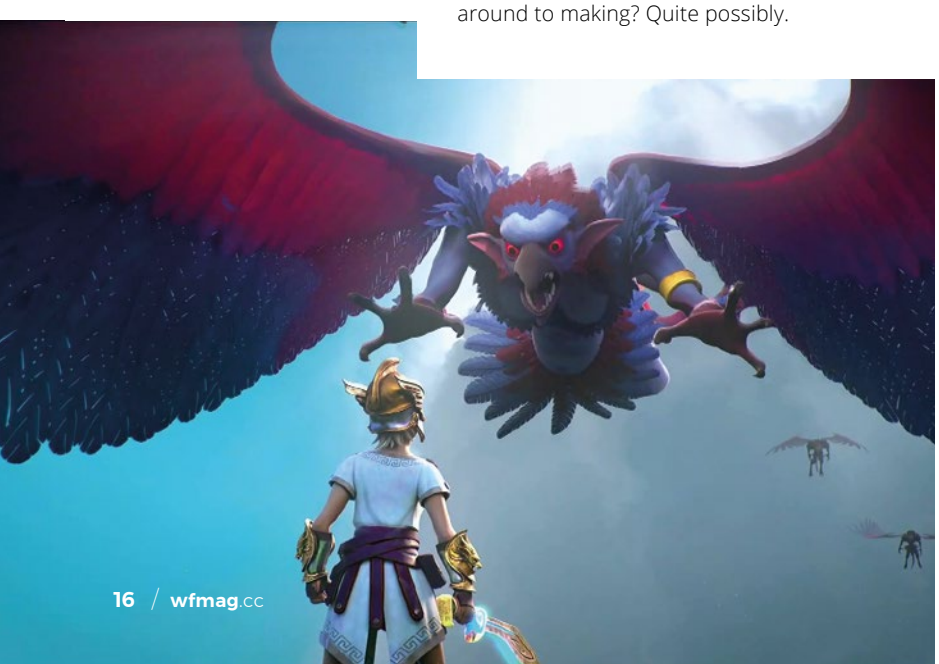


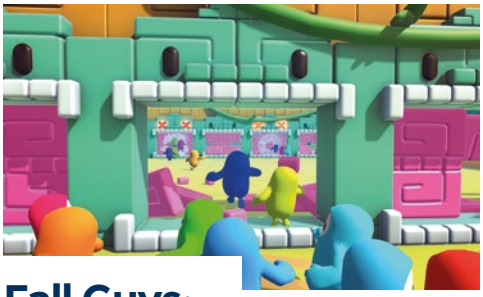
Genshin Impact

Suggestions that *Genshin Impact* looks cheekily close to Nintendo's *Breath of the Wild* aren't without foundation. But while Chinese developer miHoYo's action RPG contains a familiar blend of fantasy world-building, combat, and exploration, it all looks finely crafted so far. The twist here is that there'll be multiple characters to switch between, though we don't yet know whether this means we'll be able to team up with other players to take on its monster-filled world. That it's getting a closed beta ahead of its release in 2020 suggests that *Genshin Impact* will have some kind of online functionality. We'll keep you posted.

Gods & Monsters

From those plucky indie developers that brought us *Assassin's Creed Odyssey*, along comes a similarly themed action adventure seemingly aimed at a slightly younger audience. Expect a colourful open world, a bit of puzzle-solving, plus cameo appearances from some familiar creatures from Greek myth: the Gorgon, the Cyclops, Demis Roussos, and so forth. The 3D *Kid Icarus* spin-off that Nintendo never got around to making? Quite possibly.





Fall Guys: Ultimate Knockout

Devolver Digital have an eye for anarchic and enormously playable games, and so *Fall Guys: Ultimate Knockout* has already made our must-play list. A kind of massively multiplayer riff on *Takeshi's Castle*, it sees up to 100 players compete in a string of bizarre races and challenges. One such challenge appears to involve stealing golden eggs from a giant, sumo-wrestling chicken. If this doesn't become a world-conquering esport, we'll be sorely disappointed.

Genesis Noir

An adventure game "set before, during, and after the Big Bang" according to developer Feral Cat Den, *Genesis Noir* captured our attention from its first brief trailer. Set in a surreal world of shimmering lines against black backgrounds, it takes in a love triangle, jazz, and the birth of the universe as we know it.

Deathloop

The announcement trailer for this forthcoming curio is high on incongruous imagery but low on detail. A pair of hardened warriors – Julianna and Colt – engage in athletic combat on a windswept isle, and when one of them inevitably dies, they immediately wake up and start fighting again, like Itchy and Scratchy with shotguns and sniper rifles. But then there's also a city populated by faceless, armed goons, who Julianna and Colt also fight until they're eventually overwhelmed. Time loops are becoming quite a thing of late – see also *Outer Wilds* and the forthcoming *12 Minutes* – but with *Deathloop* being the latest game from *Dishonored* developer Arkane Lyon, this is one vicious cycle we're looking forward to entering.

Outriders

People Can Fly previously brought us the absurdly entertaining *Bulletstorm*, so we've high hopes for its latest shooting opus, announced at June's E3. It's set in a grungy sci-fi world akin to *Bulletstorm* and *Gears of War: Judgment*, and will allow up to three players to join forces and fight monsters of varying shapes and sizes. The studio says it's had the concept on the backburner for some time; here's hoping its first game away from its former partners at Epic proves to be another blast.

Cris Tales

If you're fond of JRPGs like *Chrono Trigger* and *Final Fantasy IV*, you'll probably want to take a look at *Cris Tales*. Its hand-drawn artwork might suggest a small and intimate indie experience, but *Cris Tales*' fantasy saga takes in multiple paths and a campaign that lasts around 20 hours.

THE ART OF FIGHTING

MAKING A GENRE ACCESSIBLE

FIGHTING GAMES ARE KNOWN FOR THEIR COMPLEX MECHANICS, BUT A WAVE OF DEVELOPERS AIM TO MAKE THE GENRE MORE WELCOMING

WRITTEN BY MATTEO LUPETTI

More than 30 years after Capcom released the original *Street Fighter* in 1987, the fighting game genre is undergoing something of a renaissance. We're now seeing an ever-growing number of titles that make a point of being more accessible to new players: *BlazBlue* has included a beginner mode, and featured simplified controls, since 2009's *Continuum Shift*. *Guilty Gear* adopted a similar system in 2016's *Guilty Gear Xrd -Revelator*; *Street Fighter 5* featured more forgiving combos than earlier episodes of the series. Meanwhile, *Soulcalibur VI* and *Dead or Alive 6* introduced new systems designed specifically for newcomers.

Inevitably, this move towards a more welcoming genre has its detractors. *Street Fighter 5*'s simpler combos have positive effects on beginners, but pro players have often expressed their distaste for these changes, and feel they restrict how players can express themselves. "Developers have done all sorts of things, like lowering the execution barrier, adding comeback mechanics, and removing mechanics entirely," says Gerald Lee, fighting game expert and owner of the YouTube channel, Core-A Gaming. "Sometimes [these changes] can improve the game, but sometimes they can kill creativity and depth." ➔

^ *Fantasy Strike*: a fighting game "built from the ground up to be as understandable as possible."

Upcoming indie fighting game *Metal Revolution* promises 'minimalistic controls': special moves executed by pressing one dedicated button and a direction.

Creativity and expression are important words in fighting games: players express themselves through their actions, they lie to lure enemies into their traps, they get to know their opponents, and try to anticipate their next move. But newcomers are still learning the moves, so they can't necessarily enjoy the nuances of this deceitful and complex dance. With this in mind, let's meet the developers intent on making the fighting game more open, approachable, and accessible than ever before.

MOVE YOUR JOYSTICK

Complex button sequences and joystick motions are the first barriers for beginners to overcome. Special moves executed with joystick inputs were first introduced in *Street Fighter*, giving players a selection of hidden, powerful attacks to discover by themselves. Since then, joystick motions – or button sequences on gamepads – have become a common feature in fighting games. The moves themselves are no longer a secret – rather, they allow for a greater range of attacks with fewer buttons, and shape a character's personality through their unique strengths and weaknesses.

Besides button sequences, though, fighting games feature rich mechanics that have multiplied and become increasingly baroque in more recent years. "I think it's been a natural progression over time," David Sirlin tells us via email. A former pro fighting game player, Sirlin was lead designer of *Super Street Fighter II Turbo HD Remix*, and now heads up Sirlin Games – an independent developer of both tabletop and video games – where he's working on *Fantasy Strike*.

"*Street Fighter II* really created the fighting game scene, and since then, there's been an overall trend towards more complicated fighting games," Sirlin continues.

"As people got used to fighting games, they were ready for more mechanics, more complexity [...]. The problem is that this trend also means fighting games have generally drifted out of reach of a lot of players. When the genre as a whole becomes more and more complex, even if it pleases expert players, it's leaving a lot of people behind."

POCKET FIGHTERS

Mobile might seem like an ideal place for a broader style of fighting game, but developers are still hunting for the right formula. HiFight's *FOOTSIES*, a free game available on PC and Android, is one that gets the balance just right. It distils the genre into a lo-res, simple experience with three buttons and no health bars. *FOOTSIES* discourages blocking and is all about movements, spacing, tricking your opponents, and punishing their mistakes. It brilliantly supports local multiplayer on the same mobile device, too.

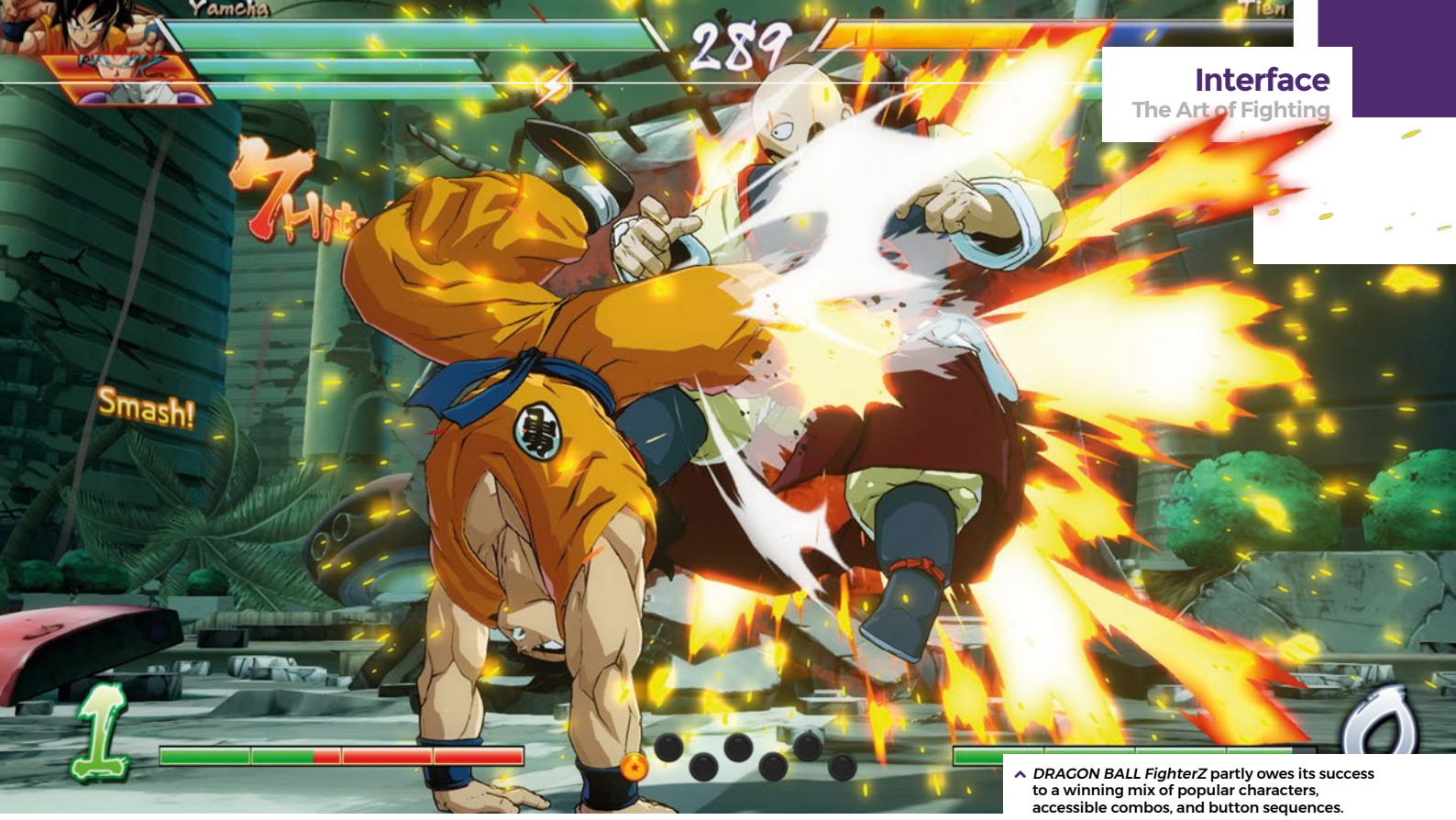
The fighting game distilled: HiFight's free-to-play *FOOTSIES*.

TUTOR ME, SENPAI

Games like Lab Zero's *Skullgirls* and French Bread's *Under Night In-Birth Exe:Late[st]* have shown how detailed tutorials can help. "Before *Skullgirls*, fighting game tutorials consisted of, 'Do this move three times; block three times; throw three times; great job!' Lab Zero's Mike Zaimont tells us. "That crap doesn't teach you how to play. So I set out to make a tutorial that would mimic the way I teach, with the goal of taking a completely new player from knowing nothing to being able to actually play, including all the aspects of that play. We didn't just want to make easy-win, congratulatory sections; we wanted to teach things, and with that comes failure."

Even so, these games still need weeks and months to be mastered at a decent level; at the end of its 179 tutorial lessons, *Under Night In-Birth Exe:Late[st]* warns that "You're still not ready to take on other players."

Tutorials help to ease newcomers into *Skullgirls*' action.



DRAGON BALL FighterZ partly owes its success to a winning mix of popular characters, accessible combos, and button sequences.

THE NEW, ACCESSIBLE WAVE

Other designers, meanwhile, have begun to wonder what could be realised with fewer systems, simpler controls, and maybe no button sequences at all. Iron Galaxy Studios' *Divekick* exemplifies this philosophy: players control its characters with only two buttons, which manage movements, regular attacks, and special moves.

Sirlin cites *Divekick* as an important inspiration for *Fantasy Strike* – a fighting game built to be accessible and understandable. "We started by having very, very few features, then adding more and more until the gameplay was deep enough to support tournament play and be interesting," he explains.

Fantasy Strike has only one button for normal attacks, no crouch and no button sequences, while normal throws are automatically countered even if players let go of the controls. "[*Fantasy Strike* is] designed from the ground up to be as understandable as possible," Sirlin continues. "That's why we have discrete chunks for hit points, a super meter that fills automatically over time, highlights on the screen for armoured moves or invulnerable ones, a move list that fits on one screen, and so on."

Furthermore, *Fantasy Strike*'s lenient inputs have been designed to prioritise strategy over complex moves.

Divekick started out as a parody of the ubiquity of diving kicks in the fighting games scene.

"WHEN THE GENRE BECOMES MORE AND MORE COMPLEX, IT'S LEAVING A LOT OF PEOPLE BEHIND"

The *Smash Bros.* series is a party game for some, and intense esport for others.

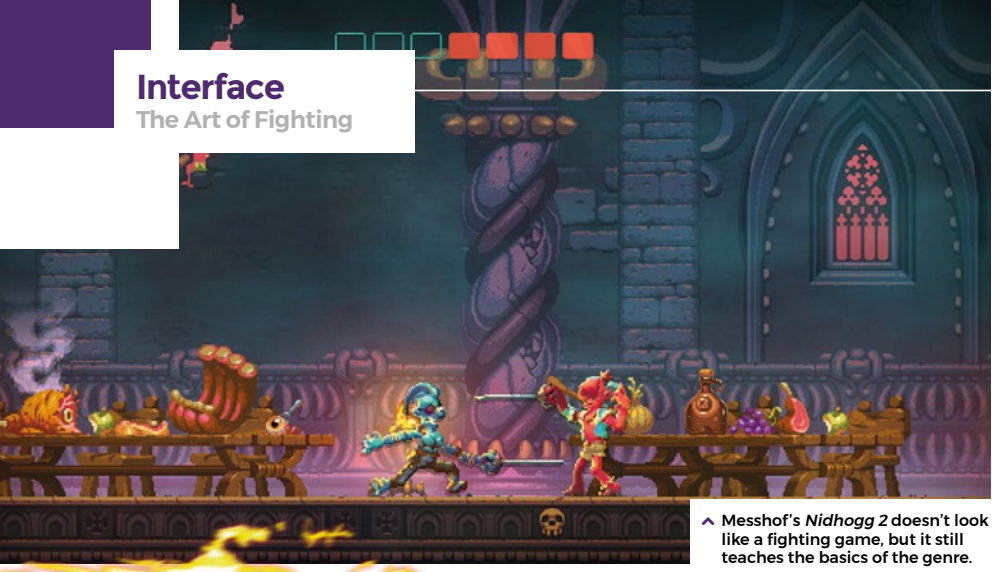
"Making inputs do what the player intends, making it easy to understand how things work, and how to do combos has nothing to do with strategy; those are things that just get in the way of strategy until you can overcome them," concludes Sirlin.

Since the launch of *Fantasy Strike* on Steam Early Access in 2017, other companies have released fighting games designed to be an effective introduction to the genre: Nicalis' *Blade Strangers* is a crossover fighting game with four-button controls, easy combos, and no complicated button sequences, and *SNK Heroines: Tag Team Frenzy* is a fan-service heavy fighting game with no crouching and a dedicated button for blocking.

HEIRS OF SMASH BROS.

At the same time, indie developers are building on the foundation of Nintendo's *Smash Bros.*, a platform fighting series marked out by its unique balance as both an accessible couch game and an esport. "That's what's so great about [*Smash Bros.*]: it's still considered as a party game for some players, and as a highly competitive fighting game for others," says Early Melon's Jérémie Klemke, developer of PC platform fighter, *Roof Rage*.

"One of the best parts about platform fighters is just how easy they are to understand for even entirely new ➔



Messhof's *Nidhogg 2* doesn't look like a fighting game, but it still teaches the basics of the genre.

> "PLEASE START THINKING ABOUT ACCESSIBILITY FEATURES EARLY ON IN DEVELOPMENT"

players," explains Bogdan Iliesiu from Angry Mob Games, developers of multiplatform title *Brawlout*. These indie platform fighters, inspired by *Smash Bros.*, draw in a wide range of people, Klemke adds. "Some of them are from the *Smash* community, others from traditional fighters, some are there because they like indie games [featuring] local multiplayer with friends," he says.

TRUE ACCESSIBILITY

A truly accessible fighting game isn't accessible solely to beginners, however. Zachary Quarles – sound supervisor and audio director for 2013's *Killer Instinct* – was also committed to making the game playable by blind and visually impaired people. To reach this goal, he says, a fighting game needs "Very specific and crafted sound design for each character, a clean and precise audio mix with discernible positional audio that lets the player know where each character is on the screen, and what behaviours they're currently performing." He adds that "speech to text and text to speech" in menus is also key.

Skullgirls' Zaimont thinks some of these adjustments are so easy to implement, it's surprising they're not more widely adopted by other developers. "Someone with impaired sight pointed me to Tolk, a screen-reader interface that is super-simple to add to your codebase and talks to most common screen reading applications. It's simple to go find that code and insert a 'send this to a screen' reader function."

"For me personally, I would love to have subtitles for any dialogues," says deaf competitive player and accessibility advocate, Chris 'Phoenix' Robinson. And in addition to these features, Phoenix would like to see something that's not often cited as an accessibility option: an online training mode. "[It] would be a very big help, especially in the [accessibility] or gaming disability community to learn [the] game together. *Marvel vs. Capcom: Infinite* had this."

"I think the most important accessibility feature is button remapping," says Randy 'N0M4D' Fitzgerald, a competitive player born with arthrogryposis, a rare muscle and joint disorder. "Fighting games these days have definitely got more complicated by adding moves that require multiple simultaneous button presses to execute a single move. I love the fact that games like *Dead or Alive 6* address this."

"One thing most fighting games share is the right stick is hardly ever used," N0M4D says. "I think when Arc System Works released *BlazBlue*, they were beyond innovative by taking full advantage of the right stick. Each direction you pressed could execute a special move that would normally require a semi-complex combination of button presses."

"I think fighting games should allow you to map any possible button on a controller to any single button, macros, and possibly even custom macros," agrees Dayton 'Wheels' Jones, a competitive fighting game player with a condition called spinal muscular atrophy type 2 (SMA II). "Triggers, bumpers, thumbstick buttons, each direction of the right analogue stick, the help/option button, and the four face buttons give you a total of 15 possible slots which would be extremely helpful for the physically handicapped, including me."

"Hardcore fighting game fans don't like the idea of making options like these," N0M4D acknowledges. "They think this takes away some of the skill fighting games require. However, my personal belief is the

Radiant Entertainment's free-to-play *Rising Thunder*, now cancelled, replaced joystick motions with one-button moves and cooldowns.

SPIN KICKS

"Perhaps the way to experiment with radically different formulas within the same franchise is to make a spin-off series," says Gerald Lee. That's what Arc System Works has done with *BlazBlue: Cross Tag Battle*. It has automatic combos and simpler controls compared to the main series, but *Cross Tag Battle*'s deep, tag team-based fight system led it to the main stage of Evo – the largest fighting game event in the world.

Combat simplified in *BlazBlue: Cross Tag Battle*.

In *Fantasy Strike*, Jaina's dragon punch costs one life point. Players didn't notice this and would overuse the move, so Sirlin added a clear message to warn them.

real skill in fighters comes down to timing and knowing the frame data."

A common request is that developers work with the disabled gamer community, and listen to their needs. "Please start thinking about accessibility features early on in development; that would help your fighting games be more inclusive," says Phoenix.

ACCESSIBLE IS INCLUSIVE

Finally, we shouldn't forget that inclusivity can also make games more welcoming to a new and wider audience. "I believe a more diverse character roster would indeed draw more women and minorities," says competitive player and cosplayer, Sedria 'Infinitii' Lewis. "People love seeing themselves in a character."

In the meantime, fighting games are still widely targeted at male players – as shown by the blatant sexism in titles like *Dead or Alive* and *SNK Heroines: Tag Team Frenzy*.

"Women's representation in fighting games still needs some work, but it's gotten a lot better," Infinitii says. "Female characters' clothing is starting to become more conservative and battle-suitable than before. Their bodies are also more realistic. Women's role in story lore is also becoming more major." And even though games like *Street Fighter* still rely upon geographical and racial stereotypes to represent characters and places from around the globe, Infinitii explains that "Cultures aren't greatly exaggerated as much as before. However, there are still signs of racial or skin tone inconsistencies, more specifically in characters of colour. Some characters that were originally dark become lighter in other game instalments or media, which can greatly tamper with representation."

There are now more fighting games to choose from than ever. There are clearer tutorials, and a whole sub-genre – the platform fighter – designed to be played as a party game. More fighting games are now accessible to disabled gamers, and we're seeing the genre become increasingly inclusive in its outlook. In short, if you've baulked at entering the intimidating world of fighting games so far, now is a great time to look for a fight.

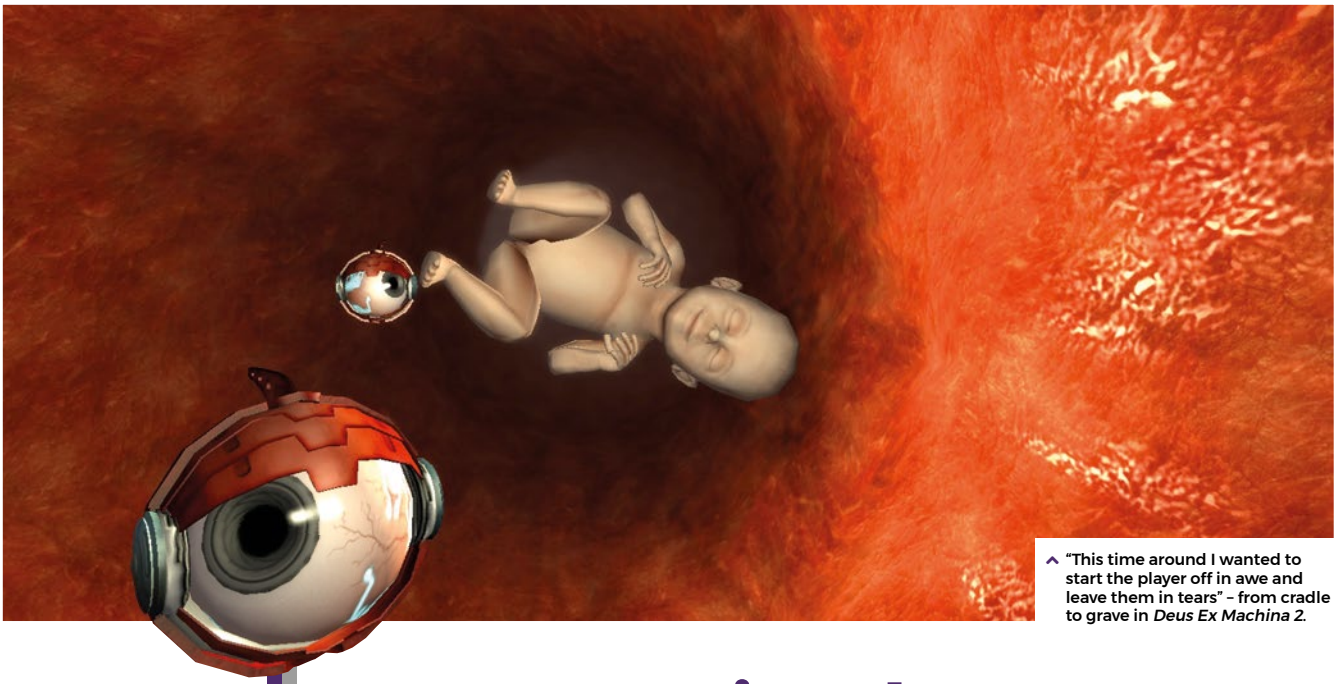
"Personally, I felt motivated to go out and play *Tekken* in an offline setting when I noticed that other girls played this game too," *Tekken* pro player Vanessa 'Swagmaster' Tran tells us. "I hope the fighting game community continues to grow, and welcomes all new players that find their way into the scene."

Street Fighter V saw a move away from complex moves and combos.

ROLLING THUNDER

Fighting game series like *Street Fighter* are rooted in an era that was less careful about the representation of women and minorities. The original *Killer Instinct*, for example, featured a stereotypical indigenous American character named Thunder. When Double Helix Games and then Iron Galaxy Studios developed its 2013 version, they reworked Thunder with the help of two consultants of the Nez Percé tribe, turning him into a more accurate character from a precise cultural background.

Thunder was given a more sensitive makeover in 2013's *Killer Instinct*.



"This time around I wanted to start the player off in awe and leave them in tears" – from cradle to grave in *Deus Ex Machina 2*.

How I revived Deus Ex Machina

Video game pioneer Mel Croucher reveals how he revived his seminal 1984 classic for a new millennium

WRITTEN BY
MEL CROUCHER

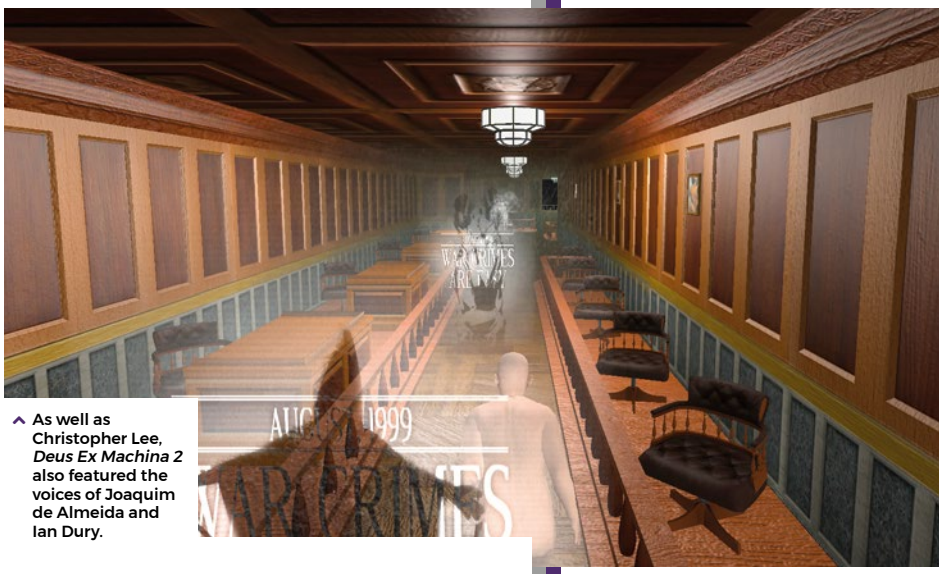
Scaramanga in *The Man With The Golden Gun*, Count Dooku in *Star Wars*, and Saruman in *The Lord of the Rings* (that's Christopher Lee) with Mel Croucher.

Although I shelved *Deus Ex Machina* back in 1985, I always believed it was just a matter of time before technology caught up with the idea of interactive movies, and then I could do it all over again, but better. I received a dozen offers to remake it, from well-meaning and not so well-meaning folk, but I turned them all down. There was one hopeful, who sent a proposal in on VHS tape, but instead of pixels, he'd filmed puppets. His business model was amusing – to buy the rights to my own game from him for a large sum of money. Another offering came from a self-taught programmer which at least ran on a PC. Unfortunately, her version only consisted of a credits sequence with her face on it and a home-grown soundtrack of scrotum-clenching horror.

But there was one proposal which was a little different from the rest. It came from a self-confessed pirate of my original game, who said he wanted to atone for his crimes and pay me back for setting him off in the business world while he was still a student. A refreshing gambit. His name was Mário, an Iberian ex-rocker who'd ended up working as Chief Information Officer at the Portuguese Ministry of Justice, with his waist-length hair and ponytail still intact. Interesting. The licensing deal he offered was not unattractive, and I was not saying no. If I was going to remake the game, then harnessing the money of one of the sods who had pirated it in the first place would be satisfying. Then, one month after I received his email, the American bank Lehman Brothers filed for bankruptcy. Here in the UK, the entire financial system teetered on the brink, and it really didn't seem like a good time to be taking a punt on a new venture. Mário's proposals were put on ice, along with all the others.

Deus Ex Machina's 25th anniversary triggered a spate of interest, and my game started to pop up all over the place. The more I dug into the web, the more bodies came up, and the full truth of what had happened began to emerge. It turned out that pirate editions had made the

charts in countries I can't even spell, and bootleg copies had percolated through the university networks of the civilised world, which means I never really made it in the USA. *Deus Ex Machina* appeared on the first page of the definitive history of video games. And the inevitable new wave of bootleg products began to infest the online shopping malls, all featuring key graphics and audio from the original game. Well, bugger me. I decided to go for it.



As well as Christopher Lee, *Deus Ex Machina 2* also featured the voices of Joaquim de Almeida and Ian Dury.

INTERVIEW WITH THE VAMPIRE

It was time to call Mário Francisco Valente Baltazar Valente (like *New York*, *New York*, so good they named him twice), the Portuguese entrepreneur who had a bank in his pocket and a declaration that it had been his lifelong dream to remake *Deus Ex Machina*. Who was I to step on that dream? He flew to London and we met on Valentine's Day to seal the deal. The company he'd created to produce the game was the delightfully named Quirkafleeg, named in honour of Room 40 in Matthew Smith's bonkers vintage game, *Jet Set Willy*.

The original version of *Deus Ex Machina* had taken me ten weeks to deliver in 96 kilobytes for the cost of a garden shed. Now, with oodles of megabytes to play with, the Portuguese economy behind me, and the pick of Europrogrammers to choose from, I reckoned on producing the greatest video game in the history of video games since the last time I did it, for release in 2012. How could we possibly fail? Easy. Tuesday evening, after tea and compulsory prayers, the entire Portuguese economy went tits-up. But all was not lost. Something called 'crowdfunding' was taking off, and I thought I'd give it a go.

"Pirate editions had made the charts in countries I can't even spell"

The new gameplay was my usual mix of the basic four elements of all video games: chess, ping-pong, dice, and bullshit. The original narration as recorded by Jon Pertwee had been warm and encouraging. This time around I wanted to start the player off in awe and leave them in tears. I needed a voice that would be recognised anywhere in the world as the nearest thing to The Voice Of God. So I set about hiring the services of the voice of Dracula: the greatest set of vocal pipes on the planet, Sir Christopher Lee. Obviously, my first step was to check out if he was still undead.

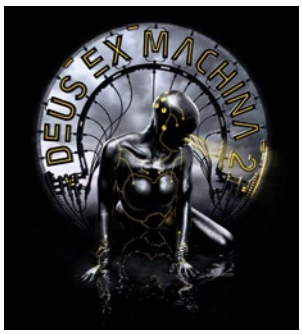
When I met him for the first time, after weeks of wooing by old-fashioned pen and ink, Christopher Lee turned out to be very tall, very frail, and very frank. "This is a travesty!" The voice was magnificent. The verdict wasn't. "There will be those who will be appalled. You are mocking Shakespeare. Making it amusing!" He sniffed, stroked his silver beard, then waved a hand in what I thought was a gesture of dismissal. It was, in fact, an invitation to shake on it. "I'll do it," he growled, in a godly sort of way. Blimey! Christopher Lee, a still-living legend, had just agreed to work with Mel Croucher, a chancer with a silly moustache. But from that moment on, I thought there was a chance of not only bringing *Deus Ex Machina* to market again, but making a success of it this time around.

Deus Ex Machina 2 was scheduled for release on 19 November 2013, my 65th birthday, the day society would officially recognise me by awarding me my Old Age Pension. The morning of my birthday was beautiful. I trotted off for a seaside dog walk before breakfast. After breakfast, I would hit the button for the game's release to my backers, supporters, and early adopters. I would then sign some personalised *Deus* posters, hot off the press from the same printer who'd produced the originals 30 years before. Then it would be lunchtime and the celebrations could begin. But none of that happened, because halfway through walking the dog, Death came knocking and I got smashed to pulp.

But that's another story.

REBOOTING THE MACHINE

I rewrote *Deus Ex Machina 2*'s libretto fast, and began to cobble ideas together for a new soundtrack for programmers to sync with. And I trawled back through all those offers of licence deals, joint ventures, and dangerous liaisons whereby other people would stump up the money to finance my new version of the game. After all, there were now untold millions of games machines to feed. And it seemed that games formats were about to go mobile, what with the recent success of the iPhone and the upstart Android hitting the market, not to mention rumours of something called an iPad and a Raspberry Pi. The prospect was irresistible.



Why aren't there more games on radio?

STEVE MCNEIL
Steve wants people to make things about video games on all of the things you can make things on. He loves it when they do.

As occasionally happens when everyone else involved in the games industry is busy, I got asked recently to go on a show on BBC Three Counties Radio called *Level 23*, a weekly, hour-long show about video games hosted by the knowledgeable and passionate Luke Ashmead and Danny Fullbrook.

It's a mix of gaming news, chat, and interviews which is immeasurably helped by Ashmead and Fullbrook's experience on the station. It's a miracle it exists; video games are a somewhat visual medium, and radio – lest the younger readers amongst you are unaware – famously doesn't have any pictures in it.

To combat this, the show is simulcast live on the online platform Twitch. Using multiple cameras, and regular cutaways to gameplay footage of the titles being discussed, it enhances the experience and also allows viewers to comment and interact directly using Twitch's chat window. While it no doubt requires more effort and planning to add all these elements, it also seems a logical next step. Broadcasting live online is no longer a complicated endeavour – many who listen to radio now do so via their computer, and the chat window offers an elegant alternative to the 'text/tweet us now' communication channel many radio shows still use as their primary method. However, the additional complexity and prep no doubt comes at some cost – which is an issue when most radio is made for roughly the same amount of money you currently have in your sofa.

Danny Fullbrook (left) and Luke Ashmead (right): knowledgeable, passionate, and on the wireless.

Level 23 on BBC Three Counties Radio – if only there were more video game shows like this.

From talks with the pair, I get the impression it was by no means easy to convince the powers that be to get the show made in the first place. Certainly, radio commissioners (as with TV) in my experience are reluctant to hand over the airwaves to something they, albeit incorrectly, assume to be niche, and the visual nature of games becomes a helpful weapon in their arsenal when justifying rejection.

There have been some great shows in recent years, such as Radio 4's *While My Guitar Gently Bleeps* (hosted by Isy Suttie) which took a look at the people making chiptune music, or Radio 6 Music's *History of Game Music*, but both of these got over the line precisely because they focused entirely on video game music. Music, at least, is something radio can understand.

Hopefully, shows like the BBC's *Level 23* or Resonance FM's *One Life Left* will help convince other stations to make the leap. Gaming is still hugely underserved in most areas of the media and both projects demonstrate how, with passionate people at the helm, gaming can not only work on radio, but can be genuinely entertaining, even despite my presence.
You can watch *Level 23* at **twitch.tv/bbc3cr** and listen to *One Life Left* at **onelifeleft.com**

"Gaming is still hugely underserved in most areas of the media"

Toolbox

The art, theory, and production of video games

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The technologies that keep cities connected

30. When to say 'no'
Why turning jobs down is sometimes key

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Using algorithms to draw devious mazes

36. Trailers
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This autumn's Northern Exposure conference

Get players flocking to your game with an enticing game trailer. Find out how on page 36.

Running a successful game studio sometimes means turning a project down, as Reid explains on page 30.

CityCraft: The movement of humans and things

Vehicles, transportation networks, and the technologies that keep cities connected

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**

Private and Public Transport

Modern planning often categorises civic transportation as public and private, and accepts that the two coexist in essentially every contemporary settlement. The private modes of transportation – exemplified by the car – are usually aimed at individuals or very small groups of people, whereas public means – buses, trams – tend to cover set routes, and serve many commuters simultaneously. Carefully planned combinations of the two can make moving around a city extremely efficient, though the freedom of movement of the individual can often be at odds with the needs of the many.

Iconic cars not only bring character to urban environments, but can also help date them.

Transportation – the movement of things and people – has always been a primary function of all cities. Vehicles, roads, alleys, and pavements are what keep cities connected both internally and with the rest of the world. Transportation often defines civic sizes and rhythms. Walking distances set a limit for the radius of many ancient cities, while the introduction of the automobile was partly responsible for the increasing pace of metropolitan life.

Transportation also has the tendency to influence the structural characteristics, shape, and form of a city. The low density suburb is primarily reliant on cars, and too expensive to serve with, say, subways, while dense downtown areas tend to attract leisure and commercial activities. Throughout the 19th century, when railroads dominated the urban landscape, cities evolved linearly along railway lines emanating from the urban core.

LAND AND RAIL

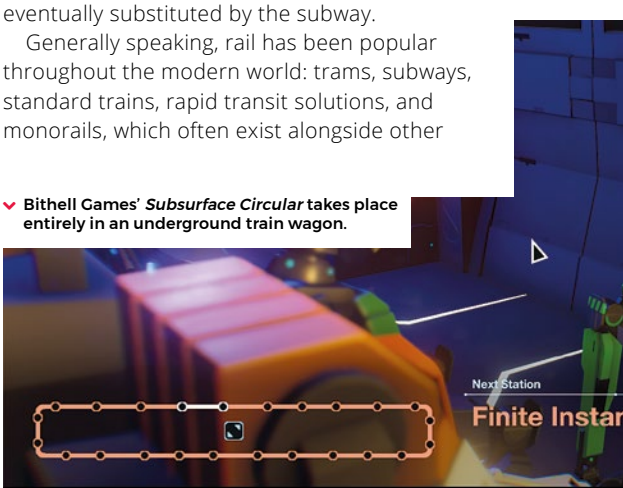
Deciding which vehicles will serve your game's traffic needs should take into account what its societies want, need, and are capable of building. Walking was once the main way of crossing a town; today, it's generally restricted to short distances, as the populace turns instead to public or private transport for longer journeys.

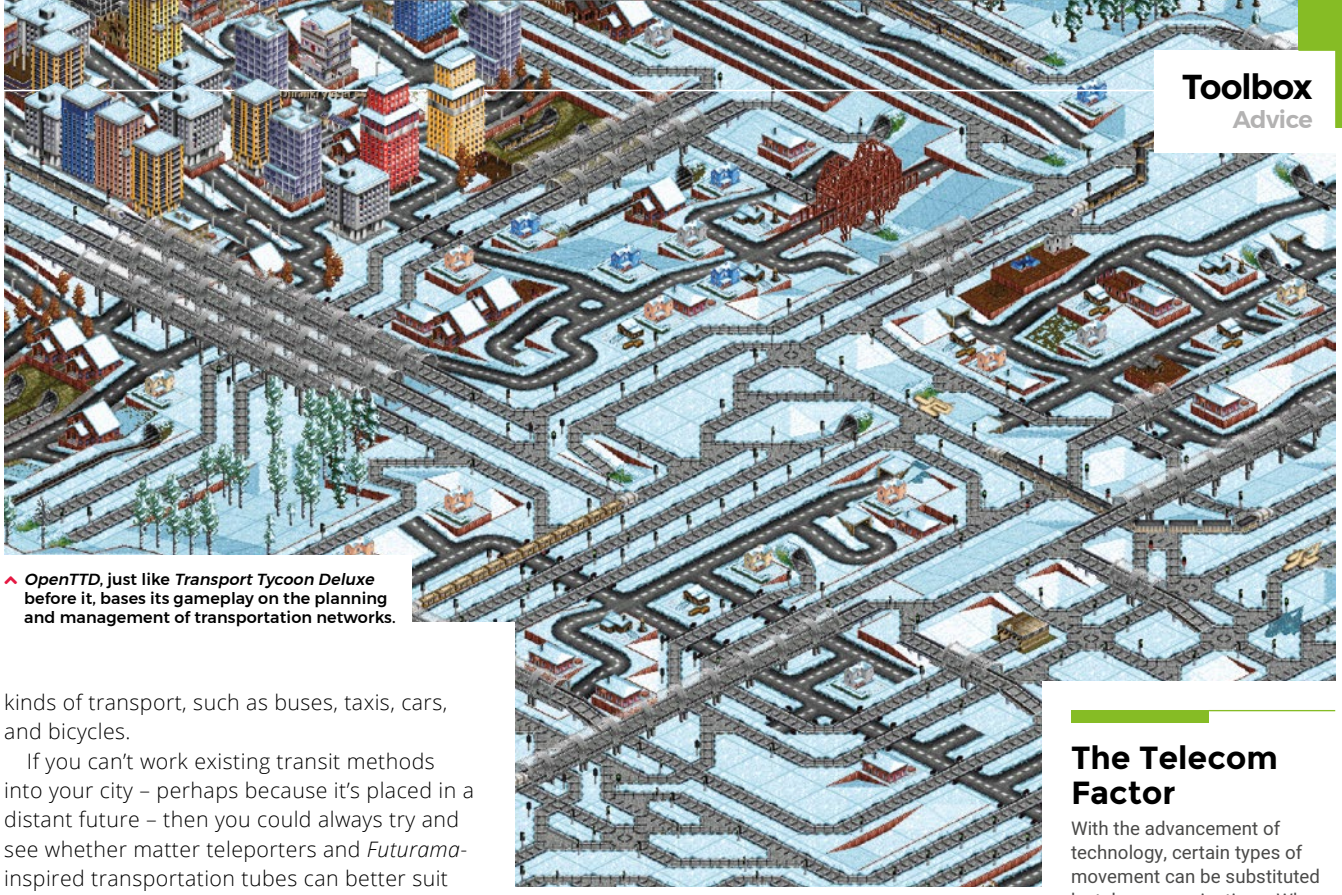
Access to the street has long been dictated by law and custom: zebra crossings, curfews, and jaywalking laws have all been used to regulate when and where people are allowed to walk. Historically, humans often shared urban streets with oxen, donkeys, horses, and other beasts of burden. Technological breakthroughs like the wheel resulted in carts and chariots, and deeply transformed transportation. The invention of the internal combustion engine, meanwhile, allowed the car to dominate mid-20th-century cities.

Similarly, without steam, wagons would still be drawn by horses (or even men) on rails, and without legislation and cheap loans, the steam locomotive wouldn't have connected cities to workers' suburbs and countryside areas, or travelled across continents. The elevated train served New York for years, its iconic steel lines overshadowing its streets, before they were eventually substituted by the subway.

Generally speaking, rail has been popular throughout the modern world: trams, subways, standard trains, rapid transit solutions, and monorails, which often exist alongside other

Bithell Games' *Subsurface Circular* takes place entirely in an underground train wagon.





OpenTTD, just like *Transport Tycoon Deluxe* before it, bases its gameplay on the planning and management of transportation networks.

kinds of transport, such as buses, taxis, cars, and bicycles.

If you can't work existing transit methods into your city – perhaps because it's placed in a distant future – then you could always try and see whether matter teleporters and *Futurama*-inspired transportation tubes can better suit its design; sometimes, exotic solutions make sense. Do keep in mind, though, that any future society could still benefit from older solutions; bicycles have timeless benefits, and an omnibus drawn by robotic horses could look visually striking. In a fantasy city, on the other hand, you might have to imagine ways of regulating the use of flying carpets, and think about who will guard your inter-dimensional portals.

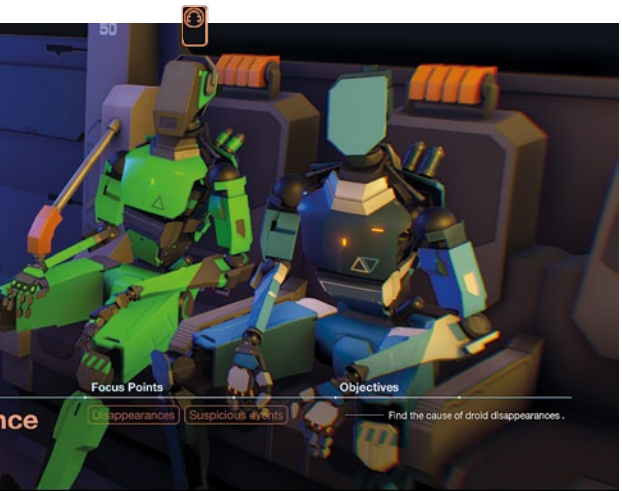
SEA, AIR, AND SPACE

Since primitive canoes and boats sailed ancient rivers, water has connected cities both internally and with each other. Ancient Tenochtitlan and medieval Venice were examples of towns where canals substituted roads, and boats played a prominent role. Ship traffic on the Nile was crucial for the cities and villages of ancient Egypt, as was travelling the seas for the Greeks, and taming the Danube for central Europe. Steamboats, rafts, water-taxis, and ferries were common in most urban rivers, and harbours have always been economically important. Ports and airports tend to require the largest parts of a city's infrastructure, and can serve as landmarks, imply vast worldwide connections, and offer interesting gameplay spaces. (A space port could provide a similar function in a future city.)

"Access to the street has long been dictated by law and custom"

Air traffic, though not yet dominant in everyday transportation, plays a crucial role in inter-urban connections, and fulfils more specific needs on the intra-urban level, mostly via helicopters and drones. Balloons have been around since the 18th century, and history is packed with wild flying contraptions that didn't always manage to take off. Flying machines and steampunk dirigibles can enhance many fantasy settings, while flying vehicles remain an enduring sci-fi trope.

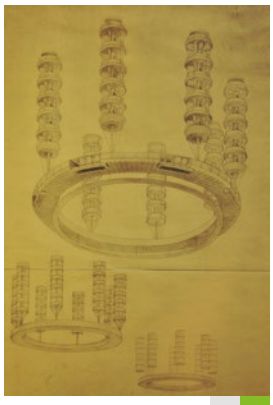
To add a vertical dimension to your city, you could also think about how it might be affected by future innovations in flight technology. Georgii Krutikov's proposed flying city from 1928 aimed to solve problems of overcrowding by moving the living quarters of Soviet citizens into the air. It was never built, but the ideas behind it remain intriguing. *BioShock Infinite*'s flying Columbia provided a memorable backdrop, but even its design pales when compared to some of the outrageous flying cities of American pop culture in the 1950s.



The Telecom Factor

With the advancement of technology, certain types of movement can be substituted by telecommunications. Why cross oceans to deliver a message when a telegram will do, and why travel to an office when home-working via computer can save time and energy? Information can sometimes travel instead of humans and objects, and though the importance of face-to-face interactions will never completely wane, when imagining a city, we have to decide whether its citizens have access to phones and the internet, or whether they'll speak directly to each other.

Georgii Krutikov's 1928 flying Soviet city was never built, but reality never stopped the construction of virtual utopias.



When developers need to say 'no'

Part of running a successful game studio is figuring out which offers to turn down, Reid writes

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**

In June 2010, we established a new studio, WB Games Montréal. Located in a temporary office in Montréal's old port, it brought together a solid group of really talented people, including my old boss from Ubisoft, Martin Tremblay. Martin was the rare combination of a strategic executive and keen gamer. He had set some big goals for the studio. And he didn't like the word 'no'.

As we sat around the table debating what our values would be as a studio, one item kept coming up. We wanted to always be "great partners" to the larger Warner Bros. organisation. This was etched into our DNA, and we wore it with pride. During our first few years as a studio, we did countless PowerPoint presentations, pitching all kinds of games aimed at kids, adults, hardcore gamers, and sometimes people who were barely into gaming. It felt like with every successive presentation, a few more would follow. When asked to pitch on a new game idea from corporate HQ, our standard response was, "We'll make it work." This was the case whether we thought the idea was good, bad, or somewhere in the middle. We chalked it up to our aim of consistently being 'great partners' and doing what was needed for the good of the company.

At WB Games Montréal, we'd already been developing LPW (Light Persistent World) games based on existing Warner Bros. licences. Our first title was *Cartoon Universe*, which blended *Looney Tunes* and *Scooby-Doo*. We'd developed some cutting-edge technology that enabled synchronous crossplay between PC and mobile, which might seem like old hat now, but had never been seen before in 2011–2012.

Unfortunately, kids had already moved away from games like *Club Penguin*, *Poptropica*, and other popular LPWs more quickly than anticipated. In short, with the onslaught of mobile, kids had access to way more free content than ever before. Unless there was a compelling reason, they didn't need to pay for games when they could get so much for free; in general, once they hit a paywall, they bounced onto the next one.

Around that time, TT Games (makers of the hit *Lego* franchise games) had been renegotiating its exclusive deal for console *Lego* games. That collaboration led to some of the most successful kids' titles, and best licensed content out there. As part of the new deal, Lego wanted its newest, wholly-owned IP brought to life in an online game. They had huge success with *Ninjago*, and wanted to go bigger. Their feeling was that *Ninjago* would start to fade, and would need to be replaced with something that would have the same appeal to kids.

Despite WB Games Montréal's best efforts, *Lego Legends of Chima Online* closed less than two years after its launch in October 2013.

About a conflict between rival animal tribes, Legends of Chima proved to be a short-lived line of toys and merchandise for Lego.

While at work one day, my boss, the VP/Studio Head, Martin Carrier, was called to ask us to sign several additional non-disclosure agreements that would then give us access to information relating to Lego's "next big IP." Without a second thought, we signed the documents and promptly sent them back. A few days later we were sitting on a call, learning about a new franchise entitled Lego: Legends of Chima. It told the story of two warring factions of magical animals competing for a precious resource called 'Chi.' The franchise seemed to have everything going for it: magic, cool vehicles, interesting characters, a deep backstory, and even an upcoming cartoon series. Lego also explained to us that it had been testing "very well" with kids.

Cartoon Universe **brought** ***Scooby-Doo*** **and** ***Looney Tunes*** **characters together for a kid-friendly, browser-based adventure.**

PAIN AND GAIN

As we thought about it, though, two clear problems emerged. First, we were about to embark on building a big game for a franchise that had no current traction with kids. If for some reason it didn't resonate, the game would be dead in the water. Second, the IP, while cool, seemed to be a mash-up of *ThunderCats*, *Avatar*, and a sprinkling of King Arthur. We couldn't put our finger on it at the time, but something seemed off.

The studio head and I decided that, despite our reservations, we should continue to "make it work" – be good corporate citizens, and find solutions rather than raise problems. In reality, what we should have done was taken a step back, surveyed the landscape, and politely passed on the opportunity. We should have said no. But by committing to the game, we sacrificed short-term gain for long-term pain.

"We should have surveyed the landscape, and politely passed on the opportunity"

We set up a team to build *Lego: Legends of Chima Online*. The team worked well together, and built on what they learned from their first title, *Cartoon Universe*. The game was solid as well: the craftsmanship that went into it was obvious as soon as you started playing. In the game, kids could adventure together simultaneously on PC and mobile, level up their characters via deep RPG systems, and build a Chima fortress that others could visit. It was a good game.

Unfortunately, however, despite the Lego group's best efforts, the IP never really took off. As a result, we never saw enough users come in to make it a real business. This was heartbreaking for the team, ourselves, and everyone who poured everything they had into the project.

This isn't to say that the game couldn't have been better. Maybe if we'd built a different game, the users would have come regardless. Like any creative project, there's always room for improvement. The game was also envisioned as a 'live service', so over time, we could adapt to real-time feedback and adjust accordingly. Ultimately, it was a tough decision, but we had to pull the plug on the game. If it wasn't going to make enough money to be a success, much less sustain the cost, it couldn't live on.

In hindsight, Martin, our studio head, should have trusted our instincts and said a decisive no to the project. We saw enough red flags that we could have justified it. But again, we wanted to be good partners and great corporate citizens – it was part of the studio's DNA.

Since starting Typhoon, we've brought this lesson to work every day. There have been a number of times where we were offered large sums of money to go down a path that didn't quite make sense to us. In each of those times, we held our ground, said a polite no, and continued on our core mission. I firmly believe this is one of the reasons why we're still around over two years later. Though we haven't shipped anything yet (stay tuned for early 2020), we've always made decisions based on what's best for the studio long-term, rather than trying to fuel short-term objectives.

Specialise, don't generalise

In the games business, being a 'generalist' developer is not a recipe for success. The way to win as a studio is to maintain a ruthless focus on a particular genre or type of game. If you're an action/adventure developer, stick with that – don't try to be everything to everyone.

The best developers out there – Naughty Dog, Rocksteady, Turn 10, Sony Santa Monica, Bungie, to name a few – have a distinct focus which allows them to make such acclaimed games.

The rise of free mobile games spelt curtains for kid-friendly titles like ***Cartoon Universe.***

Create mazes with two easy algorithms

Algorithms can be used to quickly and easily draw mazes. Nick shows you how

AUTHOR
NICK WALTON

Gidday, I'm Nick Walton, an indie game developer from New Zealand. I recently released *Maze95*, a free, open-source 3D maze game! **CroakingKero.com**

Download the code from GitHub: **wfmag.cc/wfmag18**

Whether it's a child's finger tracing a path in a book of mazes, or an Egyptian constructing what they saw as a spiritual journey, mazes have fascinated us for thousands of years. But in our most recent and advanced artform (that'd be video games) mazes have fallen into relative obscurity.

There are many ways mazes can contribute to game development. From the obvious maze-based games, to procedurally building the connecting hallways between pre-built rooms, just implementing a simple maze generation algorithm can awaken your imagination. There are infinite possible maze generation algorithms, and infinite possible types of mazes. Here, I'll teach you two algorithms which generate a type of maze known as 'simply connected', where the design lacks internal loops. I'll show how to use these algorithms to generate square, four-directional mazes, but they can be used to generate mazes of any shape.

I've chosen C because it's the grandfather of most modern languages, so it should be easy to translate to another language if you prefer. I also find C is a great language for learning, since it provides low-level control, manual memory handling, and code that relates closely to the true operation of the CPU, while also having numerous libraries to boot-strap your application when you don't want to code it yourself.

For this article, a maze will consist of a width, height, and an array of cells. Each cell will be an 8-bit unsigned integer, where the first 4 bits represent the 4 directions, 0 meaning that direction is blocked, and 1 meaning it is connected. The maze structure:

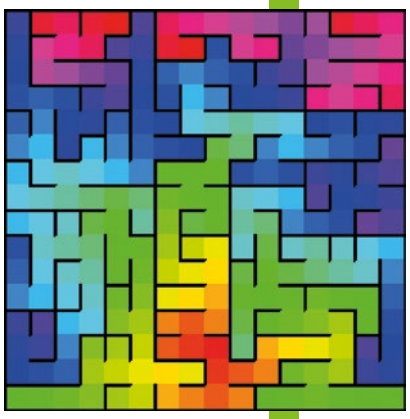
```
typedef struct {
  int width, height;
  uint8_t* cells;
} maze_t;

# define MAZE_UP 1
# define MAZE_RIGHT 2
# define MAZE_DOWN 4
# define MAZE_LEFT 8
# define NUM_DIRECTIONS 4
#define CELL_VISITED 128
```

RECURSIVE BACKTRACKER

This algorithm generates mazes with long corridors and few forks. It works as follows:

1. Select a random point.
2. Move and connect to a random unvisited neighbouring cell. Repeat until the current cell has no unvisited neighbours.

Dijkstra's algorithm calculates the distance from the starting cell to every other cell. I used these weights to draw a coloured maze to illustrate the 'texture' of different maze algorithms.



3. Backtrack to each previously visited cell in order until one with an unvisited neighbour is found. Go to step 2.
4. When you return to the first cell, every cell has been visited. End.

Right, let's implement it in code. Other than a maze structure with memory allocated for the cells, we'll also need a stack to contain the previously generated cells.

```
  maze_t maze = {0};
  maze.width = maze.height = 10;
  maze.cells = (uint8_t*)
calloc(sizeof(uint8_t), maze.width * maze.
height);
  int* cell_stack = (int*)malloc(maze.width *
maze.height * sizeof(int));
  int cell_stack_top = 0;
```

`calloc()` allocates memory and sets it to 0, unlike `malloc()` which leaves the memory dirty. Now that we've done the prep, we can implement each step of the algorithm.

```
  cell_stack[0] = rand() % maze.width*maze.
height;
  maze.cells[cell_stack[0]] |= CELL_VISITED;
```

We select any random point from the maze, add it to the stack and mark it as visited.

```
  do {
    int x = cell_stack[cell_stack_top]%maze.
width;
    int y = cell_stack[cell_stack_top]/maze.
width;
```

A cell's index is equal to x + y * width, so the above operations extract the x and y components from that index.

```
    while( (y < maze.height-1 && !(maze.
cells[x + (y+1)*maze.width] & CELL_VISITED)
) || (y > 0 && !(maze.cells[x + (y-1)*maze.
width] & CELL_VISITED) ) || (x < maze.width-1
&& !(maze.cells[x+1 + y*maze.width] & CELL_
VISITED) ) || (x > 0 && !(maze.cells[x-1 +
y*maze.width] & CELL_VISITED) ) ) {
```

Check that there is an unvisited neighbour in at least one direction.

Maze95, which I was inspired to make based on the old Windows 95 3D maze screensaver. I decided to show off other cool indie games on the walls!

```
      int direction = rand();
      bool connected = false;
      for(int neighbour_checks = 0; neighbour_
checks < NUM_DIRECTIONS && !connected;
++neighbour_checks) {
        direction = (direction+1)%4;
```

Check all 4 directions, or until a connection is made.

```
        switch(direction) {

          case 0: { // Up
            if( y < maze.height-1 && !(maze.
cells[x + (y+1)*maze.width] & CELL_VISITED) )
{
              maze.cells[x + y*maze.width] |=
MAZE_UP;
              ++y;
              maze.cells[x + y*maze.width] |=
MAZE_DOWN;
              connected = true;
            }
          }break;

          case 1: { // Down
            if( y > 0 && !(maze.cells[x +
(y-1)*maze.width] & CELL_VISITED) ) {
              maze.cells[x + y*maze.width] |=
MAZE_DOWN;
              --y;
              maze.cells[x + y*maze.width] |=
MAZE_UP;
              connected = true;
              }
          }break;

          case 2: { // Right
            if( x < maze.width-1 && !(maze.
```

EXTRA THINGS YOU CAN TRY

- Implement Dijkstra's algorithm to calculate the 'weight' of each point in the maze – the distance from the start to that point. Draw mazes with the weight indicated by a colour gradient to clearly display the 'texture' of the mazes.
- Draw the maze at each step of an algorithm to observe the construction of the maze.
- By adding 1 to our direction variable on each attempt, we force the direction checks to happen in a specific order each time, causing a bias in our maze algorithm. Come up with a way to ensure all directions are checked in a random order instead.

A maze generated with Prim's algorithm. Notice the constant forking and relatively few long corridors.

A maze generated with recursive backtracker. Notice the numerous long corridors.

LANGUAGES

In most languages, you might use a built-in 'stack' object, but in C, the most natural solution is to implement it yourself. In this way, C can help programmers learn exactly how their code works, and in many cases reveal that it's not that complicated after all.

```
cells[x+1 + y*maze.width] & CELL_VISITED) ) {
              maze.cells[x + y*maze.width] |=
MAZE_RIGHT;
              ++x;
              maze.cells[x + y*maze.width] |=
MAZE_LEFT;
              connected = true;
            }
          }break;

          case 3: { // Left
            if( x > 0 && !(maze.cells[x-1 +
y*maze.width] & CELL_VISITED) ) {
              maze.cells[x + y*maze.width] |=
MAZE_LEFT;
              --x;
              maze.cells[x + y*maze.width] |=
MAZE_RIGHT;
              connected = true;
            }
          }break;
        }
      }

      if(connected) {
        cell_stack[++cell_stack_top] = x +
y*maze.width;
        maze.cells[x + y*maze.width] |= CELL_
VISITED;
      }
    }
```

With this, our program selects a random direction to start and checks the four possible neighbouring cells. When an unvisited neighbour is found, it connects and moves to that cell, breaks the loop, and marks the new cell as visited.

```
  } while(--cell_stack_top > 0);
```

Closing the **do-while** loop with this line takes care of backtracking through the previously visited cells, and the inner **while** loop checks for unvisited neighbours to fulfil step 3.

We should also free the memory allocated for the stack since we no longer need it. If you put this code into a function to reuse, be sure to **free(maze.cells)** on subsequent calls as well.

```
  free(cell_stack);
```

With that, we've got a complete maze generator using the recursive backtracker algorithm! The maze can be drawn in a variety of ways. Here, I'll demonstrate a simple method using SDL's functionality.

```
  SDL_SetRenderDrawColor(renderer, 255, 255,
255, 255);
  SDL_RenderClear(renderer);
  SDL_SetRenderDrawColor(renderer, 255, 0, 0,
0);
  int size = 10;
  for(int y = 0; y < maze.height; ++y) {
    for(int x = 0; x < maze.width; ++x) {
      if( !(maze.cells[x + y*maze.width] &
MAZE_UP) )
        SDL_RenderDrawLine(renderer, x*size,
(y+1)*size, (x+1)*size, (y+1)*size);
      if( !(maze.cells[x + y*maze.width] &
MAZE_RIGHT) )
        SDL_RenderDrawLine(renderer,
(x+1)*size, y*size, (x+1)*size, (y+1)*size);
    }
  }
```

We clear the screen to white, then loop through each cell and check up and right. If those directions are not connected, we draw a black line to block it off.

PRIM'S ALGORITHM

Recursive backtracker is nice, but such long corridors with few forks make for easy mazes. Now I'll demonstrate an algorithm which produces hardly any corridors at all and constant forks. Presenting Prim's algorithm:

1. Select a random point, mark as visited, and add it to the list of visited cells.
2. Until the list of visited cells is empty:
3. Select a random cell from the list of visited cells.
4. If the current cell has no unvisited neighbours, remove it from the list. Go to (2).
5. Connect to a random unvisited neighbour of the current cell, mark that neighbour as visited and add it to the list. Go to (2).

Preparation:

```
  maze_t maze = {0};
  maze.width = maze.height = 10;
  maze.cells = (uint8_t*)
```

```
calloc(sizeof(uint8_t), maze.width * maze.
height);
  int* visited_cells = (int*)malloc(maze.width
* maze.height * sizeof(int));
  int num_visited_cells = 1;
```

This is essentially the same as the recursive backtracker, except instead of a stack we're simply using an array.

```
  visited_cells[0] = rand() % (maze.
width*maze.height);
  maze.cells[visited_cells[0]] |= CELL_
VISITED;
```

This selects a random starting cell, adds it to the array, and marks it as visited.

```
  while(num_visited_cells > 0) {

  int selected = rand()%num_visited_cells;
    int cell = visited_cells[selected];
    int x = cell%maze.width;
    int y = cell/maze.width;
```

We pick a random visited cell and use the same maths as before to extract the x,y coordinates from the index value.

```
    if(!(y < maze.height-1 && !(maze.cells[x +
(y+1)*maze.width] & CELL_VISITED) ) && !(y > 0
&& !(maze.cells[x + (y-1)*maze.width] & CELL_
VISITED) ) && !(x < maze.width-1 && !(maze.
cells[x+1 + y*maze.width] & CELL_VISITED) ) &&
!(x > 0 && !(maze.cells[x-1 + y*maze.width] &
CELL_VISITED) )) {
      --num_visited_cells;
      for(int i = selected; i < num_visited_
cells; ++i) {
        visited_cells[i] = visited_cells[i+1];
      }
    }
```

If the selected cell has no unvisited neighbours, we remove it from the list.

```
    else {
      int direction = rand();
      bool connected = false;
      // Copy the code from recursive
backtracker, starting at "for(int neighbour_
checks = 0 [...]" and ending after the switch
statement.
      visited_cells[num_visited_cells++] = x +
y*maze.width;
      maze.cells[x + y*maze.width] |= CELL_
VISITED;
    }
  }

  free(visited_cells);
```

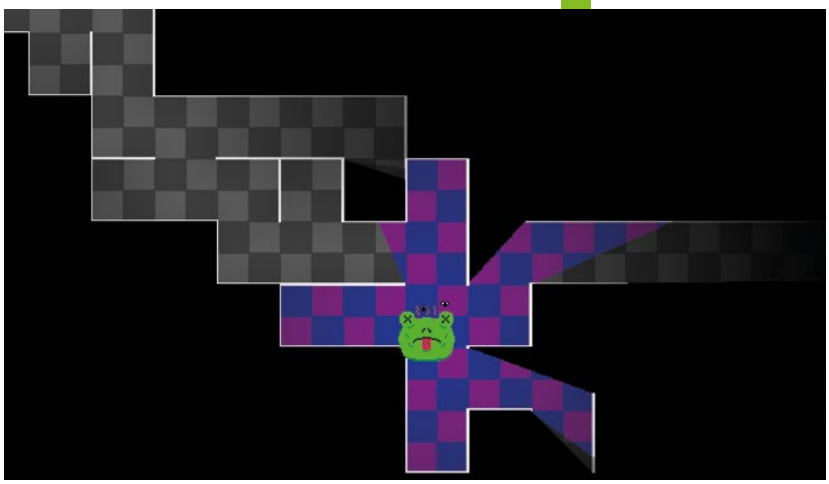
This connects our cell to a random unvisited neighbour, just like in the recursive backtracker algorithm. This time we don't need to check if a connection was made for the last two lines, because we only enter this code when an unvisited neighbour is present, and then check all possible neighbours. We free the visited cells memory, and if we're going to call this code as a function, we need to be sure to free the cells memory on subsequent calls too.

With that, we now have Prim's algorithm generating mazes with many short corridor forks. If you implemented a way to draw your mazes earlier, you should be able to draw mazes with this algorithm right away.

As you can see, different algorithms can create drastically different mazes. After implementing a few algorithms myself, I ended up creating my own algorithm I call 'Persistent Walk', which, using a persistence value, generates mazes with longer or shorter corridors. I hope you'll be inspired to come up with some interesting maze algorithms of your own.

MAZE USES

While recursive backtracker doesn't generate the most complex mazes, they can be well-suited to games which are less about getting lost and more about unlocking gates and exploring rooms connected by corridors.



Combining mazes with a light-casting algorithm can create a pretty great atmosphere.

How to make better game trailers

A game trailer is your most important marketing asset. Pete explains how to make the most of it

AUTHOR
PETE WEBBER

Pete Webber is a freelance writer working as a creative lead and scriptwriter for The TrailerFarm, a creative agency and production house for game makers. **thetrailerfarm.com**

Your game trailer lives on storefronts. It's embedded in press articles. It's there when people are researching your game, and present at the moment of digital purchase. It could be the first time someone sees your game, or the last thing they see before they buy it. When it comes to marketing your game, the trailer is the most important asset you have.

There's no one set way to make a trailer, but the core principles of making something effective are the same, whether you're working on a multi-video campaign for a triple-A studio, or you're a solo dev wanting to make a splash. At The TrailerFarm, we've made game trailers and marketing assets for clients of all sizes, including Sega, Square Enix, The Chinese Room, Obsidian, and more. Here are five things we think about when we make trailers – things you should also bear in mind when it comes to making a trailer of your own.

Try to make sure every shot in your trailer says something about your game. If it doesn't move the story on or deliver a message, cut it.

AUTHENTICITY

Regardless of whether you're making a launch trailer, a tutorial video, or a Kickstarter video, keep in mind your overall goal. Trailers are ultimately short-form storytelling, so define the story you want to tell about your game and work out what you want your viewers to take away from watching it.

Because you have a limited amount of time to tell your story, decide what your game's key pillars or messages are, and show off those features at their best. Most importantly, stay authentic: don't pretend to be what you're not. Own your strengths, and tell that story.

Ultimately, your trailer needs to lead the viewer to try or purchase your game, so authenticity is key. Authenticity doesn't mean that your trailer has to be made entirely from in-game footage, however.

As an example, we created a series of trailers for *Two Point Hospital*. At one early stage, the game wasn't ready to be shown in full, so we created a cast of doctors and characters that sat in the wider game world *Two Point Hospital* lives in, and played on the humour that the game presents. The CG element obviously wasn't

Pacing is key to any game trailer. Capture attention from frame one, and build the story arc throughout the trailer.

gameplay, but the spirit, messages, and humour in the trailer were authentic. As we moved through the campaign, CG elements became a consistent wrapper to present the story of the game alongside gameplay footage.

In contrast, the 2011 survival horror game *Dead Island* debuted with a fantastic trailer which was both emotional and cinematic. As a piece of work, it was brilliant, but it didn't capture the essence of the final game, which was far more humorous than serious. You don't need to search for very long to find game trailers which don't align with the finished product. Stay authentic to the spirit of your game, and what it is you're showing. "The North remembers," to borrow a quote from *Game of Thrones*, and so do gamers.

"You don't need to search long to find trailers which don't align with the product"

OPEN SMART, END BIG

Gaming is booming, but there are more games available than ever before. A highly competitive landscape for games, combined with today's accelerated consumption of media – think about how quickly you scroll through your Facebook feed – means that you may only have a couple of seconds to capture attention. So make those early seconds count.

This doesn't necessarily mean you have to open your trailer with quick cuts of high-energy action – although it's certainly a viable option – but it does mean that you have to begin with a moment of impact, emotion, or intrigue straight away. If you're not presenting something immediately interesting, or making the viewer excited enough to see more, then the rest of your carefully crafted trailer will go to waste.

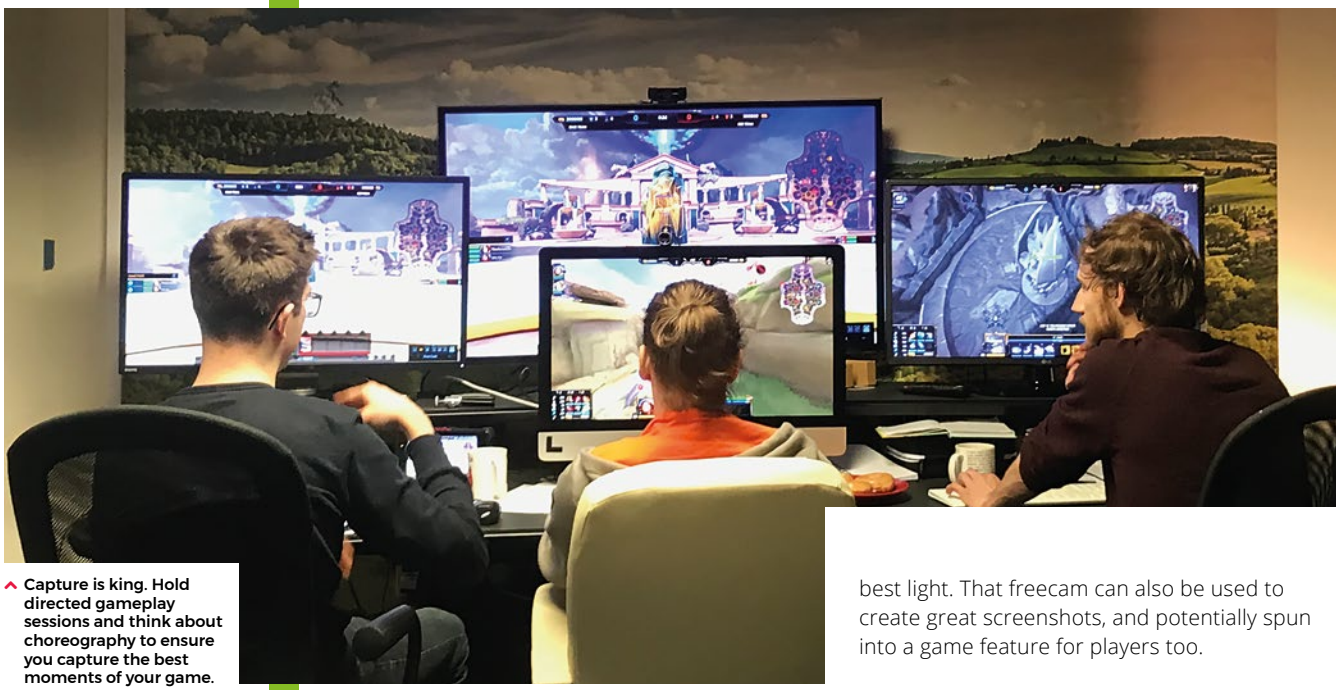
Pacing is also vital. Think about the story arc throughout and define where you want to rise and slow down, before ending on a winning, big beat. Again, this doesn't have to be something that's only visually spectacular, but whatever you choose must have impact and leave an impression on the viewer. A good way to think about the pacing of your piece is to find the 'wow' moment in your game, and showcase that. What is it that really cuts to the core promise of your game? Is it a specific moment of gameplay, story element, or emotion? Find that, and build around it. ➔

Our *RimWorld* launch trailer was based on an extensive script, featuring character biographies and a detailed shot list to describe a condensed playthrough of the game.

INSPIRATION

If you're making your first trailer, revisit your favourite trailers from games, film, and TV and think about what worked for them. Check out other trailers in the genre you are working in, and think about how your proposition can stand out against them, from both a message and story perspective.

The TrailerFarm was founded in 2011 by brothers Dan and Tony Porter, after Black Rock was shuttered by Disney. The company was acquired by Keywords last year.



Capture is king. Hold directed gameplay sessions and think about choreography to ensure you capture the best moments of your game.

There isn't a specific length of trailer that works, and the story you want to tell could be achieved effectively in anything from 30 seconds to over two minutes. If you can't tell your story in three minutes, however, you might be cramming too much in. Aim for 90 seconds, and shorten or lengthen until it feels tight but not rushed.

CAPTURE IS KING

Treat your game trailer like you're creating a real film. Don't just 'point and shoot' in the blind hope you'll have enough to work with, but plan your shots and know what you want to capture. Regardless of whether your game is a 3D adventure, a match-three mobile title, or a 2D side-scroller, treat your trailer as if it's a live shoot on a set with actors, and use a shot list. Knowing what you want to capture will help you show the best elements of your game. When taking those shots, always remember to 'break apathy'. All of your shots should excite you on some level, and say something about your game. If you're becoming blind to your game or your trailer, get some fresh eyes on it and get honest feedback.

Also, think about putting a freecam in your game build early on. It'll help you – or anyone else – put together shots with moments of drama, and help you show off your game in its best light. That freecam can also be used to create great screenshots, and potentially spun into a game feature for players too.

PAY ATTENTION TO AUDIO

Your game trailer is primarily a visual asset, but don't underestimate the importance of audio on the emotion of the trailer. If visuals allow you to see another world, audio immerses you in it. Your music choice will often be the starting point of the edit process, whether you're using in-game music or licensing a track. Editing visual beats to audio beats is essential and powerful. Adding sound effects can also heighten key moments of drama, guide the storytelling process, or highlight a joke.

INFORMATION: HOW AND WHEN

In addition to defining the story you want to tell, there are a number of other techniques you'll want to consider. When making your trailer, imagine that your viewer is watching with full concentration, with a full sound system in a cinema. But also consider that they might be watching on mute, on a phone, on a noisy bus or train. Aim for the best quality you can achieve, but ensure the promo will also work in less than optimum conditions.

For instance, text-slates or text tracked into your game world can have a real visual impact, and drive home key messages or accolades for your game. They might not be right for a grand, sweeping storytelling trailer, but could be perfect for a trailer which needs to explain

"The only reason to put your studio name at the start is if it will add credibility"

EXPERIMENT

Breaking apathy is crucial. Ultimately, if what you are doing or showing is generic, you won't pull your viewer through the piece. Make sure you're showing your game at its best; don't be afraid to take risks, play with the storytelling process, or try something new. Stay authentic to your game, and ensure you're getting across your key messages.

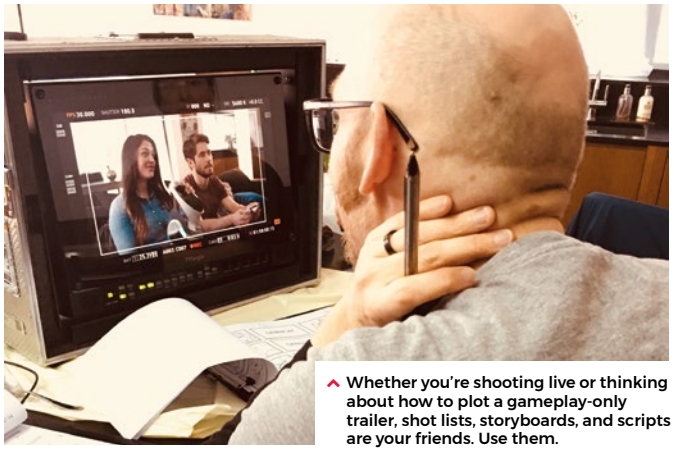
The TrailerFarm has created trailers for many huge game franchises. Everyone seems to be happy about this.

your game's features. They will also help viewers watching with the sound off to learn more about the game.

Voiceover is another consideration. Again, this is dependent on your trailer. It might be that you only use music and visuals to tell your story, or specific lines from the game can be built into the trailer. But depending on what you want to achieve, voiceovers can help you transmit a lot of extra information in a short amount of time, set the emotion or vibe for the trailer, and allow a lot more storytelling. But a poorly written, delivered, or recorded voiceover is going to take away more than it adds. Regardless of whether you choose to go with a voiceover or another form of audio storytelling, you need your trailer to work without sound: again, it should still make sense with the volume off.

Finally, there's the basic but important information: leave platforms, release dates, studio names, and publisher information until the end. The only reason to put your studio name or publisher towards the start of your trailer is if the reputation of either will add credibility and weight, so be honest with yourself.

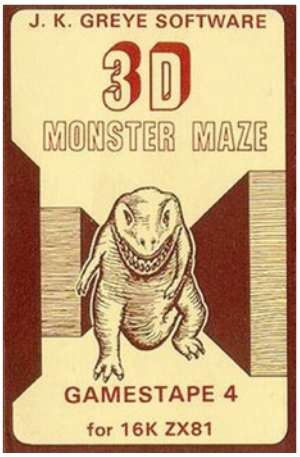
As with all aspects of trailer-making, you only have a few valuable seconds to grab your audience's attention – so be sure to use them wisely.



Whether you're shooting live or thinking about how to plot a gameplay-only trailer, shot lists, storyboards, and scripts are your friends. Use them.

DEMOGRAPHICS

You should, hopefully, have a good idea of who your audience is and what their interests are. Consider your target demographics during the creative process, and think about what features or moments in your game will most appeal to them. The best trailers have great artistic merit, but ultimately they are a commercial tool, so think about your audience and how you can cater to them.



3D Monster Maze, released in 1982 by J.K. Greye software, written by Malcolm Evans.

Source Code

Recreate 3D Monster Maze's 8-bit labyrinth

AUTHOR
MARK VANSTONE

You too can recreate the techniques behind a pioneering 3D maze game in Python

While 3D games have become more and more realistic, some may forget that 3D games on home computers started in the mists of time on machines like the Sinclair ZX81. One such pioneering game took pride of place in my collection of tapes, took many minutes to load, and required the 16K RAM pack expansion. That game was *3D Monster Maze* – perhaps the most popular game released for the ZX81.

The game was released in 1982 by J.K. Greye Software, and written by Malcolm Evans. Although the graphics were incredibly low resolution by today's standards, it became an instant hit. The idea of the game was to navigate around a randomly generated maze in search of the exit. The problem was that a Tyrannosaurus rex also inhabited the maze, and would chase you down and have you for dinner if you didn't escape quickly enough. The maze itself was made of straight corridors on a 16×18 grid, which the player would move around from one block to the next. The shape of the blocks were displayed by using the low-resolution pixels included in the ZX81's character set, with 2×2 pixels per character on the screen.

"The maze itself was made of straight corridors on a 16×18 grid"

There's an interesting trick to recreating the original game's 3D corridor display which, although quite limited, works well for a simplistic rendering of a maze. To do this, we need to draw imaginary lines diagonally from corner to corner in a square viewport: these are our vanishing point perspective guides. Then each corridor block in our view is half the width and half the height of the block nearer to us. If we draw this out with lines showing the block positions, we get a view that looks like we're looking down a long corridor with branches leading off left and right. In our Pygame Zero version of the maze, we're going to use this wireframe as the basis for drawing our block elements. We'll create graphics for blocks that are near the player, one block away, two, three, and four blocks away. We'll need to view the blocks from the left-hand side, the right-hand side, and the centre.

Once we've created our block graphics, we'll need to make some data to represent the layout of the maze. In this example, the maze is built from a 10×10 list of zeros and ones. We'll set a starting position for the player and the direction they're facing (0–3), then we're all set to render a view of the maze from our player's perspective.

The display is created from furthest away to nearest, so we look four blocks away from the player (in the direction they're looking) and draw a block if there's one indicated by

A simple 3D maze in Python

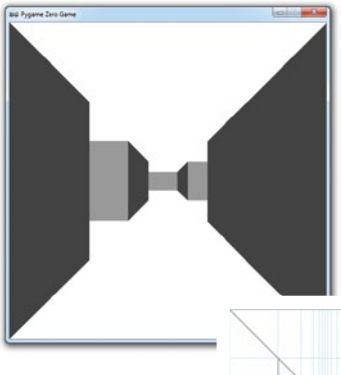
Here's Mark's code, which recreates *3D Monster Maze*'s network of corridors in Python. To get it running on your system, you'll need to install Pygame Zero – you can find instructions at **wfmag.cc/pgzero**

Download the code from GitHub: **wfmag.cc/wfmag18**

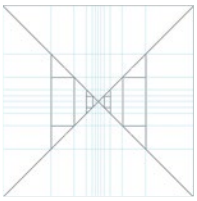
```
WIDTH = 600
HEIGHT = 600
maze = [[1, 1, 1, 1, 1, 1, 1, 1, 1, 1],
        [1, 1, 0, 1, 0, 1, 0, 0, 0, 1],
        [1, 0, 0, 0, 0, 1, 0, 1, 0, 1],
        [1, 1, 0, 1, 0, 0, 0, 0, 0, 1],
        [1, 1, 0, 1, 0, 1, 0, 1, 0, 1],
        [1, 0, 0, 0, 0, 0, 0, 0, 0, 1],
        [1, 1, 0, 1, 0, 1, 1, 0, 1, 1],
        [1, 1, 0, 1, 0, 1, 1, 0, 1, 1],
        [1, 1, 0, 0, 0, 0, 0, 0, 0, 1],
        [1, 1, 1, 1, 1, 1, 1, 1, 1, 1]]
playerX = 1
playerY = 4
playerDir = 2
dirX = [-1,0,1,0]
dirY = [0,1,0,-1]

def draw():
    screen.fill((255, 255, 255))
    screen.blit("back", (0, 0))
    drawMaze()

def update():
    pass

def on_key_down(key):
    global playerX, playerY, playerDir
    if key.name == "UP":
        newX = playerX + dirX[playerDir]
        newY = playerY + dirY[playerDir]
        if maze[newX][newY] == 0:
            playerX = newX
            playerY = newY
    if key.name == "DOWN":
        newX = playerX - dirX[playerDir]
        newY = playerY - dirY[playerDir]
        if maze[newX][newY] == 0:
            playerX = newX
            playerY = newY
    if key.name == "LEFT":
        playerDir -=1
        if playerDir < 0: playerDir = 3
    if key.name == "RIGHT":
        playerDir +=1
        if playerDir > 3: playerDir = 0

def drawMaze():
    dm = 1
    if(playerDir == 1 or playerDir == 3): dm=-1
    for l in range(4,-1,-1):
        x = playerX + (l*dirX[playerDir])
        y = playerY + (l*dirY[playerDir])
        if(x>=0 and x<10 and y>=0 and y<10):
            xl = x + (dirY[playerDir] * dm)
            yl = y + (dirX[playerDir] * dm)
            if(maze[xl][yl] == 1):
                screen.blit("left"+str(l), (0, 0))
            xr = x - (dirY[playerDir] * dm)
            yr = y - (dirX[playerDir] * dm)
            if(maze[xr][yr] == 1):
                screen.blit("right"+str(l), (0, 0))
            if(maze[x][y] == 1):
                screen.blit("mid"+str(l), (0, 0))
```

the maze data to the left; we do the same on the right, and finally in the middle. Then we move towards the player by a block and repeat the process (with larger graphics) until we get to the block the player is on.

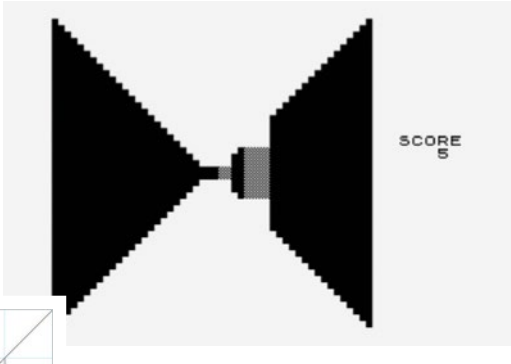
That's all there is to it. To move backwards and forwards, just change the position in the grid the player's standing on and redraw the display. To turn, change the direction the player's looking and redraw. This technique's obviously a little limited, and will only work with corridors viewed at 90-degree angles, but it launched a whole genre of games on home computers. It really was a big deal for many twelve-year-olds – as I was at the time – and laid the path for the vibrant, fast-moving 3D games we enjoy today.



Each visible block is drawn from the back forward to make the player's view of the corridors.



The maze display is made by drawing diagonal lines to a central vanishing point.



The original ZX81 game drew its maze from chunky 2×2 pixel blocks.

Directory

Northern Exposure: 12 September 2019

Find out more about a business-to-business conference on the banks of the Tyne

What is it?
Following a successful event in February, a second Northern Exposure conference is due to take place this autumn. A business-to-business games conference held in the North East of England, Northern Exposure's roots can be traced back to the region's GameHorizon Conference – its aim being to bring together great speakers to discuss the future of the games industry.

A one-day conference, Northern Exposure features talks from business owners, industry leaders, professionals, and experts, all sharing stories of success and challenge.

As well as hearing expert tips and nuggets of knowledge to inspire your own business and games, you'll have the opportunity to make new connections and catch up with games industry contacts.

NORTHERN EXPOSURE

Where is it?
Discovery Museum, Blandford Square, Newcastle upon Tyne

Find out more
Early bird tickets are available to purchase before 31 July. For prices and more details of what's on, head to **north-expo.co.uk**.

GET INVOLVED

Do you have an online tutorial you'd like to share with readers? Have you created an online resource that other game developers might find useful? Maybe you have a local code club you're keen to promote? If you have something you'd like to see featured in the Directory, get in touch with us at **wfmag.cc/hello**

Learn from industry experts and meet like-minded developers and publishers at Northern Exposure this September.

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PLAYING ON HARD MODE

COMBATING NEGATIVE STEREOTYPES AND RALLYING UNDER ONE BANNER: THE RISE OF THE SERBIAN GAME DEVELOPER

WRITTEN BY
JIM HARGREAVES

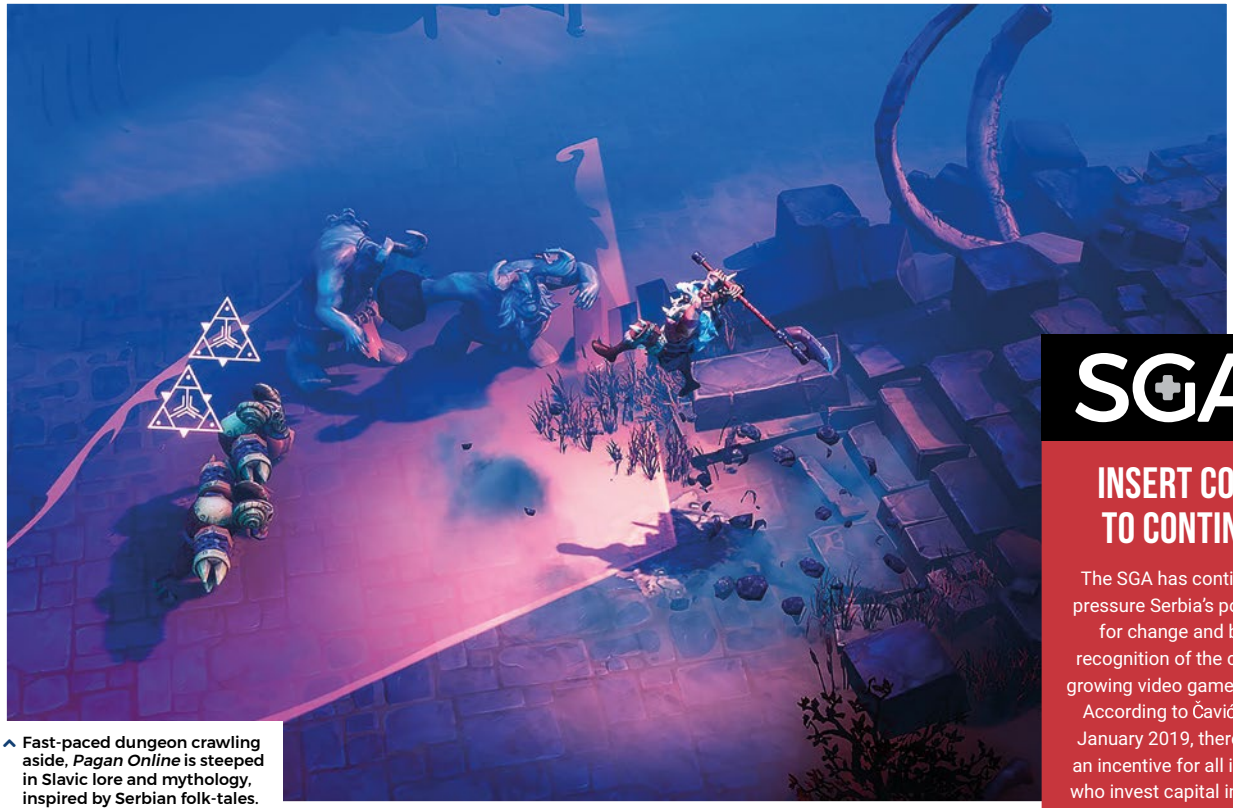
Serbia is a country with such a rich history, yet few are still able to immediately point it out on a map. Nestled within the Balkan Peninsula, over the centuries the country has found itself at the centre of many conflicts – allegiances, ideologies, and ethnicities have all served as reasons for wars big and small, sometimes binding Serbia to other nations many hundreds of miles away. It's a country home to a rich, scarred history, and the troubles of the recent past are still fresh in the memory of many a Serb.

These days, things are markedly different, with the country climbing its way up international rankings in quality of life, while offering things like universal healthcare and free higher education. That said, Serbia perhaps isn't the first place you'd think of as a hotbed for video game development. The truth is this is a country with a rapidly growing gaming industry, even if it has been an uphill battle.

Tomislav Mihajlović was the first person outside the founding Nordeus trio to come on board. He now oversees more than 30 of the developer's marketing team.

Nikola Čavić is CEO at the GameBiz consulting firm and Chairman at the Serbian Games Association, having previously worked at Nordeus and CCP Games.

Uroš Banješević and his team have always wanted to work on their dream RPG. Developing hidden object games was a necessary step towards this goal.



Fast-paced dungeon crawling aside, *Pagan Online* is steeped in Slavic lore and mythology, inspired by Serbian folk-tales.

"It's been frustrating," explains Uroš Banješević, co-founder and creative director at the Novi Sad-based Mad Head Games. "To grow up in Serbia and make a business in game development is like playing on hard mode."

Banješević used this phrase more than once during our interview, likening his own struggles to the grim gauntlets players must face in his studio's RPG, *Pagan Online*. Alongside other developers such as Nordeus and Eipix, Mad Head Games is among the vanguard of companies that have broken new ground and fought against the odds in an attempt to put Serbia's games industry on the map.

Mad Head was founded by four friends in 2011, with the company's lead game designer, Emil Esov, having originally worked in architectural 3D modelling before making the transition to game development.

"We did a lot of work as an outsourcing company," he says. "A group of friends who started doing all kinds of stuff, like modelling cars for Chinese companies and creating buildings for upcoming video games. We did it all, basically, and over time we gathered people who could oversee the production of our own original games. That's how we evolved."

HIDDEN SUCCESS

There's a running joke that if you walk around the Mad Head offices, you'll find portraits of unassuming older gamers who have, over time, attained an almost celebrity status among the hard-working crew of Serbian developers.

It's these older players, the joke goes, who make up large swathes of the casual market Mad Head has been specifically catering to for the past few years, with the studio having shipped more than 45 titles in the seldom discussed but hugely popular hidden object genre.

"A common misconception about hidden object games is that they're not serious," Banješević tells us. "However, these games still have development cycles – they require project management, publishing, marketing, and all that stuff. So making these has been a very good learning experience."

> "A COMMON MISCONCEPTION ABOUT HIDDEN OBJECT GAMES IS THAT THEY'RE NOT SERIOUS"

SGA

INSERT COINS TO CONTINUE

The SGA has continued to pressure Serbia's politicians for change and better recognition of the country's growing video game industry. According to Čavić: "From January 2019, there is now an incentive for all investors who invest capital in Serbian companies developing an IP, to receive up to 30% of that investment, capped at 880k EUR, back as a tax credit. This is a definite step in the right direction and encouraging news for the whole sector."

Wargaming greenlit *Pagan Online* partly because of the quality of its concept art.

Top Eleven has been running for nine years, with over 200m users. It's come a long way since its low-key conception in a Belgrade garage.

WINNING ELEVEN

Serbian developer Nordeus was set up by three friends who were originally working out of a garage in the capital city of Belgrade. In May 2010, the team launched its first game, *Top Eleven* – a football management game built to run on Facebook. "The company was profitable within three weeks," Mihajlović tells us, with *Top Eleven* eventually making its way to smartphones and tablets in 2015, becoming one of Serbia's top gaming exports.

Mad Head is one of the many developers working with Big Fish Games, the social gaming giant that prides itself on releasing a new game every day of the year. Naturally, these titles are somewhat formulaic, smaller in scope, and have a much quicker turnaround, making them easier to churn out.

"We became a content treadmill," Banješević says. "We built our company on top of that – it paid the bills and allowed us to scale up to a team of 150 people. Now we've decided to go hardcore." *Pagan Online* is currently available in Early Access, made with the backing of publisher Wargaming, best known for its massively popular *World of Tanks* franchise.

The growing strength of Serbia's video game industry hasn't flown under the radar of other major companies, it seems. Ubisoft opened a Belgrade branch in 2016, and it was only in January 2019 that Epic Games – on a classic spending spree – acquired the specialist team at 3Lateral, which focuses on character rigging and modelling as a studio.

But just ten years ago the local scene was far removed from the one today – an ecosystem in a substandard state, according to former Nordeus head of business development Nikola Čavić. "The number of game development studios was low, there was zero support from the government, and limited collaboration," he explains, "Today, it is a completely different story, with dozens of successful companies pushing us all forward and generating massive benefits for the local economy.

"What is even more impressive is that in the last five years, we have developed a whole sector that can not only produce video games, but support other companies with technology, production, and publishing activities."

BETTER TOGETHER

Having spent almost seven years at Nordeus – the Belgrade-based team behind football sim sensation *Top Eleven* – Čavić is now Chairman of the Serbian Games Association (SGA). Home to almost 60 companies and 1700 people working within the country's video game industry, the organisation is a vital platform, unifying once-divided developers and finally giving them a strong collective voice.

"Thanks to the SGA members, today the gaming community in Serbia is thriving," Čavić says. "We are bringing together groups of students, investors, and service providers, alongside programmers, artists, and game designers to support a crucible for creativity."

> "A LOT OF THINGS CAME LATE TO SERBIA, WHICH MEANS THAT WE'VE LACKED A CONSOLE CULTURE"

He continues: "Our method of working with the government is to establish channels of communications at various levels and speaking 'their' language. We have been providing them with reports, evidence, and case studies of how investment in this sector can create a positive outcome for the Serbian economy, and they have been open to that input so far."

According to Čavić, progress is being made – though not at the rate he and other members

of the SGA would like to see, especially when it comes to "levelling up" education in schools.

"Today, there is a huge gap in terms of what type of education local students are receiving, and what is expected of them to know when they become employed," he says. "We aim to work closely with the institutions, creating programs and courses for students who want to pursue a career in the video games industry."

Part of the problem is how the government views Serbia's video game industry: it's unable to distinguish it from the country's IT sector. This is one of the SGA's current priorities: creating a formalised means of collecting, tracking, and measuring data to show just how positive an impact gaming has on Serbia's economy.

SERBIAN GAMING CULTURE

Although it has undergone a small-scale digital revolution, those who lived in Serbia in the 1990s didn't always enjoy the same access to video games that some of their European neighbours did. Growing up in the former Yugoslavia, getting hold of consoles and games in this part of the world wasn't always easy before the age of Steam and the convenience of online distribution.

However, Banješević explains: "Serbians have always found a way to get things that weren't available here, even if they weren't exactly legit," a knowing smile creeping along his face. "We always found a way as kids. But as with the first Mega Drive and other consoles, a lot of things came very late to Serbia, which means that we've traditionally lacked a console culture.

"There's been a PC-focused mentality here, but we're starting to see more people getting into Xbox and PlayStation – I've even seen the occasional Nintendo Switch while on public transportation!"

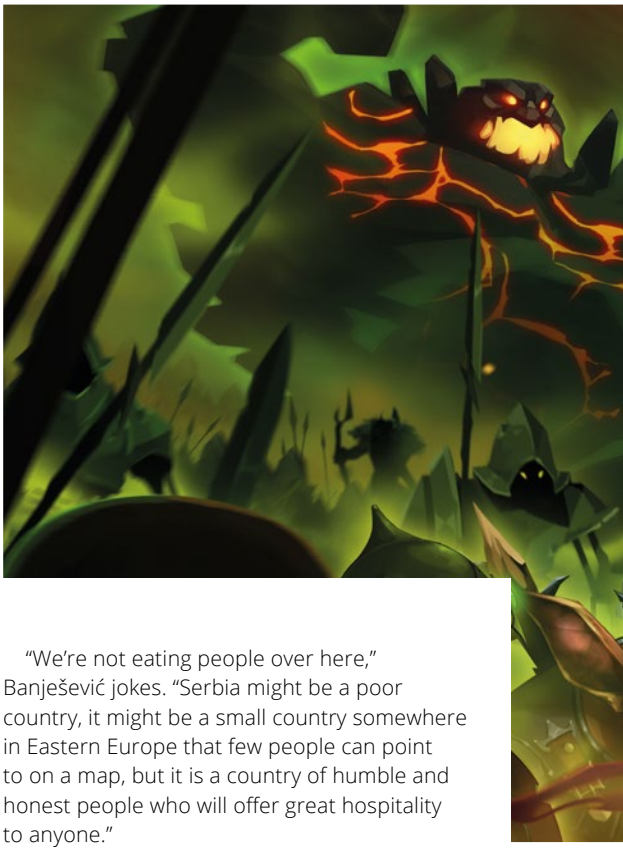
Tomislav Mihajlović, CMO at Nordeus, does recall the Mega Drive as his gateway into gaming, while also playing games like *Tetris* on his father's work computer. He recalls questing through the original *Prince of Persia*, littering Mihajlović Sr's desk with stray floppy discs before he and his brothers got their first PC in 1998.

"The three of us shared it for years," he says, "and I spent significant time and personal savings to upgrade that machine so we could keep playing better games... ones that more than likely were pirated.

"Working in the industry now, we can say that it was wrong – studios survive on players purchasing the real thing – but it was a

***Uncharted 2*'s Zoran Lazarević: one of several Serbian video game characters who show the country in a less than positive light.**

The team at Mad Head Games pride themselves on the work of their talented artists, which effortlessly transitions between genres.



different time for us back then. All of that changed as we moved into the millennium; legitimate movies and games became readily available to buy or rent from specialised shops."

It's the same now in Serbia as in most of the world, Mihajlović explains, with the PS4 and Xbox One proving extremely popular, and a booming industry on the mobile end of gaming.

VILLAIN CLUB

Besides nurturing Serbian game development, Nordeus, Mad Head Games, and other homegrown studios are also looking to combat the way their country has been represented in video games. Western media has been responsible for creating a less than savoury image of Serbia, to put it lightly.

"TV, movie, and game makers have used Serbia's chequered history to often represent our countrymen as the bad guys," Mihajlović says. "When we look at some examples from gaming, it does make us laugh, and we do take it with a pinch of salt."

"We're not eating people over here," Banješević jokes. "Serbia might be a poor country, it might be a small country somewhere in Eastern Europe that few people can point to on a map, but it is a country of humble and honest people who will offer great hospitality to anyone."

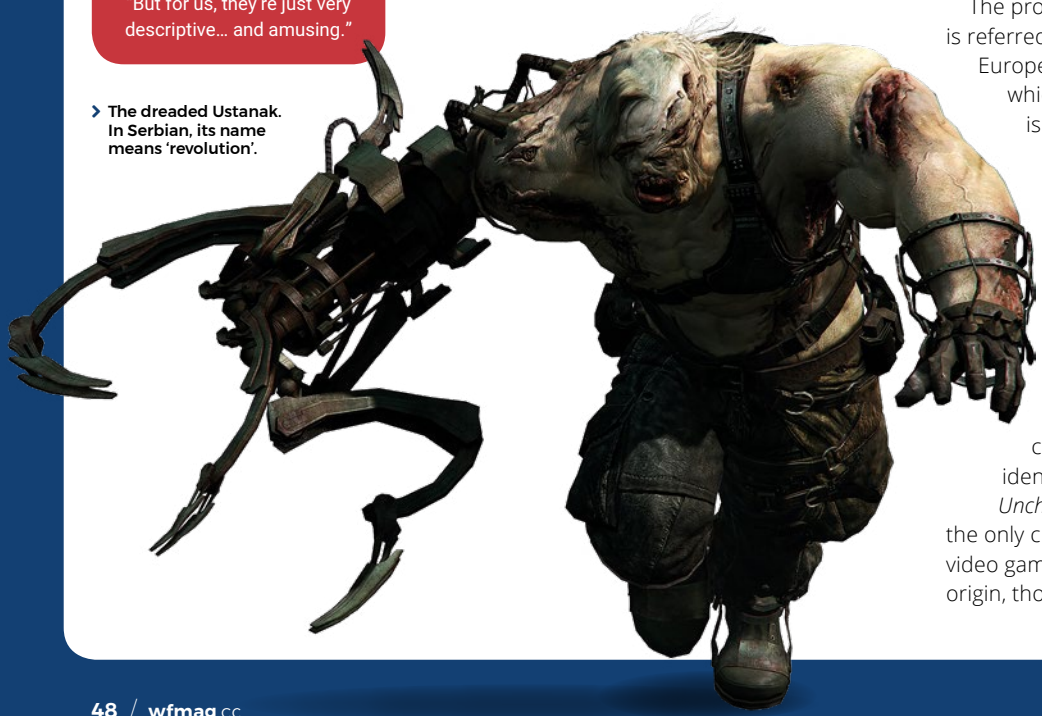
But when viewed exclusively through the lens of video games, the country isn't represented entirely fairly outside of, say, sports titles. When asked how his people are typically portrayed, and if there are any visible Serbian characters in video games, Banješević immediately points to one example: "Well, you have *Grand Theft Auto IV*. You have Niko Bellic."

The protagonist of Rockstar's global megahit is referred to as a war veteran from Eastern Europe. It's never made explicitly clear which country he originates from, but it is speculated to be either Croatia or Serbia. Rockstar's Dan Houser was quoted as saying Niko is "from that grey part of broken-down Eastern Europe," underlining a notion, in the typically unsubtle Rockstar way, that the many nationalities and cultures from this part of the world are indiscernible in the eyes of pop culture. It's not hard to imagine how damaging such generalisations can be when the individual, vibrant identities of these countries are ignored.

Uncharted 2's Zoran Lazarević is perhaps the only character in a major (non-sports) video game actually confirmed to be of Serbian origin, though he doesn't exactly challenge the

WHAT'S IN A NAME?

One particular example of Serbian representation in video games may surprise you – unless you speak the native tongue, that is. *Resident Evil 6* features a number of Serbian words to name its creatures. As Mihajlović explains, "'Noga-Skakanje' is 'Leg-Jumping', 'Rasklapanje' – 'Folding', 'Ruka-Hvatanje' – 'Arm-Capturing', and so many more. In English they may sound like cool, scary names," he laughs. "But for us, they're just very descriptive… and amusing."



The dreaded Ustanak. In Serbian, its name means 'revolution'.

Now in Early Access, *Pagan Online* is gearing up for a full release at the time of writing.

Niko Bellic is one of *Grand Theft Auto*'s most loved protagonists, yet his representation as an immigrant turned gangster makes him equally divisive.

troubling stereotype perpetuated by other video games and media. He's a memorable antagonist, though, labelled as a war criminal, resorting to the most destructive, brutal tactics available to him, even at the expense of innocent lives and those of his own men. A video game villain who was just pure evil without writers needing (or wanting) to justify this through complex character arc or backstory. You know, that very kind of thoughtful writing *Uncharted* developer Naughty Dog is now lauded for.

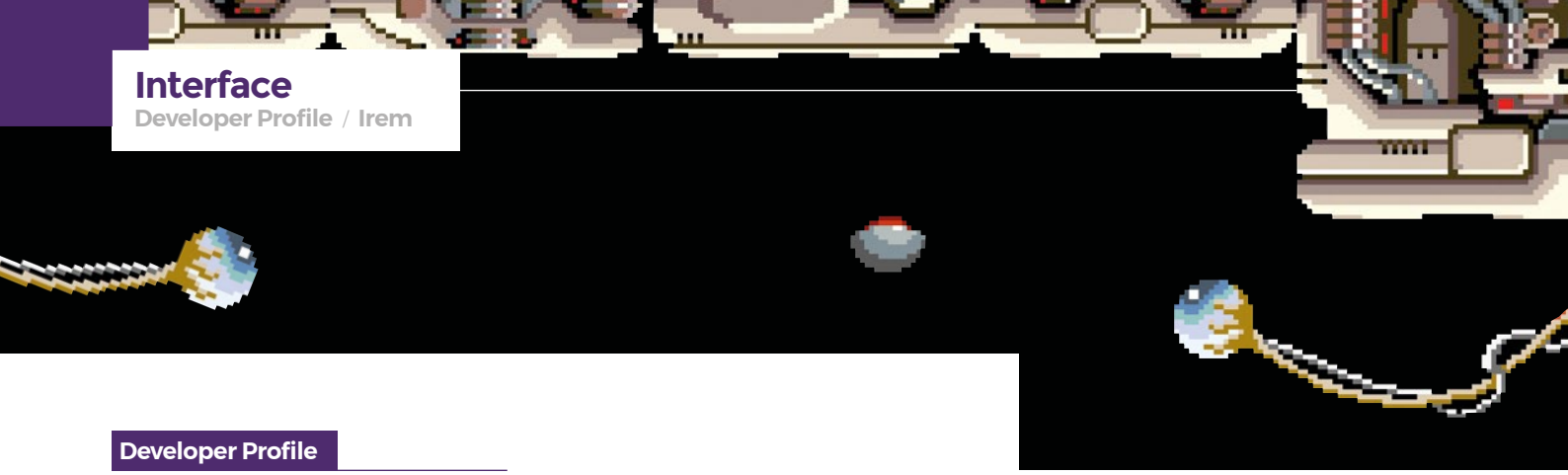
"If we talk in a political sense, Serbs are mostly represented as bad guys because of our history," Esov says, explaining how certain cultures make for easy, go-to villains simply because audiences literally don't know where they're from in the world, never mind relate to them. He posits that if games were to feature threats closer to home, such as domestic terrorists, militias, or radical groups, these games would struggle on the western market.

"What we would love to see is game and filmmakers using some of our world-renowned scientists as inspiration to represent us and showcasing some of the major contributions Serbians have made to the world," Mihajlović says.

Nikola Tesla is a name brought up that many will recognise, but there are the likes of climate change theorist Milutin Milanković, and Mihajlo Pupin – one of NASA's founding members. Serbia also has more than its fair share of those aforementioned sporting celebrities, from international football stars such as Dušan Tadić and Nemanja Matić to Serbia's medal-winning Olympic basketball team. Then there's Novak Djoković, of course – a household name, and the world's number one ranked men's tennis player, at the time of writing.

"SERBS ARE MOSTLY REPRESENTED AS BAD GUYS BECAUSE OF OUR HISTORY"

Serbia has plentiful positive role models, and now, with the impressive evolution of its video game industry, developers hope that the two will combine to serve as a vehicle for changing perceptions, opening a channel for authentic Serbian stories – and voices – to finally be heard.



Developer Profile

Remembering Irem

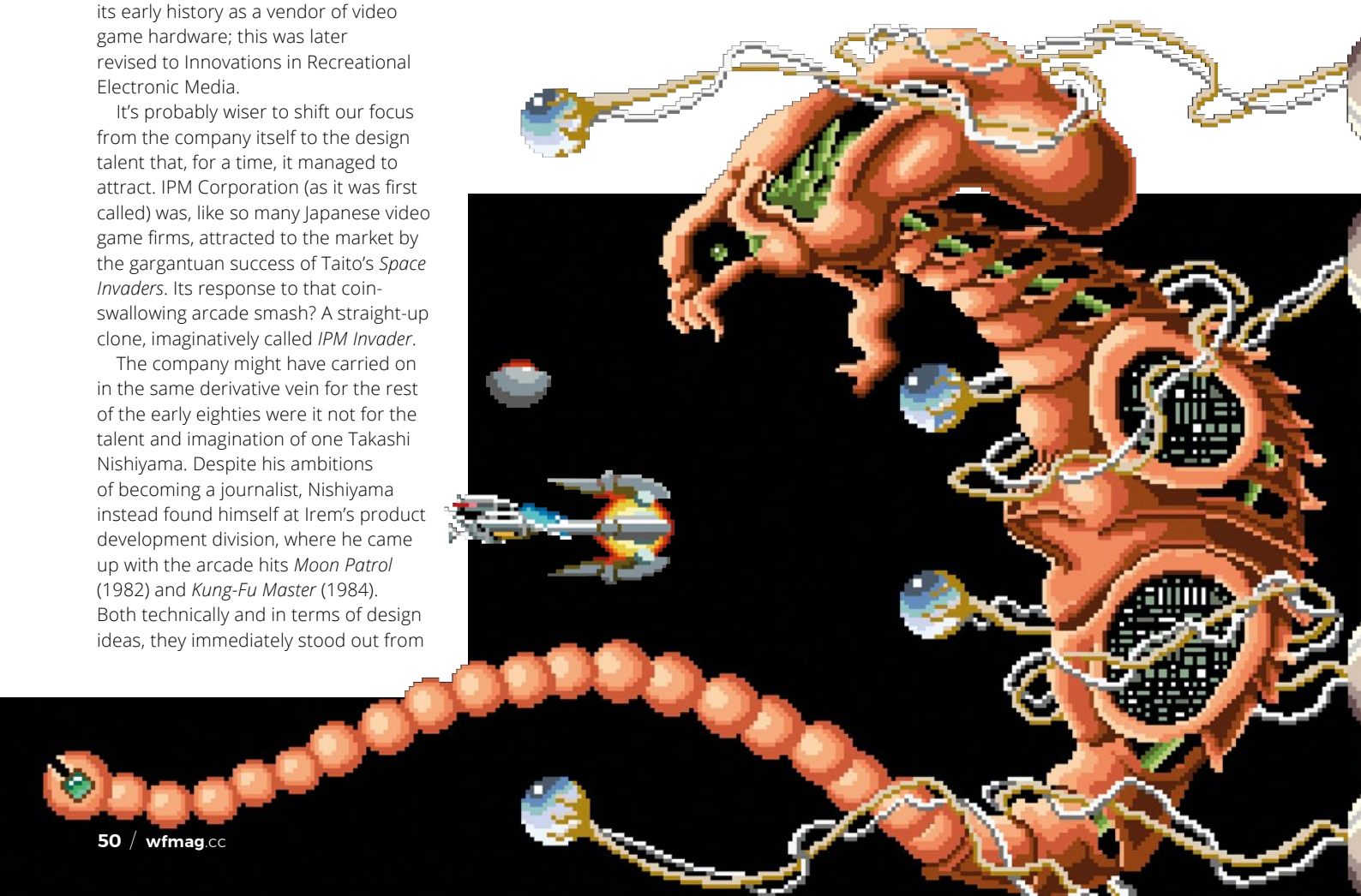
The Japanese firm helped create the beat-'em-up genre, gave us a seminal shooter, and much more besides

Looking back through the mists of history, Irem emerges as a strange and amorphous company, subject to so many takeovers and rebrandings that it's almost impossible to summarise. Even the meaning of its name evolved over time: at first, Irem stood for International Rental Electronics Machines, reflecting its early history as a vendor of video game hardware; this was later revised to Innovations in Recreational Electronic Media.

It's probably wiser to shift our focus from the company itself to the design talent that, for a time, it managed to attract. IPM Corporation (as it was first called) was, like so many Japanese video game firms, attracted to the market by the gargantuan success of Taito's *Space Invaders*. Its response to that coin-swallowing arcade smash? A straight-up clone, imaginatively called *IPM Invader*.

The company might have carried on in the same derivative vein for the rest of the early eighties were it not for the talent and imagination of one Takashi Nishiyama. Despite his ambitions of becoming a journalist, Nishiyama instead found himself at Irem's product development division, where he came up with the arcade hits *Moon Patrol* (1982) and *Kung-Fu Master* (1984). Both technically and in terms of design ideas, they immediately stood out from the crowd; the former is widely credited as being the first mainstream game to feature parallax scrolling, while the latter helped birth the beat-'em-up genre. *Kung-Fu Master* was so successful, in fact, that Nishiyama was headhunted by Capcom, where he worked on the original *Street Fighter*, before he departed for SNK in 1988 and helped spawn the *Fatal Fury* and *Art Of Fighting* series. (Curiously, Irem founder Kenzo Tsujimoto was the chairman of Capcom by the mid-eighties. We told you Irem's corporate history was strange.)

Nishiyama's games arguably set the pace for Irem's output through the rest of the eighties. Its best games were visually and aurally striking, technically dazzling, and occasionally genre-defining. Its signature game, at least in



Irem's given up on the game dev thing, but the *Disaster Report* franchise is alive and well at Kazuma Kujo's studio, Granzella.

the eighties, was *R-Type*, a side-scrolling shooter built around some new 16-bit hardware created by Irem's parent company, Nanao. With its gigantic area bosses and innovative weapons systems, *R-Type* was a step ahead of the shooters emerging from other studios at the time; in the wake of *R-Type*, every other game in the genre had to have a gimmicky weapon of its own. Suddenly, Irem had gone from making straight-up clones of other studios' games to creating a landmark title that everybody else wanted to rip off. According to *R-Type*'s sound developer Masato Ishizaki, the team working on *R-Type* was unusually young, with most of them in their early twenties. Certainly, Irem seemed like a young and energetic company in the late eighties, with *R-Type* being followed with similarly eye-catching action games like *Image Fight*, *Mr. Heli*, *Dragon Breed*, and *X-Multiply*.

IT'S BEHIND YOU

Of the games in this period, a developer at Irem once put it this way, according to an interview translated by **shmuplations.com**: "Previously, Irem has invested a lot of energy and research in traditional animation technology. Other game developers see sprites as a means to an end, a symbol that you just move around on screen. At Irem, however, we focus a lot on what we want the player to see – that is, graphics and visual presentation. You can see that dedication in the sprites for our new game, *R-Type*: the huge battleship in stage three, the erotic-yet-grotesque enemy designs, the wave cannon... our goal at Irem is to impress you!"

Through the nineties and into the new millennium, Irem shifted and changed, as development arms carrying the company banner were variously absorbed, restructured, and shut down. As a result, there was an exodus of talent around 1997, as a team of developers who worked on the shooter *In The Hunt* left to form their own studio: called Nazca, it would later enjoy success with the *Metal Slug* series, published by SNK.

Kazuma Kujo, *In The Hunt*'s designer, headed up some of the best-known games of that era, including the shooter sequels *R-Type Delta* and *R-Type Final*, and the innovative *Disaster Report* series of earthquake survival games. By the time of the tragic Japanese earthquake and tsunami of 2011, however, Irem had again begun to shape-shift. All games in development at the time, with the exception of *Steambot Chronicles 2*, were abruptly cancelled; Irem had, according to Kazuma, decided to pull out of the games industry altogether, choosing to focus instead on producing slot-machines. It was generally assumed that Irem had cancelled the earthquake-themed *Disaster Report 4* because it might have seemed in poor taste in the wake of 2011's real-world tragedy; but as Kazuma lamented in a 2011 interview with 1UP, "Even without the earthquake, it was becoming difficult to do a lot of things at Irem."

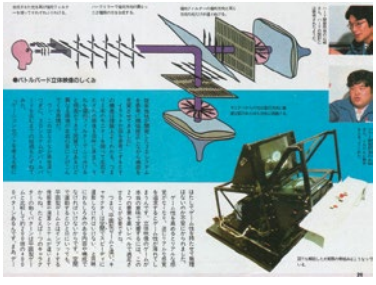
"Our goal at Irem is to impress you!"

As a result, Kazuma left the company to found his own studio, Granzella – a company made with the express intention of realising all the projects that couldn't be set up at Irem, including *Disaster Report 4 Plus* and *R-Type Final 2*, a sequel to a game once intended as the series' downbeat epitaph.

Across its long and meandering history, Irem managed to put out some extraordinary games, even as names changed and designers came and went. For now, its direct involvement in game design is at an end. But given that it's changed forms so many times in the past, maybe the coming years will see Irem transform once again, ready to unleash another salvo of exotic games on an unsuspecting world.

Lost in space

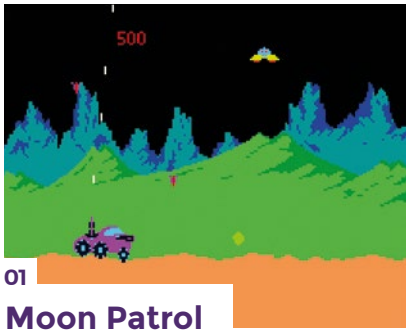
Irem's eighties-era commitment to making technically daring arcade games is ably summed up with one obscurity, called *Battle Bird*. Devised around the middle of the decade, it was a space shooting game distinguished by its highly unusual arcade cabinet, which used a pair of screens to create a stereoscopic 3D effect. *Battle Bird*'s technical ingenuity may have been its undoing, however; only a handful of cabinets were ever produced, and today, the game itself is so rare that a few meagre stills from contemporary magazines are all that remain of its existence.



Blast off and strike

10 products of the Irem hive mind

Plenty of shooters, but the odd foray into fighting and survival, too



01

Moon Patrol

Arcade / Various – 1982

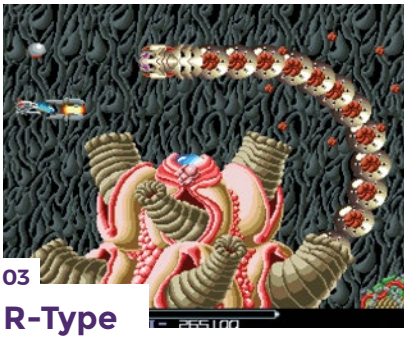
In a market full of identikit games, *Moon Patrol* emerged as something refreshingly different. A platformer/shooter hybrid, it involved guiding an armoured vehicle across hazardous terrain while blasting at enemies hovering above. Its design flourishes – parallax scrolling backgrounds, the way the vehicle's wheels skip over the rocky surface – make it a retro delight.

02

Kung-Fu Master

Arcade / Various – 1984

Later brawlers, particularly of the belt-scrolling variety, all owe a debt to Takashi Nishiyama's early fighting game. *Kung-Fu Master* asks little more of the player than to time their kicks and punches, whether they're directed at mindless enemies or, more curiously, snakes hidden in what appear to be falling plant pots, but it was a vital first blow in a rapidly-evolving genre.



03

R-Type

Arcade / Various – 1987

The game that saw Irem at the height of its eighties powers, *R-Type*'s bold, detailed graphics and novel weapons system (with a rotating shield which could be attached to the front or back of the player's craft, or sent barrelling into enemies) were little short of revelatory. Sequels and imitators followed, but few could match *R-Type*'s eye-popping impact.

04

Mr. Heli

Arcade / Various – 1987

Where *R-Type* was all Freudian monsters and foreboding music, *Mr. Heli* went down a more whimsical route. A free-scrolling shooter, it's also a more measured (and dare we say it, cerebral) game than *R-Type*, with hidden crystals to uncover and exchange for weapon upgrades. It does, however, share the same scary difficulty level as its Irem contemporary.

05

Image Fight

Arcade / Various – 1988

A title that's largely fallen into obscurity in the 21st century, *Image Fight* was a big deal on original release – a top-down shooter with some similar visual themes to *R-Type*, it was ported to several Japanese home systems, including a solid version on the PC Engine (pictured above). Whichever one you choose, be prepared for a frighteningly steep difficulty curve.

06

Hammerin' Harry

Arcade / Various – 1990

The first in a series of charming platformers, *Hammerin' Harry* never quite got the attention it deserved in the West. This is likely because its design was so steeped in Japanese culture – its hammer-wielding hero, for example, is a zany pixel rendering of a traditional carpenter. Simple though they all were, the *Harry* games' pace and humour made them a low-brow delight.

07

In The Hunt

Arcade / PS1 / Saturn – 1993

If this shooter's captivatingly detailed sprite work looks familiar, then that's because it's from the same team that later brought us the equally sumptuous *Metal Slug*, released by SNK. The similarities are more than skin-deep: submarine shooter *In The Hunt* also shares *Metal Slug*'s love of exotic machines, chaotic action, and absurdly large explosions.

08

R-Type Delta

PS1 – 1998

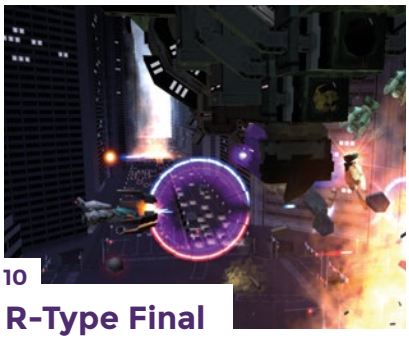
"For the first time in 3D!" trumpeted the marketing for this polygon-era reimagining of Irem's biggest name. With a garage of ships to select from and some terrific sci-fi set-pieces, *Delta*'s one of the best *R-Type* sequels so far – even if the boxy character models mean the bio-mechanical monsters no longer look as organic as they did a decade earlier.

09

Disaster Report

PS2 – 2002

A survival game before the genre became fashionable, *Disaster Report* sees players scrambling from the wreckage of an earthquake-stricken, sinking island city. The presentation looked creaky even in 2002, but there are innovative ideas humming away here – particularly the notion of a crumbling city as a gigantic, interactive puzzle to master.



10

R-Type Final

PS2 – 2003

A funereal tone hangs over *R-Type Final*, from its glacial pace to its downbeat soundtrack. Originally intended as the series' swansong, *Final* was one of the last 2D shooters to get something approaching a mainstream budget: the enemy designs are grotesque and imaginative, while the hangar contains a mind-boggling 101 ships to unlock.

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Review

My Friend Pedro

Overripe humour doesn't sully an a-peel-ing shooter

Info

GENRE
Side-scrolling shooter

FORMAT
Switch (tested) / PC

DEVELOPER
DeadToast Entertainment

PUBLISHER
Devolver Digital

PRICE
£15.49

RELEASE
Out now

REVIEWED BY
Andrew King

A slo-mo meter allows for a more tactical approach to combat. This resource is hard to deplete; it's always available and has a quick recharge.

My Friend Pedro stars a beady-eyed talking banana, and boy howdy does it *not need* to star a beady-eyed talking banana.

The side-scrolling shooter from DeadToast Entertainment comes as close as video games ever have to replicating the feeling of being an action movie star. As you charge through a series of perfectly paced levels, you'll dual wield Uzis, no-scope goons with a sniper rifle, and blast heads off in slow motion with a punchy shotgun.

Once a head has been separated from a goon's shoulders, it becomes a weapon, a fleshy football you can kick into another enemy's noggin to knock them out. Kicking is a very useful skill in *My Friend Pedro*; you'll kick dudes in the face, kick skateboards into dudes' faces, and punt a frying pan into the air then ricochet bullets off its cast iron surface and into dudes' faces.

Why unleash all this head-kicking mayhem on dudes' faces? Because Pedro, that beady-eyed talking banana we mentioned up top, is telling you to. The game begins with your potassium-rich pal waking you up in a grungy, heavily guarded warehouse, and teaching you the basics of combat. You're an unnamed, masked, amnesiac protagonist (as blank as blank slates come), and as you set out on an aimless murder quest, Pedro fills you in on the workings of the vaguely dystopic world.

Pedro is the source for most of the game's narrative and world-building colour. But, as green and brown bananas remind us, colour is not always a good thing. This game has everything: a Christmas Party Santa, a lame 'roses are red, violets are blue' joke, bullet-spongy hardcore gamer enemies, and a butcher making people into consumer goods. It's capital Q Quirky, but the quirk never amounts to a real personality. *My Friend Pedro* doesn't want to be self-serious as it revels in ultra-violence, but the writing doesn't present a viable alternative.

But, if you've seen a GIF of this game in action, you know that the writing isn't the draw. The draw is all that head-kicking. *My Friend Pedro* is, thankfully, long on shooting and short on story, and the action is perfectly paced. You'll begin your bloody journey with a pair of pistols, but you'll gradually unlock the full shooter arsenal, and each weapon makes the moment-to-moment action feel satisfyingly different. A shotgun allows for quick hits while a sniper rifle enables you to clear out a dangerously packed arena from a distance. Other mechanical twists – skateboards, motorcycles, trampolines, a propellor hat – enter stage left and exit stage right quickly, providing novel tweaks to an excellent core loop.

Melee combat is a viable option, though it will take a few kicks to bring down this heavily armoured enemy.

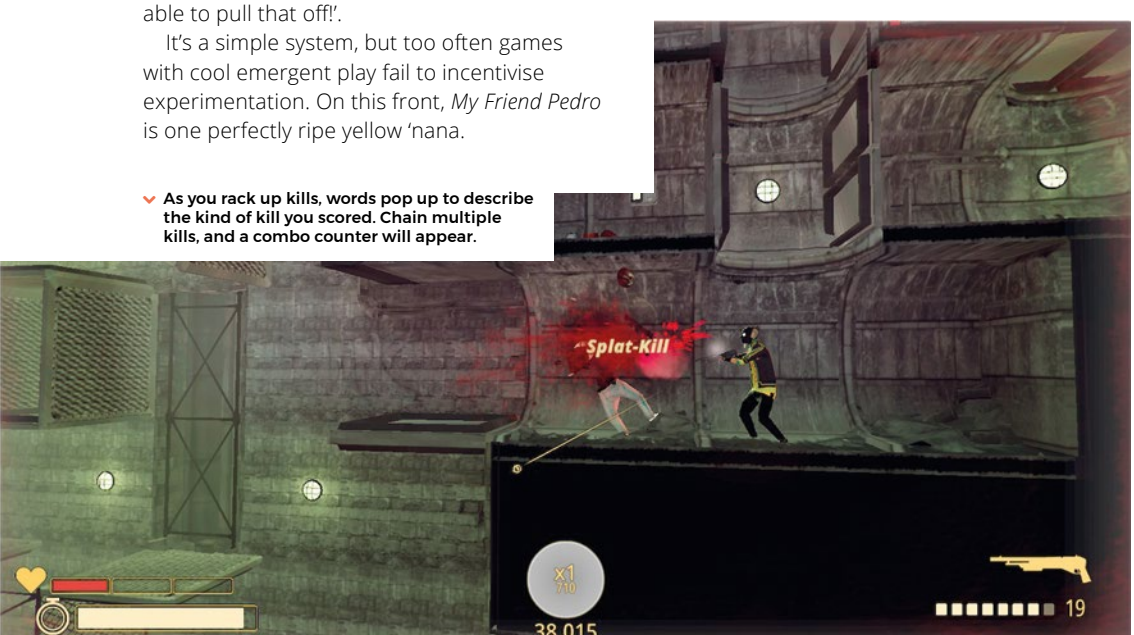
And that core loop takes surprising inspiration from a very different kind of side-scroller: stunt bike racing games, like *Trials Rising* and *Urban Trial Playground*. Going into slo-mo is as easy as a button press, allowing for bullet time-style flying and flips. Killing goons in quick succession will get a combo going, and a kill's value differs depending on how you achieved it. For example, a headshot you nail while swinging through a shattering window is worth more than one you land flat-footed. It's a smart system, encouraging thoughtfulness. Before leaping into the fray, you need to think like a choreographer – 'That would look cool!' – and like a stuntman – 'I *should* be able to pull that off!'.

It's a simple system, but too often games with cool emergent play fail to incentivise experimentation. On this front, *My Friend Pedro* is one perfectly ripe yellow 'nana.

"You'll dual wield Uzis, no-scope goons with a sniper rifle, and blast heads off in slow motion with a punchy shotgun"

Additionally, multiple difficulty levels make replaying the game worthwhile. On Normal, *My Friend Pedro* is easy enough that you likely won't need to reach into your bag of tricks too often. But, when I upped the difficulty, quicker, stronger enemies forced me to go back to the lab, perfecting the art of the slo-mo flip and fire. *My Friend Pedro* is fun even when you're fumbling through it, but it's excellent when you ascend to your rightful place as a banana-befriended Keanu Reeves. Its writing may be dumb, but, mechanically, *My Friend Pedro* is a smart game that demands equal smarts from you.

As you rack up kills, words pop up to describe the kind of kill you scored. Chain multiple kills, and a combo counter will appear.



HIGHLIGHT

My Friend Pedro makes brilliant use of the 'Play of the Game' feature popularised by *Overwatch*. After each level, a GIF of (what the game has algorithmically dubbed) your best moment plays on the score screen. Though you will likely have performed it in slo-mo, it plays at normal speed here and will often make you impressed at your god-tier reflexes.

VERDICT

***My Friend Pedro* makes you an action hero and fight choreographer, but, unfortunately, not a screenwriter.**

80%

HIGHLIGHT

Reed is always at the mercy of the sanity meter, which will move up or down depending on how disturbed he becomes while investigating. You see, he's suffering from faint visions himself, travelling to Oakmont in search of answers. Bashed bodies and Wylebeasts won't do good for his mental health.

Review

The Sinking City

Not much has changed, but they live underwater...

Info

GENRE
Survival Horror

FORMAT
PC (tested) / PS4 / XBO / Switch

DEVELOPER
Frogwares

PUBLISHER
Bigben Interactive

PRICE
£49.99

RELEASE
Out now

REVIEWED BY
Aaron Potter

VERDICT

***The Sinking City*'s engaging world is rich with intriguing characters and mysteries but can't quite escape from shallow problem-solving.**

61%

The Sinking City sees Ukrainian developer Frogwares back in its detective game lab, having already proved its detective game chops with the cult classic *Sherlock Holmes* series. This time the studio hopes to find mainstream success by bringing the art of deduction to the dank and inky world of H. P. Lovecraft. Private investigator Charles W. Reed is the unfortunate soul tasked to solve the mystery surrounding the eponymous open-world city of Oakmont, and luckily, he boasts a swathe of special skills to help him do so.

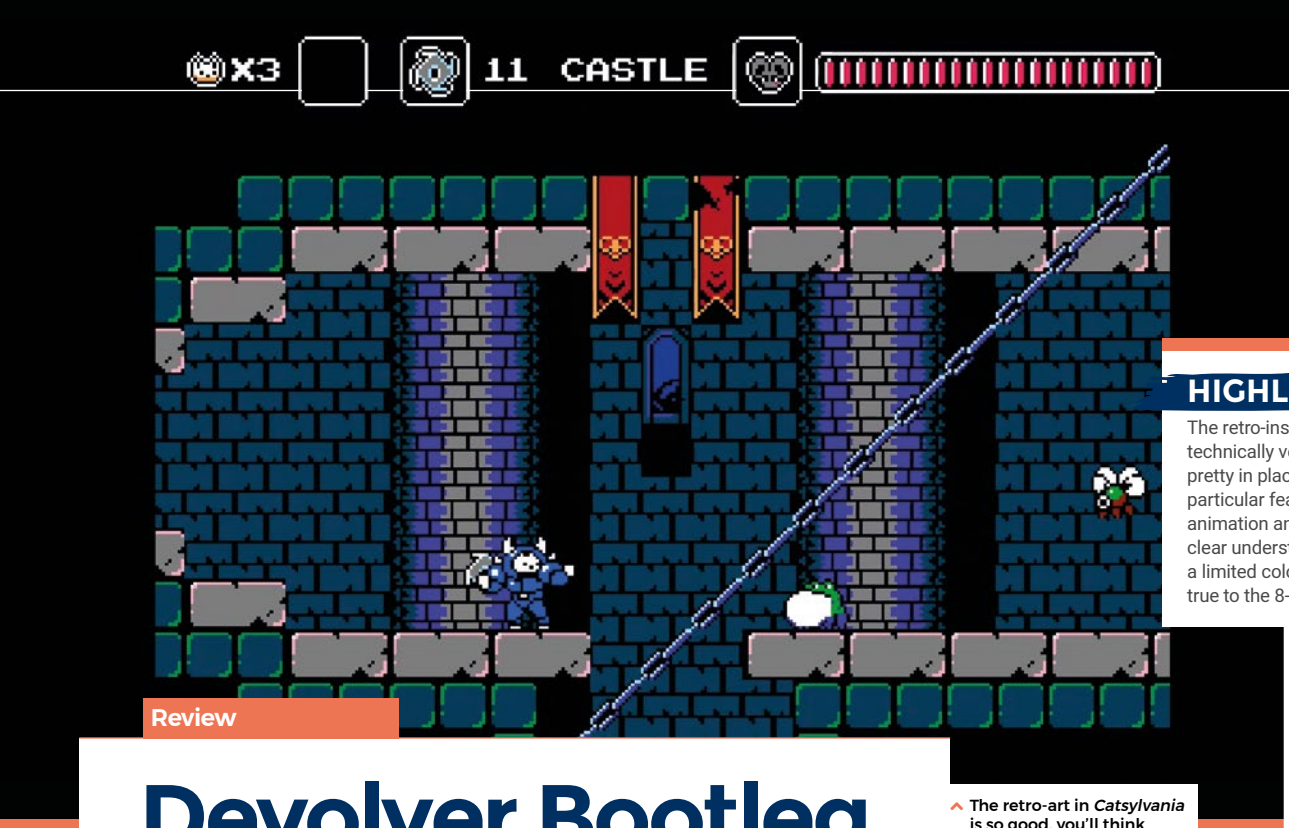
Initially, the sheer number of investigative options available to help you crack each case seems daunting. You can speak to witnesses and pick up key objects spread across a crime scene, sure, but how *The Sinking City* sets itself apart from its genre peers is through supernatural abilities like Retrocognition, Omen-Following, and Mind's Eye. The first lets you step Reed into moments of the past, piecing them together sequentially to paint a better picture of what happened; following the spectre-like Omens, meanwhile, guides you to other areas involved in a case; and Mind's Eye sees you glimpse into the history of important items.

All will warp and twist the screen in different ways, constantly reminding you that this is a city suffering from the otherworldly. The powers feel open-ended to use at first, but the novelty quickly wears off when you realise most cases have a singular route to a solution. One mystery, for example, saw me investigating the cause of a local family's sudden outbreak of madness. It was intriguing at first, yet quickly fell into the same rinse-and-repeat checklist of detective tasks – like combing through the house and waiting for the whistling sound needed to activate Retrocognition – before organising the gathered evidence in Reed's Mind Palace (a repurposed mechanic from the *Sherlock Holmes* games).

Thankfully, the scenarios of main and optional side cases feel distinctive enough that things rarely get stale; it's just a shame the actual act of solving them isn't as sprawling as *The Sinking City* itself. Getting around is a simple mix of on-foot exploration and boat travel – the latter being Reed's only way of traversing the areas steeped in flood water. You enter new suburbs at a regular pace through the core story and sometimes even venture underneath the adjacent seabed at points. Funnily enough, you feel most like a detective when travelling, largely because of the need to visit various archives when crime scene clues only get you so far.

> **"Cases are distinctive enough that things rarely get stale"**

The Sinking City doesn't push the detective genre forward so much as it wraps around you its familiar staples like the tentacles of, yes, a Lovecraftian creature. Its biggest success is making Oakmont feel like a place steeped in secrets and in need of your help, rather than offering up any new mechanic or approach to have you think outside the box. Still, it's a mystery worth diving into.



Review

Devolver Bootleg

It's the price of a coffee, but you're the mug

Devolver Bootleg exists primarily as the "oh, it's real" punchline to one of the gags in this year's Devolver E3 press briefing. It's a satirical swipe at... proprietary game launchers? Pixel art? Companies selling stuff? Satirising companies selling stuff while being a company that sells stuff? There's so much crammed in that the joke gets a little muddled, but at least you get your four quid's worth of Clever Satire.

The eight minigames on offer in this collection are retro-styled 'off-brand' demakes of some of Devolver's most popular titles. In some cases, like *Shootyboots* (*Downwell*), *Luftrousers* (er, *Luftrausers*), and *Enter the Gun Dungeon* (no), they manifest as clunky but inventive riffs on their full-fat equivalents, sort-of recreating styles and mechanics under tight creative restrictions, whether arbitrary (a brief to make crap versions of existing games) or practical (only enough time and budget to make crap versions of existing games, probably).

In other cases, like *Ape Out Jr.* and *Super Absolver Mini*, they lampoon other games entirely – the former mostly revels in the fact *Ape Out* and *Donkey Kong* both star apes, and the latter is a *Street Fighter 2* send-up that completely revels in the fact that *Absolver*, right, is also a game about battering people. *Ape Out Jr.* does at least have a fair few flashes of clever level design, and works as a mashup of its dual inspirations.

"At least you get your four quid's worth of Clever Satire"

The jewel of the collection is *Hotline Milwaukee*; a shockingly decent 8-bit adaptation of *Hotline Miami* that's worth the price of entry all on its own. While it's nowhere near as satisfying as the original was with its slick traversal and crunchy gunplay, it does an excellent job of identifying the spark that made it so compelling – the 'just one more level' combat puzzles that felt emboldening to lose, and euphoric to beat.

Hotline Milwaukee confidently replicates that formula, even manages to do it with more charm; it's difficult to be mad at being shot by a dog with a pistol in its mouth. It's analogous to the Master System versions of the *Sonic* games – obviously put together with a less-full toolbox, but somehow all the more endearing for it. That's a lie, the 8-bit *Sonics* were terrible, but let's pretend they were good for the comparison to work.

Devolver Bootleg is the best example of the extremely narrow Joke E3 Reveal That Actually Exists genre. But the only other example that comes to mind is the Amazon Echo version of *Skyrim*, which is just a rubbish version of *Zork*.

There's secretly a lot of value to be found here – not as a directionless gag that Bethesda did first – but in comparing these games to the originals, as a lesson in the art of deconstruction. It's easy to know something is good, but understanding why something is good, and what you can learn from it, is a rewarding and enriching skill for creators, critics, and consumers alike.

HIGHLIGHT

The retro-inspired presentation is technically very adept and almost pretty in places. *Catsylvania* in particular features a lot of smooth animation and subtle motion, and a clear understanding of how to use a limited colour palette that feels true to the 8-bit period.

The retro-art in *Catsylvania* is so good, you'll think 1980s Konami made it.

Info

GENRE
Minigame Collection

FORMAT
PC (tested)

DEVELOPER
doinksoft

PUBLISHER
Devolver Digital

PRICE
£3.99

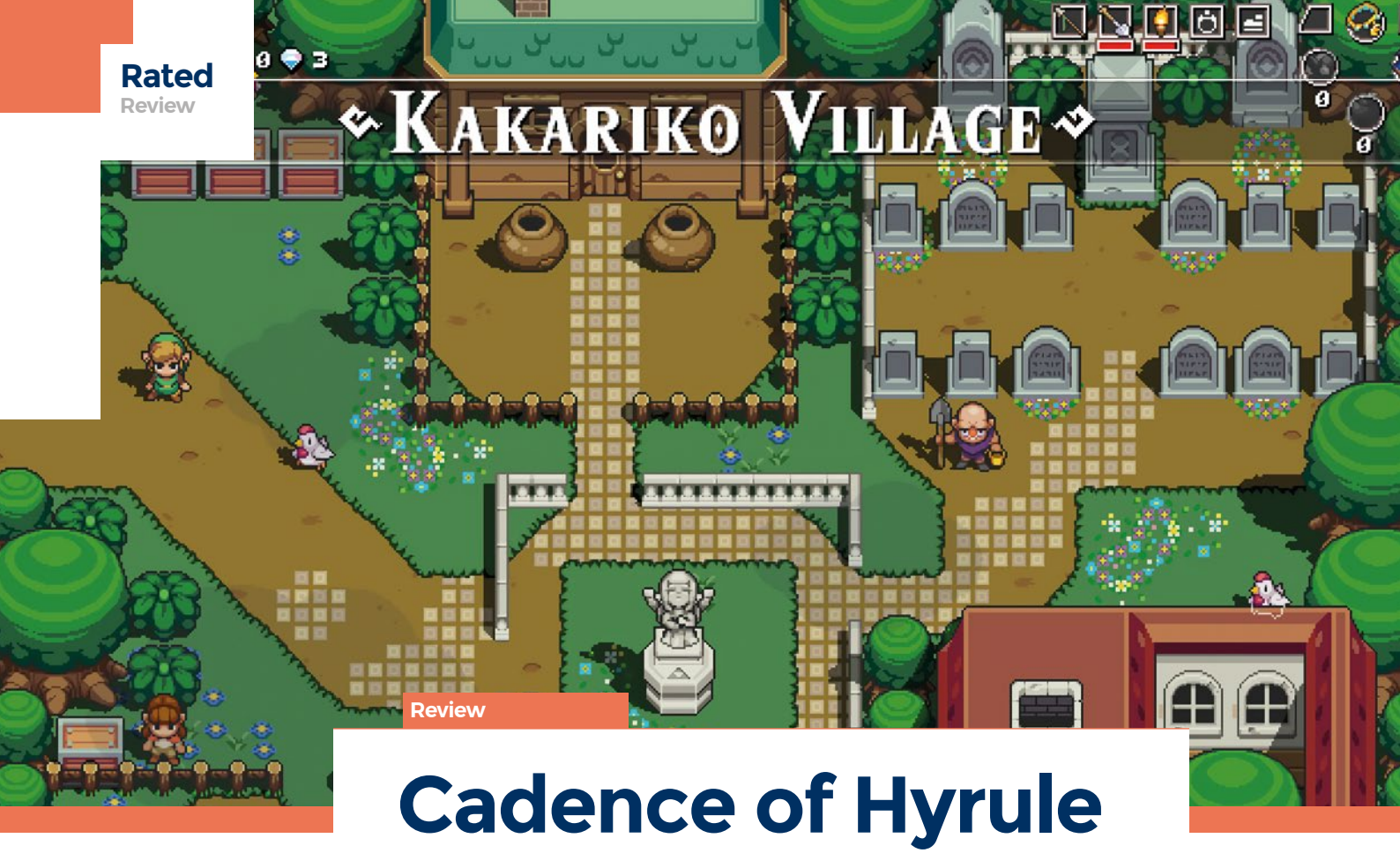
RELEASE
Out now

REVIEWED BY
Dave Hurst

VERDICT

A surprising amount of merit, but difficult to recommend over just playing *Hotline Miami* again.

56%



Review

Cadence of Hyrule

A refreshing roguelike variation on a traditional Zelda theme

Info

GENRE
Rhythm / Adventure

FORMAT
Switch (tested)

DEVELOPER
Brace Yourself Games

PUBLISHER
Nintendo

PRICE
£22.49

RELEASE
13.06.2019

REVIEWED BY
Joe Parlock

A few years back, before the current battle royale craze, indie games were all about the roguelikes (or roguelites, if you're a purist who baulks at anything that doesn't have ASCII art). There was *The Binding of Isaac*, *Dungeons of Dredmor*, *Risk of Rain*, and a billion others, but it was always Brace Yourself Games' *Crypt of the NecroDancer* that stood out as being the pinnacle of the genre. A rhythm-based roguelike with a dizzying amount of weapons to master, enemies to learn, and characters to experiment with, on top of an incredible soundtrack by Danny Baranowsky (*The Binding of Isaac*, *Cave Story 3D*, *Super Meat Boy*), *NecroDancer* is still up there as one of the best roguelikes available.

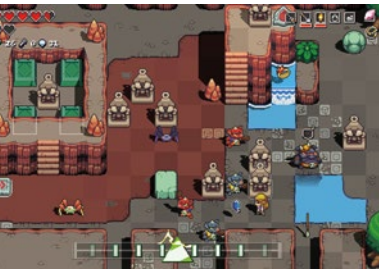
Nintendo, a publisher that has historically been pretty stingy with its IPs, seems to be lightening up on the Switch and giving third parties the license to use its famous IPs, with titles such as Ubisoft's *Mario + Rabbids Kingdom Battle* being the result. Fast forward to 2019, and suddenly we have *Cadence of Hyrule*, Brace Yourself's mash-up of *NecroDancer* and Nintendo's *The Legend of Zelda*.

It's more a spin-off than a true sequel. After being teleported into Hyrule, *NecroDancer*'s Cadence must team up with Link and Zelda to stop an emerging threat, save Hyrule, and figure out how to send Cadence back to her home world. It's all the same story *Zelda*'s been telling since 1986, but the addition of Cadence and rhythmic elements makes it feel that little bit more special.

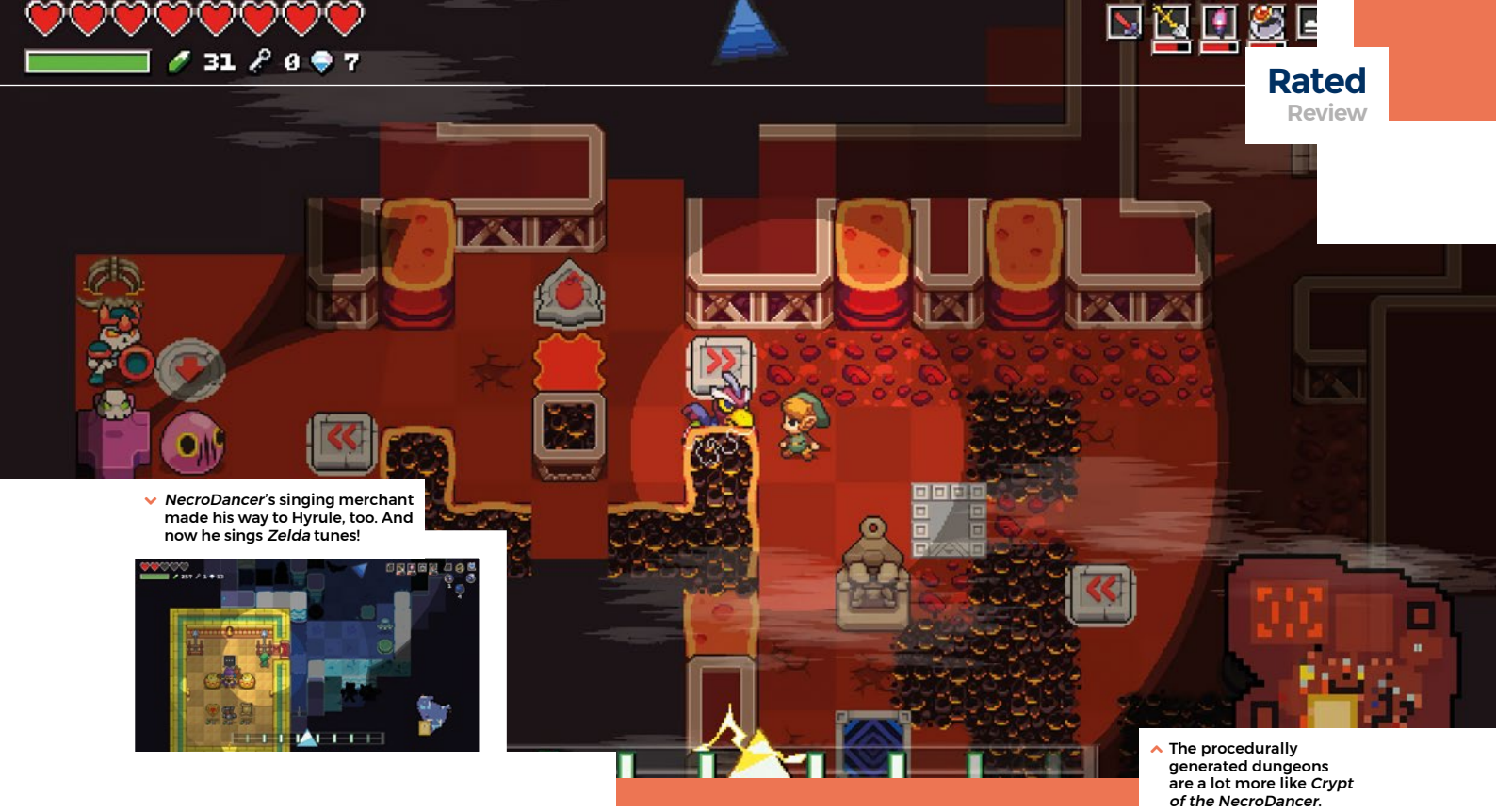
In true *NecroDancer* fashion, Hyrule has become a much more rhythmic and musical place, with everything from Octoroks to ReDeads now moving to the beat. Most screens are crowded with baddies, turning each screen into more of a puzzle that requires reading the surroundings and predicting the enemies more than grooving in and getting by on sheer luck.

The roguelike elements have been dialled way back, and map design is much more in line with 2D *Zelda* games like *A Link to the Past* and *A Link Between Worlds*. Hyrule is an open world littered with towns, dungeons, and fields of enemies that begs you to explore the land and find new equipment. The four temples themselves are more like *NecroDancer*, being procedurally generated and resetting upon death, which creates a nice sense of balance between *Zelda*'s adventure and exploration and *NecroDancer*'s efficiently rhythmic combat.

In a lot of ways, I'm jealous of anybody who hasn't spent an ungodly amount of time with *NecroDancer*. This new interpretation of Hyrule, its enemies, and long-standing *Zelda* mechanics is ingenious. Sure, the inventory screen is a bit



Each area is its own screen-wide puzzle that requires careful dancing to complete.



NecroDancer's singing merchant made his way to Hyrule, too. And now he sings *Zelda* tunes!

The procedurally generated dungeons are a lot more like *Crypt of the NecroDancer*.

wonky and the map can be difficult to read, but that doesn't matter: it's a new 2D *Zelda*, while also being something wholly new to the series at the same time. Hyrule's seldom looked this pretty, and thanks to being made by a third-party studio with an obvious passion for the source material, there are more Easter eggs here for eagle-eyed fans to spot than in the discount section of an Aldi on the day after Easter Monday.

For those coming from *NecroDancer*, though, it's a slightly different story. Even with all the Zeldaification going on, with the introduction of an open-ended map, environmental puzzles, a more involved inventory system, and a plethora of side-content, it sometimes feels too similar and safe. Many of the enemies are simply *Zelda*-themed reskins of *NecroDancer* staples: skeletons are now Bokoblins, bats are Keese, mushrooms are Puffstools, Shove Monsters are Stalfos Gel, and so on. Even the final boss is eerily like the NecroDancer himself. Weapons are also almost identical to *NecroDancer*'s. Some are breakable, some have a longer reach, some hit multiple spaces at once – it all feels a bit samey. The pool of potential weapons itself is much smaller, too.

"In true *NecroDancer* fashion, Hyrule has become a more rhythmic and musical place"

This isn't to say *Cadence of Hyrule* is bad if you're a *NecroDancer* fan and good if you're a *Zelda* fan. Far from it. The game's overall flow is very different from its parents, and it's a wonderful game regardless of your prior experiences. It just feels like that wonder of discovery that is so central to both *Zelda* and *NecroDancer* is hampered by having too much prior knowledge. There isn't as much excitement in finding a new weapon or spying a new enemy when 30 seconds later you realise they're just facsimiles of things you've been handling for dozens of hours in a different game.

Regardless, the massive overhaul that comes with going from a strictly dungeon-crawling structure to the open-ended one of *Zelda* does bring some new excitement for *NecroDancer* players. Towns are a breath of fresh air, full of shops to trawl through, NPCs to chat with, minigames to play, and puzzles to solve. Returning to the game after the credits roll to check out what you missed is also nice, as the game features a hefty amount left untouched if you just barrel through the main story.

When a game's main problem is "it's too similar to *Crypt of the NecroDancer*, the best roguelike since *Rogue* itself and devourer of almost 200 hours of my life," you know that game is fantastic, and *Cadence of Hyrule* is certainly that. The sense of déjà vu gives way to a colourful, exciting, and fresh take on a much-loved Nintendo staple that those who've never played a *Zelda* game, or those who let *Crypt of the NecroDancer* slip by, can enjoy. It also shows that Nintendo slacking its iron grip on its properties and letting other, creative studios take the helm can produce some absolute corkers. This is yet another example of the creative powerhouse the Switch can be.

HIGHLIGHT

It's a rhythm game at heart, so the soundtrack had to be good, but *Cadence*'s remixes of classic *Zelda* are wonderful. Whether it's the iconic Hyrule Field theme or the Gerudo Village, *Cadence* pulls together musical motifs from right across the *Zelda* series and gives them the beat-heavy, earworm-y revamp they deserve. It's Danny Baranowsky composing, though, so something great was to be expected.

VERDICT

Some areas feel too similar to *NecroDancer*, but *Cadence* still offers a vibrant new look for *Zelda*.

82%

Review

Draugen

It's red herring season, and they're out in force

Info

GENRE
Adventure

FORMAT
PC (tested)

DEVELOPER
Red Thread Games

PUBLISHER
Red Thread Games

PRICE
£16.99

RELEASE
Out now

REVIEWED BY
Andreas Inderwildi

HIGHLIGHT

Even the story's terrible resolution doesn't completely undo Lissie's charm. Voice actor Skye Deva Bennett conveys not only teenage cheekiness but also a deep empathy that Edward so sorely lacks. Lissie plays a much-needed counterpart to Edward's obsessively intellectual temperament, and their back-and-forth makes the game come to life.

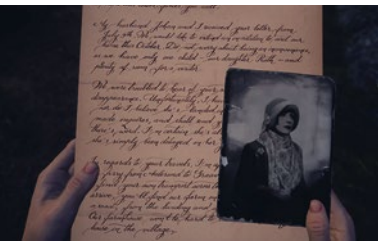
As far as first impressions go, *Draugen* knows what it's doing. It's the early 1920s, and we arrive at the remote, tiny Norwegian village of Graavik by rowing boat. Our middle-aged protagonist Edward (aka 'Teddy Bear' or 'Old Bean') made the journey from Boston to Scandinavia in search of his disappeared sister Betty, a journalist who, for an unknown reason, was on her way to Graavik the last time Edward heard from her. With him in the boat is his ward Alice, or Lissie, an imaginative 17-year-old girl with lots of attitude who delights in coming up with all manner of fanciful nicknames for our protagonist (see above).

In many ways, Graavik and its surrounding landscape is the third major character of the game. Nestled against the mountains and the cold shores of the fjord, it makes a big impression despite its humble size. It's gorgeous and eerie all at once; its entire population seems to have vanished from the face of the earth, and its picturesque huts and homesteads with old-timey charm lie abandoned in the middle of breathtaking but cold natural beauty. Avalanches rumble on the summits of distant mountains while the ghostly silhouette of a Nordic church peeks through the mist atop the precipice overlooking the harbour.

Here, we begin our search for Betty, and an investigation into what happened to the villagers. Most of the village is open for exploration, but our progression through the story is entirely linear. We find letters and other documents that hint at a bigger story; there's talk about lost Viking treasure, a terrible murder, a curse, and the draugen, an undead creature from Scandinavian folklore. Throughout all of this, we converse with Lissie via a very simple dialogue system that's less about influencing the way the story plays out and more about illuminating Edward's thoughts and inner life. Next to Lissie, however, he appears downright dull (he is, in Lissie's words, "such a pill". She's not wrong). Her wild speculations about what might have happened and irreverent yet

A lot of time is spent looking at Lissie's face, so it's a good thing her expressions come across as human and genuinely sympathetic.

Draugen features many documents and hand-written notes, convincingly suggesting a bygone era and a different world.



Draugen works magic with lighting, colours, and weather. We see Graavik by day and by night, in sunshine, mist, and rain, each with its own charm.

Draugen can be creepy on occasion, but it never crosses the line from eeriness into horror.

empathetic character are consistently delightful. When she isn't quipping or poking fun at the Old Bean for his tiresomeness, she's dancing around, practising handstands, or climbing trees.

Sadly, *Draugen* is a mystery game, and the thing with mysteries is that an unsatisfying resolution can retroactively spoil even the most enjoyable experience. *Draugen* seems to be aware of the problem and circumnavigates the danger of a bad resolution by deciding to have no resolution at all. By this, I don't mean that it ends with a pleasurable kind of ambiguity that allows us to speculate (Lissie-style) or come to our own conclusions. For that to work, there'd need to be a foundation of tantalising and meaningful clues to work with.

"It avoids the danger of a bad resolution by having none at all"

Draugen takes that away by revealing to us that all the clues or "breadcrumbs" (as Edward calls them) we've been following for several hours are essentially nothing but red herrings on top of more red herrings. Its narrative twists don't intrigue, but simply reveal the artifice and meaninglessness of the mystery. A good twist in a mystery story is like having the rug pulled from under our feet, only to discover a previously hidden trap door that opens entirely new avenues of intrigue. In *Draugen*, there's simply nothing beneath the intricately patterned rug but naked floorboards. It was pleasant to look at and was doing its job just fine, so why take it away? It's a rug better left unpulled.

It seems oddly proud of this blunder. In one especially awkward example, Edward rebukes Lissie by saying: "This is real life, not a whodunit by Agatha Christie. There won't be a convenient series of clues leading to a tidy resolution." It feels like the makers are winking at us, but they don't seem to understand that there's a giant gulf between having no "tidy resolution" and essentially burning the whole house of cards to the ground. *Draugen* willfully takes away every single reason why we'd care about the events of the game in the first place, and as a result, feels like a mockery of our investment of time and intellectual energy. And if the game doesn't take its own mystery seriously, who could expect players to?

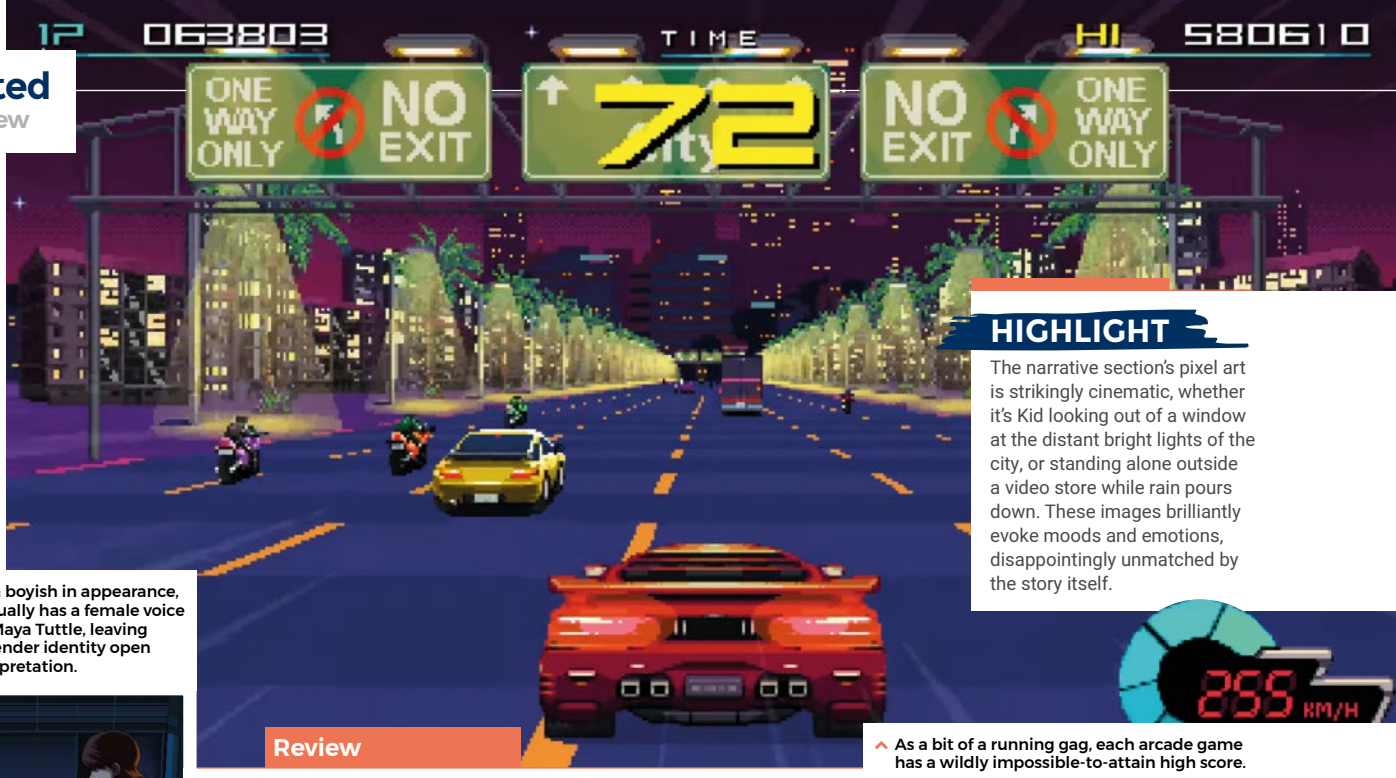
It's impossible to convey just how egregious a misstep *Draugen* commits without spoiling the end of the game. The intriguing premise, the wonderful setting, the entertaining writing, the haunting soundtrack; all of it is squashed beyond recognition by what is the narrative equivalent of witnessing a car smash head-on into a concrete wall in slow motion. The only question I was left with in the end wasn't about some intriguing aspect of its story, but simply: "Was that it?" Alas, it was. I was desperate enough to play it a second time, not because of a lingering fascination with its mystery, but simply because I was convinced I must have missed something. But I hadn't. There are no subtle revelations one could miss, no alternate endings, no new game plus, no post-credits twist. All we get is a dubious assurance: "Edward and Alice will return." Tantalising as that might be in many other situations, to be honest, maybe it's better for them to stay lost in the fjords.

VERDICT

A gorgeous mystery game, tragically crippled by a baffling refusal to engage with its own mystery.

45%

Lissie is much more than comic relief, but her irreverence and liveliness make what might otherwise be a drab experience enjoyable and engaging.

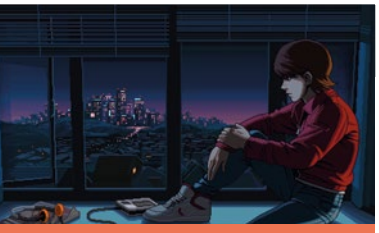


Though boyish in appearance, Kid actually has a female voice actor, Maya Tuttle, leaving their gender identity open to interpretation.

As a bit of a running gag, each arcade game has a wildly impossible-to-attain high score.

HIGHLIGHT

The narrative section's pixel art is strikingly cinematic, whether it's Kid looking out of a window at the distant bright lights of the city, or standing alone outside a video store while rain pours down. These images brilliantly evoke moods and emotions, disappointingly unmatched by the story itself.



Review

198X

Not so much rose-tinted but washed-out nostalgia

At first glance, *198X* seems like a retro games collection comfortably fitting in with the many throwback compilation packages publishers push on us in an ever-increasing fashion. However, its five games are essentially minigames, each paying homage to classic arcade genres and serving as little more than a vehicle for an emotional coming-of-age story.

There is, however, something more rose-tinted about this nostalgia than usual. While intended as a celebration of the golden age of arcade games – so, the late 1970s to mid-1980s – *198X* more or less skips the 8-bit pixels and vectors of the era altogether, and opts instead for a far more (over) polished look. The first fictional game you'll play is *Beating Heart*, a tribute to 1989's *Final Fight*, although legendary composer Yuzo Koshiro's contribution to the soundtrack will have you thinking of 1991's *Streets of Rage*.

And while the second and third entries emulate 1980s shoot-'em-ups and driving games like *Gradius* and *Out Run*, the pixel count, generous palette, and animations on display still feel more reflective of what games from the early 1990s were pushing out in the visuals department.

The inconsistencies continue when you get to ninja platformer *Shadowplay*, which feels far more like the endless runners first introduced on smartphones, and the arcade pretext is seemingly ditched altogether with *Kill Screen*, clearly based on dungeon-crawling CRPGs like *Wizardry*. In other words, Hi-Bit Studios' depiction of the gaming arcade of the 1980s takes some wild creative licence.

Granted, *198X* merely wants to capture the spirit of the arcade era rather than provide a history lesson. Besides, it's not like *Shenmue* fans had qualms about the sight of Sonic gachapon figurines in 1980s Japan. But where Yu Suzuki's opus captured a specific time and place, *198X* suffers from an utter lack of specificity elsewhere. Never mind the X in the year; the teenage protagonist is called Kid, while the setting is a sleepy suburban town called, wait for it, Suburbia.

Apart from sharing the odd visual motif, such as how both the beat-'em-up's player character and Kid sport red clothing, the link between mechanics and narrative is as tenuous as the myth that gamers are society's real outcasts and rebels. Mastering the patterns of a shoot-'em-up might tell you something about the way old arcade games were designed to relieve players of their coins, but it doesn't provide any insight into Kid's character or conflicts. They're simplistic and repetitive bursts of gaming which punctuate extended cutscenes, where Kid doles out clichés of how the world doesn't understand them.

Perhaps that's still to come. As it turns out, this is merely the first instalment of what's meant to be an 'arcade epic'. However, if the first part has already skipped the early golden age period in favour of later and more visually pleasing homages, what else is left? Unless the next one is called, say, *199X*.

Info

GENRE
Arcade nostalgia

FORMAT
PC (tested) / PS4 / Switch / XBO

DEVELOPER
Hi-Bit Studios

PUBLISHER
Hi-Bit Studios

PRICE
£8.99

RELEASE
Out now (PC)

REVIEWED BY
Alan Wen

VERDICT

***198X* offers warm, fuzzy nostalgia (and a fuzzy history) but it's a short-lived exercise in style over substance.**

54%

Visible war

Still slinking through the cyber-shadows in Deus Ex: Mankind Divided

Strange to think that as recently as 2016, 'collusion' was a dirty word. Of course these days it's just code for 'good at his job', or 'very, very honest' – but *Deus Ex: Mankind Divided* stuck doggedly to the old-fashioned reading of the word, linking it to other phrases like 'conspiracy'. Yes, the world is run by shadowy figures, the 'mechanical apartheid' (sigh) has been completely manufactured, and Adam 'I didn't ask for this' Jensen is back to unravel it all by either shooting everyone in the face, or not.

I originally picked up *Mankind Divided* at launch all the way back in 2016, being a massive fan of the series – to the extent I even defended *Invisible War*, at least until I *woke up*. It seemed to be more of what I wanted: smart design, intelligent worldbuilding, mechanics suitable for some serious mucking about. That very *Deus Ex*-y feel the team at Eidos Montréal nailed in 2011's *Deus Ex* reboot, *Human Revolution*. Even with all that working in its favour, though, I gave up. I moved on. I promised I'd return, but at that moment in time, I just wasn't feeling it. I was, simply put, bored by this particular dystopian vision.

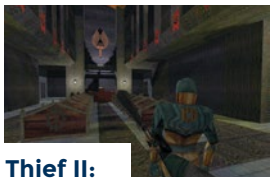
Fast forward three years – and a lot of 'Oh, I should pick that up again' thoughts – and *Mankind Divided* was loaded up, with shiny new PS4 Pro HDR effects in play. Turned out I did just need a quick three-year break, as I am now in the thrall of this magnificent little (big) game, and once again, all of my desires to hide behind boxes in the future are being fulfilled, with gusto.

See, *Deus Ex* lets you play how you like – obviously within the confines of the game engine, logic, and so on – so it's a game in which I am free to hide for *absolutely ages* while I panic about what to do next. So good am I at hiding in *Deus Ex* games that I can get through the vast majority of them all without ever being seen, even if it does take me approximately 27 minutes to make my way through one small room with a single enemy in it. It's a slow-burn catharsis, and *Mankind Divided* is proving to me I was absolutely right to go back and give it another chance.

> **"Once again, all of my desires to hide behind boxes in the future are being fulfilled, with gusto"**

The series is in something of a limbo right now; an expensive production that reviewed well and sold a lot, but didn't end up in the hands of enough people to make its large budget worthwhile. So it hangs there on the vine, slowly withering not as a result of corporate subterfuge but because of very visible, very open capitalism. Seems that whether it's in the open or cloak and dagger, the system always finds a way to work against you. I'm hopeful of another *Deus Ex* return in the future, but right now, I've rediscovered what's turned out to be a really great game. And to think, I didn't even ask for this.

Wireframe Recommends



Thief II: The Metal Age
PC
A stealthier sequel to the fantastic original, *Thief II* ratcheted up the sneaking and as a result proved – arguably, of course – the best in the series.

The Chronicles of Riddick: Escape from Butcher Bay
XBOX / PC
Starbreeze's original blew preconceived movie-game notions out of the water, as well as making for a thrilling, inventive, *physical* take on the first-person stealth genre.

Deus Ex: Human Revolution
PC / PS3 / X360 / WII U / MAC
Alright, so you didn't ask for this but neither did Adam Jensen. *Human Revolution* was – and is – a fantastic game. Tight, atmospheric, and surprisingly bold.

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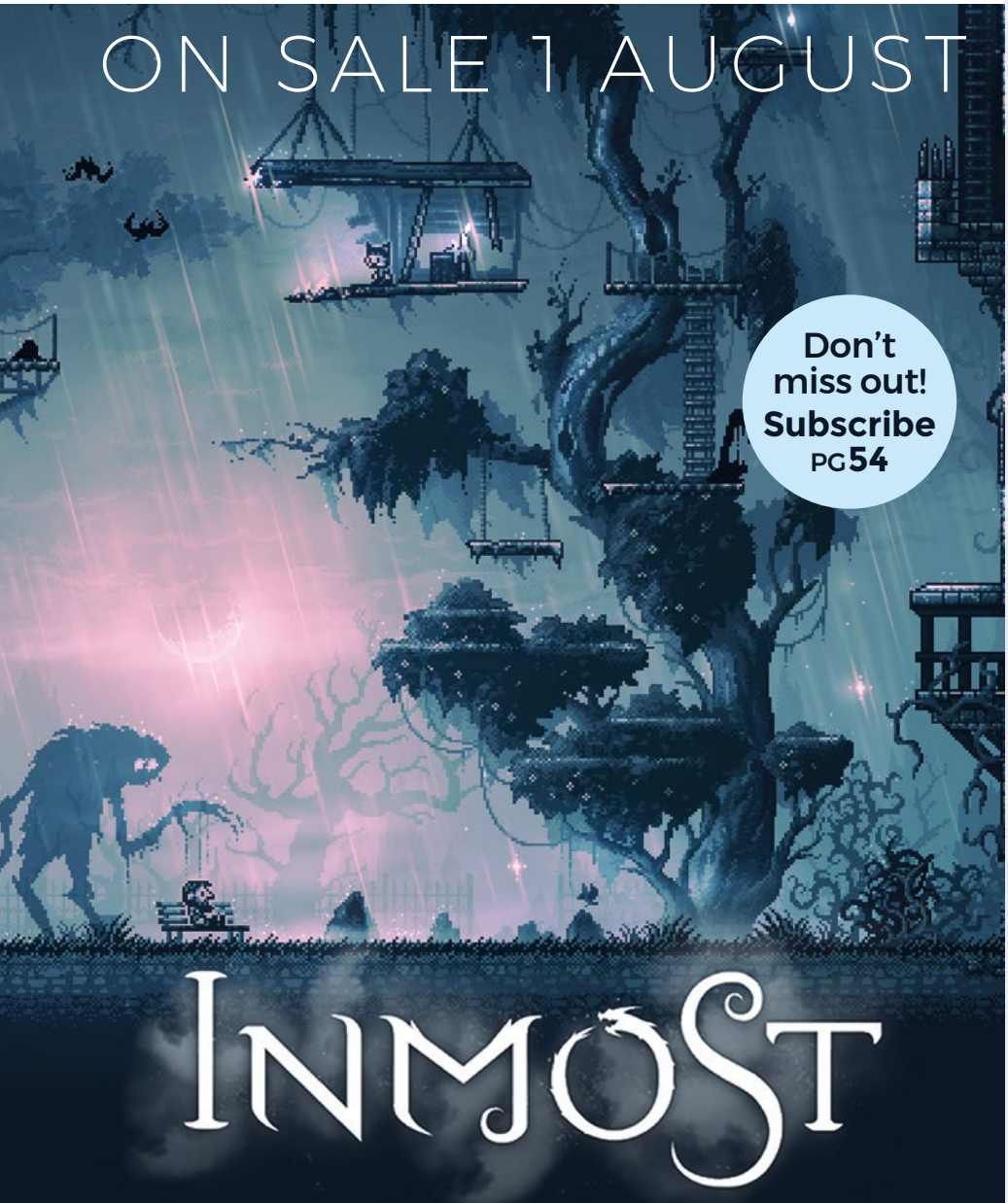

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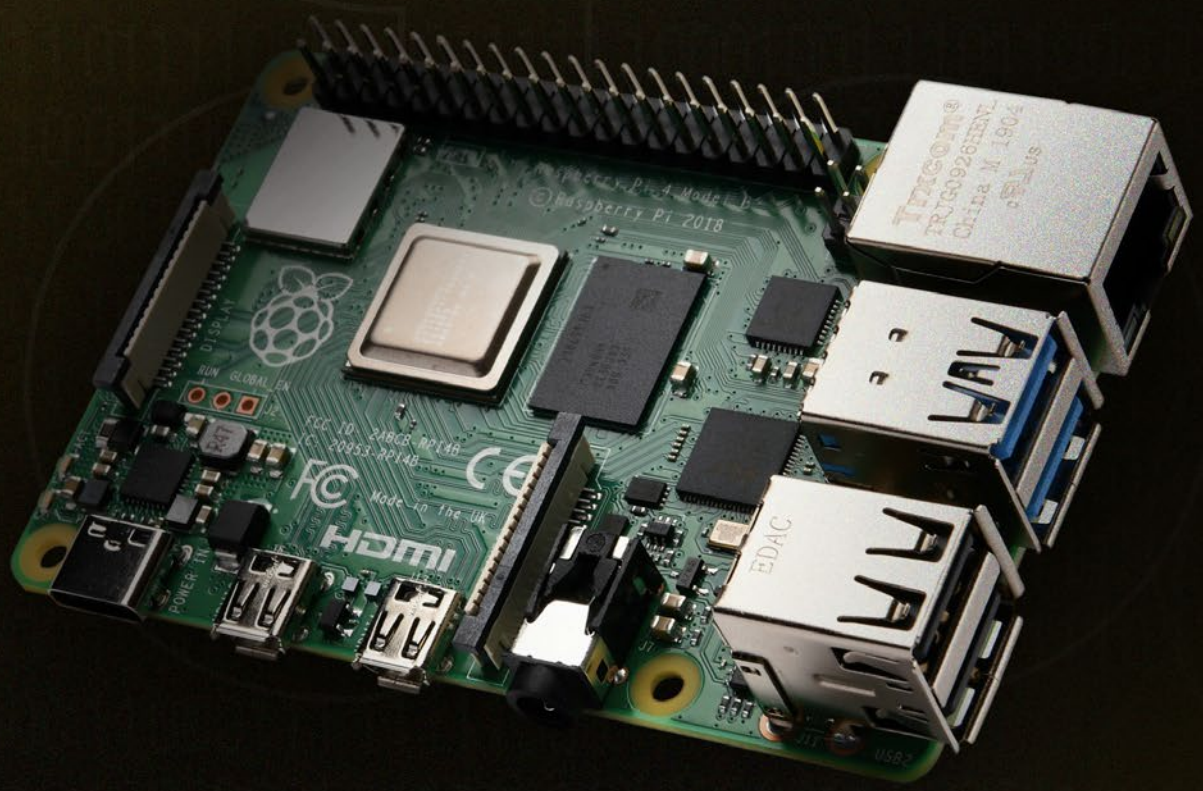

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