

ALL FORMATS
116 PAGES MONTHLY

Wireframe

LIFTING THE LID ON VIDEO GAMES

CLASSIC CABINETS

20 games that must be played as coin-ops

RAINBOW ISLANDS

Make your own retro platformer in Python

BATTERED JOYSTICKS

The trials of running a modern arcade

Issue 57 £6
wfmag.cc



OXENFREE II

LOST SIGNALS

Night School Studio talk exclusively about
2022's most anticipated indie sequel





G-MASTER™

MONITORS 4 GAMERS

by **iiyama**

UNLEASH YOUR FULL GAMING POTENTIAL



AMD
FreeSync
Premium

Get the competitive edge you need to unleash your full gaming potential with the 24" and 27" G-Masters offering 0.8ms MPRT and 165Hz refresh rate. Armed with FreeSync Premium you can make split second decisions and forget about ghosting effects or smearing issues. The ability to adjust brightness and the dark shades with the Black Tuner delivers greater viewing performance in shadowed areas and the IPS panel technology guarantees superb image quality.



Fixed stand versions:
24" G2470HSU-B1 & 27" G2770HSU-B1
Version with height adjustment:
24" GB2470HSU-B1 & 27" GB2770HSU-B1



Find your match at
gmaster.iiyama.com

Voice acting? For crying out loud

I am midwife to a global pandemic. I'm the mother of a monster. It's a pandemic that has infected all 3.2 billion gamers on the planet. A monster that has devoured £125 billion of our cash this year. A demon that corrupts and degrades the very language we speak, replacing it with grunts, barks, piffle, and banality. I'm talking about voice acting in games, and I was the idiot who did it first. I do not seek your forgiveness, but it's the season of goodwill, so let me tell you how it happened.

Sometime in the 1960s, Cilla Black inspired me to make a computer beep *I Can Sing A Rainbow* in sync to coloured lights. I was on a student grant at the time, which is all you need to know. In 1977, I started to inject recordings of my own voice to liven up broadcasts of gaming code over local radio. I was sponsored by Whitbread brewery, which is all you need to know. Then I decided to produce an interactive movie for computers: *Deus Ex Machina*. Obviously, to make movies I needed professional voices.

So I hired my voices, including TV's top comedian, the godfather of punk, and the bloke who played Doctor Who. They may have been the best voices in the land, but they were only hired labourers. No more. No less. I looked them up in the phone book, knocked on their doors, handed them a script, and bribed them to rock up to the studio and record their parts. It was all very simple. Back then, 40 years ago, the pandemic only infected a few thousand victims. Today it has infected the world. Every plague starts with patient zero, and patient zero of the gaming voice-plague was me.

Gradually, the rest of the industry began to catch up. When pixelated Nazis appeared in 1981's *Castle Wolfenstein*, they'd yell something approximating to Achtung! Years later, games like *Perfect Dark* were stuffed with unimaginative variations on the theme of Achtung! By contrast, I gave my original cast a bit of oratory and some dirty jokes. Which brings us to today,



MEL CROUCHER

Mel Croucher is a British writer, musician, and video game pioneer. His games include *Pimania*, *My Name Is Uncle Groucho*, *You Win A Fat Cigar*, and the classic *Deus Ex Machina*. melcroucher.net

where the mainstream games industry is bloated and formulaic, with only a few indies and homebrews to subvert the norm. Voice artists have become intrinsic to the formula, and their sense of importance is risible, with leading studios doing what I did: offering celebrities too much money for too little work in the hope that celebrity lends kudos to their hackneyed productions.

If Mark Hamill can earn \$3 million for lending his voice to video games, then that's fine by me. Feel the farce, Luke. If Samuel L Jackson trousers a million for a performance in *GTA: San Andreas*, then he's the daddy, and it's Rockstar Games that are the schmucks. My favourite is Stephen Merchant as Wheatley, the robot in *Portal 2*. He got the going rate for 16 hours' work on that, and complains: "I found the whole thing exhausting, more than anything I've ever done before, pretending to fall off things". Stephen, duckie, that's what actors are supposed to do. Act.

The average rate for a pro voice doing a half-day recording session is around £600, and that's a great payoff compared to a healthcare worker, or the author of this item. Plus you can turn up at a gaming convention, sign some exposed flesh, pocket the cash, and drink as much beer as you like. But it wasn't good enough to stop the biggest actors union going on strike for eleven months, accusing publishers of torture on a Guantanamo scale. Jen Taylor, the voice of Cortana in *Halo*, testified: "Video games are exhausting. Many games even have the same actor in more than one role!" Blimey, whatever next! Ray Rodriguez was their negotiator, complaining that actors are forced to "bark orders, scream out in agony, or shout during the game".

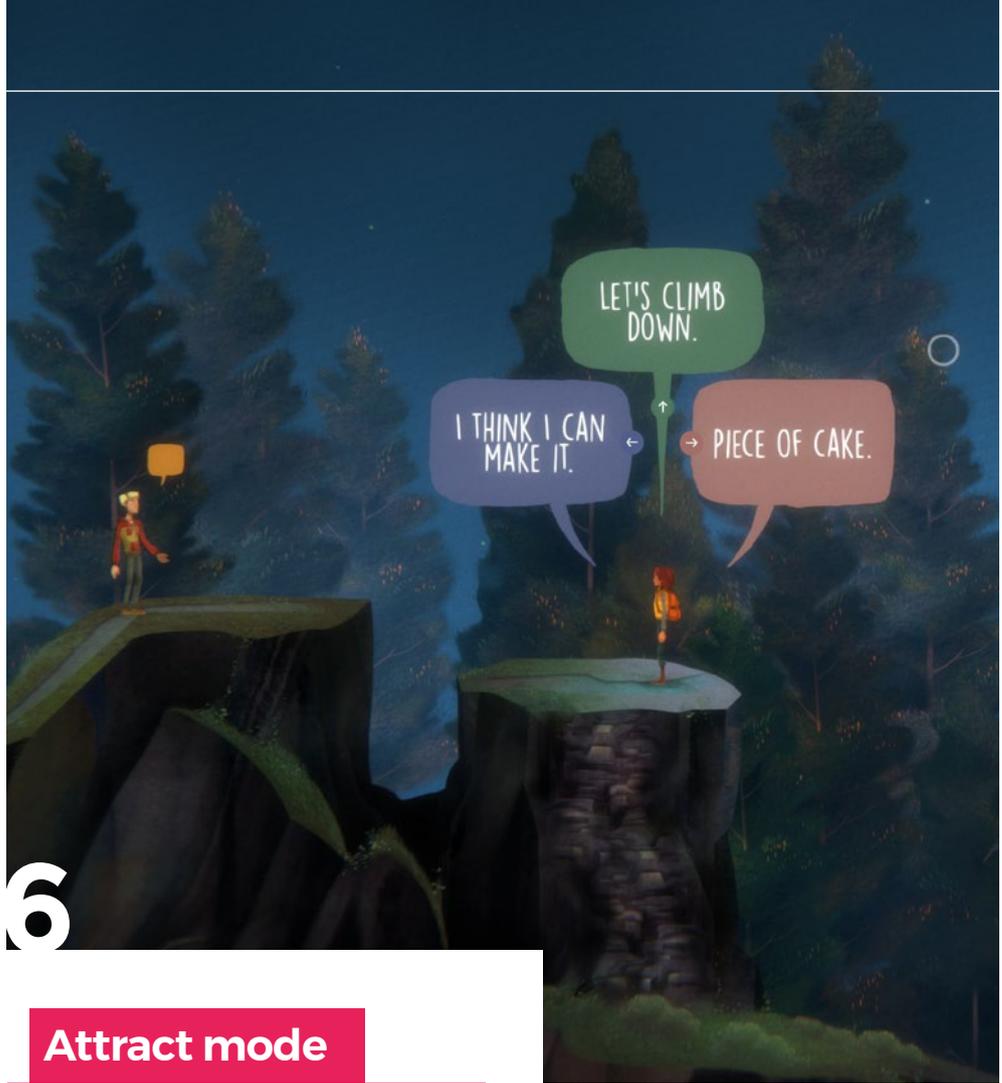
Games publishers caved in to this nonsense, even though most voice actors can now record while sitting on the toilet at home. I agree that a lot of gaming voice acting involves Neanderthal grunts, screams, and barks. But it's money for old rope. Of course it is. So, my dear voice actors, take the money and shut up. 🗣️

#57



Contents

6



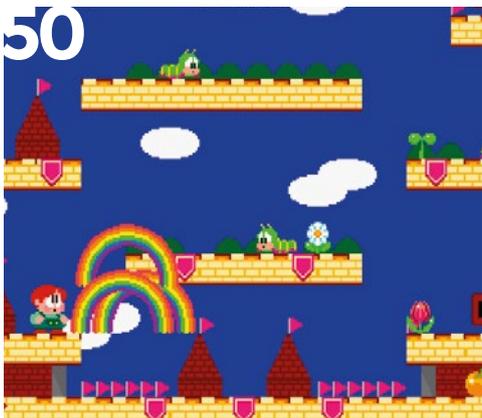
Attract mode

- 06. OXENFREE II: Lost Signals**
Night School Studio on its return to Camena
- 12. Silt**
This upcoming explore-'em-up looks like Limbo under water
- 16. Octo-Ninja Hachimaru**
The anime-inspired action-platformer with a British edge
- 18. Backbeat**
The word on the street is that this is a rhythm-based puzzler
- 20. News**
Another wry glance at the month's video game happenings
- 24. Letters**
A rummage through this month's Wireframe mailbag
- 26. Incoming**
Our pick of the most promising games looming on the horizon

Interface

- 28. Extra life**
The highs and lows of running an arcade in the 21st century
- 34. Kim Justice**
In-person game expos are back – albeit with fewer visitors...
- 38. Coin-op classics**
Our list of games that just have to be played in an arcade
- 70. Blazing saddles**
Exploring the under-representation of black cowboys in games
- 82. Super Sonic**
The fans who've kept Sonic the Hedgehog's fire burning
- 88. Steve McNeil**
More thoughts from Britain's foremost gaming personality





Toolbox

- 48. CityCraft**
How to design a town to rival The Witcher 3's Novigrad
- 50. Rainbow Islands**
Make a complete platform game with our in-depth guide
- 58. Kickstarter success**
The essential tips you'll need to get your video game funded
- 66. Source Code**
Program a new take on Lords of Midnight's landscape engine

Rated

- 90. Sable**
An elegantly minimalist exploration sandbox
- 92. SkateBIRD**
This Tony Hawk homage doesn't quite take flight
- 98. Metroid Dread**
Samus Aran engages in a deadly game of hide-and-seek
- 104. Backwards compatible**
A Game Boy refurb, a DOOM mod, and more retro stuff

WELCOME

It's easy to get a little too nostalgic when thinking back to the golden age of arcades. In reality, the coin-op era – assuming you're old enough to remember it – wasn't always particularly golden. If one genre yielded a hit, then arcades would suddenly be packed with almost identical clones of that game. And when arcade games weren't copying each other, they'd rinse players for every coin they had in their pockets: bosses capable of killing you with a single hit; tiny platforms designed to have you plummeting into a deadly chasm.

Every so often, though, amusement arcades would throw out something incredible. Few who were there at the time will forget the thrill of fighting alongside their friends (or a few friendly strangers) in *Gauntlet* or one of Konami's four-player brawlers. Or the sensation of being jostled around in one of Sega's 'body sensation' arcade machines, like *OutRun* or *After Burner*. Or leaping out of cover and shooting hatted villains in *Time Crisis*.

Arcades will never hold the sway over the games industry they once did, and that's probably a good thing, given how unoriginal and cheap they could often be. But coin-ops were about fleeting moments by design – the odd blast here, the occasional bout of fighting there. And it's those absolute high points we're celebrating in our features on pages 28 and 38. Taken as a whole, arcade games weren't always great. But occasionally, they'd create gaming moments you simply couldn't find anywhere else.

Enjoy the new issue!

Ryan Lambie
Editor







WONDER FULL

Teen angst is replaced by mid-30s crises
(and supernatural goings-on) in *Oxenfree II*



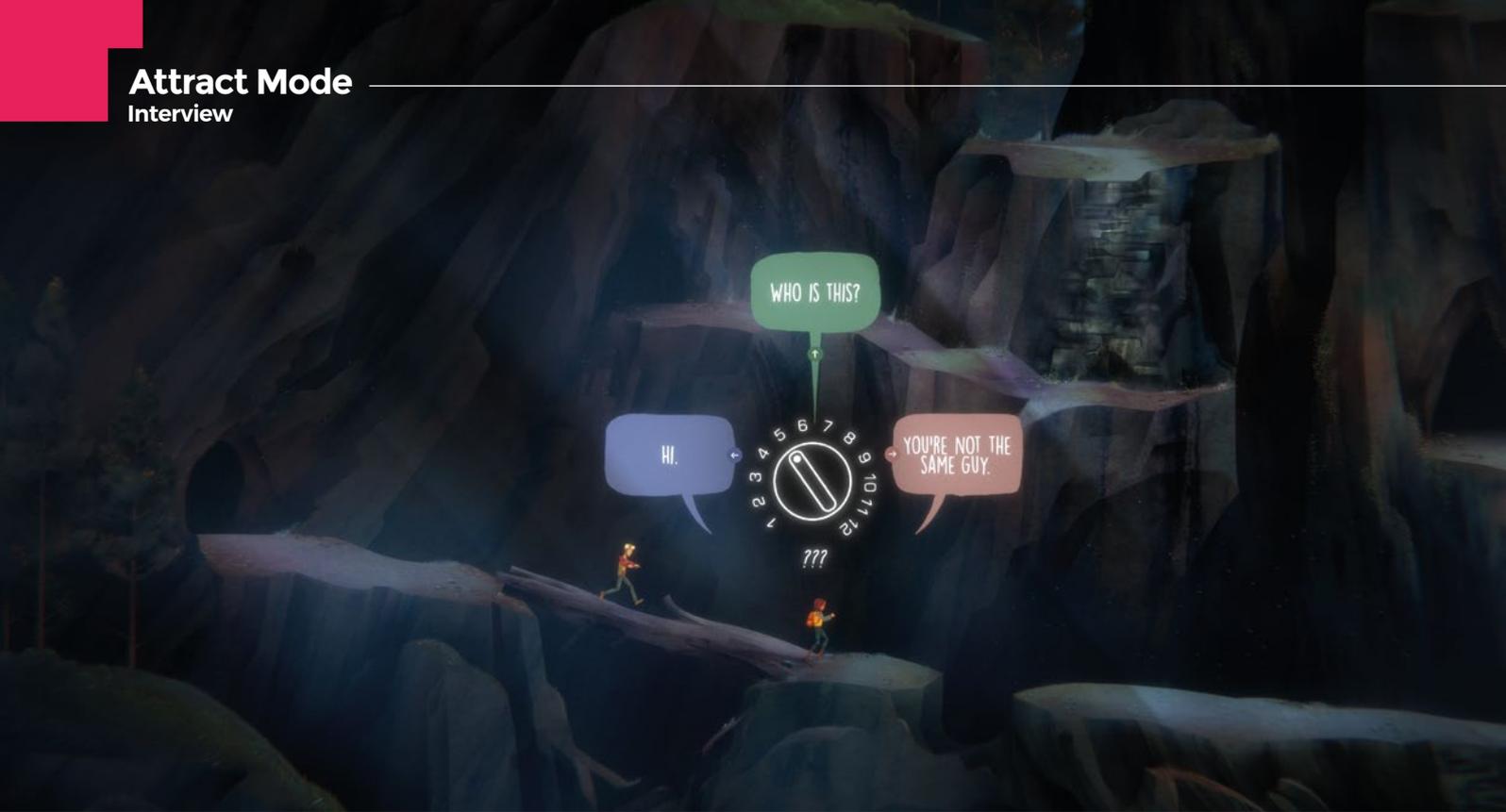
Oxenfree II builds on the foundations of the 2016 original, leading us to a world both familiar and very different. It's the same atmosphere – the same *vibe* – there's plenty of supernatural goings-on, you'll be chatting a lot (with wonderfully written dialogue), and the story itself picks up not too long after the events of the first game. This time around, players take on the role of new protagonist Riley, a 30-something who grew up in *Oxenfree II*'s setting, the town of Camena, before leaving to find her way in life. She's back for a job, returning to her roots and forced to confront not just the giant portal looming over the town, but also her past. Her life. Her hang-ups. Small-town ambience anyone from *that* sort of place knows well.

It's a fine thread to weave, mixing a near-universal nostalgia with a coming-

of-age tale featuring a cast largely aged 30-plus – *and on top of that* featuring a supernatural, existential threat. But there's a confidence in the air around *Oxenfree II*, the sort of thing that comes when a team like Night School Studio builds off the back of an incredible success like the first game in the series.

If almost anyone else came up pitching the idea of a woman reconnecting with her roots, encountering old friends, and chatting with strangers on walkie-talkies mixed with time portals... well, you'd at least have a *few* questions to ask. Not with *Oxenfree II*. It sounds great. And, well, there are still *some* questions.

Bewitched by the sense of wonder and wishing to find out more about the mysteries within *Oxenfree II*, we sat down for a chat with Sean Krankel, studio director at Night School Studio, and Adam Hines, the studio's lead writer. ➔



The original game was something of an indie darling, everybody seems to know of it – does that make for pressure in creating a sequel?

SK: It definitely does. And not just because it ended up being received so well. But because we really just adore that story and didn't want to return to it unless there was a reason to tell a new story in it. Which is why I think for us, it was important that we didn't just do a continuation of the last one. I think that when we looked through what made *Oxenfree* special – now that we have had some distance from it – I think it's mostly because it is a game that takes people that are going through a really important moment in their life, and it holds up a very strange, dark, surreal mirror to them, and forces them to reckon with a lot of coming-of-age events in a very short period of time in a very scary

and surreal way. [Doing a sequel with new characters] let us tell a brand new story with a lot of the same rule set from the first game, but without making it feel like we were making a *Scooby-Doo* adventure with a bunch of characters going and doing the same stuff again. So, in short, yeah, I think the pressure comes partially because we want to live up to what the fans of the first game would want from one of these games. But also because we want to tell a story worth telling. We didn't want to just put out *Oxenfree II* for the sake of doing it, and it took us a few years to find that story. But we're really happy with where we're headed.

You mentioned distance from the first game – how important has that been to the creation of the sequel?

SK: I think it's been vital, honestly, because we can look at the game and we can see it a little more similarly to how people who just bought it for the first time could see it. After you ship a game, I think you're so close to all of the flaws of it or the strange things that might stand out to you as being a little bit off, or you just notice all the individual parts. Sometimes it's hard to see the forest because you're looking at each tree. A few years going by helped us look at the game as a single experience, as opposed to a lot of different parts. Coming

back to a world that is many onion layers of mystery that a player can unravel, and just trying to scare the shit out of people again, all that stuff feels really fun to do.

AH: It's been nice to return to a game and play it now, and not just kind of see every perceived flaw and every little thing that we would have changed. When a piece of art [you've worked on] comes out, all you see is the stuff that you'd want to have more time to tinker with. But it's great to see it now with fresh eyes, and see it as it is.

I mentioned pressure before, but at the same time, there has to be more confidence this time around. Is that true?

SK: I don't know if we ever get a lot more confident... It's like a medium-tier of confidence in the studio. Everybody is always really proud of their co-workers, and impressed by their ability and contributions.

The general foundation of how we build our games is so much stronger than when we started; we didn't

have any of the toolset that could allow us to make this type of game. But I think the only additional confidence we had was that at least the rules of the game were already in our heads as we embarked on this one; we weren't inventing a whole new set of supernatural rules and worlds. Other than that, it feels just as scary to me.

“All of our influences come from that kind of Spielbergian mix”



^ Chatting, navigating, exploring, discovering, and sometimes being a bit scared: what *Oxenfree II* is all about.



▲ The moon-worshipping cult, Parentage, has actually been patched in to the original *Oxenfree* in a wonderful example of how committed Night School is to consistency in its narrative.

Oxenfree is a solid mix of heavy themes, sci-fi or creepy horror escapism, and a few bits of levity along the way – how important is a balance like that to a story like this?

AH: I don't think we would ever want to do a game or tell a story that's purely horror, or purely comedy. You have the drama, you have characters that really want to survive and want to get what they want in life, but they also have moments where you can scare the audience and make them laugh and make them cry and just have all the touches. All of our influences come from that kind of Spielbergian mix – a light touch of several different parts.

SK: With *Oxenfree* specifically, it is the most grounded game that we've made in the most grounded story; if ghost-y stuff wasn't showing up, you'd just be some people walking around the Pacific Northwest talking about life and the challenges that life throws at you.

Oxenfree II focuses on a looming, ever-present threat over the lives of normal people. I might be going off the deep end here, but do you think the Covid era, the Covid paranoia, or whatever you might want to call it, has factored into the writing and the setting?

AH: Good question. I mean, I feel like there's an answer: yes. Even if it's in a subconscious way, we've made the entirety of *Oxenfree II* without being in the same room. Working from home, the experience is such a 180-degree turn from [working in the office together], it's been a lot of just reminding ourselves to check in and reminding

ourselves to do as much social stuff as we can with each other away from work. But it's been much more regimented. Of course, with everything else that's going on in the world, with the political landscape and everything that's been surrounding that while we've been stuck at home, I'm sure all of it has filtered into probably every single aspect of this game. Just making the characters [older] means that they have a much more adult perspective on things, like we do. So that too has changed the tone of the game. But definitely that paranoia in the air and the fear of the unknown, not exactly being able to totally map out what the rest of your day will be like, never mind the rest of your weekend, month, and year, has absolutely impacted what we think is scary about this setting. And it's happening to these characters, too, definitely. ➔



▲ Rifts throughout *Camena* are a direct result of those darn teens from the original game.



THE NETFLIX QUESTION

Night School Studio recently announced it had been acquired by Netflix in the streaming giant's first real move into the world of gaming. *Oxenfree II* is nothing to do with the deal, and questioning about the topic was off-limits. Anyway, we asked about the deal and this is what Krankel told us: "Right now, it just means that we are able to keep doing what we do without the risk of – and fear of – going under, like every studio feels. It's been extraordinary for us finding this partnership with Netflix, because they look to us to just keep expanding on the types of stories and game experiences that we've built, and afford us the opportunity to experiment even more than we have. Anybody who's in any kind of smaller studio knows it's hard to really experiment and try new things and take big swings over and over again. We're going to have that opportunity now. It's pretty exciting. Other than that, there's no emphasis on what types of games we make, there's nothing written in stone about anything other than just 'Nice, cool, keep doing what you do'. And the Netflix team basically says, 'We just want to supercharge you'. That's it. It's pretty exciting."



FAMILY TIES

Krankel and Hines have worked together at Night School for almost a decade, but their relationship is slightly closer than just workmates: the two are cousins, with a relationship developing well over 30 years. "It's odd in that Adam and I were talking about this the other day," Krankel says, "We [haven't yet had] any sort of supreme blowout or friction in a way that is detrimental to our own personal relationship or the studio or anything else. We've only been kind of, 'yes-ing and no-ing' each other for seven years now with this thing. It's working really well."

"It really hasn't been tricky at all," Hines adds. "We're just really in sync with our goals for the studio. It's always nice that Sean says we complement each other with our tastes, so no one's ever really completely taking over. So yeah, it's been really great."

Mentioning the move to an adult cast, how much does that actually change things? What does such a move bring to the overall experience?

AH: The first game – in a good way – myopically focused on that particular point of their lives, along with the individual problems that they're going through. And in that same way, Riley, not to spoil things, but she's going through a major life event. We calibrated her view on what her life *should* be now, and she's really trying to make sense [of things], correcting some past mistakes, and setting the groundwork for a more successful future for herself...

Having that nostalgic air that *Oxenfree* had, but having them as adults in their mid-30s [with] some past behind them just allows us to touch on way more adult themes and adult topics, and just have them be in a much more mature place than [before], which of course colours every conversation and every interaction that you have.

SK: Putting the game in Camera – the hometown of the characters from the first game – and having this be Riley returning to her hometown and [her old high school friend] Jacob being somebody who never left the hometown, it affords us the opportunity to keep it small and personal and reflect on those small-town aspects that do feel like that there's kind

of a built-in nostalgia there. I don't know that there would be a good *Oxenfree* game that, say, goes to Tokyo. Adventures with ghosts in Tokyo. I think this setting is so much of what makes the game work – not just being the mood that it induces or the art style, but also what it represents. What is a small town to a small group of people? We maintained a lot of the general feel and that warmth from the first game, but we're not approaching it as a bunch of 16-year-olds now.

'Wonder' is a word that you see bandied around for the original game, and I assume it's here in the sequel. But how do you create 'wonder'?

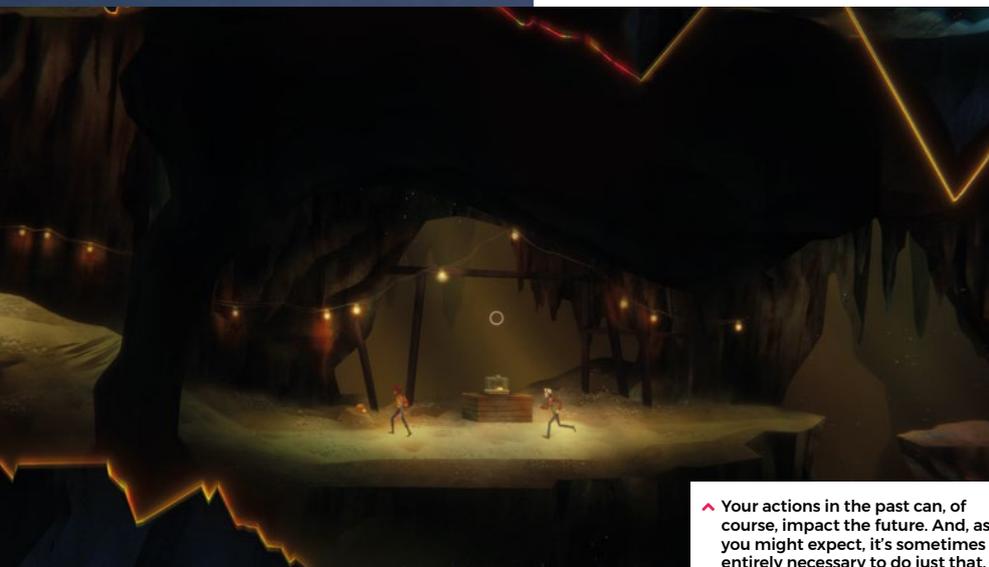
SK: That is an amazing... I think that's maybe the best question of all time. 'What is the meaning of life?' 'How do you create?'

Oh, that's my next question...

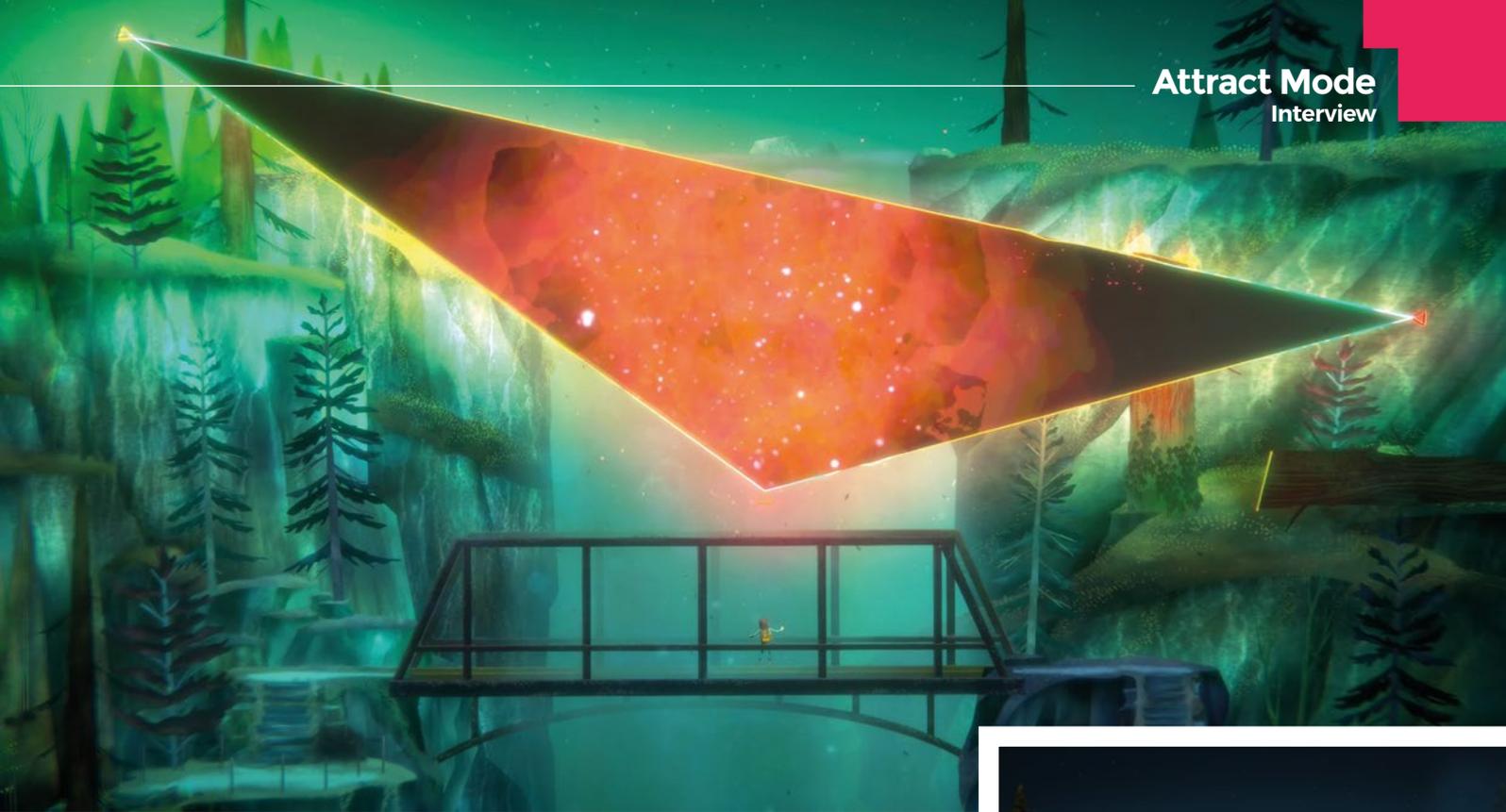
AH: I can take a stab at it. It's definitely every discipline working in sync and harmony. It definitely starts with the general visuals and wanting the characters to feel pretty small. And those environments and if you were to sit in on any of our scene reviews, it's like, 'Pull the camera back, pull the camera back', because that became such a nice defining trait of *Oxenfree*. It was such a pillar of that feeling of wonder: I am just a speck in this world, trying to fight back against the current of the storm. Having those characters be in these very lush environments is one big aspect. [Our soundtrack] is another massive component of that, the score and the sound effects and the sound design and how all of that works in sync... It's really *every* discipline trying to combine to make this one singular feeling that's playing the game.

How has the day-to-day production changed from the first game?

SK: Being remote sucks. We've made the most of it; I think we've fooled ourselves into thinking that we're accustomed to it now and that it's fine. But we actually had a couple of team get-togethers recently, and the electricity of when the team is back together is so different to speaking through Zoom. So I think the biggest change has been just adapting to



▲ Your actions in the past can, of course, impact the future. And, as you might expect, it's sometimes entirely necessary to do just that.



remote work and trying to find ways to approximate in-person conversations and communication. This means there's more documentation – I think in the first game we just overheard each other a lot, and that was how decisions got made; they were done in person. But now everything is getting documented all the time. There's a lot more meetings that happen with a very clear intent, which I think is a big plus. With the first game, we meandered at times. But now the intentionality behind what a meeting looks like

and how we all interact means that the output needs to be actionable.

The other thing is that the team has gotten bigger. The core team of the first game was four, although we scaled up to about 15 by the end of the game. This one, I don't even know at this point, probably 20-plus different people have touched the game in some way, shape, or form. The upside there is that you're getting a lot more different fingerprints on the game to make it a more robust, yet diverse experience. The downside is that it's just hard to translate [everyone's] visions to each other.

Is there any advice you'd offer to other smaller indie teams?

SK: I think one of the few things we did really well out of the gate with the first game, that

we continue to try to do, is just find one special piece of the game and focus all of our efforts on that, instead of trying to have 15 features and do them all to a mediocre tier. We knew our internal strengths when we started the studio related to storytelling, to how we could direct talent, to having a really strong visual style, and we just said 'Let's lean into those things'. We're not going to do a server-side, multiplayer first-person shooter, or we're not going to add a bunch of features just because they seem cool

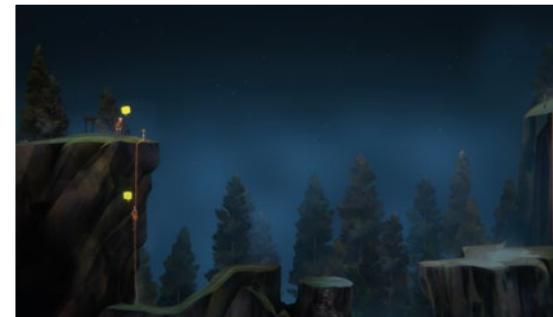
right now. We just wanted to do one thing and do it really well and be pretty unwavering with that. It's more than

enough work to just try and focus on doing one thing well. Just focus on doing one thing well and make sure it's one special thing. Don't try to come out and compete with everybody else, because the market is so overcrowded that you've got to have at least one thing that feels unique and special.

So, what are your hopes for the game when it's all done and out the door? Do you expect it to surpass the original?

SK: We don't expect anything to surpass anything. We hope, we certainly *hope*. I think our expectations continue to shift over the years. With the first game, we just wanted it to come out and not have our whole studio collapse. I think our hope and expectation

"It's really every discipline trying to combine to make this one singular feeling"



^ The ambience almost drips off the screen; there's very much a sense of place with *Oxenfree II*.

with this one is just that it resonates as strongly and gets as emotional a response from the audience as the first one did. We want you to be as embedded in this game and feel that degree of connection to the character in the event, and that it's *your* version of Riley's story, not anybody else's. And so the game's really been designed that way, to try to make it feel like everybody's ending and the journey along the way feels crafted to what their choices were.

Creatively, we just want to evoke a lot of the same emotions, but through a different lens this time. Also, we haven't talked about any of the mysteries of the game, which we won't today either, but there are so many things we haven't revealed – weird mysteries that we just can't wait to see if they seem as cool to the world as they do to us. So I think that would be the other thing. We just hope that people connect with it. 🗨️

***Oxenfree II: Lost Signals* releases in early 2022 on PC, PS5, PS4, and Switch**



Sea of shadows

How a fine artist and a former research scientist are making *Silt*: one of the most beautiful adventure games of 2022

Info

GENRE
Exploration

FORMAT
PC

DEVELOPER
Spiral Circus

PUBLISHER
Sold Out

RELEASE
2022

SOCIAL
@GamesCircus

In the murky depths of a drowned world, you're a solitary diver journeying to an uncertain destination. With no weapons to speak of, and only your skimpy suit for protection, you cut a thin, vulnerable figure against the vast backdrops of abandoned structures and strange aquatic creatures. All that stands between you and a lonely death is your miraculous ability to psychically control fish. It's an ability that allows you to use undersea life to nibble through chains with their sharp teeth, or wriggle through tight spaces.

This is *Silt*, the debut game from British developer Spiral Circus. It's a 2D adventure heavy on exploration, and even heavier on captivatingly surreal imagery. *Silt's* monochrome, ornate imagery comes courtesy of artist Tom Mead, a fine artist who's spent the past three years turning his watercolour artwork into a video game. "I'd say I am a born surrealist, and the visual ideas of this game are predominantly just how my mind works," says Mead. "I have to start from imagination first. I simply can't draw any other way, come up with an idea that I'm happy with from a visual point of view, then make it into something that can be feasible for a project of this type. Having to think in terms of feasibility and technical limitations took some getting used to."

The genesis of what would become *Silt* began with a chance encounter at a New Year's Eve party. Mead bumped into Dom Clarke, then a research scientist who was interested in making a video game. Mead suggested they collaborate, and so the pair met a few days later to talk about what sort of project they might make. "It was at this meeting that I showed [Clarke] a series of watercolour paintings I was doing of my characters drowning in a vast, empty underwater abyss," Mead tells us. "One of them was called *Silt*, and the project was born from there."



> The detail and texture in *Silt* is such that it's hard to believe that the artwork hasn't been drawn on paper.



Together, Mead and Clarke set up their indie studio, Spiral Circus, and with their debut project's title and theme decided, began searching around for a means of getting the game funded. "After our initial meeting, myself and Dom applied to the Stugan accelerator program in 2018, and very fortunately we got accepted," Mead says. "So Dom and I spent eight weeks in rural Sweden with a group of other game developers who were also building out their new projects. We built the initial pitch demo and fleshed out the core concepts, visual ideas, and game mechanics there. That demo is what we pitched to Sold Out, our publisher, and it's what got us the funding to make the whole game."

What's so remarkable about *Silt* is that, although it looks for all the world like a hand-rendered watercolour drawn to life, the artwork was all generated digitally.

"I would love to say it was all hand-drawn traditionally as I normally would have done in the past," Mead says.

"But due to this being our first game... ultimately, I had to simulate the hand-drawn feel. I did draw the entire game by hand, just not entirely in a traditional manner, as I feel that if I had done that, it may have sunk the project before it got started – pun intended!"

With Mead handling the art side of things, Clarke set about designing a pipeline which could



▲ Your unnamed explorer can get out of sticky situations like this by harnessing the power of nearby creatures.

efficiently import that 2D artwork straight into Unity. "I built a set of tools that lets Tom do all the art in Photoshop, and then I can take those Photoshop files and run scripts on them to get them into the game," Clarke says. "The scripts work their way through the layers, break them into smaller pieces, and place them into the scene in Unity in 3D. It generates the collision shapes, the entrances and exits and what other scenes they lead to, even some of the

interactions and gameplay elements, all directly from the Photoshop files.

"The tools we've written can just automatically wire that up correctly in Unity

so we can see it in-game immediately after Tom has finished the art. It allows Tom to work with the tools he's already used to from his art career. He can just work the way he likes and not have to fight with tools he's not [familiar with]. Developing that toolchain was a major part of the first year of work on *Silt*, but it has paid off enormously in the long run." ➔

"I did draw the game by hand, just not entirely in a traditional manner"

SHADOWLAND

Like *Limbo* before it, *Silt* makes intelligent use of silhouettes to create a sense of scale.

Though when we bring this up with Mead, he reveals that those striking areas of darkness weren't intended as silhouettes at all. "Believe it or not, everything has a texture painted onto it, but the lighting in Unity was more effective with high contrast, making some of the layers lose their texture," he explains. "This worked out fine, though. The game's levels are built entirely from layered Photoshop documents, and I put together a large library of smaller assets that I could place many copies of into the level. I'd often spend several days just drawing plants or corals or bits of machinery, filling up pages and pages of them and adding them to my library."

2D OR NOT 2D

While 2D animated feature films are sadly a rare sight these days, Mead agrees that there's been a mini renaissance of 2D animation in indie games over the past few years. "I do feel that I would barely be in this industry without the influence of 2D atmospheric games such as *Limbo* and *Machinarium*, *Cuphead*, and more. Seeing those games showed me that a strange and surrealist style could be embraced... In the animation world, the lack of funding crippled the creative scope and from the people that I knew, made them either quit or get commercial work that actually paid the bills. As much as I love 2D animation, it's costly and very niche, so it's no surprise that we don't see as many as we once did. I do think that [animators and artists] like Felix Colgrave and David Firth are keeping the dark or surreal scene alive, but I would be lying if I didn't say I would love to see them work in games also!"



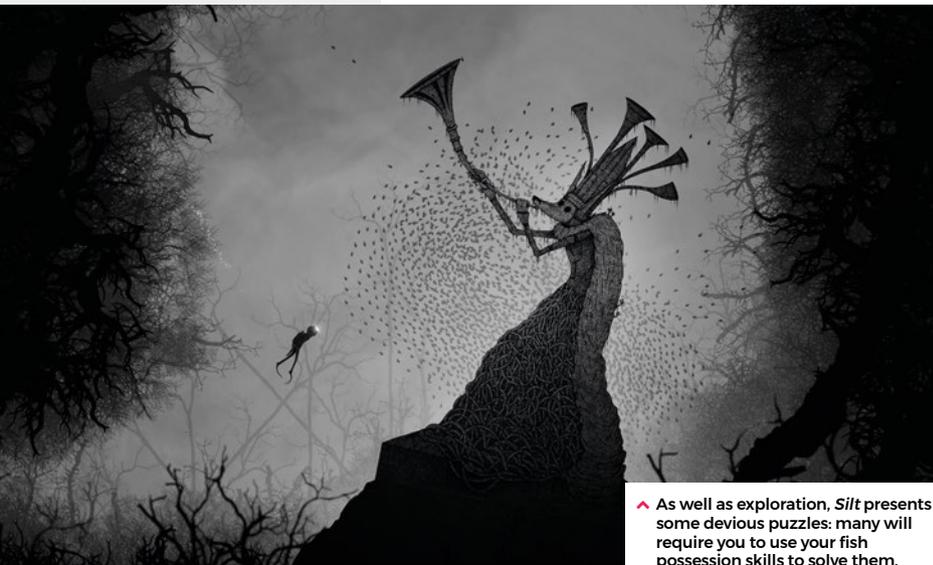
▲ There are hints here and there of a bygone civilisation drowned by rising sea levels.

Swimming through *Silt*'s gorgeous undersea world, it's possible to see hints of artist/filmmaker Tim Burton, or the cross-hatched artwork of the illustrator that inspired him, Edward Gorey. In video game terms, though, its clear antecedent is the similarly shadowy and nightmarish *Limbo* – Playdead's indie darling from 2010. Both Mead and Clarke eagerly point to that game as a reference point for *Silt*. "*Limbo*'s the reason I got excited about games again," says Mead. "I knowingly stopped playing games in the N64 days as I wanted to focus more on my art, and at

the time there were no games that were, in my eyes, applicable for work like mine. When I saw *Limbo*, it made me realise my style may be able to work for games, or at least that there was a kind of 'art renaissance' in the indie game world, which was very exciting."

"*Limbo* was a big part of that first wave of amazing indie games on the old Xbox Live Arcade," Clarke adds. "I don't think I'd ever considered it possible to 'just make a game' before I played those games. Suddenly we had small studios making new IP and that being a really viable business model. Of course it was just one of many great games that came out on that service, but it was one of the first ones I really got into."

Like *Limbo*, *Silt* uses contrasts of light and shade to imply a vast ocean that stretches beyond the bounds of the screen; away from the graphics, though, there's Nick Dymond's sound design – an eerie sonic backdrop that does much to underline the game's echoing sense of solitude. "I decided very early on that I wanted the audio to lean into expressionism, and while the game needed to feel underwater, I wanted it to maintain a full-frequency sound," Dymond tells us. "To help achieve this, I used a small subset of sounds close to the player to sell the aquatics. This included water movement, muffled head impacts, and the breathing apparatus within the helmet. This then left room for me to fill out the rest of the spectrum in a painterly fashion without worrying too much about each sound feeling specifically 'underwater'."



▲ As well as exploration, *Silt* presents some devious puzzles: many will require you to use your fish possession skills to solve them.



Brilliantly, Dymond came up with some distinctly analogue approaches to capturing those aquatic sounds. “I built a small water tank in my studio that has a speaker and hydrophones floating around inside,” he continues. “I used this to record water movements, but more interestingly, I could pipe all sorts of sounds back into the tank and re-record them through the hydrophones. Some of the ambiances and creature sounds have additional layers of these re-recordings within them. This process helped create some of the gritty sonic identity present in the sound design. In terms of trying to make the game world sound large, there’s quite a lot of baked echo and reverberation in louder sounds, along with some exaggerated real-time filtering happening at runtime on certain events.”

For both Mead and Clarke, adapting their skills to the process of making their first commercial video game proved to be their biggest challenge. Mead had to get used to the leap from traditional rendering techniques to creating digital artwork; at the same time, Clarke had to adapt to building and evolving a full game project. “I spent years before meeting Tom just building prototypes and game-jam-style projects and throwing them away once they reached a certain level of complexity because I just didn’t know how to build software that scaled well,” Clarke explains. “I think Tom and I met at a

“Limbo’s the reason I got excited about games again”

good time for me; I’d failed just enough times and learned just enough from each failure to have a decent shot at getting it at least half-right the next time. Nothing prepares you for how much work really goes into finishing a game, though.”

After approximately three years in development, *Silt* is nearly ready: the art and animation is all complete, Mead says, and the finish line is in sight. “It’s very exciting to finally get to the end, and we hope there’s going to be many, many more projects to come. This has been an absolute journey, and our team have been Herculean in their efforts to get this done. We feel very happy to get to this stage and cannot wait to finally have it out there for everyone to play.”

▲ Taking inspiration from filmmaker David Lynch, *Silt*’s story is open to interpretation, with bits of lore implied by the things players find on their travels.



Octo-Ninja Hachimaru

Developer Aisosa Ugiagbe tells us about his 3D action-platformer demo, and his plans to turn it into a full release

Info

GENRE
Action-platformer

FORMAT
PC

DEVELOPER
Aisosa Ugiagbe

PUBLISHER
N/A

RELEASE
TBC

SOCIAL
@OctoNinjaGame

As Kim Justice points out on page 34, EGX wasn't exactly bustling with triple-A games this year, but this at least gave indie developers more space to shine. One such developer was London-based game design student Aisosa Ugiagbe, who was there to show off a demo of his action-adventure, *Octo-Ninja Hachimaru*. A final year project for his MA course in game design at the National Film and Television School (NFTS), *Octo-Ninja* harks back to an early-2000s era of arcade-like brawlers – and with its bold splashes of colour and anime-like character models, we could easily imagine it as a Sega Dreamcast game from the dawn of the millennium. “We had a stall as part of my uni course,” Ugiagbe says of his EGX experience. “I thought we’d be put at the back of the convention, but so many people came by that it was a bit overwhelming... There was a kid at EGX who played it, and not only did they play it, they were trying to speedrun stuff already. I was, like, ‘What are you doing?’”

Long before its public debut at EGX, though, *Octo-Ninja Hachimaru* had an unusual origin.

“I think a lot of kids would benefit from a game like this”

In 2020, Ugiagbe created an entry for that year’s My Famicase Exhibition – an annual event in which fans and artists design the label for a fictional Famicom cartridge. Ugiagbe’s entry for 2020 was – you guessed it – *Octo-Ninja Hachimaru*. Later, when Ugiagbe’s university course set him the task of making a vertical slice for a full game, he revisited the plucky teen character he’d first dreamed up for that exhibition – Hachimaru, a ninja whose powers are augmented by an octopus god, Takogomi.

The result is a 3D action game with a pace akin to the likes of *Sonic Adventure* and PlatinumGames’ *Metal Gear Rising: Revengeance*, but presented in Ugiagbe’s day-glo anime art style.

It’s a true east-meets-west concept, too: while Ugiagbe looks to Japan for his spiky, vibrant character designs, it’s joined with a distinctly British flavour. The soundtrack by Darkos Strife is heavily grime influenced (“I thought, everything the grime genre can do – why isn’t this in games more?” Ugiagbe says), while the voice cast, which includes Nickeem Latty-Morgan (who plays the hero, Hachimaru), Amina Koroma, and Benji Buckley, all have distinctive British accents.

“Everyone in games is American, which I don’t mind – it’s cool – but at the same time, we exist,” Ugiagbe says. “We’re right here! Why has no one done it? The first game to open my mind to the possibility was *Xenoblade Chronicles*. I played it six, seven years ago now, but I just thought, ‘Wait, this needs to happen more’. I’d never heard anyone say ‘Bob’s your uncle’ before in a JRPG!”

An artist since he was a boy, growing up on a diet of video games (which his parents didn’t, strictly speaking, approve of) and Japanese shows like *Naruto* and *Bleach*, Ugiagbe didn’t get into game design until his late 20s, when he started on his course at the NFTS. For *Octo-Ninja*, then, he’s not only creating all the character art and animation, but also designing the game in Unity. “I’ve had to update my Google-fu,” Ugiagbe jokes

▼ For more of Ugiagbe’s superb, anime-inspired artwork, turn to page 68.

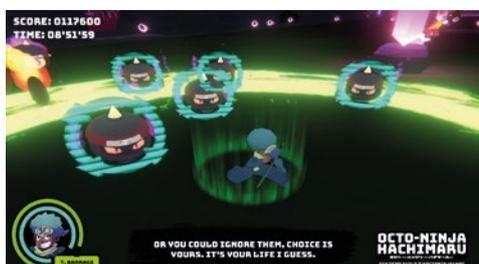




◀ Maybe it's the colour and comic book style, but we're getting distinct *Jet Set Radio* vibes from *Octo-Ninja*.

about learning to program in C#. "I've had to look in forums [and] take in so much information. And luckily, sometimes it sparks curiosity: I've learned that X equals Y. But what if I change X to achieve Z? Which is funny because before the course I was like, 'Listen, I'm not programming. Stop looking at me'. But now I know enough to not be completely lost when people are talking about programming, which is nice."

Ugiagbe's other challenge was a common one: time. His original slice was of an entire stage, with the player ascending seven floors of challenges on the way to a final boss. With time running out before the demo's EGX debut, Ugiagbe realised he had to reduce his scope. "Each level was going to be randomly generated, so every time you went through a level, it'd be from three different types: there'd be a normal platforming level, a battle-type level, with waves of enemies, and then a stealth level where all the enemies on this floor are super-strong, so you need to stealth around them... At the moment, the demo has the first two levels, almost trying to explain the energy I want to give in the game. So that was the biggest challenge: scoping and time."



▶ The game's combat is partly inspired by *Kingdom Hearts* – Ugiagbe plans to add combos and shurikens to the finished version.

With the demo complete and positive reactions from players at EGX, Ugiagbe hopes to get working on a full version of *Octo-Ninja Hachimaru* in the future. "I'd love to make it into a fully-fledged thing. I'd love to receive funding to be able to do that, and I'm looking into that now."

Not only is *Octo-Ninja Hachimaru* an exciting-looking action game, but it also offers unique characters and perspectives we don't see often enough in the medium. Which is where the kid who sped through Ugiagbe's demo at EGX comes back in.

"His mum was telling me how much he enjoyed it, and said, 'Please, finish the game if you can'. I wasn't expecting that reaction at all. I was trying not to make eye contact because I didn't want a tear to fall out.

"A lot of black people that came by were surprised: 'Oh wow, this is different. Once they heard Hachimaru's voice, and realised he was Black British, they were, 'Wow'. I think that a lot of kids would benefit from a game like this." 🗨️



REPRESENTATION MATTERS

As well as finishing his *Octo-Ninja* demo, Ugiagbe has also had a dissertation to write. For its subject, he's been looking into black representation, both within games and the wider industry. "There's a lack of black and minority ethnic people in the industry on the development side," he says. "But when you go higher up, it's almost non-existent. I think the last black or ethnic person I saw in a prominent role was Reggie Fils-Aimé from Nintendo, and he's retired. So it's like, who else is there? There is no one really front-facing like that, and I feel that feeds into kids not being aware that game development is a viable career."

The same is true of character creation options in games, Ugiagbe adds: things are changing, but at a slow pace. "For people with hair like mine, we realise there are barely any options for us, and when there are, they're horrible... For example, *Animal Crossing* – until recently, you couldn't be black in the game. You had to get a tan to be at least somewhat dark, or there were two actual black hairstyles... but it's the internet age. Now people can actually voice opinions and realise, 'Wait a minute, I'm not the only one that feels this way. This is kind of BS. What can we do about this thing?' I'd like to believe that, you know, people are trying to improve and stuff like that."



And the beat goes on

Pacing to a rhythmic pace in *Backbeat*

Info

GENRE
Beat-based puzzle

FORMAT
PC / Mac

DEVELOPER
Ichigoichie Games

PUBLISHER
Ichigoichie Games

RELEASE
Early 2022

SOCIAL
@Ichigoichie_Inc

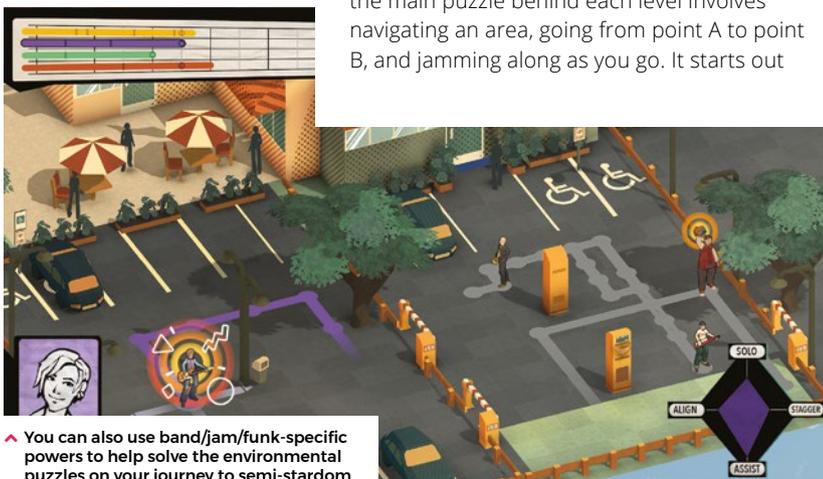
It's almost jarring, the shift from brain-bending frustration to laid back enjoyment in *Backbeat*. Ichigoichie Games' latest is a mix of movement- and timing-based puzzles, nostalgic narrative, and funky-funk beats. Players take control of Watts, a bassist without a band but with dreams of doing something a bit more than working a dead-end job and floating on by through her existence. Step one is to get a band. Step two is to... well, just *play*.

It's not *Rock Band*, though. You're not standing about strumming plastic instruments; your band isn't even playing a specific song per se – this is funk, this is jam sessions, this is seeing where the beat takes you. Literally, in the sense that the main puzzle behind each level involves navigating an area, going from point A to point B, and jamming along as you go. It starts out

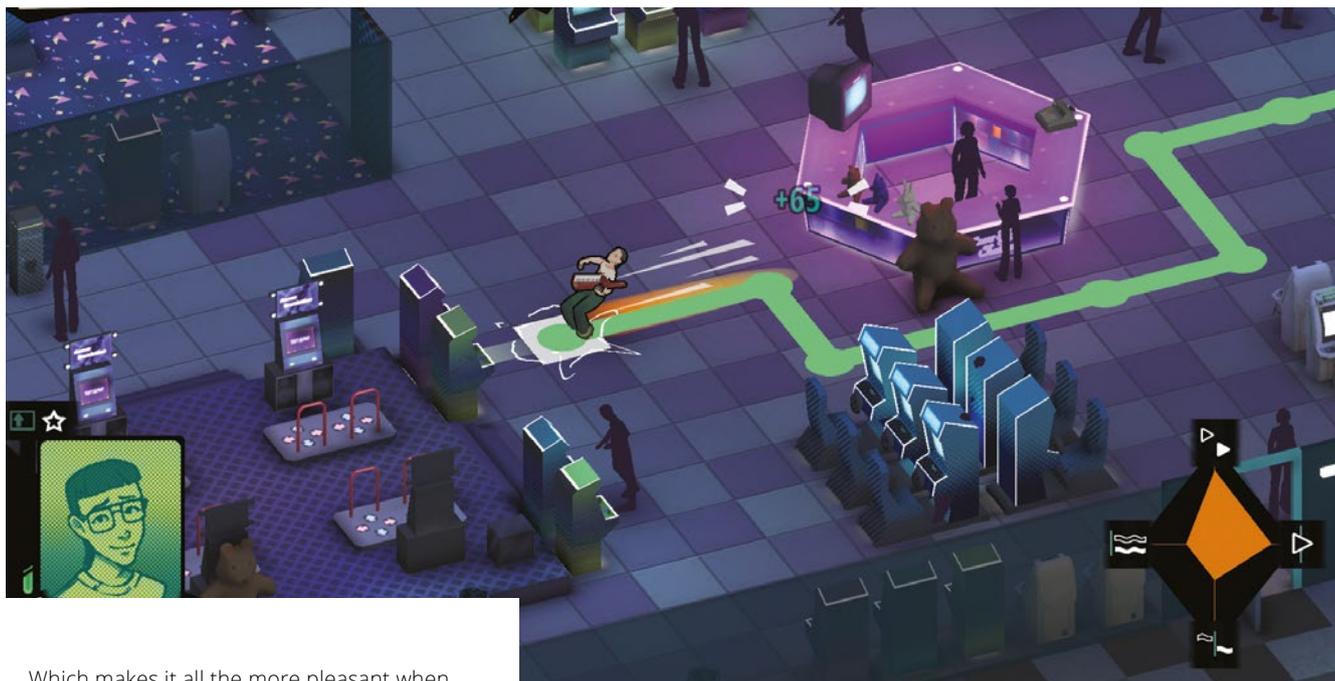
simple enough, but within not much time you're having to manage the timeline-based movement of your four band members, avoiding obstacles and making sure to all arrive at the goal area on – or around – the same time.

So surely everyone can just take the same route, in the same amount of time? Oh, sweet summer child, of course that's not the case. No, each member of the band moves at a different beat – or pace. Watts moves at a steady couple of squares per move/turn, while your drummer – thanks to an injury he suffered – moves much further each turn and requires obstacles to be smartly used to stop him in his tracks and help redirect him towards the goal. Plus the other two moving at their individual beat-pace. Plus the obstacles to avoid, including people who get in the way, gates that open/close at certain points, and more. It swiftly becomes a lot to manage, and the fine balancing act can soon give way to panicked backtracking and do-overs to try and make things as perfect (or just vaguely correct) as they can be.

It's something Ichigoichie is clearly aware of, though, as *Backbeat* doesn't punish you for messing up. You're always able to go back single moves to try a different route, or at the press of a button you're able to reset the entire stage and try again. It might not seem like the possibilities are endless, with just four directions open to move in, but that's four movements for every character, on every space they stand in, in every turn they take. It can be a lot to mull over.



^ You can also use band/jam/funk-specific powers to help solve the environmental puzzles on your journey to semi-stardom.



Which makes it all the more pleasant when you do work hard at a level and eventually make your way through – yes, *Backbeat* slaps on the screen the barely earned grade C (must try harder), but you're rewarded with a real-time playback of your band making their way through the space, playing their instruments as they go. It's a neat little jam; a relaxing way to decompress after what *can* be a puzzle that makes your head hurt.

Helpfully, the music throughout *Backbeat* is great. There's a true feel of funk throughout, from the background music, through the tunes the band jams out as they stroll, onto incidental sound effects when you're choosing a direction to walk in or encounter an obstacle. The game is designed around making music, so it makes sense the actual soundtrack would be as integrated as it seems to be. But that

“Helpfully, the music throughout *Backbeat* is great”

doesn't make it any less enjoyable, and genuinely one of the sound effects when encountering an obstacle – a blare of saxophone, shifting the note played each time you hit said obstacle – is bizarrely satisfying. I honestly found myself tapping away at the A button to move into something in the way repeatedly, just to play the almost-but-not-really tune.

The demo included around 20 or so levels of the final game's 40, so

there's plenty yet to be seen – and a coherent, full narrative to get involved in and help bundle the experience along. How all the different elements come together will, as always, be key here – a narrative you don't care about, in a game that does rely *fairly* heavily on it, is going to be a letdown. Puzzles getting too samey, being too easy, being too hard – any of these and you've got yourself a letdown. If it suddenly slips into nu metal in the endgame, that would be a letdown. There are variables to consider, and it's hard to see how the final game will actually end up faring.

But there's no doubt from this brief, unfinished snippet of the game that there's something thoroughly *pleasant* about *Backbeat*. That vague mid-nineties nostalgia, the funky-funky beats, the reward of beating an environmental puzzle – that stress-to-relaxation switch in your brain going off. It's all good, and it makes you hopeful that the complete package will come together in a coherent, enjoyable whole. 🎧

▲ Nostalgia runs through *Backbeat*'s core, with its mid-1990s setting appealing to those Of A Certain Age.



▲ As things develop and your band grows, routes taken become ever more complex, requiring planning and care. You're never punished, though.

PREVIOUSLY...

You may have seen Ichigoiche's previous title in our Toolbox pages back in Wireframe's past (aka issue 30). *Hexagroove: Tactical DJ* was a rhythm action game that eschewed the surprisingly narrow confines of the genre and presented itself as a unique mix of game and music production... simulator, of sorts? As our review (issue 26) put it: "It's a 'musical RTS' about reading and leading the crowd, rather than following a predetermined rhythm chart", and it's still held in high esteem with the folks who've played it. It's still worth a look if you've got a PC, Switch, or Xbox.

That was the month that was

01. Weta go

Weta ('What a') surprising move this one was: Unity – as in the Unity we all know and love for its wonderful suite of game-creation tools that are featured in this very magazine repeatedly – has purchased Sir Peter Jackson's Weta Digital for a cool £1.2 billion. This is the very same Weta Digital that worked on visual effects for the likes of *The Lord of the Rings* trilogy, *Game of Thrones*, *The Avengers* movies, and plenty more.

In the deal, Unity acquires 275 engineers to work on the software, pipeline, and other tools; plenty of said tools that have been made, upgraded, and maintained over the years; and a library of thousands of assets – still being built upon

weta
DIGITAL

 **unity**



– to draw from for use however Unity sees fit. And how *does* Unity want to use all of this? To 'democratise', it seems.

Unity chief John Riccitiello said: "By combining the power of Unity and Weta Digital, the tools and technology that built characters and scenes from the world's most iconic films such as *Avatar*, *The Lord of the Rings*, and *Wonder Woman*, will enable an entirely new generation of creators to build, transform, and distribute stunning RT3D content." That's 'real-time 3D', by the way. Jargonistic silliness.

"Weta's goal has always been to inspire and motivate a whole new generation of creators and it's exciting to pass the mantle over to Unity," said Prem Akkaraju, Weta Digital CEO. "I see a future where more and more content shares the same level of visual fidelity as *Avatar* and *Game of Thrones* and Unity is the ideal company to lead us into this future." We've not confirmed on our end if we're going to update our *Build Your Own First-Person Shooter in Unity* book to feature



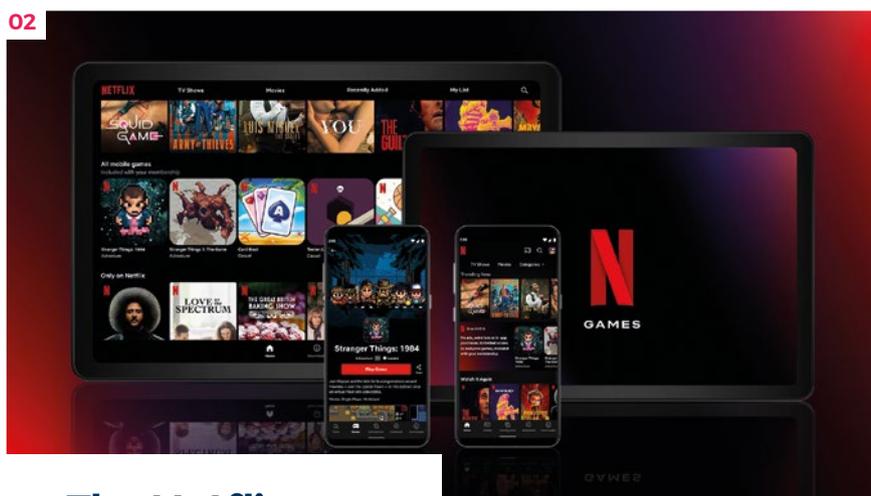
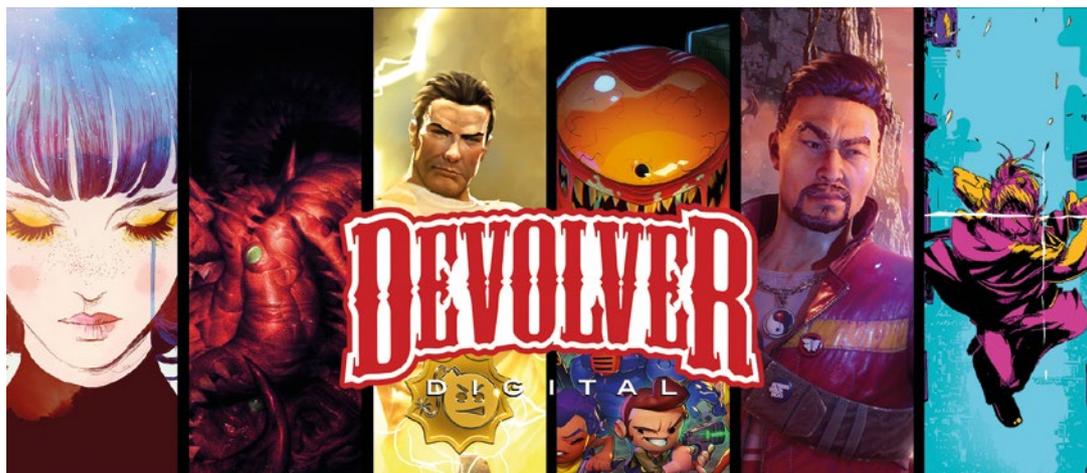
photorealistic blue alien people as of yet, but we'll keep you posted on that one.

Weta's visual effects team will continue to operate under the name of WetaFX, and ownership of that side of the business remains in the majority ownership of Jackson. Unity says it expects it will be one of WetaFX's biggest customers in future months and years, which really does make it sound like everybody's winning here. The proof will of course be in the tasting ("how things pan out"), but right now, this is all sounding like very exciting news – and another great reason to get involved in Making Stuff using Unity.



Q-Games retrieves rights to *The Tomorrow Children* from Sony

Quantic Dream's rumoured *Star Wars* title codenamed *Eclipse*, set in the High Republic era



02. The Netflix of games

Turns out the Netflix of games is actually Netflix, with Netflix launching Netflix Games, thus fulfilling the entire brief of 'Who could possibly be the Netflix of games?' Clear? Cool. Subscriptions to the streaming TV and film service are automatically upgraded to include a bunch of games to play, including a couple based on *Stranger Things* and some other casual hoop-shooting/ card-playing things. It's definitely a thing that exists and there's genuine hope it will develop into something genuinely exciting, but right now it's little more than an also-ran masquerading as an afterthought. Here's hoping though, eh?

03. Hangar off

Take-Two has cancelled an unannounced project from dev studio Hangar 13, writing off the £40 million spent on the game. Sources told Kotaku the cancelled game was to be a third-person live-service action title in the vein of *Destiny*, with the working title of *Volt*. The cancellation came about essentially as a result of T2's worries about the game's commercial viability in a marketplace where similar-sounding titles like *Marvel's Avengers* have recently underperformed. With hundreds of employees impacted, it is at least comforting to hear few – if any – jobs are set to be negatively impacted.

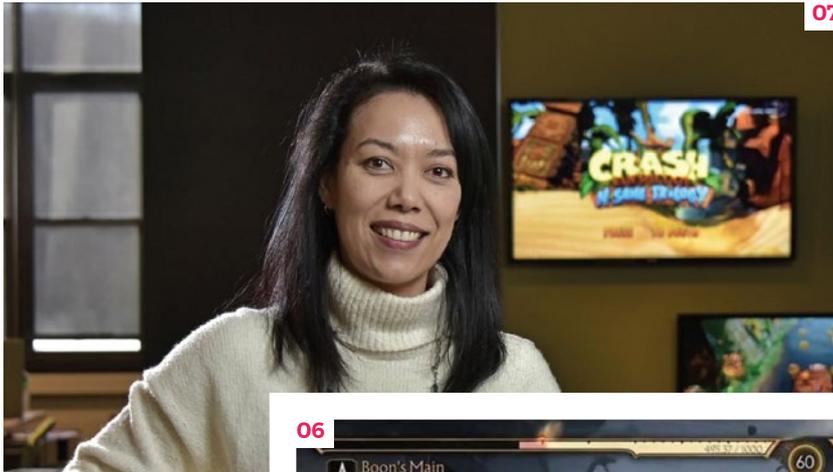
04. Devolving

Plucky indie underdog publisher Devolver Digital has made that classic niche market move of going public and being valued at just shy of one *billion* dollars (£744m) while raising around £190m from the flotation. As you do. The move has offered a huge financial safety net for the firm, which remains in the majority owned by employees, and is looking to push forward with even more indie titles being published each and every year. Chinese internet giant NetEase purchased eight percent of Devolver, while Sony Interactive Entertainment bagged around five percent.

Konami delays v1.0 of *eFootball 2022* to 2022, fittingly



Harry Potter: Wizards Unite, Niantic's mobile game, to close end of January



07



05

Thunderful

05. Thunder in paradise

Thunderful, the Swedish game holding company with the likes of Coatsink under its banner, has picked up games investment firm Robot Teddy, with the intention of helping developers fund self-publishing of their games. Brjánn Sigurgeirsson, Thunderful Group CEO, said: "From the moment we began thinking about adding an investment pillar to our games publishing and games development businesses, Robot Teddy stood out in our minds as the obvious partner. The acquisition of Robot Teddy supports our strategy to grow our Games segment and the Group as a whole. The proven expertise that Callum [Underwood] and the team at Robot Teddy bring to Thunderful will be invaluable, and we are really excited about the work we are going to be doing together."

06



06. Ban all memes

We reported some years ago on the joke-slash-meme doing the rounds that had put Shaggy from *Scooby-Doo* as a character in *Mortal Kombat*. It didn't happen, but it was funny. So, of course, rumours now have it that Warner Bros. is working on a *Super Smash Bros.*-alike title featuring – yep! – the likes of Shaggy, Batman, Gandalf, Johnny Bravo, and more. The working title is apparently *Multiversus*, just to make your likely visceral reaction to this rumour that bit more *perky*. It sounds ridiculous, it might not be real, but it could be brilliant? No idea; games are weird. Ban all memes to stop this stuff from happening.

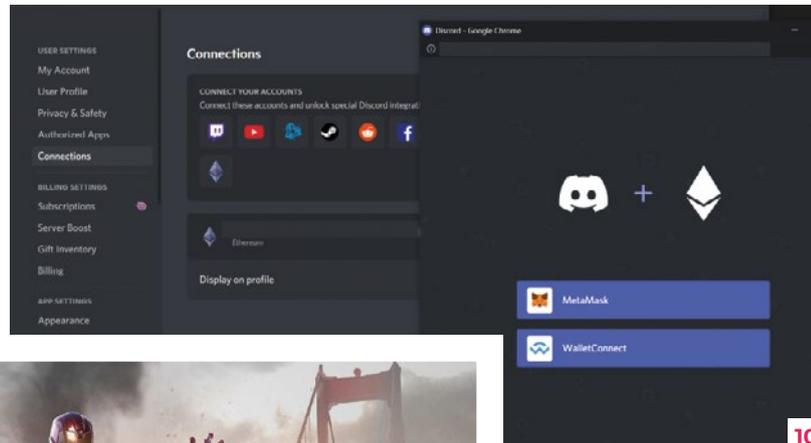
07. Acti-Blizz again

Activision-Blizzard has lost a further two senior female members of staff, with technical director Amy Dunham stepping down and co-leader of Acti-Blizz, Jen Oneal, announcing she will be leaving at the end of the year. Oneal took her position in August. The studio also lost production director Julia Humphreys earlier in 2021. The studio has been hit with multiple allegations of a toxic work environment and a lawsuit is ongoing concerning the alleged issues. Of course, no direct, provable link has been shown between the lawsuit/allegations and the three senior women leaving. It's probably a complete coincidence. Definitely. Maybe.



Nintendo's Doug Bowser takes feedback over poor N64 emulation 'very seriously'

And Panic Inc.'s Playdate crank-handheld has been delayed to early 2022



08



08. Avenge me

Square Enix chief Yosuke Matsuda called *Marvel's Avengers*, the game developed by SE-owned Crystal Dynamics, "disappointing", going on to say the game did not prove as successful as the publisher had hoped. It's fun to be dragged publicly by your boss. *Marvel's Avengers* is claimed to have cost over £74m to make, but with sales of around three million ended up losing around £47m in total – so you can at least understand from a purely financial perspective the reason for the comments. We weren't hugely enamoured with the game, offering it a decent score of 68% back in issue 44 – it can be a fun game, but there's just that *oomph* lacking to push it over the top. Still a bit harsh though, Yosuke.

09. Car crime

Grand Theft Auto: The Trilogy – The Definitive Edition isn't just a needlessly long-winded title, it's *also* the title of a bunch of games that have set the gaming world on fire... for the wrong reasons (Metacritic user rating: under 1.0). To preface all of this: things will likely (hopefully) be fixed over the coming months, but at the time of writing, it's coming in as hot as *Cyberpunk 2077* did in 2021: players saying the games are riddled with texture issues and bugs, with vociferous complaints about anything from NPC faces to the rain making them feel sick. We'll be keeping an eye on this one.

09



10. The NFTs bit

NFTs – non-fungible tokens – aka drawings of monkeys you can right-click and save to your computer – are the latest gold rush, it seems. EA is keen on them, with CEO Andrew Wilson saying he sees NFTs as "an important part of our future". Take-Two chief Strauss Zelnick thinks on similar lines, saying he's a fan of NFTs on a "selective" basis. All fun and games, then? Not so much: Discord initially announced plans to integrate NFT trading on its app, but quickly drew back from the idea following vocal backlash from its community. For now, at least.

Component shortages hit Valve, with Steam Deck postponed to February 2022



Xbox, Halo, and Metal Gear Solid 2 all turned 20 recently. Sorry

Post Apocalypse

The looming threat of NFTs in gaming, and your favourite arcade memories. It's this month's letters...



Issue #56

Want to write to Wireframe? Message us at wfmag.cc/hello or tweet us @wireframemag



NFTs? No Flippin' Thanks

Over the past few months, I've watched with dismay as EA and Ubisoft have pledged to start using blockchain technology or NFTs [non-fungible tokens – Ed] in their future games. I recently read, for example, that Ubisoft's CEO Yves Guillemot thinks that blockchain "will enable more players to actually earn content, own content, and we think it's going to grow the industry quite a lot". Now I can't stop thinking about all the grim ways those publishers could use NFTs to get players spending even more money.

Imagine a driving game where the rarest and most exotic sports cars are only available in limited quantities, and have to be purchased as

an NFT with real-world cash. It'd make the publisher lots of money, sure (no doubt from taking a cut of the sale price in an in-game auction) but it would also mean that only the richest players would get to drive the best cars. Meanwhile, everyone else is clattering about in an old Ford Fiesta or something. Am I the only person who can see a bleak side to the idea of NFTs in games, or am I just getting old?

Geoff, Essex

Ryan writes:

While there may be some fascinating upsides to incorporating blockchain technology in video games that we haven't considered

yet, the downsides seem pretty clear – and the example you've come up with is a good one, Geoff. Publishers have spotted a money-making opportunity in NFTs, but will they actually be used to make games more entertaining for players? My guess is: probably not.

What's extra worrying is how easy the concept of NFTs is to grasp in the context of a video game. Blockchain technology could, for example, mean there's only one in-game version of Cristiano Ronaldo to go around in, say, *FIFA 2024* (or whatever it ends up being called). The *FIFA* user that owned Ronaldo could then keep him on their squad or sell him to another user for a no-doubt eye-watering sum. Then again, a football game like this would likely be a massive turn-off for its players, because as with your driving game analogy, only the richest players would be able to assemble a decent team. As enticing as NFTs must look to publishers right now, the designers that work for them are going to have to think carefully about how blockchain tech can be fairly incorporated into their games.



Shortcuts

To complement this month's duo of coin-op-related features (see pages 28 and 38) we asked our loyal readers on Twitter: what's your favourite arcade game and why?

Time Crisis! The game that made me buy a PlayStation, and find a light gun that had the slide action on top too. Action!

@jamesmoran

Flying Shark and *Virtua Racing* were great. *FS* for the frustratingly addictive, straightforward, vertical shooter thrills, and *VR* for the fact it was a great multi-linked four-unit spectacular when it hit that looked, sounded, and played like the real thing!

Paul Twomey on Facebook

Double Dragon. Reason: it was literally magic. It could make tenpence pieces levitate out of my pockets and into the cabinet's coin slot!

@Digital_Shore

Has to be *OutRun*. The deluxe cabinet was my fave. From its arrival in 1986 when I watched others play it for the huge sum of 50p to the early 1990s when I'd mastered it and three credits cost 50p! Nothing screams eighties arcade more than this for me.

@THEHugoDrax1979

RYGAR, because its graphics and gameplay were awesome, powerful

stuff. With plenty of enemies on screen and a wide variety of levels to beat.

Shaun Spud Gallant on Facebook

Galaga/Galaxian. Loved playing the tabletop versions on cross-channel ferries as a kid.

@BORIS_WATCH

Double Dragon. I spent so much time playing this game. Used to beg Mum for 10p to put into the machine! I remember thinking the graphics were amazing!

@andycaomhanach

Gauntlet – gaming's first widespread four-player co-op matchmaking with randos, many of which became instant friends. Until someone shot the food.

@pyr0sa

Metal Slug, because nothing simulates carving through enemies like a tornado and then dying to a boss shooting an ungodly amount of bullets quite like it.

@MrMandolino

OutRun 2! Feels good to play, great music, tons of metrics for competition, gorgeous cabinet, and never gets old.

Shame we won't get a modern port due to the licensing nightmare that is Ferrari.

@PyronoidD

Star Wars (1983). I played it at the Dream Machine [arcade] in Hadley, MA for years. Decades later, I found one at @Arcade_Museum and I was in tears. It was like I'd gone back in time to the 'good old days' of arcade life.

@graemeknows

Atari Firefox. If *Star Wars* was the only way to fly an X-wing in 1983, then this was the only way to fly the MiG 31. Expensive, unreliable, but in 1983, nothing could touch it. Think in Russian. Always.

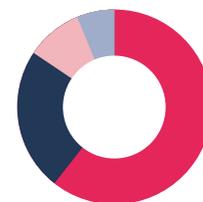
@JohnPaynter1970



The burning question

Continuing our arcade theme, we ran a poll asking Twitter which of the following gun games was the best. Poor old *Operation Wolf* – it never stood a chance...

- Time Crisis - 63%
- Operation Wolf - 25%
- Silent Scope - 5%
- Mad Dog McCree - 7%



Review



Elden Ring [↑](#)

So those barking 'It's just another *Dark Souls* but with the guy who hasn't done the last *A Song of Ice and Fire* book yet involved' were... spot on. *Elden Ring* is FromSoftware's latest and includes a setting created by one George R.R. Martin, though with the lack of massively over-descriptive prose covering all manner of different foodstuffs, it's hard to actually tell Martin was involved. You are 'Tarnished', people enigmatically talk at you like enigmas, you drink from a flask to heal yourself, you sit at (not quite) campfires to rest and recuperate which also respawns any enemies you've defeated in the area... it's *Dark Souls*. It's *really Dark Souls*.

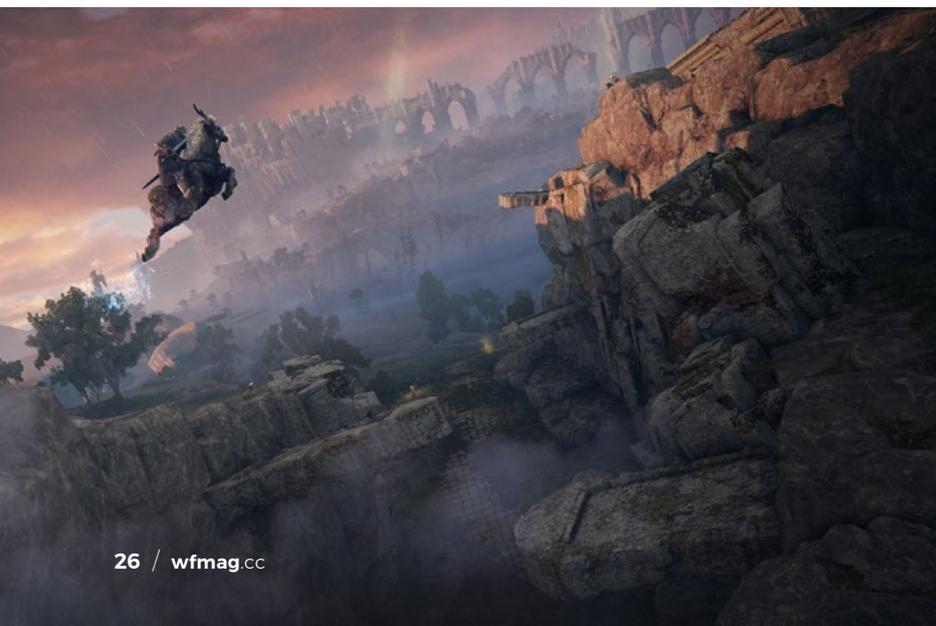
What did we expect though, eh? Well with it being a different name and – on paper – a different game, expectations might not have been firmly in the realm of this being a stealth *Dark Souls 4*. And you might think this is hammering home a point that need not be hammered – of course there will be similarities, it's the same studio and director, it's *obviously* not the same game, there's plenty different



about it. Sure, fine, that's OK. Animations might be nigh-on exactly the same as in *Dark Souls*, menus look very similar, there are messages from other players strewn around the grounds, you can roll through a bunch of barrels to smash them up, and the first big character you meet can wipe you out in one or two hits, forcing you to retrace your steps and recover your dropped souls... sorry, 'runes'.

This is getting away from the point at hand a bit, but it's really difficult to be anything other than a bit confused with *Elden Ring* and the decision to not call it *Dark Souls Neo* or *Demon's Souls: Dark Edition* or somesuch. There are differences of course, and this is all based on a limited few hours with the game in its recent network test. The biggest change is the introduction of an open world – rather than fairly open regions linked to each other, *Elden Ring* opts for a big open landscape to wander, explore, and drink in. It's unashamedly gorgeous at times and offers plenty of areas to just stand still and take in the wonder of it all (before getting stabbed in the back by a soldier you didn't notice).

You get a horse, you can jump, the precise mechanics from *Dark Souls* have different names, *there are changes here*, and by no means should this be read as a negative take on *Elden Ring*. It's clearly got the mechanics down pat, combat is as satisfying and responsive as ever, and calling in a pack of spectral wolves is a joy most of us don't realise we need in our lives. But will it be able to drag itself out of the considerable shadow cast by the behemoth that is *Dark Souls*? That's up for debate.





Men of War II ↗

This long-coming sequel actually released – in a way – in the form of *Men of War II: Arena*, a multiplayer-focused RTS centring on grand battles from the Second World War. It was decided, though, to move the project to a full standalone format, and thus *Men of War II* was born. The latest in a series that can trace its way back to 2004's *Soldiers: Heroes of World War II*, the new game acts as a direct sequel to 2009's *Men of War*. Just to make it a bit more confusing.

This being handled by publisher 1C and developed by teams located in regions like Belarus and Ukraine, the game's single-player missions brings in not just the western front, but the eastern campaign too – and, according to Iliya Svanidze, PR and brand manager at 1C, “The Soviet campaign isn't just one story, it's not just Stalingrad!” So there could be a learning opportunity for those of us raised on the more western-focused tales of Second World War drama.

It's an RTS, of course, so you'll know what to expect there, but the team has worked to implement one major change to help with immersion (if you choose to use it): direct vision. Previous titles allowed direct control of units, and this remains so, but you'll now be able to shift to a first-person (or thereabouts) view for all the different units. This can change from a zoomed-out, hands-off strategy experience into one of direct, involved tactical play as you manoeuvre a tank into perfect position, or just fire a howitzer from a first-person view. The mass appeal might not be slathered over this one, but for a certain niche, it could offer a lot.



Alliance Peacefighter ↖

Take a Saturday morning cartoon vibe, mix it with *X-Wing* and *Starwing/Star Fox*, and what do you have? *Alliance Peacefighter*, a mission-based space shooter that will tick all kinds of boxes for all kinds of players of a certain age. The dearth of straight-up space shooters in recent years has been apparent; though the likes of *Elite Dangerous* and *Star Citizen* promise entire universes to explore, there hasn't been much focus on just flying about and doing some pretty shooting at other spaceships. “I'm hoping the game will appeal to fans of story-driven space sims like *Wing Commander*, *X-Wing*, and the recent *Star Wars: Squadrons*,” says developer Brad Jeffrey. “People that want a linear story and a bit of patter with weird alien crewmates between missions. Space games have enjoyed a massive resurgence in recent years, but this specific kind of game still seems to be an underserved niche.”



ARCADE PERFECT

Three seasoned experts tell us about the highs and lows of running an amusement arcade in the 21st century

WRITTEN BY
DAN COOPER



For 1980s computer nerds raised on the two-colour limits of the ZX Spectrum or the Amstrad CPC 464, walking into the sensory assault of an amusement arcade was like being flung into the future. Rows of cabinets blasted out sound and music at a deafening volume while their screens served up the vibrant colour graphics that puny home computers couldn't hope to match. Whether it was an annual trip to a seaside town, or the occasional travelling fairground popping up for the weekend, the fleeting nature of the arcade experience only made it all the more potent.

It was the dawn of the PlayStation era, along with the launch of the Sega Saturn, that ultimately saw the Age of the Arcade fall into its twilight period. With their 3D capabilities and the CD-quality sound, the gap between home machines and arcades had narrowed to the point of insignificance. Couple that with the sudden availability of arcade emulators like MAME, and the magic that once made the arcade a unique pilgrimage for gamers began to evaporate.

For all their processing power, though, fifth-generation consoles couldn't hope to capture the atmosphere of a real arcade. That first glimpse of a gigantic four-cabinet *Daytona USA* setup engulfing the floorspace; or a Sega R360 cabinet, whose ability to spin the player in every direction quickened the pulse in a way that PlayStation sitting in a bedroom simply couldn't.

Though the arcade's heyday has passed, there are still those out there who are passionate

“Kids put their hands in the closing door because the sign says not to”

enough to preserve the coin-op experience for others to enjoy. Jason Rayner is one such person. As venue manager for Arcade Club Leeds and operations manager for several branches of the popular arcade hotspot, Rayner spends his days in the biggest video arcade in Europe, surrounded by hundreds of arcade machines, many of which were never designed to be operated through four decades of use. And yet, with careful attention and regular maintenance, these cabinets have been restored to live a fruitful second life.

When we first meet Rayner, he has the guts of a two-player *WWF WrestleFest* cabinet open, and

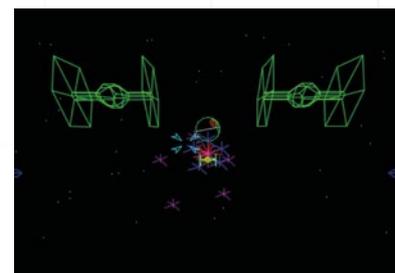
is trying to diagnose why the machine's screen is discoloured. It looks like hard work, but Rayner is adamant that the deluxe 'sit-down' cabinets (of

which Arcade Club boasts many), are even trickier to look after. "Anything with moving parts is really hard to maintain," he says. "*Elevator Action [Death Parade]*, for example, you tend to find a lot of kids put their hands inside the closing door because there's a sign asking them not to – so obviously, they do the opposite. We have to reset that quite often."

It's true that *Elevator Action Death Parade*, the 2009 lightgun shooter from Taito, with its giant doors that open and close to reveal the 50" screen, has an unfeasible number of moving parts. Sit-down racers can also be problematic, ➔

▲ **Arcade Club in Leeds boasts over 300 machines, including VR systems and air hockey. The ground floor features several 'modern' arcade machines. The middle floor is an ode to the arcade's eighties heyday.**

▼ **The vector graphics in Atari's *Star Wars* were simple yet beautiful.**



MOST WANTED

Which classic arcade machines of yesteryear are the most requested by visitors?

JOHN WARNER, NQ64: "Mario Kart was the most popular request, but now we've got that, we're still getting requests to make it a four-player setup. It's proving quite hard to source, but where there's a will, there's a way. We've had requests for *MotoGP* too, but it's quite a big machine and we have to think about floorspace."

JASON RAYNER, ARCADE CLUB: "The one cabinet people always ask us for is the Sega *G-LOC R360*. We have been offered them in the past, but you [need] an attendant on it at all times, you have to have the machine X-rayed to check for cracks from a health and safety perspective, and if I'm being honest, it's not a very good game."

GAVIN KAPUSCINSKI, THE PIXEL BUNKER: "Our most popular request has probably been for the vector-based *Star Wars* sit-down cabinet. We do actually have one in the arcade now, so [customer requests] definitely had an effect."



▲ True to Digbeth's street art style, NQ64 has some crazy psychedelic wall art that you can study whilst you contemplate game strategy.

▼ NQ64 also boasts free-to-play consoles, once you run out of arcade tokens!

especially the ones that move as you steer. "Some mornings," Rayner says, "you'll turn everything on and within ten minutes everything will be running fine, then other mornings you'll switch stuff on and *OutRun 2* has crashed, the joystick isn't working on this, an I/O board isn't working on that. Sometimes a flick of electricity is enough to stop everything from working."

John Warner, general manager of NQ64, an arcade bar in Digbeth, Birmingham, agrees when it comes to the reliability of the beloved Sega racer: "*OutRun 2* is notorious for breaking down," he says. "It's a sit-down four-player cabinet that needs servicing, I'd say, about every six weeks. It does take a toll, when a screen goes down. But there's always *Mario Kart*!"

As a dedicated nightlife venue open until the early hours, the players bashing away on NQ64's cabinets are often somewhat worse for wear. But generally, Warner says, the machines are pretty bulletproof. "To be honest, we don't need to remain that vigilant. On a Saturday night, for example, we might need to go over to the *OutRun* sit-down racer around ten times, which sounds dramatic, but it's actually pretty low. There are little tables next to the cabinets for drinks which helps. In terms of drinks getting spilled on the machines, our tech guys have done everything they can to make sure people are as safe as possible when interacting with the machines."

KEEPING THE LIGHTS ON

When dealing with such old machines, maintenance inevitably forms a huge part of running a 21st-century video arcade. "It's very rare that everything in the arcade works one hundred percent," says Rayner. "There's always





something that doesn't work, where you're waiting on parts." While regular cleaning does form part of the upkeep, most arcades tend to service machines as needed, adopting an 'If it ain't broke, don't fix it' approach.

"On a day-to-day basis, there generally isn't too much ad-hoc maintenance, as we have spare machines to swap in if machines go down," explains Gavin Kapuscinski, general manager of the recently opened The Pixel Bunker in Milton Keynes. "We have a technical team, who are based further in the north, who come down every week or two, to fix or maintain machines. We also do a full refurbishment on every machine we purchase."

Likewise, the crew at NQ64 find it more efficient to simply service the machines when they need it. As Warner puts it: "The machines get cleaned twice a day. In terms of tech support, rather than trying to diagnose problems that haven't happened yet, we tend to wait until they break so you can pinpoint the issue quickly."

One aspect that each venue needs to consider carefully is floor space. Not only are arcade machines bulky, but they're also essential pieces of video game history. Walking through a modern arcade should feel curated, like a visit to an art gallery or a museum, because, in effect, a video arcade is both. But who decides how we experience an arcade, and with limited space, which machines even make it in? "On the classic floor, we try and group all of the games together by type," explains Rayner, "so you have *Time Crisis* and the other shooters, then you've got all of your *Pac-Man* games together, and so on. We try and make sure we've got all of the classics that

everybody remembers: *Space Invaders*, *OutRun*, *Star Wars*, *Paperboy*."

Likewise, The Pixel Bunker values the arcade as a way of celebrating the medium's rich heritage, and as such, is always looking for landmark machines. "We'd love a *Computer Space* cabinet, which was the first arcade game ever made – that's top of the list," states Kapuscinski. "But there's not many of them about, as you can imagine. We'd love the original *Pong* machine, too. We try to stick closely to the experience of what arcades were, so having machines from the early days is a dream because we do see ourselves as preserving video games' past for the future to enjoy. We're not about to start roping off machines so you can't play them, but we are a slice of history."

Over at NQ64, the token-based system used by the bar allows management to evaluate which machines are justifying precious floor space. "We use the tokens that the players pop into the games to monitor how much each game is being played," explains Warner. "If something is only getting played, say, ten times a week, we put it under review. Every two months or so, we'll use that to change the machines for something

"It's rare that everything in the arcade works one hundred percent"

else. For example, we swapped *CarnEvil* for *1944: The Loop Master*, which we're seeing a lot more potential with."

It's a process of experimentation honed thoughtfully by each arcade. "We aim to swap out at least ten or so of our hundred machines at The Pixel Bunker, every month or so, just to keep that freshness," says Kapuscinski. "After all, that's how it would have been in the 1980s, with new machines constantly being released." ➔



▲ Sega's *Shinobi* doesn't allow you to continue on the last level so remains hard to beat – even on freeplay.

◀ *OutRun* is a racing classic, but the deluxe cabinet with moving parts needs regular maintenance.

GAME OVER

Which arcade games are the most error-prone, no matter how much TLC they get?

JASON RAYNER, ARCADE CLUB: "We had a *Dragon's Lair II*, which was still running off the original laser disc that was inside. We serviced it, got the monitor running beautifully, but it literally lasted two weeks with the laser disc spinning. The disc player gave up and we had to remove it from the floor."

GAVIN KAPUSCINSKI, THE PIXEL BUNKER: "The trickiest ones to maintain are the ones with vector-based graphics such as *Star Wars*, which require very specific screens in order to keep them in their original form. Those monitors are becoming increasingly rare, which makes it more of a challenge."



▲ Early versions of 1983's *Tapper* featured actual Budweiser taps for the beer-pouring controls. *Root Beer Tapper* quickly followed when Bally Midway was accused of advertising alcohol to minors.

BEST OF THE BEST

Hang out at a modern arcade for long enough, and you might just see a world record performance. "There's a guy called John Studley, who's one of the world record holders on *Pac-Man*," says Arcade Club's Jason Rayner. "He's come to Arcade Club in Leeds and done the perfect game on *Pac-Man*, where you play it for six and a half hours until the game runs out of memory. We've also had a guy visit who has played through to the kill screen on *Donkey Kong*."

Wandering nostalgically among the sights and sounds of your youth is a powerful experience, and the trio of arcade managers we spoke to mention the satisfaction of giving visitors a small but resonant glimpse of their childhood. "So many people come up to you; they're so emotional, seeing games they haven't seen for 20 or 30 years. Something like the *Star Wars* cockpit cabinet will [often] have that effect," explains Rayner.

"There's such a nice vibe; everybody wants to talk to you about games," Kapuscinski agrees, adding that tracking down machines that visitors are desperate to play is one of the most satisfying aspects of the job. "We've already got a lot of repeat visitors," he says. "To see them come back and we've got the machine they wanted, the one that was dear to their childhood, to be able to give them that nostalgic experience, is fulfilling for the staff."

Both Rayner and Kapuscinski mention the magnetic appeal of Atari's 1983 sit-down *Star Wars* cabinet, and the way grown adults are reduced to giddy children as they relive a less complicated time in their life. As Rayner puts it: "The best thing is seeing the joy on people's faces, especially those that haven't seen an arcade in decades. They just walk around with their mouths hanging open. The beauty of Arcade Club is that it takes you back to a time when you had no problems, you'd just go to an arcade when you were a kid, with your mum and your dad, and just enjoy playing games."

What about the kids of today, though? What does the *Fortnite* generation make of these

simplistic, pixelated games? After all, with no online capabilities or loot box upgrades, they're rooted firmly in gaming's past. "We have a lot of kids turn up and at first, you can tell, they're not really looking forward to it," says Kapuscinski. "Once they get in here, they begin to see it as a learning experience, to understand where games like *Fortnite* originate from. After all, the original first-person shooters, for example, were arcade cabinets, and the graphics from *Minecraft* were inspired by these retro games. When they begin to understand this, they really start having fun. They often gravitate towards lightgun games like *House of the Dead*, *Time Crisis*, and *Operation Wolf*. With the popularisation of *Call of Duty*, it's something they can relate to."

It's not like arcade machines are a previously undiscovered species for young players. The availability of classic titles on console platforms, even phones in some cases, means they have some familiarity with retro titles, even if they're divorced from the environment they were designed to be played in. With films and TV shows such as *Wreck-It Ralph* and *Stranger Things* offering up affectionate homages to 1980s video arcades, however, even gamers raised on a PlayStation 4 understand the cultural significance of the arcade. "When families do come in," says Rayner, "they tend to stick to the bottom floor where we have more modern machines, rather

"People are so emotional, seeing games they haven't seen for 20 years"

than the classic floor. But as daft as it sounds, things like the *Wreck-It Ralph* film show kids these games have timeless appeal. They'll

come in and say 'Whoa, they've got *Tapper* and *Q*bert* and get excited because they've seen them in the film.'

From regular visitors that gladly donate spare parts to ensure they go to a good home, through to hardcore gamers that turn up to play marathon *Dance Dance Revolution* sessions with sweat towels in hand, the sense of adoration and commitment to communally preserving and embracing the joys of the arcade experience feels real. This of course extends to the efforts of the staff as well, who pour countless hours into ensuring that gaming's past remains available for all to enjoy. "Some of these cabinets that we get, the boards don't work, the monitors are damaged, there's mould on the cabinets, the wood is damp or damaged," explains Rayner.

"A lot of love goes into getting them working, a lot of love goes into it, that's why we close for three days a week, to maintain the machines."

PRESERVING THE PAST

Private collectors aside, 21st-century arcades such as Arcade Club, The Pixel Bunker, and NQ64 are now the preservers of video gaming's early years. It's a responsibility they're taking seriously. "Eventually, we'll reach a place across the world where we're running out of parts, but we're nowhere near that yet," reflects Kapuscinski. "We can still save every machine right now. It's a horrible thought though, that one day we may have to consider preserving these machines by choosing not to play them."

One machine that *was* saved, for at least a while longer, was the *WWF WrestleFest* cabinet that Rayner was repairing when we originally met him. When reminded of that first encounter, he laughs: "It's fixed now – all fully working. *WrestleFest* is one of those games that takes you back to a time when you were at school. You see the Legion of Doom talking on the intro screen and you're like, 'It's a game that has speech'. Kids don't realise that back then, when a game came with speech, it was a big deal."

He's not wrong. It was a time in gaming's infancy, when speech in games was a big deal, when more than a couple of colours in games were a big deal. As players, the DNA of every game that we love today, every title we spent countless hours on, is buried deep within those cabinets with their bright livery and primitive systems.

Thankfully, it seems, they're in good hands. 🎮



▲ The Palace Arcade in *Stranger Things* does a good job of recreating the nostalgic arcade experience. It even has a *Dragon's Lair* cabinet!

▼ One of the high scores at The Pixel Bunker remains unbeaten for four years. The game? Namco's *Pole Position*.

HI SCORE

Do expert players ever show up to put on a masterclass for those of us who still struggle to get past level 4 of R-Type, even if we have endless credits?

JASON RAYNER, ARCADE CLUB: "We've got somebody who can finish *Shinobi* on one credit without even throwing a shuriken; he just uses the sword. Show-off."

GAVIN KAPUSCINSKI, THE PIXEL BUNKER: "We had somebody come in just the other week on *Robotron: 2084*. He'd been playing for around half an hour and was starting to hit some of the insane levels. A crowd formed and a few cheers were going up when he'd finish a level; there was a real feeling of community spirit to it."



Trying to get back into the groove



KIM JUSTICE

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

After 18 or so months of enforced absence, events are gradually starting to make their way back to the UK gaming scene, with recent weeks and months seeing the return of the Eurogamer Expo (EGX) to London, the retro-focused PLAY Expo in Blackpool, and the industry-facing Develop in Brighton. These three events, of which I was fortunate to attend two, weren't just merely a way for people to reunite with each other in the flesh – they also provided something of a first look at how the world of games can move forward with big events, even with the pandemic still an ongoing concern. And inevitably, there were more questions than answers by the time the curtains fell, particularly at EGX.

EGX's organisers decided to put as brave a face on things as possible – choosing to continue their residence at the ExCel Exhibition Centre in Royal Docks, London, with the promise of a fully packed four-day event. Whether they delivered on said promises may well depend on your generosity and understanding – with

restrictions on travel still in place, most major studios had no presence there. The end result saw indies largely having to take the top billing, making this rather akin to a Rezzed-sized event held in a venue far too big for that level, the general emptiness of the hangar-like venue – which not too long ago served as a Nightingale hospital for Covid patients – only underlining the sense of emptiness. For those keen on indie titles, there was plenty to enjoy, but the more casual audience the main EGX show attracts may have found the exhibition to be wanting, and unfortunately, hashtags like '#EGXrefund' started trending in the show's immediate aftermath.

There's no doubt that EGX is in a tricky position – while the ExCel was too big for the event, it's understandable running it in such chaotic times when it's hard to predict all that much. What if you run a smaller venue, but a spike in cases leads to further restrictions and distancing, driving the numbers down even further? It's a very tricky game, and the answer for EGX seems to be to continue in trusting the process – the more intimate Rezzed will not return to Tobacco Dock next year, being replaced by a long-requested return to EGX's old stomping ground of the NEC in Birmingham, going along in tandem with the usual ExCel show.

Whether to run shows in as big and open a venue as possible, whether to stick to more intimate surroundings, or indeed whether to run them at all are quandaries that event organisers will have to struggle with as we head into 2022. It appears that EGX's organisers are hoping that by the time their show returns to the second city in March, the answers will become clearer, and that people and companies the world over will be looking to return at last. For the sake of a UK scene that still struggles with truly big-ticket gaming events, compared to other countries, hopefully the gamble pays off. 🍀



▲ A real life Fall Mountain was one of the main attractions on offer at this year's EGX. As game as some were to claim a *Fall Guys* trophy for themselves, others were somewhat less keen.

SCHOOL OF SIMULATION AND VISUALISATION THE GLASGOW SCHOOL OF ART

BSc Immersive Systems Design
3D Modelling
Games & Virtual Reality



credit: Hamed Talebany, BSc Immersive Systems Design (3DModelling)

Creative - Innovative - Interactive
Art, Design & Technology for Games,
Virtual Reality & Real-Time at an
International Top 10 Art School

TOP 10

2021

Art & Design



WORLD
UNIVERSITY
RANKINGS

BY SUBJECT

<http://bit.ly/gsa-isd>



unity

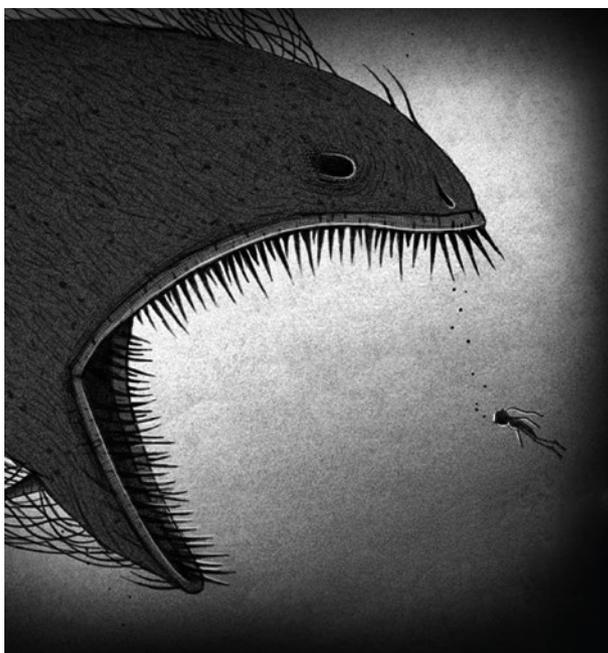
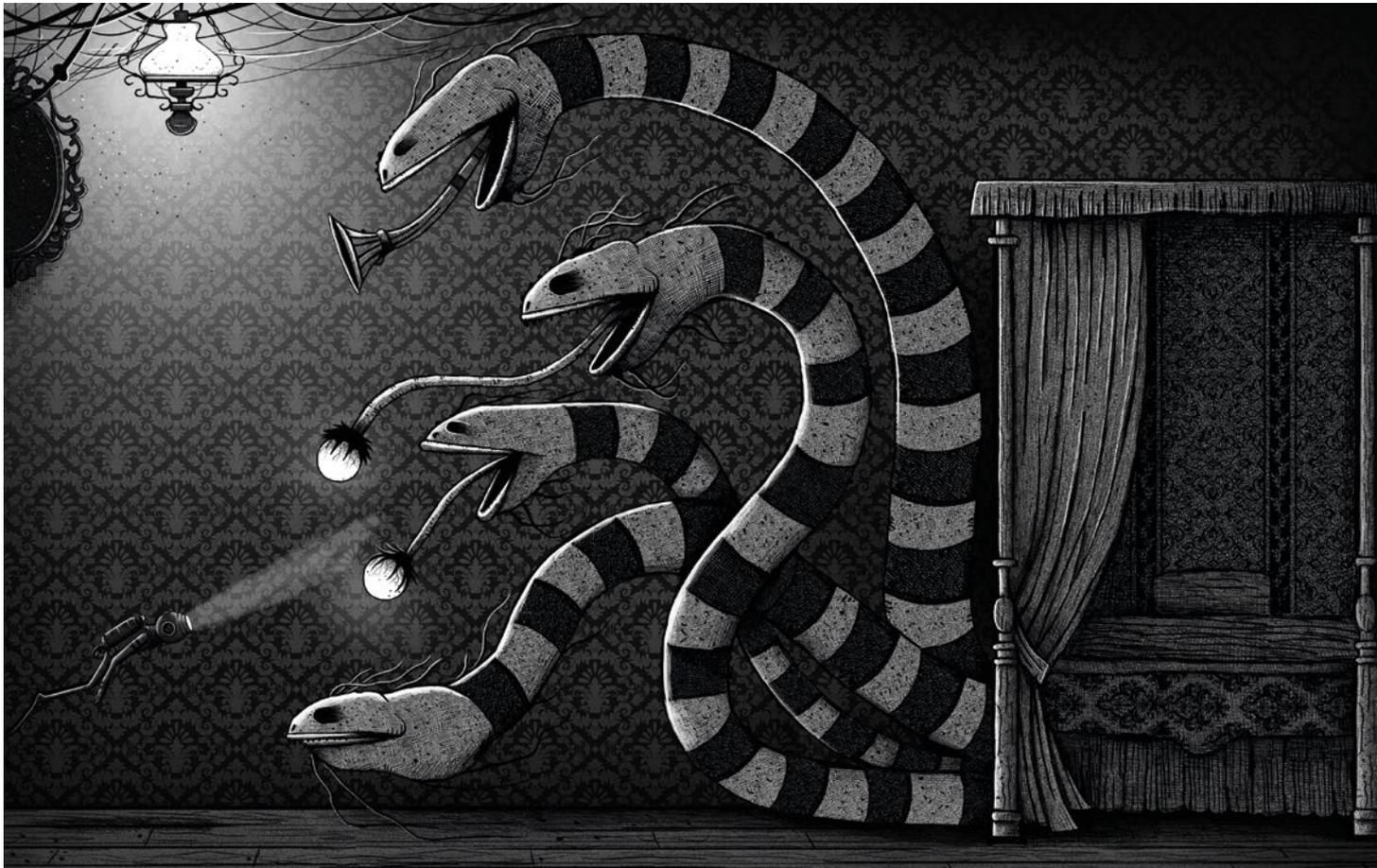
Academic
Alliance
2021

GAME
Silt

DEVELOPER
Spiral Circus

RELEASE
2022

WEBSITE
spiralcircusgames.com



Silt

**READ
MORE**
turn to
page 12

Our preview on page 12 gave some insight into how the surreal exploration game *Silt* is being made; here, you can see some of artist and animator Tom Mead's stunning work in isolation. For Mead, *Silt* gives him the chance to turn his surreal watercolours into an entire interactive world. "I studied 2D animation production at the [Art University] in Bournemouth, so the thought had always been in my head to have my characters come to life," he tells us, "but the opportunity hadn't really arisen before this point. I had been working as a fine artist for ten years in Bristol and it was all very low-tech and traditional. I would only really work with fine liners on paper or wood, so to go from that to game art was a huge leap.

"Due to my training, though, I wasn't entirely out the loop with the digital world, which was lucky. I had to find a way to simplify how I drew and painted without compromising the subject matter, so the entire game could be drawn, but I quickly realised that cross-hatching an entire game wasn't going to be a good plan for our first project!"

ARCADE ONLY

Our rundown of the games that could only be fully enjoyed in their natural habitat: the dingy, noisy amusement arcade

WRITTEN BY
RYAN LAMBIE AND IAN DRANSFIELD

There are dozens of games that, although they began life as coin-ops, worked just as well as home console titles: Nintendo famously designed the NES's original hardware so that it was capable of running an almost perfectly accurate rendition of *Donkey Kong*. There are some games, however, that simply aren't the same when they're extracted from the hulking cabinets in which they were originally housed. This list, then, is dedicated to those games: unique experiences that simply had to be played in the depths of a busy, deafening arcade...



OUTRUN – 1986

We listed Sega's classic coin-op as one of the most important games ever to emerge from Japan back in issue 50, and with good reason. More than just your typical racing game, *OutRun* has a dash of romance running through its fuel lines: it's about the joyous, sun-drenched fantasy of guiding an exotic sports car down mile after mile of coastal roads. Then there was the cabinet: the deluxe, sit-down version only added to the feeling that you were at the helm of an unfeasibly expensive Ferrari, as it tilted and tottered with every bend. *OutRun* wasn't the first hydraulic 'Taikan' cabinet designed by Yu Suzuki, but it was undoubtedly one of his most iconic.

STAR WARS – 1983

The game's (admittedly pretty) vector graphics meant Atari's *Star Wars* didn't look exactly like the hit movie. But what really helped sell the illusion that you were Luke Skywalker flying an X-wing on an assault on the Death Star was the game's booming sound and sit-down arcade cabinet. It didn't throw the player around like Sega's later offerings, but the sense of sitting in a cockpit, as the sounds of laser fire and digitised voices reverberated in your ears ("Red Leader standing by!") made *Star Wars* one of the most essential arcade experiences of its day. Its follow-up, *The Empire Strikes Back*, was equally as good (tattle over the AT-ATs!). *Return of the Jedi*, which mystifyingly dropped the vector 3D for pedestrian isometric sprites, is eminently skippable.



OPERATION WOLF – 1987

This Reagan-era rail shooter was quickly superseded by later, similarly gun-crazy arcade machines, but for sheer impact, *Operation Wolf* was a landmark in its day. The life-sized, convincingly weighty Uzi strapped to the front of the cabinet meant that it immediately looked different from any other game in your typical arcade in 1987, while the way it bucked and vibrated in your hands made every squeeze of the trigger feel like a miniature event. The game's sheer recognisability meant that it was ported to all sorts of home systems later in the eighties, but inevitably, none of them came packaged with a hulking, vibrating 9mm machine gun. That angular slab of metal turned *Operation Wolf* from just another 2D shooting gallery into something approaching a blockbuster action movie.

AFTER BURNER – 1987

Sega wasn't quite cheeky enough to call this dizzying into-the-screen shooter *Advanced Tom Cruise Simulator*, but arcade-goers in the late 1980s would have immediately recognised its debt to the Cruiser's blockbuster movie, *Top Gun*. You took to the skies in an F-14 Tomcat, blasting incoming enemy planes and avoiding their fire with a deftly timed barrel roll. Depth and context were in glaringly short supply: who were you shooting at? Where in the world were you, exactly? Not that any of this mattered: in the depths of an eighties arcade, with the cabinet reeling and rocking in time to the explosions and synth-metal soundtrack, *After Burner's* adrenaline rush was irresistible.



TIME CRISIS – 1995

All that came before immediately felt old, lacked dynamism, and didn't seem fair. To say *Time Crisis* changed lightgun games is to make the sort of understatement you should be ashamed to make, and it was all thanks to one thing: the pedal. Most everything else functioned as usual for shoot-the-screen games: point your gun, blast the baddies, progress. What *Time Crisis* did was introduce cover, so safety for the player, as well as the ability to control when cover was entered and exited, through the use of a foot pedal. Add into this perceived safety a strict time limit, and you're left with one of the most genuinely exciting ways to raise the bar on a genre ever seen. The PlayStation port was undeniably great, but the majority of players didn't have a pedal at home to play with, so the impact on console wasn't quite the same.



- Action Pedal
- System Super 22 graphics
- Time attack mode
- 50" monitor

DIMENSIONS
Width: 1150mm
Depth: 2170mm
Height: 2180mm
Weight: 280kg

N.B. Cabinets shown are of Japanese specifications and are subject to alteration.

NAMCO EUROPE LIMITED



GALAXIAN3: PROJECT DRAGON – 1990

Now here's an experience that most of us could never have hoped to replicate in our houses – because *Galaxian3: Project Dragon* was approximately the size of an actual house. Less an arcade cabinet and more a walk-in cinema room, *Galaxian3* was a rail-shooter along the lines of *Star Fox* (or *Starwing*, if you're in the UK); the difference here being the absolutely gigantic 18-foot-wide screen and the capacity for up to six players to blast away at enemy fighters. *Galaxian3*'s honking size made it a rare sight in UK arcades (the vast, 28-player version was even rarer, since it never made it out of Japan) but the handful of us who got to play it will be unlikely to forget its ominous presence anytime soon.

SONIC BLAST MAN – 1990

Arcade games have long been about simple, direct ideas that can be understood in a second or two – and game ideas don't come much more simple or direct than *Sonic Blast Man*, which asks nothing more of the player than to punch a huge pad as hard as they can. As the title's comic book hero, you're presented with a range of crises that have to be resolved with your punching superpower: a muscle-bound hoodlum who needs to be pummelled into submission; an asteroid that has to be pulverised before it collides with Earth. Few early nineties games were as brash or eye-catching as *Sonic Blast Man*, and it's hard to imagine the same cabinet getting a release today: it was eventually withdrawn from arcades, reportedly because so many players were injuring their hands.



RIDGE RACER FULL SCALE – 1993

The home port of *Ridge Racer* was one of the defining points of a new console generation: arcade perfection (more or less) in the home. But while Namco's PlayStation version of the drift-based racer was superb, it could never even hope to compete with the best way to play the original version in arcades: while sat in a full-size Mazda MX-5. Yes, through the magic of faff and doohickery, Namco was able to put together a *Ridge Racer* that featured a giant panoramic screen, where you sat in an actual sports car and used the wheel, pedals, and gear stick to play. You could even change music in-game using the radio. It was a proper event game, and a great accompaniment to a superb title.

HONOURABLE MENTIONS

BATTLEZONE – 1980

More glorious vector graphics from Atari's golden age, this time in the service of a surprisingly addictive tank sim. Playing the game required you to get to grips with a chunky yoke (the same as the one used for *Star Wars*, fact fans), and viewing the action through a small portal. An immersive coin-op for its time.

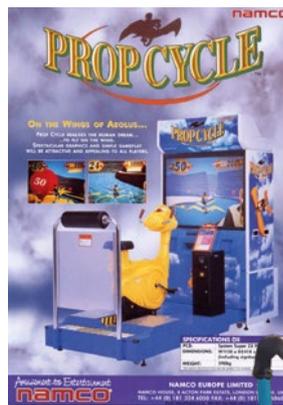


BISHI BASHI CHAMP – 1996

The proto-WarioWare is a cult classic, mixing manic hilarity with surprisingly compelling minigames to wonderful effect. In arcades it was a standout machine: a screen, and three sets of three big, colour-coded buttons to (bishi) bash. That's it. Games involve simple instructions, super-tight time limits, and the need to work faster than your opponents standing next to you – and what does that translate to? Hooting with laughter while absolutely hammering those buttons in the hope you can make your fizzy pop can-powered car complete the drag race the quickest, or that you can feed Uncle Bean the most jelly beans. The PSone port was superb, but – genuinely – missing that stand-up, big-button aspect removed a big chunk of the arcade original's fun.

PROP CYCLE – 1996

"When you create something weird, it's hard to find a way to make it approachable for new players." Words of wisdom from *Prop Cycle*'s designer, Shigeki Toyama, as translated by Shmuplations. One way of making it approachable is to slap a big exercise bike in front of the screen and have players control their in-game flying cycle by pedalling (and pivoting) in order to pop balloons, as happened with Namco's 1996 arcade title. And be under no illusions: this is one that stayed firmly in the realm of the arcade, with no publisher even daring to consider a version of the bike controller for the home market. Peloton might be keen these days, mind.



RAPID RIVER – 1997

Of the many gimmick-based games Namco released throughout arcades in the 1990s, *Rapid River* has to be one of the most... Namco. Sitting in a re-creation of a rubber dinghy, players would manoeuvre their way through challenging river rapids, avoiding obstacles (including dinosaurs) along the way. Naturally, all of this was controlled with a large paddle mounted to the machine, allowing up to two players (or more if you dared) to combine their strength and get *absolutely knackered* while attempting to flail ('paddle') their way out of the pull of a whirlpool. We actually got a rubber dinghy peripheral for the Xbox 360's *Kinect Adventures!*, but the one thing we never did get at home was all-important: the oars.



DANCE DANCE REVOLUTION – 1998

Konami's music game wing, Bemani, hasn't had a bigger worldwide hit than the *Dance Dance Revolution* series – originally known in Europe as *Dancing Stage*. It seems so simple on reflection: music plays, instructions flow across the screen, you press buttons on the floor using your feet, the illusion of successful dance is complete. But *DDR* was a revelation – a genuine attraction in arcades where you could watch absurdly talented people dancing their hearts out in arcades the world over. There's no doubt the home ports, which saw cheap, thin plastic dance mat sheets laying on living room floors around the world, were well received. But good as dancing in the home was, it could never compare with busting a move in the arcade, slamming your feet down hard on that chunky, diminutive dance-floor, and impressing all onlookers with your grooving skills. "wild failure at rhythm"



SPACE HARRIER – 1985

Another of Yu Suzuki's arcade titles that mixed pseudo-3D shooting action and a spine-rattling hydraulic cabinet, *Space Harrier* was the more psychedelic, surreal ancestor of Suzuki's *After Burner*. Its protagonist's constant cries of pain must've driven eighties arcade owners mad, though.

G-LOC: AIR BATTLE – 1990

Arcade owner Jason Rayner probably wasn't wrong when he said that this spiritual sequel to *After Burner* wasn't great, and its fully rotating R360 arcade cabinet required constant maintenance and attention, but still: we're glad this batty coin-op existed.

POINT BLANK – 1994

It didn't do anything unique with the hardware setup – a gun and a screen – but Namco's *Point Blank* series did a fine job of bridging the gap between fairground shooting gallery games and the world of video games. It's still a superb series.



TAIKO NO TATSUJIN - 2001-present

This rhythm-action title's such a national institution in Japan, you can walk into second-hand stores and buy its distinctive drum peripheral for the equivalent of a few quid. But while the home console versions are undeniably fun – the Nintendo Switch version even got a European release if you want to give it a try – they're a pale imitation compared to the original arcade machine and its colossal Taiko drums. If you've played *Donkey Konga*, then you'll know the drill: hit the drums in time to the beat, either on the top or the sides as the coloured symbols rolling across the screen dictate. With a selection of infectiously strange tunes, though, and those huge drums reverberating with every hit, *Taiko no Tatsujin* is one of those games that just has to be played in an arcade to be fully appreciated.



TSUKKOMI YOUSEI GIPS NICE TSUKKOMI - 2002

A stand-up comedy arcade game? Sure, why not. Rather than having you channel your inner Frankie Boyle, though, *Tsukkomi Yousei Gips Nice Tsukkomi* runs through a double-act comedy routine (based on traditional Manzai routines) on-screen and requires you slap, punch, and generally assault your comedy partner, who stands next to you in the form of a large inanimate dummy. There are surely comparisons to be made to playing games in the home alongside a sibling or friend, with playful taps (or worse in the case of older siblings) thrown around as a game is played – but like-for-like? No chance: this one was only ever something that could be in the arcade, and in the arcade is where it stayed.

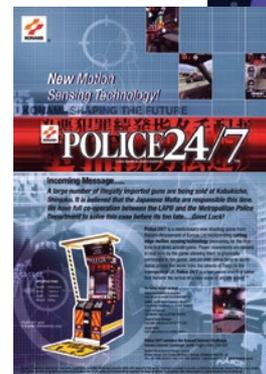


SILENT SCOPE - 1999

Precision-engineered to satisfy would-be snipers the world over, *Silent Scope* offered an arcade experience that its home console ports could never quite replicate. Unlike countless other gun games of its type, this one had a screen built into the rifle itself; you got a wider view of your kill zone on the arcade machine's main screen, but it was only by looking through your scope that you could get a precise bead on the assorted enemies lurking in windows or skulking behind parked cars. Later PC titles like *Sniper Elite* brought increasingly grim realism to their head shots, but *Silent Scope* concentrated on the tension and thrills rather than exploding heads. The result is a minor arcade classic.

POLICE 24/7 - 2000

Konami spread out from its earlier *Lethal Enforcers* series – a very static shooting gallery affair – with the far more dynamic, far more gimmicky *Police 24/7*. In it, players would make their way through regular lightgun shooter environments, blasting the baddies and trying not to blast innocent civilians. All pretty *Lethal Enforcers*-y. What made *Police 24/7* stand out, though, was the ability to duck into cover – and unlike in *Time Crisis*, you didn't control it with a pedal: you used your body. Yes, motion-sensing technology tracked your movement and updated your position in-game, meaning to avoid incoming fire you would literally have to avoid incoming fire. A PS2 port did happen, but this still felt like one that could only be appreciated in arcades – especially in today's largely lightgun-less world.



GTI CLUB: RALLY COTE D'AZUR - 1996

Konami's free-roaming street racer was good when ported to PS3 in 2008, but it was missing two big factors that made the arcade game great: force feedback steering, and that wonderful handbrake to wrench for those tighter turns.

AQUA JET - 1996

Think *Wave Race 64*, but in Namco's delightful mid-1990s polygonal style and with a full-size jet ski as your controller. A straightforward concept, a lot of fun, and something rather similar to *Alpine Racer*, the skiing game also from Namco.

FIGHTING MANIA FIST OF THE NORTH STAR - 2000

Based on the startlingly violent manga and anime, this coin-op asks you to punch a set of six pads in a specific pattern in order to beat a procession of brawny villains into a bloody pulp. It was a bit like *Sonic Blast Man*, but with protective gloves and a lot more violence.

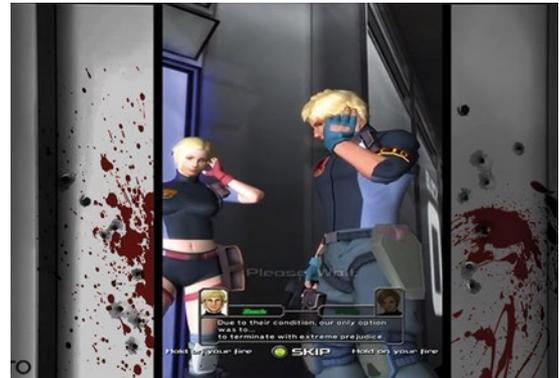


CHO CHABUDAI GAESHI - 2009

Roughly translated as *Super Dinner Table Flipping* and released in English as *Anger Explosion*, *Cho Chabudai Gaeshi* is a game in which you... explode in anger and flip a dinner table. Pretty decent titles, then. It's an example of a daft gimmick that could only work in the arcade for two reasons. One, the peripheral – a table half fixed to a heavy arcade machine so it could be flipped – wouldn't be easily doable at home. Two, the game itself – which requires you to slam your fists on the table to build up your anger, before releasing it by flipping the table at your rowdy family/rubbish wedding guests/naughty school kids and more – wouldn't be much fun in the home. In the arcade? It's a laugh riot.

THE TABLECLOTH HOUR - 2010

The title tells you pretty much everything you need to know: you have to pull a tablecloth out from under a variety of objects – cups, saucers, and the like – to score points. Fail to tug on the tablecloth with just the right amount of force, and you'll send all those objects clattering to the floor. As an arcade game, it's about as gimmicky as they come, and one of those quintessentially Japanese cabinets that never got a release elsewhere as far as we can tell. Still, as an example of an arcade experience that you simply couldn't replicate on a console, *The Tablecloth Hour* takes some beating. (Though thinking about it, you could just replicate the experience in your kitchen with a tablecloth and a few items from your cupboard.)



ELEVATOR ACTION: DEATH PARADE - 2009

As our feature on modern amusement arcades on page 28 points out, *Elevator Action: Death Parade* sure has a lot of moving parts. Why? Because its large, 50-inch screen is covered up by a pair of mechanical lift doors, which slide open to dramatically reveal the latest wave of armed villains waiting behind it. It's a cunning – if gimmicky – twist on *Time Crisis*' duck mechanic, with those shiny doors both providing a break between stages and also a handy means of protection in certain sections: by rapidly tapping the 'close' button, it's possible to use the doors as a shield from incoming bullets. It's also worth pointing out that *Elevator Action: Death Parade* is one of the finest game titles we've ever heard.

THE LAST BARFIGHTER - 2013

North Carolina-based Big Boss Brewing pushed this one out as a marketing campaign: a basic, actually not great one-on-one fighting game placed in bars and at festivals for people to play and beat each other up in. Oh, and the winner of each fight would get a beer poured for them, from the machine itself. Manufactured for the headlines in the most part, it wasn't a theme that caught on around the world and – obviously – never saw a home port. It wouldn't be out of the question to do a simple homebrew version of the game, of course, in which the loser of whatever game you play has to get a beer/tea/soft drink for the winner, but it's not quite the same. ☹️



MARIO KART ARCADE GP - 2005

Nintendo's flagship racing series took to arcades with this thoroughly enjoyable spin-off. As with the console original, it was better played with friends, while the sit-down cabinet only added to the fun.

HALF-LIFE 2: SURVIVOR - 2006

If you'd ever wondered what would happen if *Half-Life 2* was revamped in an arcade edition, featured joystick and foot pedal controls, and only released in Japan... well, here's *Half-Life 2: Survivor*. A bizarre mash-up of arcade game and classic FPS, it didn't quite match its intended impact.

STAR WARS: BATTLE POD - 2014

The logical end of the original *Star Wars* arcade game's quest for full immersion, *Battle Pod* encased players in a pod with a giant screen, playing through famous movie moments with sights, sounds, and even blasts of air completing the illusion.

Toolbox

The art, theory, and production of video games

46. Design Principles

Why do games look to cinema? Howard has some thoughts

48. CityCraft

Konstantinos shows you how to design a town fit for an RPG

50. Rainbow Islands

Make a fully fledged platform game with our in-depth guide

56. Narrative Design

Antony de Fault's back with more interactive storytelling tips

58. Kickstart your campaign

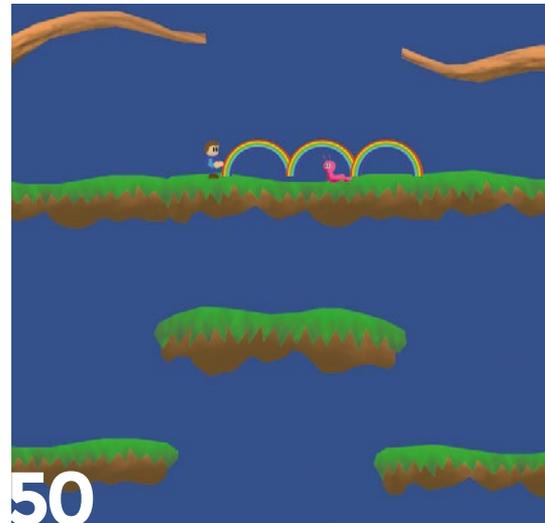
Essential tips for making sure your game's ready to crowdfund

62. Remastering War Robots

Pixonix explain how they adapted their mobile shooter to PC

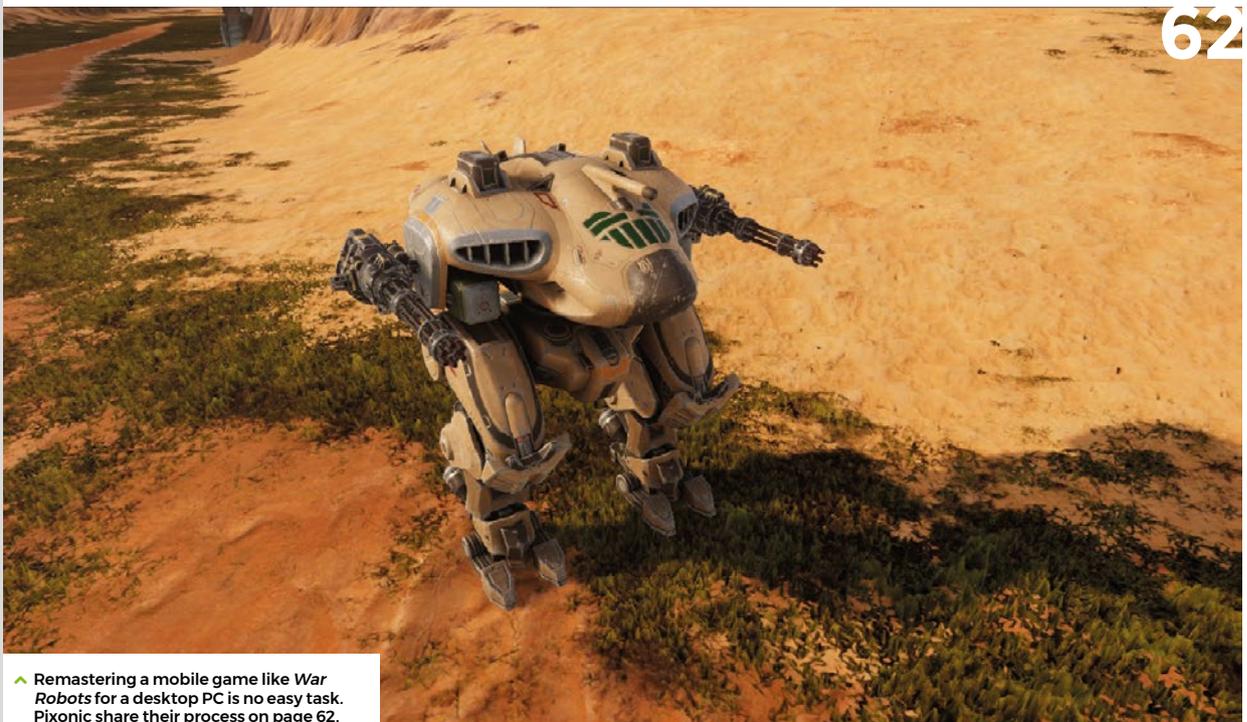
66. Source Code

Mike Singleton's Lords of Midnight is under this month's spotlight



50

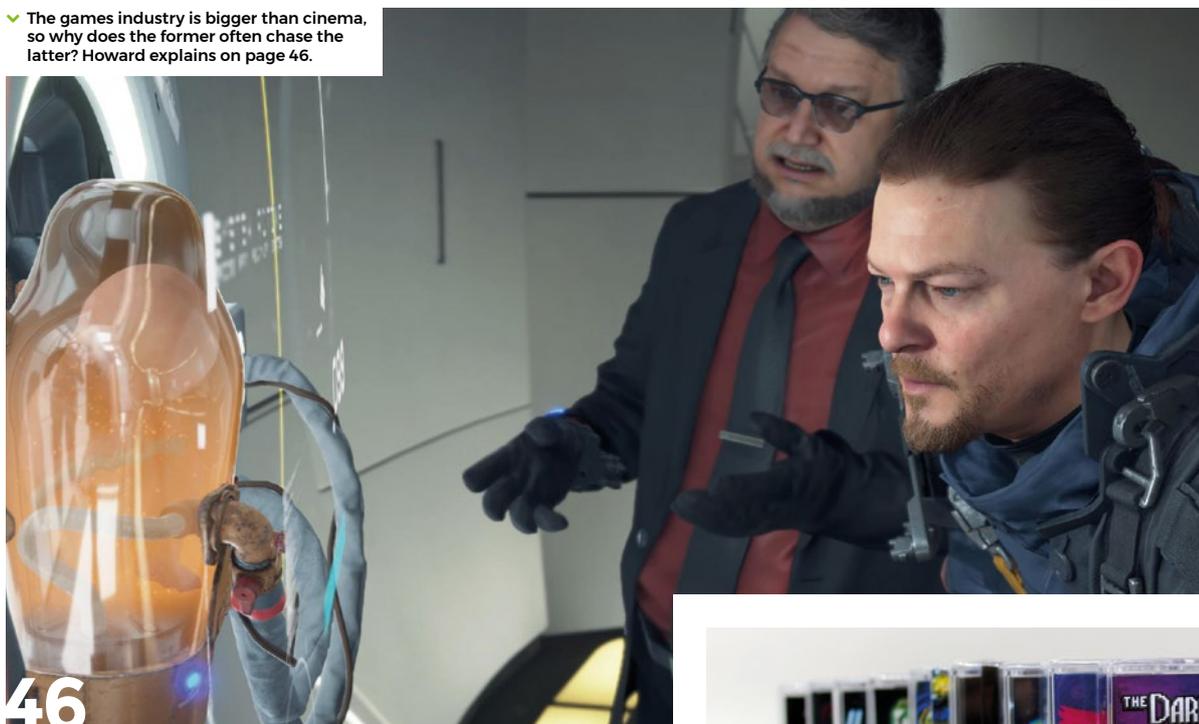
Remember *Rainbow Islands*? Make an homage to Taito's classic with our in-depth guide on page 50.



62

Remastering a mobile game like *War Robots* for a desktop PC is no easy task. Pixonix share their process on page 62.

✓ The games industry is bigger than cinema, so why does the former often chase the latter? Howard explains on page 46.



46



58

- ▲ Thinking of putting your game on Kickstarter? Then consult our essential tips on page 58 first.
- ◀ Code a graphics engine straight out of *Lords of Midnight*. See page 66.



66

The principles of game design

Video games overtook cinema in terms of revenue years ago. So why do games often look to the movies for inspiration?



AUTHOR
HOWARD SCOTT WARSHAW

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

From the dawn of the video gaming industry, we've always had our eye on Hollywood. Yet I hardly ever see video games made from movies anymore. They used to be commonplace – take it from the guy who did the first one (that's *E.T.*) and watched them explode into the gaming world. Whether or not they're tapping each other for specific products, the film and video game industries are inextricably linked, feeding each other and frequently depending on each other.

Hollywood has always been the bright shining star out in front of entertainment – at least, that's how it felt. And video games were like the toddler a few steps behind, trying to catch up to an idealised role model.

Here's a stat you may already know: In 2020, global video game revenues were *far* larger than global film revenues. At long last, we overtook them. What a relief! But wait a minute. When did video games first surpass the film industry? Hint: Not recently. Financially, video games eclipsed Hollywood as an industry sometime in the late 1970s. By 1980, video games took in over \$7 billion while films were significantly under \$3 billion. And in 1981, video game worldwide revenue jumped to over \$20 billion. That's one of the best-kept secrets in the entertainment industry.

Financially, we took the lead early on and never looked back, but video games always felt like the lesser relation of movies, struggling to catch up. You might ask: catch up to what? Despite our financial success, we're still lagging behind in one very important category... Prestige.

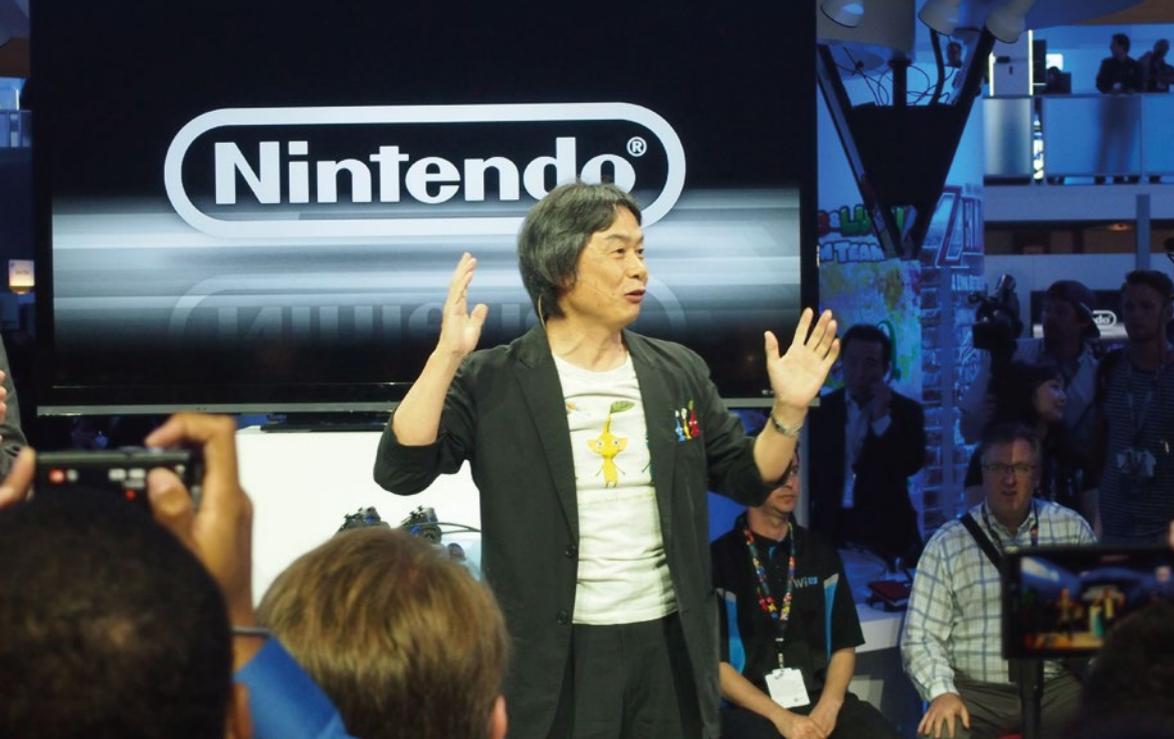
Let's consult Google for another stat. When I search for 'film stars', I get 13,800,000 results. However, when I search for 'video game stars' I get a mere 84,000 results. That makes sense to me; after all, movies have been an integral part of the culture for a very long time. Video games have only been around for about two generations now.

Hollywood is more firmly established, but video game development has made huge contributions in multiple areas and generated technologies integral to our daily life. Yet, it's still seeking the kind of recognition and respect that other (smaller) industries command.

That's likely because Hollywood has better marketing. Better awards shows. More glamour.

✓ Sure, he founded Atari. But is Nolan Bushnell as famous as Matt Damon? Hardly.





◀ Shigeru Miyamoto is a games industry icon. But does he have the recognisability and star power of Jason Statham? Probably not.

Who doesn't dream at least once of being a movie star? Is there such a thing as a video game star? Perhaps with the rise in spectators for video game competitions, some players will emerge as stars. But will game makers become stars? Some have. Shigeru Miyamoto always comes to mind. Nolan Bushnell is certainly an instant recall for many gamers. But companies, not individuals, tend to dominate the landscape of video game stardom.

Video games have been chasing Hollywood since their birth. Even after having dramatically overtaken Hollywood as an industry, they're still chasing the image. Like a younger sibling, video games are still looking for that ultimate acceptance and validation in the eyes of the public. And guess what? As an industry, it attracts a lot of people who are also chasing this validation. This need to be accepted, appreciated, loved!

Until now, I've been talking about the differences between celluloid and silicon. Now let's look at what they have in common. First and foremost, they're both entertainment industries.

Let's talk about what it means to work in an entertainment industry.

When most people think of entertainment (especially career fantasiers), they think of the glamour, the applause, and adulation that some artists receive through their product. There's an allure to the entertainment industry.

Another secret of the entertainment industry is that working in this industry is brutal. Succeeding always looks wonderful, but doing the work is frequently excruciating. Why do people subject themselves to this kind of punishment?

Hollywood (or Pinewood or Bollywood) is about two things: illusion (their main product for the public) and disillusionment (the exhaust upon which many industry insiders choke). What's so brutal about it? There's the ridiculously long hours, disappointment, excessive demands, harsh criticism and rejection, being used, chewed up and spat out. Losing weekends, vacations, and relationships. You know, the kinds of things that led Hollywood production people to form unions.

Why would anyone voluntarily sign up for that? Well, there are egos out there in dire need of external support because they cannot provide it themselves. This is the promise of the entertainment industry, and it's a powerful magnet. For some, these ego needs supersede everything,

which is bad news for the other needs. This is how the entertainment industry is able to create diabolical working conditions for many creators.

Enter video games. Cutting-edge technology is already a brutal business. So, when entertainment technology became a thing, like it did at Atari, there were lots of opportunities to work in a brutal-squared environment. And we lined up for the opportunity. Of course, at Atari we did it voluntarily – in fact, many of us needed to be there. By the time I arrived at The 3DO Company in the 1990s, management simply demanded it and we capitulated. Now there is increasing talk of video game labour unions. That's entertainment!

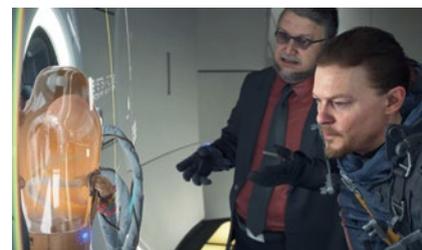
Illusion and disillusionment. Play a game and you can waste an afternoon. Learn to make games and you can waste an entire career. I think the video game industry has indeed become a lot like Hollywood. And that's no lie. 🙄

“Cutting-edge technology is already a brutal business”

GOOD ENDING

As products, video games have one major advantage over films. In games, you can change the outcome the next time you play. If you feel you had a lousy outcome in a game, you can play it again and do better this time. When you watch a movie and don't enjoy it, it's unlikely the movie is going to be very different for you on the next viewing. Video games have more upside potential. With movies, you're stuck with one experience; with video games, you make (and remake) your own experience every time.

✓ *Death Stranding's* affection for cinema is such that it even stars actual movie directors: here's Guillermo del Toro as Dreadman.



Building a town fit for an RPG

Want to design a city or town worthy of *The Witcher 3* or *World of Warcraft*? Konstantinos has the blueprint – and the pitfalls to avoid



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 *Virtual Cities* atlas, designs game cities, and consults on their creation. game-cities.com

SYSTEM OF A TOWN

Towns and cities never exist on their own. They're instead parts of larger hierarchies of settlements and wider geographies. They're connected to these other places via roads, paths, canals, telegraph cables, or railways; have political, cultural, trade, and diplomatic relations, and often supplement each other or go to war with each other. Taking such networks into consideration is crucial. Not only does each settlement have to distinguish itself, but thinking of such networks can help flesh out your game with continental post services, the need for defences, a train station, or even custom controls at the gate.

► *Fallout's* Junktown wasn't just a functional hub that fitted the setting. As a town, it offered fascinating stories and its own quests.

U

Ultima, *Fallout*, *Diablo*, *Skyrim*, *Final Fantasy VII*, *Pillars of Eternity*... almost every RPG released over the past 30 years has used towns and cities as settings. Such settlements may be large or small; stereotypical or wildly innovative; memorable or sketched in to support gameplay and storytelling needs. They can boil down to thinly disguised menus and hubs with a few quests and snippets of lore thrown in, or they can be iconic places like Sigil, Novigrad, Midgar, or *Mass Effect's* Citadel: vibrant, believable places that transcend mere game mechanics to become truly iconic.

A MATTER OF FUNCTIONS

The gameplay functions of any RPG settlement – its in-game reason for existence – shouldn't be ignored. Rather, our design goal should be to organically incorporate our game functions into an engaging, well-crafted environment, all woven around its virtual inhabitants. Supporting the

gameplay and expositional needs of our story is more than just important: it makes any city or town worth experiencing, and a place where the player needs to visit in order to gear up, relax, rest, or advance the plot. Even the most imaginative, meticulously designed, and stunning city will be ignored by audiences if it fails to offer meaningful interactions.

We thus have to decide which plot or mechanical requirement we need to serve before we place a settlement in our game world. Why is it needed in terms of gameplay? How does it function narratively? Does it help shape our overall world-building? These are all questions that need to be carefully answered.

So, mechanically speaking, an RPG city should provide all kinds of gameplay opportunities without the demand for excessive travelling. Cities, both virtual and physical, are condensers. They allow for shopping, healing, resting, training, relaxing, crafting, and the meeting of interesting, possibly quest-giving characters in a small space. They also provide the crowds, systems, and tensions that breathe life into a world.

Obviously, a place that offers all this has to be big and dense enough to support it all, and should therefore both make sense in its overall setting, and in some way shape it. *The Witcher 3's* Novigrad doesn't exist in a void. It's a major centre that is talked about across the game's regions, attracts heroes and villains, is influenced by the world's politics, follows its rules, and is itself believable as a city.





▲ Even hack-and-slash dungeon crawler *Diablo* felt the need to use a bare-bones town as its main hub.

Novigrad, not unlike other successful game cities such as *World of Warcraft's* Orgrimmar, maintains a harmonious balance between fiction and mechanics. The scripted residents may not have real-life needs, but their shops and taverns function in-game as shops and taverns for players to purchase equipment and drink fictional drinks while hunting for useful bits of gossip. As for the quests players run into by the harbour and the ones in its adjacent red-light district, they're thematically differentiated enough to emphasise their spatiality.

BELIEVABILITY

Avoiding common genre mistakes and oversimplifications is another important step towards a good RPG city. Constructing cities big enough to properly house their entire populations, as was the case with (again) Novigrad, may be logistically impossible, but at least maintaining some sense of scale is vital. In *World of Warcraft*, Stormwind underwhelms when this supposed metropolis is revealed to consist of a mere handful of buildings, and what is meant to be a medieval village turns out to be made up of three residences, a well, and eight buildings (temple, town hall, armourer's workshop, general store, arcane supplies shop, and so on). It simply feels wrong.

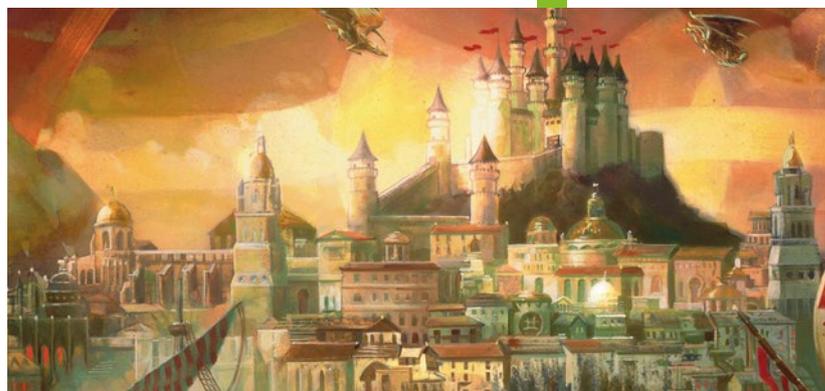
You see, settlement size should correlate to the number and scale of functions the player expects to find there. The more specialised or grand a function is – a vast cathedral, for instance, or an artisanal shop that only sells clockwork mechanisms – the less it would make much sense in a village. Meanwhile, a metropolis without a single supermarket would seem unconvincing. Then again, unbalanced scales can sometimes be quite effective. An out-of-proportion castle,

a world-famous specialist, or a major mining enterprise would profoundly and uniquely influence the modest settlement they're placed in – provided the narrative works.

Taking into account the era, geography, society, and technologies available should determine many of the characteristics of any game city. A medieval-inspired fantasy settlement should be based on medieval urbanism. Research should be conducted, and the required characteristics identified. The walls, the cathedral, the guild-houses, the twisting narrow streets, the half-timbered architecture, the class structure and piety of the population will all help paint a convincing picture, and provide a foundation on top of which something unique can be built.

Having everything make sense and fitting together doesn't necessarily lead to a fascinating and interesting environment, however. Ideally, each settlement in a game world – especially key ones – should stand out and help players mentally map and identify it in the overall geography of the game. A strong thematic axis, an unexpected situation, an identifiable and odd population trait, or a major landmark can all help do this.

The greatest city of the realm, the capital, the town of unending civil war, the harbour community, the mountainous outpost, the local carnival, the palace, or the deathly complexion of the inhabitants, are all traits that can individualise a settlement. Then, of course, comes the question of how exactly to show off its focal points, imply its history, and sculpt its overall shape, while imagining how daily life would work. And aren't there instances where a decidedly nondescript town could work wonderfully when it comes to evoking feelings of unease – or even as a backdrop to terrifying situations? 🗨



GENERATION GAME

The Medieval Fantasy City Generator by watabou is a wonderful tool that will, at the very least, provide you with a procedural medieval-esque urban space to start working on. Find it here: wfmag.cc/citygen.

▼ Cities and towns have been a staple of *Dungeons & Dragons* both on the tabletop and in video games. Pictured here: Waterdeep from the Wizards website (wfmag.cc/wizards).

Make your own retro platformer

Code your homage to Rainbow Islands in Python – a vertical scrolling platformer where enemies meet incredibly colourful deaths

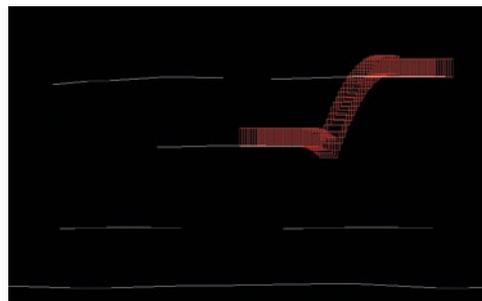


AUTHOR
JORDI SANTONJA

Jordi currently works as a software engineer in Norway for a company that develops systems to design infrastructure: roads, railways, utilities... He originally comes from Spain and, in his spare time, codes video games.

Platform games have long been about dexterity: running, jumping, and avoiding enemies and pits. The genre's roots go back to Nintendo's *Donkey Kong*, released in 1981, and gradually evolved from single fixed screens to scrolling levels, and then to 3D.

Rainbow Islands: The Story of Bubble Bobble 2, developed for arcades by Taito in 1987, stood out from other platformers thanks to its vertical level design and unique attacks. The player makes their way from the bottom to the top of narrow stages, and can cast rainbows which can be used as both temporary platforms and an attack that destroys enemies. The rainbows kill the enemies if they collide with them when created, or, when destroyed, if they fall down over them. A rainbow is destroyed when the player character jumps over it, or after a certain time from its creation.



› This is what happens when the player jumps just after leaving a platform: they jump in the air like a cartoon character. Hence its name, 'coyote time'.

We're going to code our own take on *Rainbow Islands* in Python and Pygame Zero, with the help of Shapely for the collision detection. Head to wfmag.cc/shapely, where you'll find out how to download and install it.

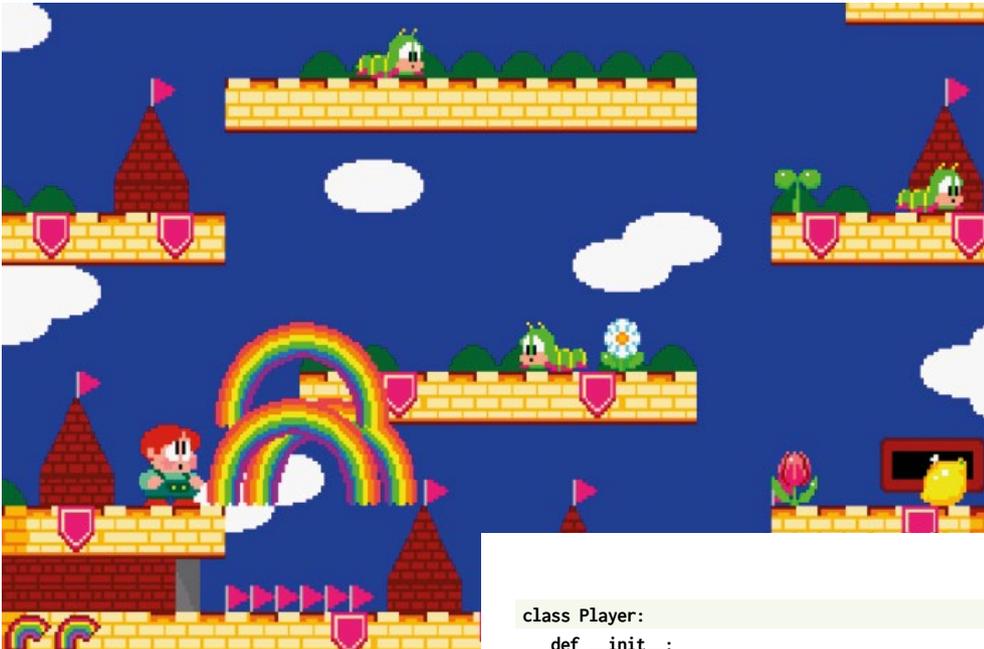
DRAW PLATFORMS

Let's start coding some of the game's main mechanics. We'll first test the player's interactions with platforms: jumping, falling, and walking around. We need some platforms to check all this, and to draw them we use the program **Listing01_DrawPlatforms.py**. We can draw lines with the mouse, **RETURN** starts a new line, and the **SPACE** bar prints the resulting lines to the Python console.

In the game, the player's character can jump up through a platform without colliding with it, but when they're dropping down they'll land on top of the platform. This way, the player can advance upwards by jumping from platform to platform. To achieve this, the platforms consist of a single open polyline from left to right, which doesn't intersect itself and has no loops.

PLAYER PROTOTYPE

The first lines of **Listing02_PrototypePlayer.py** contain the platforms, called **surfaces** in the code, copied from the result of the previous program. The rest of this listing is quite complicated and long, but it contains the main foundation of the full game. After the platforms come some player



◀ *Rainbow Islands: The Story of Bubble Bobble 2* - the 1987 classic we're using as the basis for our Python project.

parameters: size, acceleration, jump speed, terminal speed, and lateral speed. You can change them at will to see how they affect the character's movement.

Next, the **Player** class is defined. The **update** function contains its main behaviour, where the collision with the platforms is handled. The collision is computed only when the player is falling down, that is, when **speedY** \geq 0. An object with a speed greater than zero goes down. When the speed is less than zero it goes upwards, and it doesn't collide with anything. The collision is computed using Shapely's **intersection** function between two Shapely geometries: the platform line and the player bounding box. Both are defined as Shapely **LineString**. The intersection result consists of one or more points. In order to avoid missed intersections when the player is falling down at a high speed, the player's bounding box size is expanded down by the speed value. The highest point of the intersection is assigned to the player's position. This way, when the player's character intersects a platform, it will remain at the top.

After the collision detection, the new position is computed from the old position and speed, limit checks are performed, and finally, input management from the keyboard is done with the three functions: **jump**, **left**, and **right**.

The pseudo-code for this prototype can be described as follows:

```
surfaces = [point lists]
player parameters
```

```
class Player:
    def __init__:
        centre = initial position
        lineString = box around centre
    def draw:
        draw lineString lines
    def update(surfaces):
        if speedY >= 0:
            for all surfaces:
                intersection surface / box
                if intersection:
                    centre.Y = intersection highest
point
    centre.Y += speedY
    translate(lineString)
    def jump:
        if not jumping:
            speedY = -playerJumpSpeed
            jumping = True
    def left:
        centre.X -= playerLateralSpeed
    def right:
        centre.X += playerLateralSpeed
player = Player()
def draw():
    screen.clear()
    for all surfaces:
        draw surface
    player.draw()
def update():
    if keyboard.left:
        player.left()
    elif keyboard.right:
        player.right()
    if keyboard.up:
        player.jump()
    player.update(surfaces) →
```

PROTOTYPES

When you have an idea for a new mechanic, one of the best ways to check its feasibility and fun factor is to build a prototype. A prototype must be fast to code, and needs no fancy graphics: some boxes and lines will do. But it needs to show the mechanic as best as it can be implemented, so if it's successful, it can be translated directly to the final game with finished graphics. I recommend taking a quick and dirty approach to prototyping – build it in the engine or programming language you're most comfortable with. If the prototype's successful, it can be translated into proper code in the final platform.



▲ The code 'Listing08_PrototypeShootRainbows_Polygon.py' is used to test the creation of rainbows and the correct placement of the player on the rainbows. Please try it, tweak the code, and play around to test the results.

GAME PARAMETERS

To test the possible values of the parameters of the game, we can code them into variables that can be easily changed, either in the code or in a file. Be it the speed of the player character, the height of its jumps, or the size of the rainbows, it can be changed any time to immediately test its effects on the gameplay. The goal is to iterate rapidly through the possibilities to find the most satisfying and fun values.

VERTICAL SCROLLING

To tackle the scrolling, we need some platforms. To make them, we'll adapt the drawing platforms listing to get **Listing03_DrawPlatformsVertical.py**, where pressing the arrow keys 'Up' and 'Down' displaces the whole screen vertically. Then we adapt the player's prototype code to allow the vertical scrolling in **Listing04_PrototypeVerticalMovement.py**, which defines the new variable `screenPosition`, which stores the vertical viewing position. All the operations are performed as before, with the intersections done in the world coordinates. In the `draw` functions, `screenPosition` is subtracted from all objects' vertical position to draw them in the right place on the screen after scrolling. `screenPosition` is updated in `screenPositionUpdate` from the vertical position of the player.

Another tweak has been introduced here. If you've played around with the first prototype, you may have noticed that if you press 'Jump' after you fall from a platform, your character jumps. To avoid this double jump, a check has been introduced when the character is in mid-air:

```
if not self.jumping and self.speedY >= 4:
    self.jumping = True
```

This sets the character as jumping when the vertical speed downwards is higher than 4, thus avoiding a double jump. This still allows

“Now we have a basic prototype for all the main elements of our platformer”

the jump in mid-air just after falling from a platform. This is a useful technique in platform games called 'coyote time'. The next step is to rename the '4' to something more meaningful, `coyoteTimeVerticalSpeed`, and test different values.

ENEMIES

Let's prototype the enemies now. In **Listing05_PrototypeEnemies1.py** and **Listing06_PrototypeEnemies2.py**, we code two basic enemy behaviours: back and forth on a platform, and falling down from the border of a platform.

The first enemy moves over a platform without leaving it. That behaviour is achieved by using a line to intersect the platform. The line is placed in front of the enemy to find the vertical position of the platform and place the enemy accordingly. If the line doesn't intersect the platform, it means the enemy has passed the border, so it must reverse its trajectory to go back to the platform.

The second enemy moves over a platform, but when it reaches the platform's border, it falls down. The collision box is similar to the player's character one, so we could reuse the code here.

SHOOT RAINBOWS

Next, prototype the rainbows. We reuse the code from **Listing04_PrototypeVerticalMovement.py** to create the new file **Listing07_PrototypeShootRainbows.py**. Here, every time the player presses the `SPACE` bar, a new rainbow is created. As the rainbow is placed in front of the player, a new variable is defined: `directionX`,

which can store two values, +1 and -1, facing right and facing left.

The new rainbow is then added to the current platforms as an

arc, so the player can walk and jump on it. But in the first prototype, we find that the player's box gets into the arc when walking on top.

To fix this, we must compute a `Polygon/LineString` intersection, that draws a `LineString` completely inside the `Polygon`. Then we get the highest point of the resulting `LineString` to place the player's character. Now the player correctly rests on top of the arcs without intersecting it. The file **Listing08_PrototypeShootRainbows_Polygon.py** contains the changes.

Another change is the size of the bounding box to detect intersections. When you jump from a platform to the one above, you'll suddenly

appear on top of the platform, which is a jarring behaviour. We can reduce the size of the bounding box to avoid this.

COLLECTABLES

We have enemies and rainbows. What happens when an enemy is killed by a rainbow? An item is released that can be collected by the player.

Listing09_PrototypeShootCollectables.py prototypes how these items fly from the enemy and land on a platform.

Here, when the player presses the **SPACE** bar, a new flying item is created at the character's position. Then it starts to fly in a random direction, computed with a pair of **randint** – one for horizontal speed and the other for vertical speed – and it flies until it lands on a platform. The collision detection is similar to the player character collision detection.

The **Collectables** class contains two lists, **collectablesFlying** and **collectables**, that store all the collectables, and defines the function **addCollectable** to add a new flying collectable. When a flying collectable lands on a platform, it's deleted from the **collectablesFlying** list and added to the **collectables** list.

DESTROY RAINBOWS

The **Listing10_PrototypeDestroyRainbows.py** program prototypes both ways to destroy a rainbow: when it reaches its time limit and when the player jumps over it.

In this code, the rainbows are independent entities, stored in the class **AllRainbows**. This class keeps two lists: **rainbows** and **fallingRainbows**. When the player shoots a rainbow, it's appended to the **rainbows** list, and when the player's character jumps over a rainbow, or its time of life **rainbowTimeLife** has ended, it's removed from the **rainbows** list and appended to **fallingRainbows**. When the falling rainbow exits the screen, it's removed from the list.

When the player's character lands on a rainbow, its speed is compared against **playerVerticalSpeedToDestroyRainbow** and, if bigger, **allRainbows.rainbowFall** is called to destroy the current rainbow and to add a new falling rainbow. Another tweak to the player's behaviour is also introduced here: the variable jump. When the player presses the **SPACE** bar longer, the character jumps higher, and with a short press, the character jumps shorter. This has been achieved by calling **stopJump** when the **SPACE** bar is released.

GRAPHICS

Now we have a basic prototype for all the main elements of our platformer: the player's character, the platform, enemies, collectables, and rainbows as weapons. With some adjustments, it's possible to start putting it all together to get the final game. It's also the time where we can start creating the graphics. My preferred software is GIMP (gimp.org), but you can use any other software capable of creating graphic files with transparency – PNGs in our case. Please replace the provided graphics with your own – I'm not an artist!

PLATFORMS

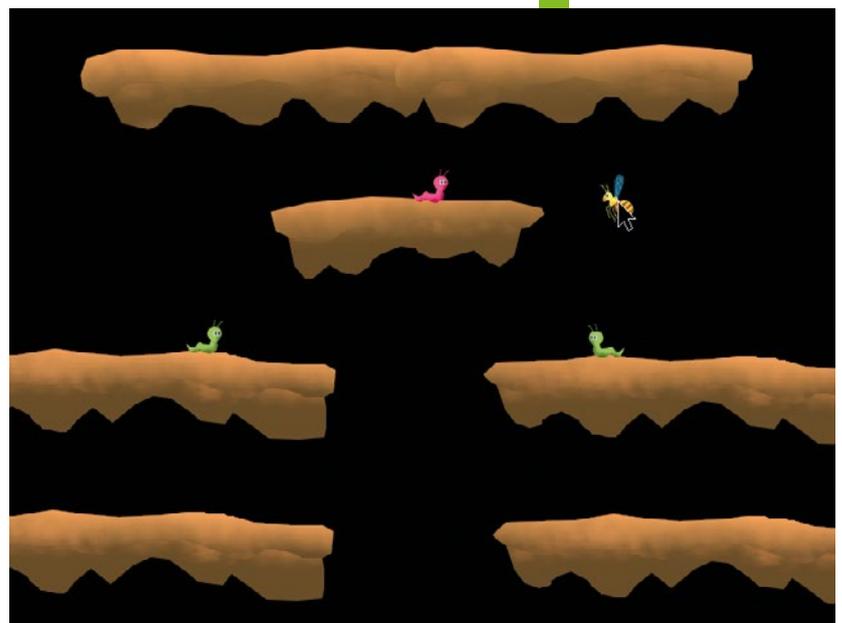
With the help of GIMP, we've designed a set of platforms to be placed on the screen. The list of platform file names is stored in the file **Listing11_PlatformNames.py** under the name **platformNames**. Now we must draw a line over each to define the top line where objects can land. We draw the lines with the program **Listing12_DrawPlatformLine.py**, and, after pressing the **SPACE** bar, the result is stored in the file **Listing13_PlatformLines.py** under the variable **platformLines**.

Next, we create the level by placing the platforms in their final positions with the program **Listing14_PlacePlatforms.py**. Here, we use the mouse to move and place every platform, the ➔



▲ **Listing12_DrawPlatformLine.py** helps us to define the platform surface where the game objects will rest.

▼ After creating the map, **Listing19_PlaceEnemies.py** allows us to place the enemies on the platforms.



COYOTE TIME

If the jumping from platforms is pixel-perfect, sometimes it can feel unfair to miss the platform by a pixel and fall to the void without the possibility to jump. To avoid this, some platformers implement a 'coyote time', where the player can still jump after having left the platform and being mid-air, in a similar way the cartoons realise they are in mid-air and start falling.

✓ Can you reach the top of the stage? And more importantly, can you create a more challenging map?

arrow keys to select platforms and to scroll the screen, and the **SPACE** bar to print on the Python console the final distribution of the platforms. Every entry of this list contains the index of the platform and the global position on the screen. This list is copied into the variable `platforms` in the file `Listing15_Platforms.py`.

The code in `Listing16_TestPlatforms.py` combines the player and the rainbows from `Listing10_PrototypeDestroyRainbows.py` and the newly created platforms, stored in the new class `AllPlatforms`. Here, we discover that the previous jump height is not enough to reach the next platform, so we increase `playerJumpSpeed` from 12 to 14.

At the moment, our background is plain black. As we've drawn some clouds as platforms, it feels appropriate to have the background fade from black to blue as the player goes up. The colour is computed in the function `backgroundColourUpdate` and stored in `backgroundColour`. This code also draws the platform collision lines to check that everything works as intended.

PLAYER

Now it's time to test the player and rainbow graphics with the program `Listing17_TestPlayerGraphics.py`. Here, we've defined the variable `drawLines` to enable or disable drawing the collision lines. In the final game it must be `False`, but for debugging and testing, it's convenient to activate it. The player can shoot up

to three rainbows at a time. To test it, the variable `numberOfRainbows` has been introduced, and set to 3. Later, it must start with 1 and be incremented every time a specific item is collected. To allow a small delay in the creation of the rainbows, each rainbow is created with a `creationTime`, and it becomes active and visible when the time arrives.

All the player image names are stored in the variable `playerImageNames`, and then loaded into actors at the list `actors` in the class `Player`. Then, in the `draw` function, the right image is selected from the current state of the player.

ENEMIES

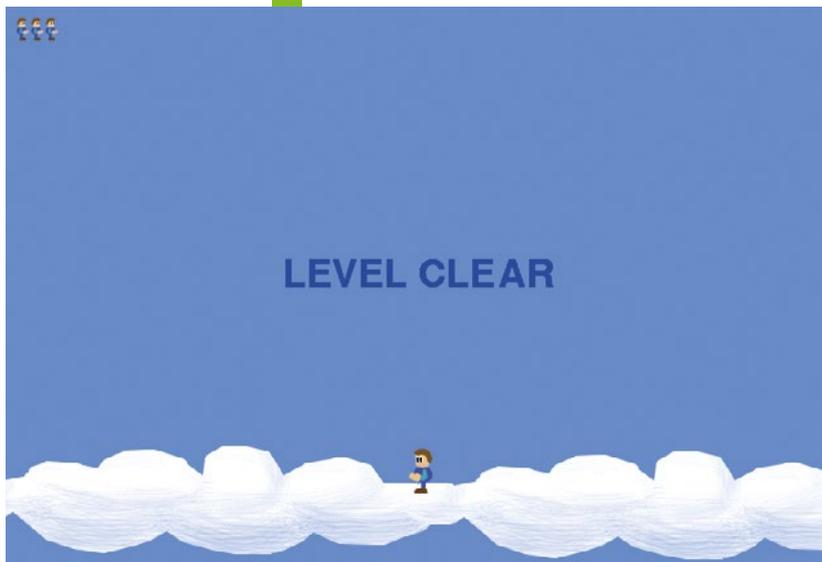
Let's place the enemies on the level map. I've created three types of enemies: one that crawls on the same platform, another that crawls on platforms but falls from its borders, and a third that flies. The image file names are stored in the file `Listing18_EnemyNames`. It's a list of lists: every element of `enemyNames` is an enemy, containing the list of all the graphic files that define that enemy. The first element in every list is the enemy facing right, the second one is facing left; and if an enemy has more graphics, all odd positions face right and all even positions face left.

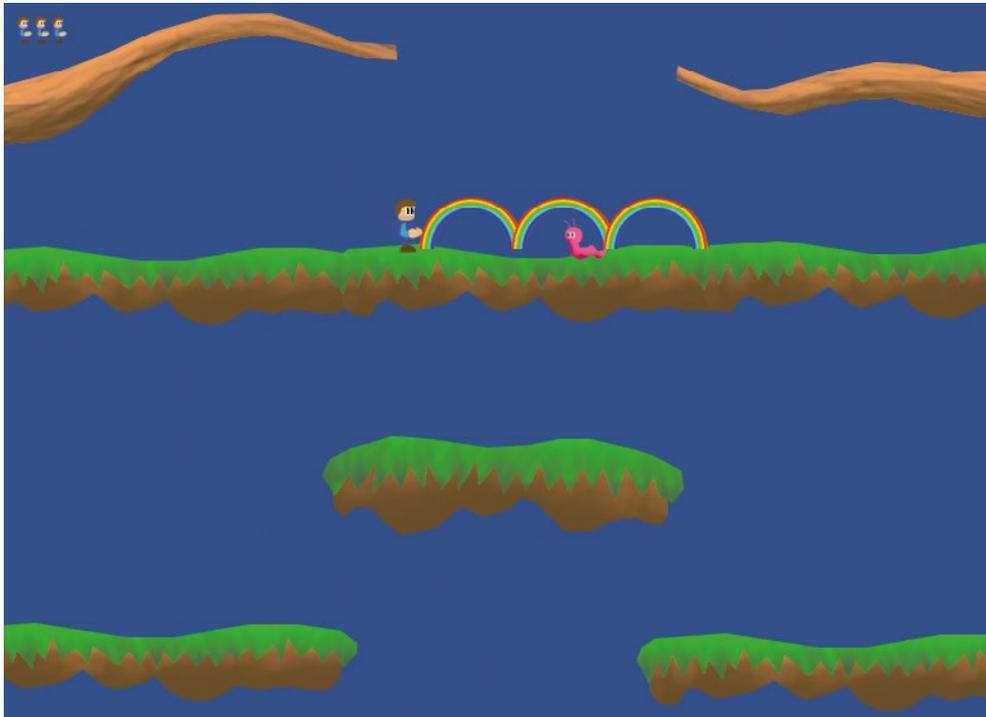
To place the enemies on the map, the program `Listing19_PlaceEnemies.py` is used. With the arrow keys 'Left' and 'Right', we can select the enemy type and its direction: facing left or right. With 'Up' and 'Down', we move the map, and with the **SPACE** bar, the list of enemies and positions is printed on the Python console. We copy this result on the file `Listing20_Enemies.py`, in the variable named `enemies`. Every element of this list stores four values: the enemy index, its direction +1 or -1, and the two screen coordinates X and Y.

FULL GAME

Now it's time to put all these elements together. `Listing21_FullGame.py` gathers all the previous pieces of code to connect them and create a full level. We now have a huge chunk of code where it can be difficult to find anything. To fix that, we need to split the code into manageable chunks.

Code files named `Listing22` to `Listing29` have been extracted from `Listing21_FullGame.py`, and called from `Listing30_FinalGame.py`. Some adjustments have been made to pass around parameters and objects, as the global variables defined in `Listing21_FullGame.py` aren't accessible from the extracted modules. `Listing23_IntersectionRectangles.py` is a





◀ It's not pretty, but it's still the basis of a platform game similar to *Rainbow Islands*.

simple rectangle intersection calculation. Its function `RectanglesIntersect` returns `True` or `False` when the two input rectangles overlap (or don't). A rectangle is defined by its central point and its half size. This function performs a faster intersection than with `LineStrings` or `Polygons`.

`Listing24_Rainbows.py` has all the rainbow-related operations.

The class `AllRainbows` keeps two lists: `rainbows` and `fallingRainbows`.

A rainbow will only intersect an enemy at the exact time of its creation, when `timeFromCreation == 0`. A rainbow won't destroy anything at any other time, but enemies or the player will be affected if they interact with it. Elements in `fallingRainbows` can, however, destroy enemies if they intersect – this is computed with the `RectanglesIntersect` function.

The code in `Listing26_Collectables.py` manages the collectable items with two main lists in the `Collectables` class: `collectablesFlying` and `collectables`. When an enemy dies, it releases a collectable by adding a new element to the `collectablesFlying` list at the same enemy position but with a random speed. When the flying collectable lands on a platform, an element from the `collectableNames` list is selected randomly. One of the elements is a small rainbow

– when collected by the player, this adds to the number of rainbows they can cast at once.

`Listing27_Player.py` contains all the player's character stuff. When an enemy collides with the player, the number of lives is decremented, the player's moved to its starting position, the number of rainbows restarts at 1, and all the enemies

are restored. When the number of lives reaches 0, the game ends.

`Listing30_FinalGame.py` imports all the previous modules,

creates the game classes, and calls them at `draw` and `update`. It manages the keyboard input, and also manages the `levelClear` variable: when the player character reaches the top of the platform map, it's set to `True` and the level ends.

NEXT STEPS

In this guide, we've learned how to code a platform game from scratch, starting with prototypes to test the mechanics in a complete level. The work is far from done, though.

From here, you can develop the project further: add more enemies, draw new graphics, add sounds and music, more levels, bosses, and so on. Or, even better, prototype your own type of platformer featuring a completely new game mechanic. It could be fantastic! 🗨

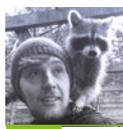
“In this guide, we've learned how to code a platform game from scratch”

FINITE-STATE MACHINES

If your player system has more than two states, you must consider using a finite-state machine to control all the states and transitions between them. This way, it's much easier to know what to do when the user presses 'Jump' and the protagonist is in the air falling after a hit by an enemy, for example.

Breaking the Lore

This month, an award-winning writer lays out how concentrated hits of lore can elevate an entire game



AUTHOR
ANTONY DE FAULT

Antony is Wireframe's writing and narrative design columnist. He's also a freelance video game storyteller, and you can find his work on [default.games](#) or [@antony_de_fault](#) on Twitter.

No stranger to world-building, Casey Lucas-Quaid is a vastly experienced wordsmith who's spent eleven years in games as a writer, editor, and community manager, recently on titles such as *Magic: The Gathering*, *Darkest Dungeon 2*, *Mini Motorways*, and *Mini Metro*.

As we spoke about her expertise, the most exciting wisdom she shared were the tidbits relating to lore: the additional information about a game's world which fills out the illusion of an expansive, lived-in fiction. When we think of lore, most of us recall audio or text that comes along with collectables, such as audio logs and notepaper left behind in gaming's post-apocalypses, or Lara Croft's interpretation of an old coin she just found. But Lucas-Quaid mentioned neither of these.

Instead, Lucas-Quaid's examples of lore delivery were weapon descriptions, level-select

screens, narration voiceover, battle cries, and map annotations. What struck me is that all of the above are baked, without pause, directly into game-critical actions such as fighting, choosing equipment, or navigating. The lore is presented if and where it is relevant, not as a separate entity to be read for its own sake. As a writer who, despite my best intentions, skims most games' lore-dumps (*Skyrim's* books, *Destiny's* grimoire), I found this quite the insight. So, assisted by Lucas-Quaid's own words, let's dig in!

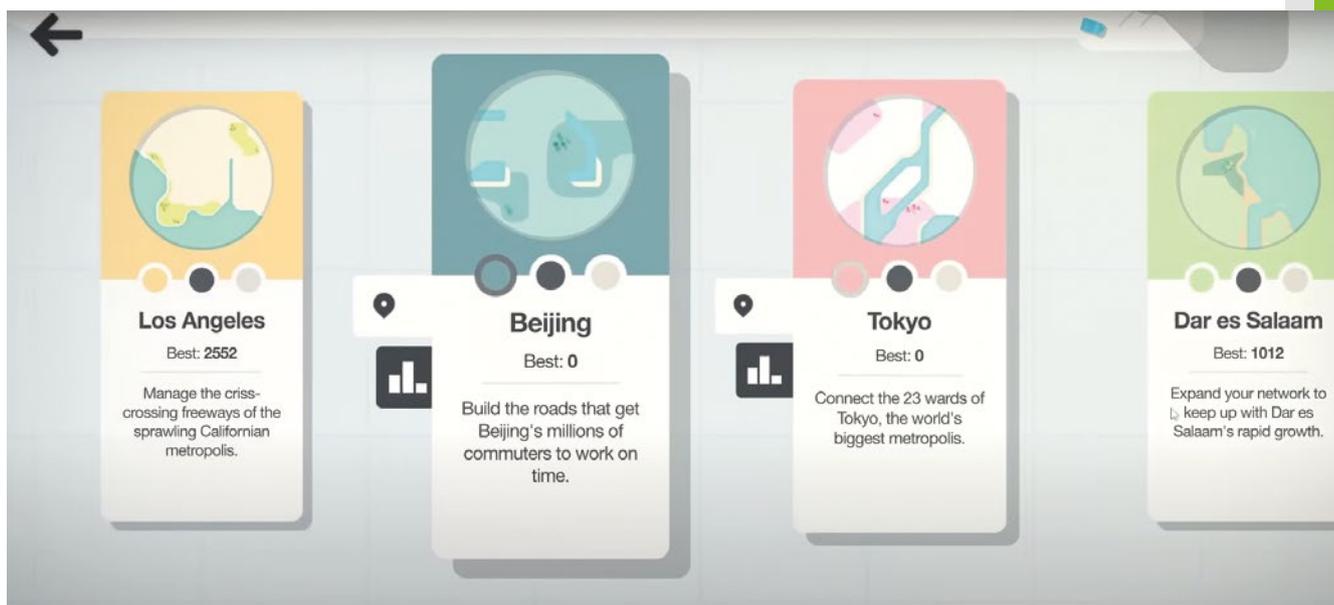
FLAVOUR

Lucas-Quaid spoke of flavour text as any creative writing "that isn't part of the game's story or narration", and continued "think about any game you've ever played where skills, items, and map locations all had blurbs". She described how flavour text is, at its core, meant to be informative, not purely decorative; it should give a sliver of context that communicates something play-relevant, from the fact that a certain weapon is uncannily lucky (e.g. it has a high crit rate) to simply conveying atmosphere. The important part here is that, again, the lore is in service of gameplay, not an end in itself. Therefore, she says, "flavour text necessitates a balance between tone, entertainment, and clarity". While keeping that equilibrium and the text's ultimate purpose in mind, she describes writing flavour text as "your opportunity to tell a bite-sized story via implication. Your goal is to drop a tasty crumb for the player that will inspire them to imagine more", which is an exciting proposition for a keen storyteller: it's microfiction!

So that's the theory of flavour text, but what about execution? Luckily, Lucas-Quaid has tips for this, too. She urges us to draw on perspectives

▼ *Darkest Dungeon*. Lucas-Quaid: "Narrators often introduce players to aspects of your world through either an omniscient narrator or a viewpoint character."





on the game's world and events that aren't spotlighted in the main narrative. For example, if your game is about knights doing knightly things, perhaps your armour description could be from the perspective of the servant who last fitted it on his liege, or a peasant child dreaming of one day wearing it? These insights will "differ from the player character's experience, and thus expose them to new perspectives", expanding the game's world in their minds.

When it comes to naming things, which is its own discipline of micro-flavour, she advises that writers "hew close to the mechanics". Her given example of this was the *Final Fantasy* classic, Phoenix Down. The name is perfect for a few reasons. First, a phoenix is a rare mythical creature: this communicates it's magical and valuable. Second, a phoenix's best-known attribute is resurrection: this item resuscitates fallen characters. Third, a bird's down isn't just any feather, it's more prized, it's softer, it's associated with rest and warmth: this is a potent healing item. Finally, 'down' is a little archaic-seeming to the modern ear, memorably fitting with the fantasy theme. Phoenix Down, she argues, is perfectly named, explaining its presence in every game.

"Go all-in on style, don't be afraid of bombast, of epic scale"

NARRATION

Narration in games has a special status. Often, it is employed only as the very first and last spoken audio the player hears in a game. It is dramatic, sweeping, and, perhaps most importantly, brief. "War, war never changes", grumbles the embittered narrator at the beginning of every main

Fallout game, setting the tone of the anachronistic apocalypse for a few brief minutes. Lucas-Quaid explains that "narration has a different flow from writing that players will read, or dialogue that will be spoken between characters". It's icing which primes you for the flavouring and quality of the cake within, decorative but purposeful. Narration is tonal flavour text on steroids.

So, how to write narration in particular? Lucas-Quaid's favourite piece of advice is to speak to the narration's voice actor beforehand if possible, "get a feel for how they work, what they excel at. See if you can listen to their audition files – ask

why they were chosen and lean into their strengths". The VO's performance is paramount, so writing a verbose monologue for someone who excels at

gruffness is a losing game. Write something the VO will love voicing, and you're onto a winner. Then, throw punctuation correctness out the window, "go all-in on style, don't be afraid of bombast, of epic scale, of things that might seem too big for regular dialogue, and make every line count. The last thing players want to do when they boot up a brand new game is listen to a lengthy soliloquy that's one-third interesting and two-thirds filler."

IN PRACTICE

All in all, these theories and tips can help you write top-of-the-line, lore-enriched content which complements, rather than distracts from, the player's engagement with a game world. I've been trying out these tips myself as writing warm-up exercises, and perhaps you could too! 🗣️

▲ *Mini Motorways*' challenge: write an identifiable, inoffensive description of an entire city in a single line, while also conveying the gameplay challenge of that level.

AN EXERCISE IN UTILITY

Lucas-Quaid suggested an exercise, which I've adapted slightly for use as a super-fast warm-up. Try the following:

1. Pick a random image of an item from a game. Anything! The less familiar you are with it, the better.
2. Name that item. Remember to "hew close to the mechanics"!
3. Add flavour for that item in one or two lines. Use unexpected perspectives, communicate something that could conceivably relate to gameplay.

Here's mine: a brain-interface device named Mind-Bleeder, with the text 'It was almost as if the spies preferred I *didn't* answer their questions immediately'.

Essential data for Kickstarter success

Launching a Kickstarter campaign requires planning and a fair bit of analysis. Rob has some handy stats to get you started



AUTHOR
ROB HEWSON

Rob Hewson is a lead designer and game director turned development studio co-founder and design consultant who has been making games for almost 15 years. hueygames.com

So, like lots of other indie developers, you're thinking of funding your game via a Kickstarter. But what's a realistic funding target to aim for? What kind of pledges should you expect from your backers? To help figure out the answers to those questions and others, you need to build something called a key performance indicator funnel, or KPI for short. This is a marketing term which, in the context of a crowdfunding campaign, works out how to use available data in order to maximise your chances of getting enough backers to make your game.

My company Huey Games has now run eleven successful Kickstarter campaigns and has consulted on several others, and we've been

able to tap into that experience to build the following KPI funnel, which is designed to help establish a pre-launch followers target (or PLFT) for any Kickstarter project:

1. Funding target (FT)
2. Average pledge forecast (APF)
3. Total backers to reach goal (TBG)
4. Day one backer target (DOBT)
5. Day one backer prediction (DOBP)
6. Pre-launch followers target (PLFT)

That's a lot of acronyms, so let's break each of these down in turn so they're easier to digest.

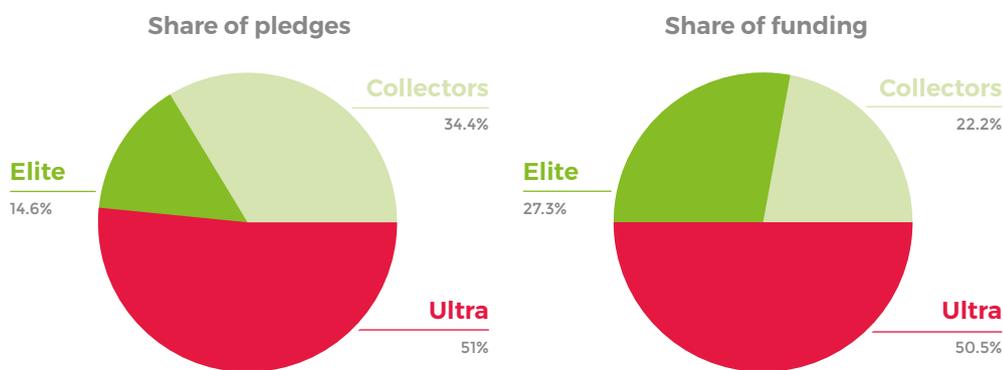
FUNDING TARGET

Kickstarter itself provides a budget calculator tool, and there is a range of useful statistics at kickstarter.com/help/stats. At the time of writing, these statistics show that most successful projects in the Games category are in the \$1000 to \$10,000 range, and that relatively few successful projects raise less than \$1000 or more than \$100,000 (see table on the left).

For a commercial video game project, it's likely that your development budget will fall into categories 4 to 6, and of those, category 4 is the lowest risk according to this data. You may want to consider what the smallest-scope version of your project is and to set your funding target accordingly – you can always add features if you overshoot the goal. Naturally, the Games category is rather broad, so it's worth

✓ Games projects with goals of \$1000 to \$10,000 have the greatest chance of success.

Funding amount	Number of successful campaigns	Percentage
Less than \$1000 (~£729)	24,510	100%
\$1000 to \$10k (~£729 to ~£7287)	2032	8%
\$10k to \$20k (~£7287 to ~£14,574)	10,108	41%
\$20k to \$100k (~£14,574 to ~£72,869)	4262	17%
\$100k to \$1m (~£72,869 to ~£728,685)	5805	24%
\$1m plus (~£728,685 plus)	2108	9%
	195	1%



◀ **Figure 1:** Each reward tier serves a different backer group, from entry-level to premium.

researching comparable campaigns for your genre to see how the trends compare to the broader Games category data.

Once you have decided on your FT, you can build out the rest of the KPI funnel.

AVERAGE PLEDGE FORECAST

The average pledge amount for a Kickstarter project is rooted in the design of its reward tiers. For the first seven campaigns in our Collectors USB Cassette series, the average pledge amounts were as follows:

Campaign	Average pledge
#001	£48.72
#002	£46.64
#003	£42.43
#004	£44.52
#005	£43.97
#006	£46.83
#007	£44.53

If you calculate the average of these averages, you get £45.38 – almost exactly the price of the middle of our three standard tiers for each campaign. The rewards we had on offer for each of those tiers were:

- Collectors USB Cassette: £25
- Ultra USB Cassette: £45
- Elite Edition: £80

This is consistent with the ‘rule of three’ marketing theory which suggests that customers are most likely to pick the middle of three value options, and feedback from our backers suggests that they value the premium features of the Ultra USB Cassette when compared against the entry-level Collectors tier.

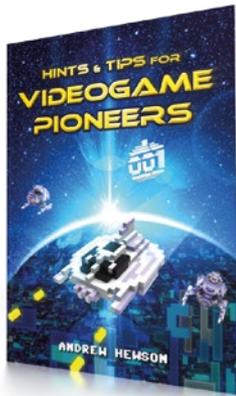
This rule of thumb won't apply in the same way if you have a greater number of reward tiers, and suitable price points will vary depending on your product. Regardless, you can easily calculate an average pledge amount for any completed Kickstarter campaign from the total raised and the backer count, which is publicly available data. Choose some campaigns which have good crossover with your target market and a reward tier design that is suitable →

EARLY BIRD

As an extra incentive for pledging early, we offer an ‘early bird’ £5 discount on the Ultra and Elite reward tiers for the first two to three days of each campaign. The middle-tier averages 51% of the pledges, and 50.5% of the total funding (Figure 1). The entry-level Collectors tier is the second most popular, but the smallest contributor to the total funding, emphasising the importance of the Elite tier for those backers who are willing to pay a premium for the most exclusive rewards.



▲ **The Collectors USB Cassette series now includes nine Kickstarter-funded releases.**



Our first Kickstarter was for a book on the ZX Spectrum and C64 era, which established a retro gaming audience.

for your project, then do some analysis to try to get a good understanding of the relationship between the average pledge amount and reward tier design, equivalent to our ‘rule of three’ theory. You should then have everything you need to calculate your APF. Divide your FT by your APF and you get your TBG, which is the next KPI in the funnel.

DAY ONE BACKER TARGET

The first day of a Kickstarter campaign is critical. Psychologically, people like to back a winner, and a healthy day one is likely to improve the chances of your project getting featured more prominently on the platform and generating wider coverage, creating a snowball effect towards success. The importance of the first 24 hours can be seen in the R-shaped profile which emerges from the accumulated data of our eleven successful campaigns (Figure 2).

In general, the bigger you can make the stalk of your R-curve, the greater your chance of success, and the earlier that success will come.

The chart in Figure 3 maps the day one funding amount of our eleven successful campaigns against the number of days it took to reach the target.

Unsurprisingly, the trendline illustrates that a better day one means you generally reach your target sooner. We can also see that only three of the eleven campaigns were successfully funded following day one funding of less than 50%. Two of those were funded late on, and I can tell you that they

“The first day of a Kickstarter campaign is critical”

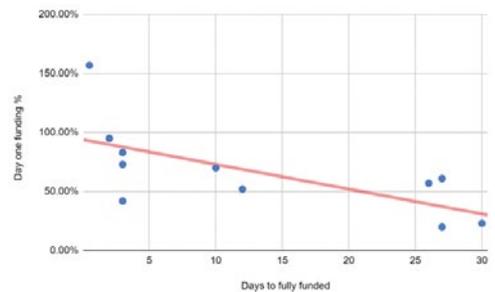


Figure 3: The bigger your day one, the earlier you will tend to reach your funding target.

required a heavily increased marketing effort to push them over the line. Our conclusion from this data is that you ought to be targeting day one funding of at least 50% of the overall FT, which means: $DOBT = TBG / 2$.

DAY ONE BACKER PREDICTION

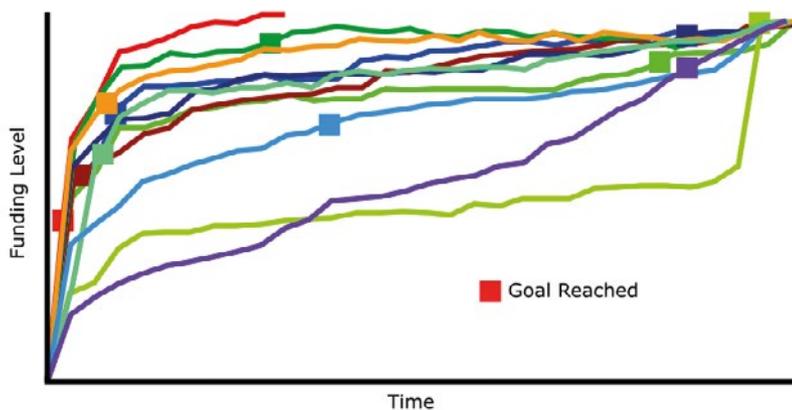
Calculating a DOBP is not as simple as figuring out the number of pre-launch followers who will convert to backers on day one, because they

are not the only people who will pledge in the first 24 hours. You will also pick up early backers from other sources, and the quantity of these depends

on the effectiveness of your overall marketing strategy for launch.

Our dataset for pre-launch followers is currently small because the pre-launch page is a relatively new feature, and we have only started to record the relevant data for our latest projects.

Figure 2: The importance of day one is clear, reflected in the R-curve funding pattern of our campaigns.



The Ultra USB Cassette is our mid-level reward tier, which acts as an anchor for our average pledge forecast.



That said, our current analysis suggests that the day one backer count for our campaigns will be between 70% and 90% of the pre-launch follower count, with approximately 30% as direct pre-launch follower conversions and the rest arriving from other sources on the day. We expect that the former figure will vary depending on your marketing strategy and may be significantly lower for debut campaigns with a less established audience, and that the latter figure will vary to some degree as we gather more data.

For the moment, aiming for a DOBP which is 30–50% of your pre-launch follower count seems like a reasonable bet for a debut campaign.

The final KPI in the pipeline, the PLFT, is then calculated by multiplying your DOBT according to your DOBP, so by a factor of two to three for a DOBP of 30–50%.

CONCLUSIONS

Working your way through this KPI funnel removes some of the uncertainty and reduces risk before you launch your Kickstarter campaign. Although you will need to produce a first draft of your campaign and get it approved by Kickstarter before you can generate your

pre-launch page, most of the work involved in building a Kickstarter campaign – including the production of high-quality graphics and your campaign video – can be done subsequently and in tandem with your follower acquisition efforts. Then, once you reach your PLFT, you can prepare to launch your Kickstarter campaign with confidence. 🙌

^ Our second successful Kickstarter was for the development of a neo-retro game, which had a cassette version as a reward tier.

GET PHYSICAL

Eight of our eleven successful Kickstarter campaigns have been for our Collectors USB Cassette series of physical games for PC and Mac. These licensed games are relatively low risk because the development of each game is already complete when the Kickstarter launches, so we only need worry about producing the cassettes themselves, for which we have a well-established pipeline.

It's also a repeatable concept, allowing us to grow our Kickstarter following and our dataset with each campaign, and they have additional business development benefits. For example, we've secured console porting projects for our work-for-hire development team after working with the client on a Collectors USB Cassette campaign first.



How we remastered War Robots

How do you update a mobile PvP shooter to PC?
Russian developer Pixonic lays out its process

AUTHORS

ROMAN VISHNYAKOV AND PAVEL KIRSANOV

Roman Vishnyakov is the lead technical artist on *War Robots*, the principal technical artist at Pixonic, and a graphics programmer. Pavel Kirsanov is a graphics software developer and is passionate about researching real-time rendering technologies.

In 2014, when *War Robots* was originally released, the mobile gaming market was much smaller than it is now. The devices themselves were also simpler, with far fewer mobiles able to support 3D gaming graphics without display issues. And although there was a shader revolution, and vertex and fragment shaders replaced the fixed-function pipeline, high-quality graphics akin to a desktop PC simply weren't feasible on mobile devices.

During the original *War Robots*' development, the only mobile graphics API (application programming interface) was OpenGL ES 2.0. Its next version, OpenGL ES 3.0, had been announced, but there weren't even any devices that supported it. Understandably then, *War*

Robots used OpenGL ES 2.0 for its graphics. The game had a typical graphics stack which supported one directional light source and calculated its shading based on a simple material system. Unusually for a mobile title, though, *War Robots* was an early game to use splat maps – a technology that allows multiple texture types to be blended on a 3D model. Together with smooth mixing, it allowed for the rendering of complex surfaces without repeating the same small patterns.

War Robots' graphics improved over time, but its development was still constrained by OpenGL ES 2.0. For example, we needed to work in a linear colour space in order to use physically based rendering (PBR) techniques, which was an unsolvable problem in ES 2.0. The point came when we needed to develop a new approach to improving the game's visuals.

Contrary to popular belief, you can't improve a game's graphics by simply cranking the settings to maximum. In fact, revising the graphics of a game that had been out for many years was no mean feat. We had to think carefully about what players would expect from a remastered version of *War Robots*, and also how we could work with the graphical code we'd built up over a period of years – including the assorted workarounds we'd created in response to each new version of the Unity engine.

We also decided it would be reckless to throw vast resources into updating the mobile version of *War Robots*, because, given our ambition, we might have ended up breaking the game trying

✓ Our first iteration of the remastered *War Robots*. There's still a fair bit of work to do here.





to upgrade it. Instead, we experimented on the Steam version, which was well-suited for this purpose thanks to its similar codebase, art, and a relatively small number of players. The PC's more powerful hardware also meant we didn't have to worry about optimisation, and could focus on improving the graphics.

Rather than jump straight into making a full remaster, though, we first built a prototype. We chose a single map, and reworked the graphics in that area – we looked again at the models, textures, shading, animation, and so on. From here, we could ascertain how much work it would take to give the rest of the game a visual upgrade, and more fundamentally, decide whether such a project was necessary in the first place. As it turned out, this task could be handled by just one technical artist. We learned a great deal in the process of doing all this.

THE CANON MAP EXPERIMENT

We chose the Canon Map for our prototype because it didn't feature too much geometry, and there was plenty of scope for improvement. First, we converted the project's colour space to linear. Then, to get the first quick results, we replaced part of the environmental geometry with ready-made assets and modified the textures of one robot to PBR. After that, we made a few lighting fixes and a minor revision of a couple of shaders, and the scene started to look more current (see **Figure 1**).

Looking at the screen in **Figure 1**, you can see that it's rather dull and flat, like a cloudy

day. To improve this, we used floating-point buffers of different precision formats to get a much brighter, high dynamic range (HDR) image. After getting a frame and post-processing the resulting HDR image, we return the range to the values that can be displayed on the screen. For this, we apply the tone mapping procedure. In the PC and mobile versions, we use the ACES (Academy Colour Encoding System) tone mapping algorithm, which allows us to get a cinematic picture with slightly burned-out colours in bright areas.

Our objective was to leave the gameplay unchanged, so the landscape's geometry and playing area needed to remain precisely the same. For this, we measured a heightmap of the playing area with an accuracy of ± 4 cm, and ▶

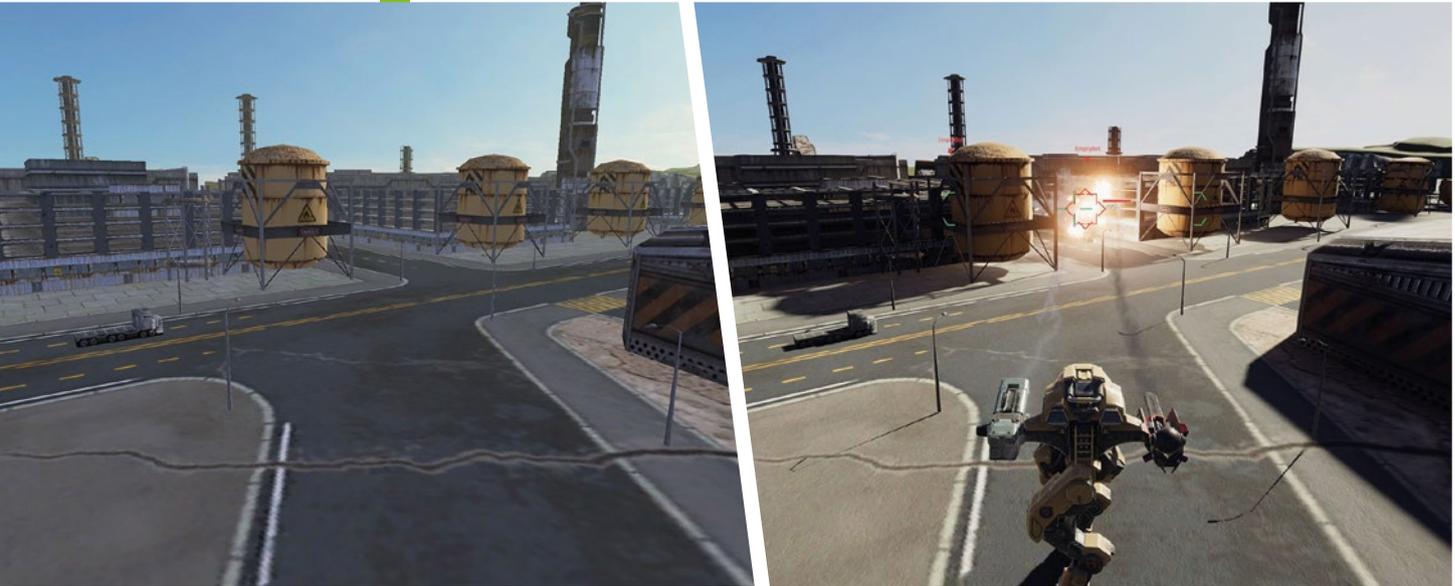
▲ The Canon Map, before the majority of our graphical improvements were in place (left), and now with clouds and improved textures (right).

▼ **Figure 1: The Canon Map with some initial updates to lighting and shaders. It's starting to look better already.**



Toolbox

How we remastered War Robots



▲ **Figure 2:** These comparison shots show how the game looked before our new light sources and other effects were added (left) and after (right).

MOBILISATION

Once the PC remaster was ready, we had an even more ambitious task ahead of us: transferring those desktop-level graphics back to mobile devices. Things like dynamic surface rendering and water with reflections require a lot of computing power. At the same time, the remaster must work as well as the original *War Robots* on three- or even five-year-old mobile devices. This left us with a dilemma: how could we deliver PC-level graphics on a mobile device without reducing overall performance? We compromised by dividing mobile devices according to their level of performance, and prepared several quality presets for each. The range of mobile devices was divided into three categories: HD, LD, and ULD, and presets – each with their own set of content and graphic solutions – were created for each of these categories.

then on this basis, we procedurally generated a new landscape, changing only the background. We redrew the terrain textures, generated the masks, added the tessellation, and created a dried-up river bed. Dust, haze, and dynamic clouds were added to the sky, and the bridge in the centre of the map was redesigned again (and not for the last time!). This gave us enough intel to proceed.

RENDERING ROBOTS

Several robots also received improvements – more than a dozen of them, in fact. These were originally drawn in Painter and later modified to full PBR. In other cases, we redrew textures from scratch based on the existing ones or used the original masks (if any). The animations for jumping and landing were also improved, and effects were added for engines turning on and nozzles changing direction, depending on which way a robot's jumping.

For fun, we redesigned the inverse kinematics system so that the robots' legs and feet stood at a right angle on inclines. We'd previously only used this on four-legged robots, but we've since added it to all of our remastered, two-legged robots. Finally, almost two dozen weapons were remastered by replacing textures with PBR; updating animations and FX shaders; and adding light sources for shots and explosions.

While remastering the Canyon scene, it became clear that we wouldn't be able to leave the rest of

the scenes as they were, so we decided to modify all other maps at least minimally – and, buoyed by our success in the prototype, we continued to work on the robots and weapons. We went on to generate a new set of high-resolution textures based on the originals, and included all the necessary maps for the correct PBR shader operation. Some of the new textures were hand-tweaked to better represent the physical properties of the materials, so the final result was quite accurate given its semi-automatic nature. We also adjusted the light sources, post-processing, and other parameters of the scene and the environment related to lighting on

each map. You can see examples in **Figure 2**.

For the remaining robots and other assets, we created a shader that helped convert the

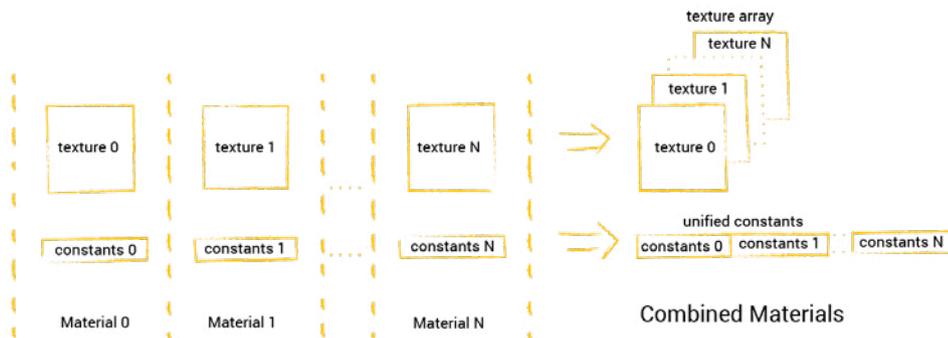
properties from the old texture set (diffusion, specular, and normal map) to those necessary for a full-fledged PBR calculation.

REDUCING RENDER TIME

Modern graphics APIs allow us to improve both image quality and performance. They significantly reduce render time and the CPU load, and provide a smooth and stable frame rate.

Frequent resource swaps between draw calls usually accompany the wide variety of materials in a scene. Since the GPU can't render during the resource binding process, latencies occur, which means incomplete CPU usage. To get around this, draw calls with the same materials used to

“Buoyed by our prototype, we continued to work on robots and weapons”



◀ Figure 3: Scheme for combining materials (constants and textures).

be grouped together. However, if every material in a scene is unique, the traditional grouping approach would be ineffective and require resource binding on virtually every call. Therefore, in the original *War Robots*, the number of unique materials in a scene was fixed, which caused restrictions on level design and other content. The remaster's graphics pipeline, meanwhile, imposes no restrictions on the number of unique materials in a scene since it doesn't require resource binding. All textures from unique materials are therefore collected in texture arrays, and additional parameters are combined into a single uniform buffer (see **Figure 3**).

The binding of such 'assembled' resources occurs once, along with the corresponding shader, and doesn't change throughout all the draw calls of this shader. The required material is selected from the collection directly in the shader by referring to the corresponding layer of the texture array by index, and through the calculated offset to the corresponding element in the constant buffer. So, the number of resource bindings is equal to the number of unique shaders used in the scene. In the remaster, each scene uses an average of twelve shader variants, obtained from the five main ones through keywords. As a result, for 300–400 draw calls in a frame, there are on average 20 resource bindings, so the frame preparation time doesn't depend on the number of unique materials.

SUMMING UP

Updating *War Robots*' graphics was a fascinating process, but we've only scratched the surface here. Experiments with the capabilities of mobile GPUs have allowed us to find solutions that scale well to a wide range of devices:

- Texture arrays and combined constant buffers made it possible to significantly reduce the number of draw calls and remove the limitation on the maximum number of unique materials in a scene

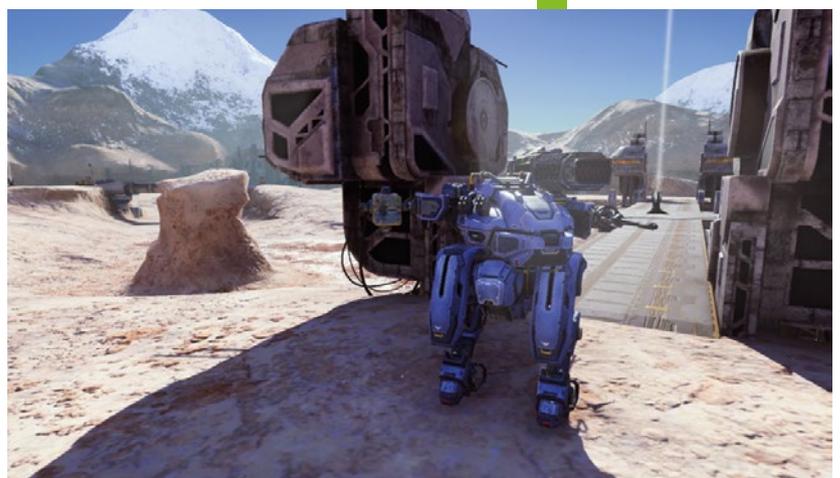
- Real colour buffers opened up new possibilities for computing correct lighting in a wide dynamic range
- Quality presets and dynamic resolution brought the visuals to a higher level on modern machines while still ensuring good performance on four- or five-year-old devices

Here are some of the other things we learned:

- Don't underestimate how negatively users can react to increased hardware requirements
- We don't need motion blur in our genre
- Realistic lighting is good, but scenes should be lit with gameplay in mind
- Bright flashes from explosions and gunfire can interfere with gameplay
- We now need a remaster for mobile platforms (see box on page 64)

Working on this project gave us an invaluable experience in preparing content, reworking the graphics pipeline, developing test methods, debugging, and improving performance. Revising an existing game isn't a simple process, but the results are well worth the effort. 🙌

✓ Both robots and weapons were given an overhaul during the remastering process.



Source Code

Code your own landscape engine



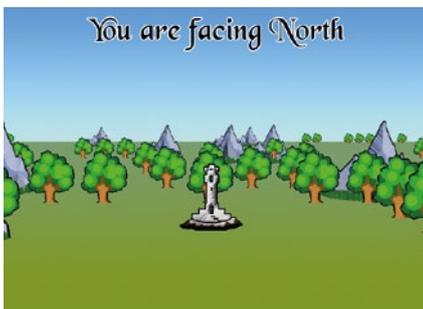
AUTHOR
MARK VANSTONE

Recreate The Lords of Midnight's pioneering graphics technique

Due to the limitations of 1980s computers, the amount of graphics a typical adventure game could actually display was limited – at least, until *The Lords of Midnight* came along. In it, players were treated to views of trees, mountains, and buildings from any viewpoint on what at the time felt like a huge map. The term used for this technique was 'landscaping', which provided a pseudo-3D view for the player as they travelled around the Land of Midnight.

The Lords of Midnight was written by Mike Singleton in 1984, first for the ZX Spectrum. The adventure sees a group of characters set off to complete two tasks: destroy the Ice Crown or battle the evil Doomdark by storming his citadel in the north. The game was a success and was quickly followed by a sequel, *Doomdark's Revenge*.

The technique to create the views around the landscape uses 'billboarding' to translate a 2D overhead view of a map into a pseudo-3D view of eight points on the compass. Billboarding refers to the idea that each object in the scene always faces towards the camera and is a 2D image but is positioned and scaled to appear 3D.



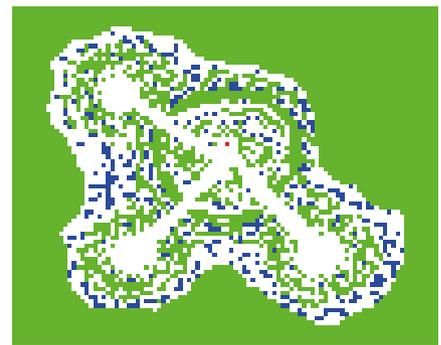
^ Our example of the landscaping technique Mike Singleton pioneered in *The Lords of Midnight*.

To create this effect, we start at the back of the scene on the horizon, drawing the objects that appear the furthest away, and then move towards the camera position drawing the objects that are closer and incrementally larger.

To write this in Pygame Zero, we'll need a little help from the Pygame library so that we can read our map pixels from an image and scale the images we're using for the billboarding. With a map image of 100×100 pixels, we'll start our player position at the X and Y coordinates 50,50. We can define our compass direction in a list of tuples, including the X direction, the Y direction, and a string describing the direction we're pointing in. After loading our image map and the images we'll use as billboards (in this case, we will have a tree, a mountain, and a tower), we can write a **draw()** function. This will draw a background of an empty landscape, then call a function to draw the landscape, and finally print a message telling the player which direction they're facing. Because this is a fantasy adventure game, we'll use a fancy font for our messages.

Unusually, we don't need to do anything with the **update()** function in our code example, but we do need to set up some key presses for rotate left, right, and move forward. The left and right keys rotate the **playerdir** variable by 45 degrees, and the up key moves the player forward by one pixel on our map.

Now comes the interesting part. We need to look along the map in the direction the player's facing and start reading nine pixels away from the player. We need to read a row of pixels that will cover the horizon and then move toward the player position, reading fewer pixels each row in a sort of wedge shape, so if our map was all trees (green pixels), we would want to see rows



^ The map, from which our routine takes its landmarks – you could try adding extra elements of your own to create a full game.

of trees extending to the horizon whichever way we look. The way we create this illusion is to start by scaling the trees to be very small, and as we read towards the player position, the trees are scaled larger, creating a perspective effect.

The routine to read the map and translate that into trees and mountains is a fairly straightforward embedded loop, reading rows and columns of the map image, but only if we're facing north. If we're facing any other direction, we need to change everything to read in a different direction. On the face of it, this might sound complicated, but have no fear: if we rotate the map to point in the direction the player's facing, we can use exactly the same reading routine. We do need to keep track of where the player is on the map and use that as our starting point once we have rotated our map, however.

So that's the concept of how to translate a 2D map into a 3D view using 'landscaping'. Now all that's required is to write an adventure for our players to embark on. We'll leave that bit to you as it'll require a heck of a lot more work! 🌍

Download
the code
from GitHub:
[wfmag.cc/
wfmag57](https://wfmag.cc/wfmag57)

Loads of Midnight

Here's Mark's code, which will draw verdant landscapes wherever you look. To get it working on your system, you'll first need to install Pygame Zero. Full instructions can be found at wfmag.cc/pgzero.

```
# The Lords of Midnight
import pgzrun
from pygame import transform, image, Color

playerx = 50
playery = 50
playerdir = 0
myDirs = [(0,1, "North"),(-1,1, "North East"),(-1,0, "East"),(-1,-1,
"South East"),(0,-1, "South"),(1,-1, "South West"),(1,0, "West"),(1,1,
"North West")]
landscape = image.load('images/landscape.png')
tree = image.load('images/tree1.png')
mountain = image.load('images/mountain1.png')
tower = image.load('images/tower1.png')

def draw():
    screen.blit("background", (0, 0))
    drawLandscape()
    d = int(playerdir/45)
    if d > 7: d -= 8
    screen.draw.text("You are facing "+myDirs[d][2], center = (400,
50), owidth=0.5, ocolor=(255,255,255), color=(0,0,0) , fontsize=60,
fontname="blackchancery" )

def update():
    pass

def on_key_down(key):
    global playerdir
    if key.name == "RIGHT":
        playerdir += 45
        if playerdir > 360: playerdir -= 360
    if key.name == "LEFT":
        playerdir -= 45
        if playerdir < 0: playerdir += 360
    if key.name == "UP":
        movePlayer()

def drawLandscape():
    global gameStatus
    rotatedLand = rotatedLandscape()
    playerpos = getPlayerPos(rotatedLand)
    x = playerpos[0]
    y = playerpos[1]
    for r in range(9,0,-1):
        for c in range(-5*int(r/2),5*int(r/2),1):
            pixel = rotatedLand.get_at((x-c,y-r))
            s = r*10
            d = (10-r)*20
            if pixel == Color('blue'):
                i = transform.scale(mountain, ((10-r)*50, (10-r)*40))
                screen.blit(i,(200+s-(d*c),180+(r*5)))
```

```
if pixel == Color('green'):
    i = transform.scale(tree, ((10-r)*20, (10-r)*20))
    screen.blit(i,(290+s-(d*c),310-(r*8)))
if pixel == Color('red'):
    i = transform.scale(tower, ((10-r)*20, (10-r)*20))
    screen.blit(i,(290+s-(d*c),310-(r*8)))

def rotatedLandscape():
    land = landscape.copy()
    land.set_at((playerx,playery),Color("black"))
    land.set_at((playerx+1,playery),Color("black"))
    rotated_image = transform.rotate(land, playerdir)
    return rotated_image

def getPlayerPos(i):
    s = i.get_size()
    for x in range(s[0]):
        for y in range(s[1]):
            if i.get_at((x,y)) == Color("black"): return (x,y)

def movePlayer():
    global playerx, playery
    d = int(playerdir/45)
    if d > 7: d -= 8
    if playerx - myDirs[d][0] > 25 and playerx - myDirs[d][0] < 75 and
playery - myDirs[d][1] > 25 and playery - myDirs[d][1] < 75:
        playerx -= myDirs[d][0]
        playery -= myDirs[d][1]

pgzrun.go()
```



^ The Lords of Midnight was first released for the ZX Spectrum in 1984. Its wealth of views caused quite a sensation at the time.





GAME
Octo-Ninja Hachimaru

DEVELOPER
Aisosa Ugiagbe

RELEASE
TBC

WEBSITE
aisosaugiagbe.com



Octo-Ninja Hachimaru

British artist and game design student Aisosa Ugiagbe grew up watching anime like *Naruto* and *Bleach* as a youth, but he's taken that formative Japanese influence and from it has forged his own vibrant style. And while he says it's "good to keep your traditional foundation", his art is created entirely digitally these days. For his current work in progress, the action-platformer *Octo-Ninja Hachimaru*, he mostly generates his artwork in Clip Studio Paint – an application commonly used for drawing comics and 2D animation. "I usually just open up Clip Studio Paint and draw whatever comes to my mind," Ugiagbe tells us. "So it's, like, 'I need these characteristics in an enemy. How can I express that?' I just start doodling until it makes sense. I've also got reference folders where I can say, 'OK, this is cool – how can I implement this in my game in a way that makes sense?' It's honestly just a lot of sketching until I feel, 'Yes, this is it,' and I can go from there."

**READ
MORE**
turn to
page 16

BLAZING SADDLES

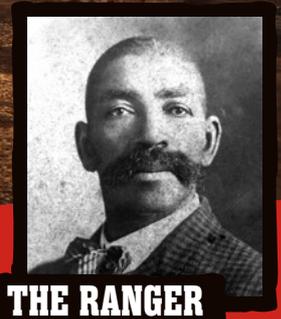
A quarter of cowboys were African American, meaning the wild west and black history are profoundly intertwined. So why are western genre games so whitewashed?

WRITTEN BY NATALIE DUNNING





^ *Desperados III* is set in the 1870s, earlier than most western games, yet some black characters have more agency than in other games in the genre.



THE RANGER

The Lone Ranger is believed to be based on Bass Reeves. Reeves escaped slavery and went on to become one of the most prolific law-persons of the era. He conducted over 3000 arrests, often using disguises and setting elaborate traps to capture outlaws. He was so dedicated that he even volunteered to arrest his son for murder. This brief summary of Reeves' remarkable life leaves out so much, but it gives the perfect three-part arc for any western game. I can already imagine gaining disguises or marksmanship skills while escaping during the Civil War or bringing in outlaws.

Most people think of Clint Eastwood, John Wayne, or The Lone Ranger when it comes to cowboys. Although, if you're reading this magazine, you're probably thinking about John Marston, Arthur Morgan, or John Cooper – from *Red Dead Redemption* and *Desperados*, respectively. These figures are the classic image of a cowboy; rugged, no-nonsense, and self-sufficient. But, notably, they're all white, which is at odds with the reality of cowboys. The term 'cowboy' was originally an insult for black ranch workers, and later, it came to describe anyone who rode or robbed their way across the wild west. This origin shows how widespread black cowboys were. According to the Smithsonian Institute, at least one in four cowboys were black (and more were mixed-race or South American 'vaqueros').

However, while historians know that black cowboys were a significant part of the wild west, they're rarely shown in popular culture. Apart from a handful of characters in films like *Django Unchained* or *Wild Wild West*, you would think Lil Nas X had invented black cowboys. As for video games, black cowboys are just as neglected. The western game genre is relatively small, but it contains some long-running series like *Desperados*, *Call of Juarez*, and *Red Dead Redemption*. *Red Dead Redemption 2*, in fact, is one of the biggest



^ Arthur and Lenny have a fairly close relationship in *RDR2*, but Arthur learns most of Lenny's back story from a discarded, missable letter in the camp.

selling – and most technically complex – games of all time. When it was released, it received a lot of attention for its 'realism'. In a trailer for the game, developer Rockstar sold *RDR2* as 'an attempt to capture' the end of the wild west era, that it was 'more detailed than ever', and mentioning its 'diverse cast of characters'. It's telling that this last part is said over a montage of white characters. Aside from a few thinly drawn supporting characters, *RDR2* and other western games that reference real history barely feature the black cowboys who were so integral to the wild west. So, is 'realism' really the correct term when a quarter of *real* people aren't represented? And if black cowboys were so important to the wild west, why are they so ignored in western games? ▶



▲ RDR2 briefly features Tilly's former gang the 'Foreman Brothers', who may have been inspired by the Rufus Buck Gang.



THE GUNSLINGER

Nat Love is probably the most well-known black cowboy because of his autobiography *The Life and Adventures of Nat Love*, which paints Love as an expert gunslinger, herding cattle and fighting outlaws across the west. Love also documents the smaller conflicts of discrimination he faced as a black cowboy, and the ways he found to fight back. He once rode his horse into a segregated bar and demanded a drink in protest – a mission I'd much rather play than RDR2's bar mission ("Lenny!").

To understand why black cowboys are overlooked, it's important to explain the cultural context of 'The Cowboy'. 'Its image was formed as America was gaining independence from the British Empire. "The idea of the Victorian [British] man being soft compared to the self-reliant [American] cowboy became something the Theodore Roosevelts of the world wanted to link to the uniqueness of white Americans," says LeTrice Donaldson, assistant professor of African American and U.S. history at the University of Wisconsin-Stout. 'The Cowboy' image also helps gloss over the atrocities committed while founding America by focusing on heroic acts and downplaying the theft of Native American land and the enslavement of black people. "The image of BIPOC [Black, Indigenous, and People of Colour] doesn't fit with [America] being a white man's country.

The wild west shows also helped popularise the idea of the Frontier being predominantly white versus the reality," Donaldson explains.

OVERLOOKED AND OUTLAWED

One game that understands the western's mix of myth and reality is *Call of Juarez: Gunslinger*. The game features legends of the wild west, and events are reshaped before your eyes to demonstrate the unreliability of western myths. Haris Orkin, co-writer of *Call of Juarez*, said that during research for the game, he "read about Nat Love, Isom Dart, Cherokee Bill, Bass Reeves, Bose Ikard, and Bill Pickett". He found their stories interesting, so he suggested Cherokee Bill as a possible character. But the developers "decided to stick to those historical characters they thought were more widely known".

Orkin believes that whitewashed westerns led developers to ignore black cowboys. "To be honest," he admits, "I'm sure I too was affected by the film and TV industry's vision of the wild west as being mostly white." So it's a catch-22 situation, where game writers and historians think black cowboy stories are worth telling, but they're continuously ignored because their stories haven't been told already.

In addition to being a historian, LeTrice Donaldson is also a gamer and a fan of *Red Dead Redemption 2*. "I loved the detail of RDR2. As a historian, it really nails the expansiveness and lawless independence of the Frontier." However, she notes that it "over-emphasise[s]



▲ Charles Smith, a half African American, half Native American character, comes closest to the idea of a brooding rugged cowboy in RDR2.





◀ *Desperados III* artwork shows villain DeVitt using convict leasing to exploit African Americans and prisoners. Modern US prisons still use convict leasing today.

and [glorifies] cowboy life” and “ignore[s] the level of autonomy women were able to exert”. Another reality that Donaldson says the game neglects is “the cross-cultural relationships” between people of colour that led to “the creation of enclaves which afforded a certain level of protection”. At face value, this could describe the Van der Linde gang of *RDR2*, but despite the group’s diversity, black cowboys are still undeserved.

The supporting characters of colour, Lenny, Tilly, and Charles, are more superficial than other gang members. Abigail, Sadie, and Bill are complex, flawed people with purpose, yet Lenny, Tilly, and Charles are simply helpful and competent gang members; they have little conflict or development. The Van der Linde gang is a diverse group of people living in a moment of intense change for black Americans,

so it’s odd that their stories or observations are mainly relegated to throwaway lines or missable dialogue with NPCs. As for NPCs, if you

venture into the ranches on the map, you don’t see many non-white ranch workers. Where are all the black cowboys, the people who made up a massive part of life in the wild west? If you’re annoyed by the glitch where the gang tells Arthur to put on warmer clothes, you’ll understand how the details can take you out of the experience; but skimming over something

“They’re ignored because their stories haven’t been told already”

so significant as black people’s contribution to the wild west is more than a small detail or a glitch, especially when the game is billed as being an attempt to ‘capture’ history.

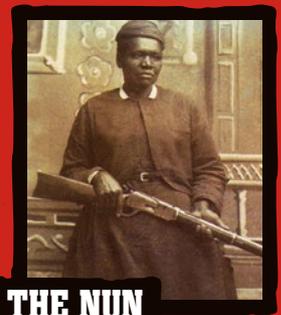
Unfortunately, Rockstar did not respond to multiple requests for comment or interviews. However, they were happy to provide images – a response that serves as a good metaphor for the issues at hand.

THE COWBOY FANTASY

In 2005, a newly released game was described as a ‘19th century *Grand Theft Auto*’. It wasn’t the first in the *Red Dead* series, but another open-world western epic called *Gun*. When I spoke to Randall Jahnsen, the writer of *Gun*, it became clear that he’s passionate about the wild west, having worked on western projects for Jonathan Demme and Spike Lee, in addition

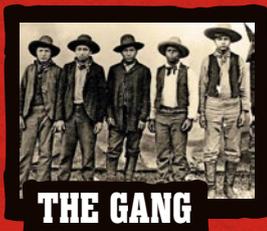
to *Gun*. Jahnsen thinks that black cowboys are “an incredible chapter of American history and so worth celebrating”.

Although, as someone who works in media, he understands the neglect of black cowboys. “It’s vastly unknown, most likely due to the succession of popular media that evolved over the next 100 years,” he says. “Dime novels and periodicals, silent film and radio, sound and colour film, and, finally, television, big media, and the entertainment industry were founded, operated, and ➔



THE NUN

Mary Fields is just as remarkable as Love or Reeves. When she was freed from slavery, Fields moved to Montana and worked at a nunnery. The nuns didn’t appreciate her swearing and she was eventually fired after a gunfight with a colleague. Later, she worked as a gun-wielding driver for the U.S. postal service, gaining the nickname ‘Stagecoach Mary’. She hid guns under her dress and defended deliveries against bandits and wolf attacks. I could easily imagine Mary’s years defending postal deliveries against bandits and wolves could make for a fun little rail shooter or side mission.



While Reeves, Love, and Fields would make great heroes, many real-life black outlaws could serve as villains. The infamous Rufus Buck Gang were a multi-racial gang that went on a brutal crime spree in 1895. They claimed that their rampage aimed to encourage black and Native American people to rebel against the government. It sounds like a noble cause, but it was probably an excuse at the gallows. Western games have a reputation for gratuitous violence against generic BIPOC NPCs. I'd much rather fight adversaries with a compelling and complex back story like the Rufus Buck Gang.

While she isn't a traditional 'cowboy', Isabelle Moreau is one of the few playable black characters in western games.



perpetuated by white people. In other words, the storytellers controlled the narrative." Media ignoring black cowboys because they conflict with the myth of white America is an explanation that has come up so often during my research. It makes sense that early Hollywood westerns would do this. But now, when history is just a click away, it feels at best lazy and, at worst, a continuation of 19th-century ideas.

During the production of *Gun*, Jahson was told to make scenes short and simple, so like many period games, much was left out. Some games are designed with bad intentions (see Custer box, opposite); for others, the format's limits mean simplifying complex issues with offensive results. For example, *Gun* came under some criticism for its portrayal of BIPOC characters at the time. (Jahson says that he heard "those who had been most critical had not played it all the way through".) It's questionable to judge a game from 17 years ago with contemporary views on representation. However, *Gun's* similarity to the *Red Dead Redemption* series highlights the lack of progress in the years between their releases.

In an interview with GQ, former Rockstar boss Dan Houser said of *RDR2*: "It may be a work of historical fiction, but it's not a work of history. You want to allude to that stuff, but you can't do it with 100 percent historical accuracy. It would be deeply unpleasant." This statement



Players found that the 'unnamed racist group' from *RDR2* ignore black NPCs, so why include them only to change their historic behaviour?

might seem fair at face value, but *RDR2* was sold as an immersive experience because of its extensive period details and complexity – this also being a good reason as to why it deserves more analysis than other titles on these pages. So when the game neglects black cowboys, it feels like Rockstar chose to skim over something that might be 'unpleasant', while at the same time including extended scenes of skinning animals or realistic horse testicles that contract in the cold – elements which could arguably be described as 'unpleasant'.

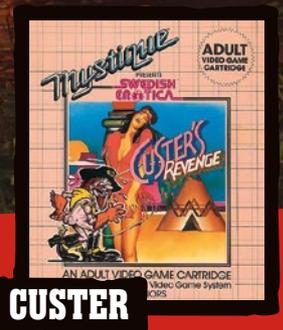
MATERIAL MATTERS

Interestingly, it's a 'simpler' game that's a little better at representing black cowboys. The real-time tactics game, *Desperados III*, includes a woman of colour and features a black law-person called Marshal Wayne (inspired by Bass Reeves – see The Ranger box, overleaf). While it's not in the same league as *RDR2* for complexity, *Desperados III* features elements of western history that aren't often explored, like convict leasing – a practice tantamount to slavery that still exploits imprisoned, mostly BIPOC, Americans.

For Martin Hamberger, lead writer of *Desperados III*, this history was important to include because he saw how it had been so overlooked. "I really like that we put things like [convict leasing] in the game because you don't really hear much about them in games. Another example is Isabelle's partner, Marshal Wayne, inspired by real-life deputy U.S. marshal Bass Reeves. I remember when one of our American partners was a bit concerned about the character. They thought that an African American marshal in the year 1875 could be seen as too unrealistic.



^ *RDR2* seems to restrict most of its black characters to Lagras and the city of Saint Denis, but ranches relied heavily on black cowboys.



CUSTER

So when I told them about Bass Reeves, they just said, "Why have I never heard of that guy? He sounds awesome!"

Despite a few characters, western games have largely overlooked black cowboys; but is accurate representation important in a period game? I spoke about this with James Newman, a research professor in Media at Bath Spa University and senior curator at the National Videogame Museum.

"It's crucial to think about how video games represent the past," he says. "They have a lot to tell us about

contemporary attitudes towards particular eras, and [how] ways of understanding are questioned and

reinforced. Alongside analysing what we see on the screen, it's essential to think about when, where, and by whom video games are made. There are conscious and unconscious biases in all representations, just as there are in the academic histories."

This idea of understanding contemporary views through period games is why the neglect of black cowboys in games is so fascinating –

"It's crucial to think about how video games represent the past"

we're still perpetuating an attitude from over 100 years ago. So, in 2121, when historians look back on western genre games that whitewash the wild west, what will they think of our attitudes? How will they judge developers and publishers who question the inclusion of black cowboys in western games?

With black cowboys, history has given us a perfect story for games, and it happens to have great representation for people of colour.

As such, when audiences are increasingly demanding representation, developers should

be embracing black cowboys. While writing this, a new trailer for a Netflix film about Nat Love, Stagecoach Mary, and other black

cowboys was released, and Beyoncé has just unveiled a black cowboy-themed campaign for her new Adidas range. It feels like black cowboys are finally getting their spotlight in other media. So if studios don't want to be left behind, they should make a game about Nat Love, Bass Reeves, or ideally a Charles-Sadie buddy cop/bounty hunter plot for *Red Dead Redemption 3* (please). [w](#)

Western genre games have a history of insensitivity and sometimes outright bigotry when portraying non-white Americans. The worst example is *Custer's Revenge*, a 1982 Atari game where the goal is to rape a Native American woman. More recently, 2019's *This Land Is My Land* has come under criticism for merging elements of Native American cultures to create a stereotype of a Native American.



Subscribe today

Wireframe

The MagPi

HackSpace
TECHNOLOGY IN YOUR HANDS

CUSTOM PC

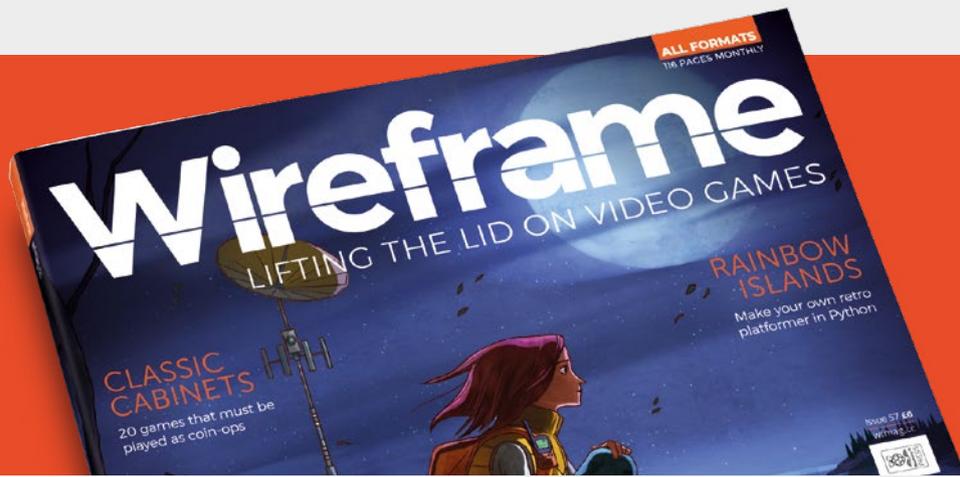
3 ISSUES FOR £10

+

FREE BOOK



wfmag.cc/freebook



Subscriber benefits

- > **Free delivery**
Get it fast and for free
- > **Exclusive offers**
Take advantage of our offers and discounts
- > **Great savings**
Save money on the cover price compared to stores

Special offer:

3 issues for £10 plus a FREE book worth £10

- > **Low initial cost**
- > **Choose from one of five fantastic books**
- > **Free delivery**

3 for £10 offer only available in UK

Subscribe for 12 months

wfmag.cc/subscribe

£55 (UK) **£90** (USA)

£80 (EU) **£90** (RoW)

Offers and prices are subject to change at any time



Digital subscriptions from

£1.99



Visit wfmag.cc/subscribe or call **01293 312192** to order

Subscription queries: wireframe@subscriptionhelpline.co.uk



Interactive / Grapple Dog

Joseph Gribbin talks us through the two-and-a-half-year process of making his canine action-platformer

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

While every developer surely wants their game to be a success, there's still plenty to learn even from a sales disappointment. For British artist and game designer Joseph Gribbin, the slow performance of his 2019 title, *Magnibox*, immediately informed his next project – the upcoming action-platformer, *Grapple Dog*. “*Magnibox* did OK on mobile,” he says, “but it kind of failed to get traction on social media or positive word of mouth. I reflected on it and tried to figure out why that was. The way I figure it, *Magnibox* lacked personality – a story, fun characters, cool environments, and so on... I knew whatever I was gonna work on next would have a lot of personality *and* you'd be able to tell what was going on even just looking at a ten-second clip on Twitter.”

Grapple Dog, then, is a wildly different game from *Magnibox*. Where the latter is a cool, abstract puzzler, *Grapple Dog* is a sprightly romp

where its canine hero can swing from platform to platform, *Bionic Commando* style. The titular dog is named Pablo – based on Gribbin's own, real-world companion – while the bold outlines and colours hark back to the Game Boy Advance platformers of his childhood, such as *Sonic Advance* and *Yoshi's Island*.

Indeed, it was Nintendo's 32-bit handheld that got Gribbin into designing games in the first place. “I started doing pixel art as a kid in MS Paint, downloading stuff off The Spriters Resource [spriters-resource.com] and recolouring them. The GBA was Nintendo's most recent handheld at the time, and it kind of blew my mind that I could make something that looked like the art in video games. I kept making pixel art for years, and then as a teenager started playing around with GameMaker, really wanting to learn how to make my own games.”

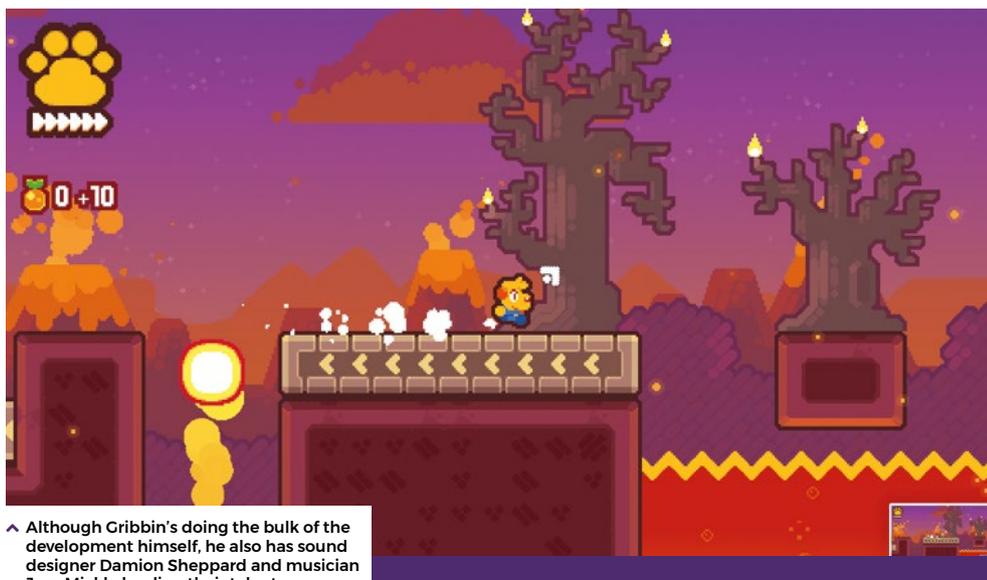
It's no coincidence, then, that *Grapple Dog* was made in GameMaker Studio 2, with Gribbin turning to Aseprite and Photoshop to generate its graphics. Like indie games such as *Arclands* and Neutronized's *Drop Wizard* before it, *Grapple Dog*'s sprites have chunky outlines that not only give it a distinctive look, but also help the player immediately understand what's a part of the background and what isn't. “There was a constant process of adapting [the art style] to make sure the game was really readable,” Gribbin says.

“For example, interactive objects have a harsh outline, background props have a fainter one, and backgrounds themselves have no outline



► Expect to face some imposing boss battles in *Grapple Dog*, including a very grumpy mechanical dinosaur.





^ Although Gribbin's doing the bulk of the development himself, he also has sound designer Damion Sheppard and musician Jazz Mickle lending their talents.

at all. That makes sure the player can easily parse the game's visuals."

Having played the demo, we can safely say that *Grapple Dog* is as smooth, polished, and easy to parse as you'd expect for an arcade-style action game. Pablo's grappling ability feels slick and intuitive to use, and it's a mechanic that, Gribbin says, has taken considerable time to get just right. "I've been refining and iterating the core movement for basically the whole two and a half years of development so far," he tells us. "There's still a bunch of things to fix and tweak, even now."

This being Gribbin's first action game, having previously made the puzzle-platformer *Spike City* as well as *Magnibox*, he found adapting to the change of pace his biggest challenge. "All the games I've made previously have been puzzle games, even if they don't look like it," he explains. "They're all about figuring out how to progress with a restrictive set of actions. With *Grapple Dog*, I had to learn how to design a moveset and how to design levels, where the player has a lot of freedom and where the fun doesn't just come from 'solving' the level, but running around and exploring."

So, we wonder, what's the key to designing an engaging stage for an action-platformer? "I think about levels as a bit of a conversation between the designer and the player – as a designer, you ask a question, and then the player has to answer it. You might put a fruit *just* out of reach, and then the player has to figure out how to get up there

and go get it. A good level, to me, is one where the player always understands what's being asked of them, and where pulling that off feels really satisfying and fair."

When we caught up with him for a chat in early November 2021, Gribbin was just in the final stages of development on his canine adventure.

"Grapple Dog is the most ambitious thing I've ever made"

Grapple Dog is a simple, breezy game on the face of it, but it's clear that Gribbin's putting a lot of care into the smallest of details ahead of its

release. "It's close, but there's still a lot to do," he says. "The majority of the content is done, I'm just in the process of stitching everything together so the game flows nicely... *Grapple Dog* is the most ambitious thing I've ever made, and I'm so excited for people to play it."

You can try out the demo of *Grapple Dog*, available now at wfmag.cc/grapple. 🐾



DON'T QUIT THE DAY JOB

Given *Magnibox* struggled to get the attention Gribbin hoped for in 2019, does he have any advice for other solo developers hoping to get their game noticed? "What I've tried to do is build an audience on social media for me as a developer, one that can follow me from game to game. I'm sharing regular updates on what I'm working on, engaging with people that like my work, trying to make video content that shows off the character and appeal of my game very quickly, and trying to be as open and honest as I can.

"As for somebody making their first game: please don't quit your job, sell your house, take out a credit card, or bank on your first game being a big success. It's very unlikely! If you can start, develop, and finish a project and release it, that's a huge achievement in itself, and if you can keep doing that, hopefully you can start to build that audience. And if your game comes out and it doesn't do the numbers you want, you've put more art and creativity out there in the world! That's not really a failure, is it?"

Online Diary

GITTIN' GUD

Being on the bleeding edge of online gaming is hard: it's Halo Infinite

WRITTEN BY IAN 'MISTER CHEF' DRANSFIELD

Not entirely sure what I expected, to be honest. I've been playing the *Halo* games since day one some 20 years ago and am very much familiar with the trials and tribulations of the walking suit of armour who's in love with his virtual assistant. I actively like the single-player portion of every *Halo* game that wasn't made by current franchise custodian 343 Industries, and even 343's output isn't *absolute* digital excrement. Just a bit po-faced and dull. But in all this time, through all these games, aside from the times I've been compelled by my profession to do so, I've never really played *Halo Online* all that much. Naturally, I jumped straight

into *Halo Infinite* when it launched in mid-November with a free-to-play (F2P) multiplayer beta, and naturally, I immediately regretted the decision because, *by crikey*, it's not a friendly game if you're a bit slow in the ol' reactions department.

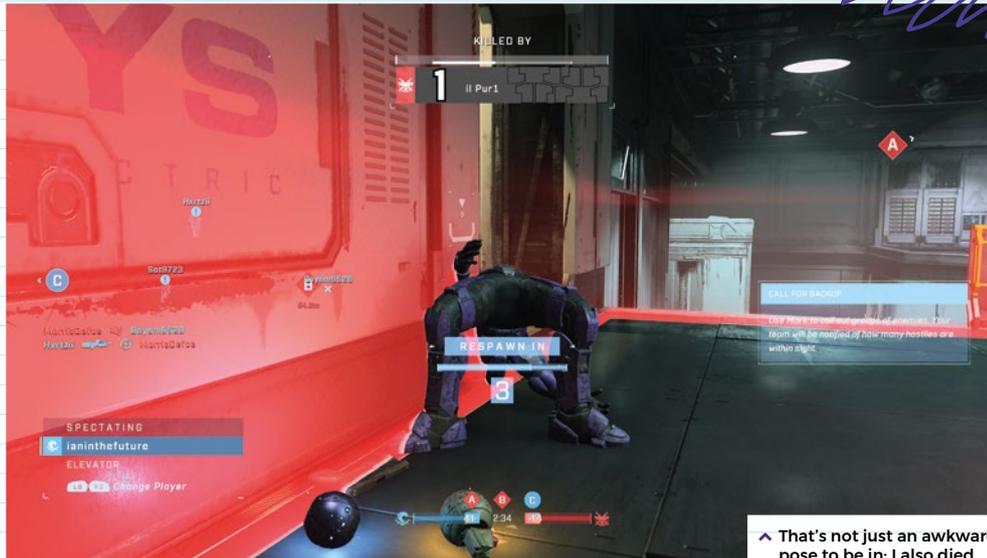
It should have been apparent what was going to transpire when I took a good four or five deaths facing off against AI-controlled bots in *Infinite's* training mode, but still, I had some level of optimism about what was coming up. After all, it was early days, what could possib... yep, nope, dead. Not to worry, I'll move onto team slayer (i.e. deathmatch) to have a diff...nope, dead. OK, what about tryi... ah, dead again. Repeat ad nauseam.

Halo Infinite – like all the *Halos* before it – is a slower-paced game than something like your *Call of Dutys*. It doesn't feel like it's running at hyperspeed; it does feel like you're able to almost take your time and consider something approaching tactics as you make your way through another one of the few intricately designed multiplayer maps available in the beta. It makes you *feel* like that. In practice, that's a bit of a wool-over-the-eyes situation, as the game very quickly revealed itself to be my own personal meat grinder; a *Verdun* all for me, located entirely within my living room.

Am I this bad at online games? Have I really spent pushing 30 years playing first-person shooters and ended up with so few skills I can't last more than a few seconds without getting popped in the noggin by some time-rich

▼ Well, by golly, if I didn't just lose this round while also dead.





teenager with a sniper rifle (in the game)? Has it all been for naught? Well... yes, in a way. It's not all bad for those of you, like me, who are lacking in certain skills (more on that in a mo). But the fact is there's very little chance – in the beta as I was playing it – of really getting much better in *Halo Infinite* if you're already a few rungs below the regular players who pop a needler off in your face before you've had a chance to realise where you are and vaguely what's going on. It's a baptism of fire, lacking in anything approaching solid matchmaking. That'll hopefully change, of course – the *beta* thing rings loudly here.

“It’s not a friendly game if you’re a bit slow in the ol’ reactions department”

But if you're anything like me, you may find your skills lie elsewhere. Driving, for example. Acting as the mule for a more heroic teammate to grab the enemy's flag, before returning it to our own base and scoring the game-winning point – well, that was a *very nice feeling*, I can't lie. No different from how something like that has been since capture the flag first appeared in *Halo* – or any game – but still nice. Or maybe you're a battery-thrower, in the mode where you have to collect the five McGuffins in order to score a point. Go out, pick one up, throw it down the daisy chain back to your base. Then get shot in the back of the head. Easy.

But really the takeaway from this whole toe-dipping exercise is that I'm no good at *Halo Infinite*. I'm sure it's good, or bad, or whatever the Brain Trust on the internet's darkest corners

decide it is before they begin another harassment campaign, but it's certainly not for me – I'll be waiting for the single-player mode before turning it back on any time soon. And what I'll also not be doing is spending any money on this F2P fracas. Not something I'd usually care *too* much about, but the level of progression is so insultingly slow that it's already become a bit of a joke at the time of writing. It does feel like a cynical approach to the F2P format and laughs in the face of the (relatively, and extremely limited) good job done on something like *Fortnite*. The battle pass systems are all a scam, but at least in Epic's game you *feel* like you're making some progress and aren't just hamster-wheeling it to eternity.

Anyway, back to the wilds of finding an online game I can stick with, I can play half-decently, I can get through two minutes of without ending up... yep, I'm dead again. 🙄



Halo help



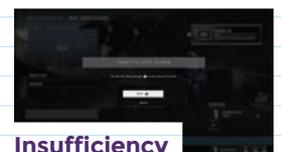
Mount up

Mounted guns are both a good way of dealing heavy damage to the opposition, as well as a good way of being stationary if nobody's driving your car and so getting sniped in the face.



Go invisible

Pickups include active camouflage, which *Predators* you up and makes you largely invisible. Unless you sprint or shoot, in which case, you become visible and are swiftly killed by the enemy.



Insufficiency

Honestly, at the time of playing, *Halo Infinite's* F2P mechanics are a bit *too* much. I'd recommend you learn to live with being low level for extended periods rather than paying money.

SONIC'S

AMATEUR HOUR

With Sega's handling of the series consistently in question, we ask the fans making their own versions: **what makes a good 3D Sonic game?**

WRITTEN BY AMELIA HANSFORD

There's a stage in the latter half of *Sonic Adventure 2* named Final Rush. Taking place just after Sonic and his friends fly towards the ARK, a monolithic research centre in space, the stage relies heavily on the game's rail grinding mechanics. Its outer space setting also means you can pull off extraordinary tricks, like flinging yourself across entire sections of the map. It's some of the most fun you can have in the game, and represents a high point of Sonic's 3D outings to date.

But it's just one moment of a few over the 23 years Sonic has been active in the 3D space, contributing to Sonic the Hedgehog's

status as one of the most divisive mascots in gaming. The reaction to *Sonic Adventure 2* alone speaks volumes: the 2001 title is alternately beloved and detested by different parts of Sonic fandom. In the aftermath of embarrassments like 2006's *Sonic the Hedgehog* and 2014's *Sonic Boom: Rise of Lyric*, 3D *Sonic* games have become almost synonymous with disappointment, broken promises, and a once-beloved mascot's gradual fall from grace. Enter: the fans. Fan-made *Sonic* games have been doing the rounds for as long as Sonic himself has been in the third dimension, and there are keen eyes in the fan community for just what it is that makes *Sonic great* with an extra axis.



▲ *Sonic Robo Blast 2* also features co-op and competitive multiplayer modes including hide-and-seek and tag. Credit: Appleblurt

One of the most common critiques you'll hear is that *Sonic* simply doesn't work in the third dimension. One argument is that original developer Sonic Team's mishandling of the IP is to blame, with its 3D entries plagued by bugs and glitches. But while official *Sonic* games have floundered, a community of fans has stepped in to make entries of its own. *Sonic Mania* is a recent, hugely well-received example – a loving remix of classic 2D *Sonic* platforming made by the fan community and officially endorsed, and published, by Sega. One much earlier fangame – in 3D, no less – was *Sonic Robo Blast 2*.

First released in 1998, *Sonic Robo Blast 2* is a freeware platformer made in the Doom Legacy engine. While that might sound like an unlikely marriage, *Sonic Robo Blast 2* is to this day a popular fan-made *Sonic* project, and a completely different experience to its ramshackle predecessor (for more on *Sonic Robo Blast*, see box). *SRB2*'s developer, Sonic Team Junior, has been steadily improving the game for over two decades now, with a major update released in 2019. While its characters and enemies are made up of 2D

“It represents an alternative path the *Sonic* series could have taken”



▲ *Sonic Mania* was a fan-made 2D game, officially licensed and released by Sega.



▲ Version 2.2 of *Sonic Robo Blast 2* was in development for over a decade before its release in 2019. Credit: Loafy

sprites, its world is fully explorable 3D. Movement is robust and fluid, exploration yields fun discoveries, it's surprisingly open, and it retains a lot of *Sonic*'s feeling of speed.

Sonic Robo Blast 2 is supported by an active modding community creating characters, levels, and even separate game modes. One such modder is character animator and self-confessed *Sonic* fanatic Chrispy Pixels. Chris began creating mods for *SRB2* in 2007 as a hobby, and has since created one of its most popular mods and worked on the game itself. “I got heavily involved in the community and was eventually contacted by the development team to work on finishing the Knuckles character for the vanilla game,” Chris says. After a “cursed and rushed” development process and a hiatus from the project, he rejoined the development team and has been active ever since.

SRB2 provides an alternate approach to the less-than-satisfying official 3D *Sonic* games we've seen over the past couple of decades, Chris argues: “I think what makes *SRB2* so popular with *Sonic* fans is that it started development before there was any kind of [established] ‘*Sonic* in 3D’ formula, so it represents an alternate path the *Sonic* series could've taken when transitioning to 3D that's more true to the classic *Sonic* formula. ➔

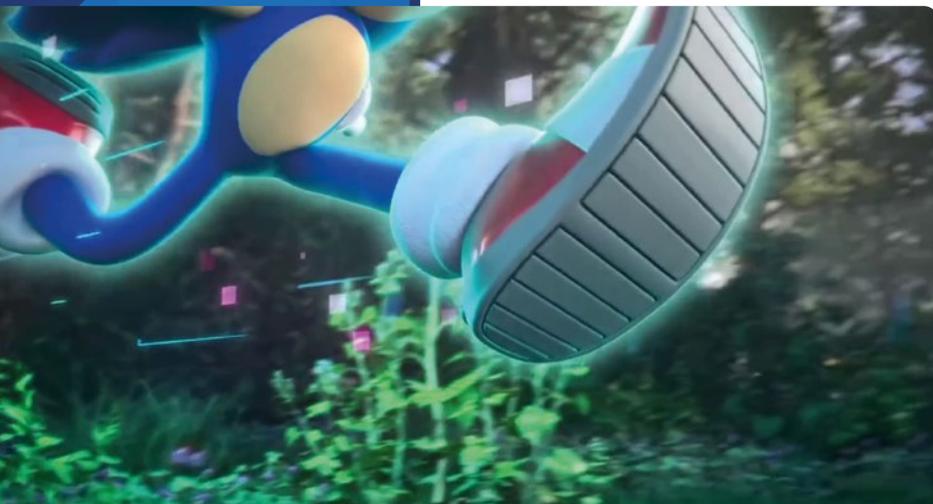
EARLY 3D

Sonic's initial forays into the third dimension were tentative at best: *Sonic 3D: Flickies' Island*, released in 1996 for Mega Drive, offered an isometric perspective and a non-polygonal 3D effect rather than a full three-dimensional world. *Sonic Labyrinth* on Game Gear had actually offered a similar experience a year prior, in 1995. And the earliest true 3D *Sonic* game in official development withered on the vine, with *Sonic Xtreme* – intended for the Saturn – eventually cancelled following two years in development. It took until 1998 and *Sonic Adventure* for the first properly 3D *Sonic* game to officially make an appearance.



▲ Sonic isn't the only one to enjoy a spot in *Sonic Adventure*, with Knuckles, Tails, Amy, and others having their own campaigns.

▼ The next 3D *Sonic* game was announced earlier in 2021, rumoured to be titled *Sonic Rangers* and said to take inspiration from *Breath of the Wild*.



The modding scene also keeps it fresh, which is how we've managed to stay active for 20 years."

Sonic Robo Blast 2 isn't the only example of a decent fan-made *Sonic* game, either. In fact, there are enough games – whether finished, ongoing, or unreleased projects – to justify sizeable fan groups and even an event centred on them: the Sonic Amateur Games Expo (SAGE). Pedro 'P3DR0' Litwinski is involved in the organisation and management of SAGE and SFGHQ – the Sonic Fan Games HQ. "3D fangames are still in their infancy; I don't think we've seen their best yet," Litwinski says. "But what we've seen gives us a pretty positive outlook for the future. It was only recently, thanks to free tools such as Blender or free game engines such as Unity or Unreal that they started becoming a possibility. 3D games are harder to make than 2D ones and require more knowledge and programming skills to pull off, and because of that, it may take a while for them to reach the same level of quality as the 2D ones."

SAGE came about thanks to the '*Sonic drought*' between 1994 and 1998, where no mainline *Sonic* games saw release. "*Sonic* fans took it upon themselves to start making their own projects and sharing them among themselves," Litwinski explains. "Seeing how many games were being made and how much people wanted to make them... it became obvious that they needed their own place where they could share resources,

knowledge, and their vision, and so, in 1998, the Sonic Fan Games HQ was born."

Seeing an increasing number of fangames made in the wake of *Sonic Adventure's* release, SAGE was created in order to give amateur developers a soft deadline of sorts to aim for – an end goal in a process that can often feel somewhat disjointed. "SAGE is a celebration of the community and their creations," Litwinski says. "And it recently had its biggest one yet, with over 240 projects showcased this year alone. I think that shows just how special the

community and *Sonic* are, where you can have one of the largest indie events on the internet, despite the 20 or so years of lukewarm reception to

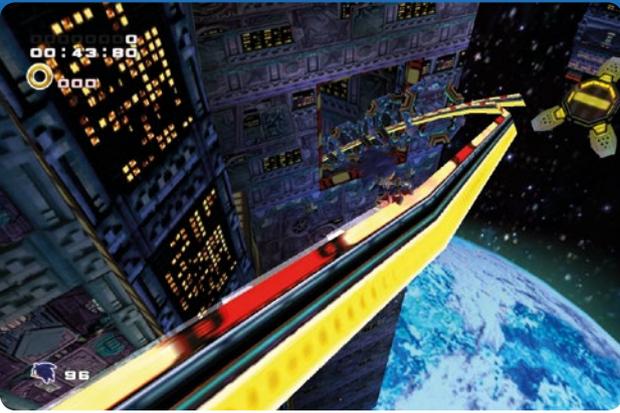
the franchise. And while fan-made games are in no way replacements to the original titles, despite not having any new games since 2017, if the fans can help it, I don't think we'll have another *Sonic drought* again."

"I don't think we'll have another *Sonic drought* again"

ADVENTURE ISLAND

Sonic Islands is another fan-made project, at the time of writing still being developed by the UK's Steve Taylor. It attempts to blend the feel of classic 2D *Sonic* games with the best elements of the 3D titles, such as homing attacks. It's exactly what you'd hope a 3D *Sonic* title would be like – speed, momentum, freedom, exploration, and some very green, hilly zones (there's an early look here: wfmag.cc/Islands).

For Taylor, *Sonic Islands* is a chance to mix the exploration of earlier 3D *Sonic* titles with the more open environments that can run on modern hardware, and "to really capitalise on controlling a character that can cover large amounts of ground, and try and unify some of the different gameplay styles throughout the series," he says. "That was the basis for *Islands* when I first started: to take what I felt were the best aspects of each style of *Sonic* gameplay, and bring them together in a meaningful way. Beginning with maintaining an objective-based, 'get from A to B' style of progression from the official games, but trying to seamlessly integrate that into a larger 'hub'. If you've ever played *Bowser's Fury* [the *Super Mario 3D World* expansion], the idea is very similar to what they achieved in that game: a series of small 'acts' that make up a larger world."



▲ *Sonic Adventure 2*'s Final Rush level allows for some massive leaps – an element some fangame creators are keen on.

Physics are key to a good 3D *Sonic* game, too, though Taylor argues that Sega didn't experiment with this aspect much once the series made its switch to 3D. "Things like allowing slope angles to affect your speed or jump direction, which was an integral part of the classics, aren't really present after the switch to 3D," he says. "That was another large aspect of *Islands*' design for me: bringing in these physics systems, but adjusting them to work in 3D, and with the more advanced moveset that comes with the 3D gameplay."

Sega's inconsistent approach to its 3D *Sonic* games' design is a common talking point among fans: opinions differ as to the 'right' way to do things, purely because Sega's never codified the right formula, either. "Fans introduced to *Sonic* through later games in the series may feel that an emphasis on the sense of speed is most important," Taylor says, "while fans of the earlier games may lean towards a more moderately paced, explorative take on *Sonic*. To me, a good 3D *Sonic* game should have a consistent and clear vision of how it's going to turn the premise of controlling a super-fast character into a fun and substantial experience for the player... making sure the player feels in control, and that *Sonic*'s speed is present in the game's mechanics."

WHAT DOES SEGA THINK?

For its part, Sega takes a hands-off approach to *Sonic* fangames – as long as they aren't seeking to profit from them, the publisher turns a blind eye. *Sonic Team*'s creative officer Takashi Iizuka says: "There are all kinds [of fangames], ranging from 2D games to 3D modern ones. *Sonic Mania* was born as a fan project, for example. I'm always impressed by the fans' creative drive and technical abilities... it's just our approach to not get in the way of fans' creative work as long as they're doing it as a hobby – we're not expecting any kind of benefit from that."



▲ The sense of speed and scale in *Sonic Islands* is genuinely impressive, and makes for an alluring take on the world of the blue blur.

"In cases that go beyond hobbies and into for-profit activity, we'll take strict and appropriate steps. We just want fans to be able to exercise their creativity and enjoy themselves through *Sonic*." It's this willingness to allow the community to work on projects without fear of being shut down that's got us to where we are today, with titles like *Sonic Robo Blast 2* and *Sonic Islands* offering something familiar yet distinct.

Iizuka isn't immune from picking and choosing elements to make a *Sonic* game the best it can be, either, and he notes the fan community's approach is an impressive one – if not something Sega takes inspiration from itself: "I always look to previous games in the *Sonic* series for reference," he says. "I try to build on elements that were received well in previous titles and improve on elements that weren't. That's how we've evolved little by little over the past 30 years... fan-made titles each have aspects that really make them shine and I find them impressive, but we don't really use them as reference when developing our games. Fans refer to our past titles and remix them, but it's our mission to create new things that no one has seen before."

With the recent remaster of *Sonic Colors*, several TV shows, a movie sequel, and a brand new 3D *Sonic* title on the way, the blue blur is in rude health. "It's in the middle of a turning point, like a pupa stage ready to evolve into the next thing," says Crispy Pixels. "I think the 'modern' era has run its course and Sega's due for some big changes in how it approaches the series. I'm excited to see what comes in the future because I believe *Sonic* has infinite potential." 🗨

FIRST BLAST

Sonic Robo Blast 2's predecessor, *Sonic Robo Blast*, was another fangame created in 1997. It's a 2D platformer, created in the game-making tool *Klik & Play* by Johnny 'Sonikku' Wallbank, who went on to work on the sequel. *Sonic Robo Blast* is primitive in both art style and mechanics, essentially containing the bare essentials of a *Sonic* game – however, its existence laid the foundation for what would become one of the most popular *Sonic* fangames of all time.

SONIC YOUTH

Best known as a composer,
the eminent Yuzo Koshiro also
oversaw Sonic the Hedgehog's
first 8-bit outing

WRITTEN BY RYAN LAMBIE

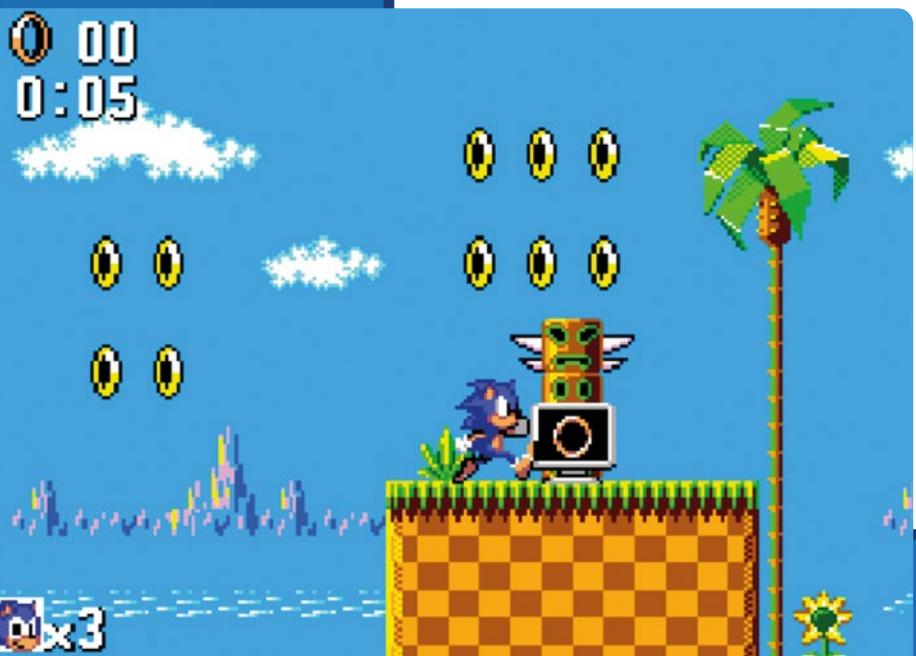


➤ Although shrunk down from its bigger cousin, 8-bit *Sonic the Hedgehog* contained the same clear blue skies and manic ring collecting.

With his quintessentially nineties attitude, Sonic the Hedgehog was the mascot that helped shift countless Sega Mega Drives. But while Sonic's 2D heyday is bound up with the 16-bit console on which he first appeared, the lesser-known 8-bit versions were remarkably good. It could even be argued that the *Sonic* that appeared on the Master System and Game Gear was (whisper it) better in some ways than the 16-bit version.

The 8-bit *Sonic* games also have a fascinating development story behind them. When Sega was still deep in production on the Mega Drive version, the company clearly knew it had a bankable character on its hands, since it made plans to adapt the game for its other consoles. This wasn't a small undertaking, either, since the Master System was a six-year-old system by 1991, while the Game Gear essentially offered up a handheld version of the same ageing hardware. Given that the Mega Drive *Sonic* was about to be sold on its blinding turn of speed, the 8-bit ports would have to be carefully retooled to fit the Game Gear's lesser processing power.

Rather than tackle that problem in-house, Sega decided to outsource the making of 8-bit *Sonic* – and for this task, the firm turned to none other than composer Yuzo Koshiro. By 1991, the 22-year-old was already a familiar name to most Sega owners, having made his Sega Mega Drive débuts with the music for *The Revenge of Shinobi* and *Streets of Rage*. Unusually, Koshiro's name was placed on those games' title screens, so





players would know who'd crafted those banging EDM-style soundtracks.

Koshiro had little direct experience as a game developer in 1991, yet he still managed to convince Sega to let him handle *Sonic's* port to the Game Gear. To work on the project, Koshiro set up his own studio, Ancient – a tiny outfit that comprised Koshiro's mother, Tomo, and sister, Ayano. Together, the close-knit team – which included programmer Shinobu Hayashi – set about making their pint-sized *Sonic* port. "Thinking back on it, it is quite weird," Koshiro told Polygon's Jeremy Parish in 2017. "*Sonic* is a huge property, and I'm not totally sure why they asked us to do it. I imagine at the time, the internal teams at Sega were very, very busy. But they still had to create Game Gear and Master System versions, even though there was nobody in-house to work on them. At the time, there wouldn't have been many external development companies to work with, and searching for one would have been very difficult."

To their credit, Koshiro and his team didn't just ape the Mega Drive version: although the 8-bit *Sonic* has broadly the same mechanics and enemies, the layouts and level themes are often entirely different. Maps are designed for complexity rather than outright speed – although it's notable how quickly Sonic moves, even with the systems' Z80 processor no doubt wheezing away behind the scenes.

Then there's the music: Koshiro took some of the 16-bit game's tunes and reworked them for his target platforms' PSG chip, but also composed entirely new tracks, many of them good enough to rival those penned by Masato Nakamura.

Sonic the Hedgehog emerged for the Master System in November 1991, while the Game Gear version came out in late December. The latter version, although broadly the same as the Master System's, made some clever tweaks to compensate for its smaller, lower-resolution screen, such as warning signs that helped prevent players from careening off ledges if they

"Sonic is a huge property; I'm not totally sure why they asked us to do it"



ran through a level too fast. What was clear from both ports was just how much care and effort Ancient put into them: far from quick cash-ins, they were every bit as colourful and playable as their more illustrious counterpart.

Critics at the time agreed: both 8-bit *Sonic* games were roundly praised, and evidently sold decently (if nowhere near as well as the one for the Mega Drive). The Master System never really took off in Japan, but it was a huge success in such places as Brazil and Europe, and *Sonic* soon replaced *Alex Kidd* as the system's built-in game in those territories. And while precise sales figures for the 8-bit *Sonic* games are difficult to find 30 years later, they must have at least been solid enough for Sega to make more of them: all told, the Master System and Game Gear received no fewer than eleven sequels and spin-offs over their lifetimes.

The curious thing about those sequels and spin-offs? Koshiro's studio didn't make any of them. Instead, they were mostly outsourced to Aspect, which made the 8-bit *Sonic 2*, *Sonic Chaos*, *Sonic: Triple Trouble*, and more besides. Still, Ancient carried on making games, and is still going today: it was credited as co-developer on such games as *Streets of Rage 2* and *3*, *Shenmue*, and most recently, the Japan-only *Royal Anapoko Academy* for the Nintendo Switch. Koshiro's brush with *Sonic* was only brief, then, but he and his studio played a pivotal role in getting the mascot's (blue) ball rolling on 8-bit consoles. 🐾

- ▲ When Sonic got hit in his 16-bit outing, a great shower of rings would emerge. The 8-bit version had to make do with just one.
- ▼ Yuzo Koshiro: genius composer and unsung hero behind the 8-bit *Sonic* games.



DIFFICULTY SPIKES

In an interview for the book *Japansoft: An Oral History*, Yuzo Koshiro recalls that Sega was remarkably hands-off when it came to the development of the 8-bit *Sonic*. "For the first stage of *Sonic* for the Game Gear, we kept in mind the Mega Drive version, but the second and third stages were planned by us. Sega weren't very strict on what *Sonic* had to be. After we completed it, Sega asked us to make a version for the Mark III [or Master System]."

Banal Fetch Quests: Ambulance Edition



STEVE MCNEIL

Steve's hobbies include comic books, gaming, and air.

"I ended up in an ambulance recently because I couldn't breathe"

Like many other people over the past couple of years, I ended up in an ambulance recently because I couldn't breathe*. It took me over a month to start to feel like my old self** but, on the plus side, I did learn how to make inhaler holding chambers entertaining. The trick, if you're curious, is to exhale into them weakly, but rapidly, so your face makes a noise like a diarrhetic cat.

I don't know if you ever get this but, because I'm an idiot, when I'm not ill, I occasionally think to myself: 'If I had a bit of a cold for a week or so, that'd be quite nice. I'd love to properly lose myself in a game for a few days'. However, inevitably, when I actually am ill, the last thing I want to do is try to successfully complete complicated tasks. As a result, I'm here this month to sing the praises not only of the NHS (they are amazing), but also banal fetch quests in games (also amazing, but obviously not even a tiny fraction as amazing as the NHS, who are really amazing and were instrumental in making me not dead yet, for which I am very, very grateful).

When I worked at Ginx TV, I remember our producer, James Neal, singing the praises of *The Witcher 3*. Not because of its campaign, but because once his family had gone to bed he could just lose himself pootling round meadows and farms for a bit, seeing what little things he might stumble across by nattering to NPCs or peeking behind barns. After a hectic day, the pace suited him.

I never understood this at the time but, filled to the brim with antibiotics, steroids, and Big Soups, I decided to reinstall *Assassin's Creed Origins*. The main quests got very little look-in as I potted around ancient Egypt, climbing up towers, looting chests, and finding animals to thwack on the head. And you know what? I loved it. I loved it more, in truth, than I've probably enjoyed most games like *Creed* when I've been focused on completing the main missions.

At the time, this was because, as I said earlier, I found concentrating on anything intense was too difficult while I was ill. However, since I've largely recovered, I've found that they've not lost their appeal at all. Prior to being ill, it wouldn't be too long before my 'gotta catch 'em all' attitude left me feeling frustrated at what seemed an insurmountable and increasingly joyless grind. Now I view the *Creed* series, and others like it, not as stories to experience, or jobs to finish, but as places to visit where I can unwind and switch off whilst nursing a soothing bag of cough drops.

Of course, this more gentle pleasure was always available to me, I just never saw it for what it was, or appreciated it. I guess youth is wasted on the young. Which, it turns out, is true not only in video games, but in real life too. Hug your loved ones, gang. Life is fragile. 🙏

** The 'good' news is it wasn't Covid. The bad news is we don't yet know what caused it. Probably long Covid, apparently... [Insert your preferred 'sarcastic thumbs up' meme here]*

*** Overweight depressive with functioning lungs*



Backend Contents

Reviews, retro games, and lots more besides

- 90. Sable** PC, XB S/X, XBO, PS4, Mac
- 92. SkateBIRD** PC, XB S/X, XBO, Switch
- 93. Eastward** PC, Mac, Switch
- 94. The Legend of Tianding** PC, Switch
- 95. TOEM** PC, Mac, PS5, Switch
- 96. Life is Strange: True Colors** PC, PS5, XB S/X, PS4, XBO, Switch, Stadia
- 98. Metroid Dread** Switch
- 100. Itch.io round-up** PC



ALEX
Yeah. Thanks. Thank you.

▲ Page 96: Life might be strange, but it's also a really great gaming experience.

OUR SCORES

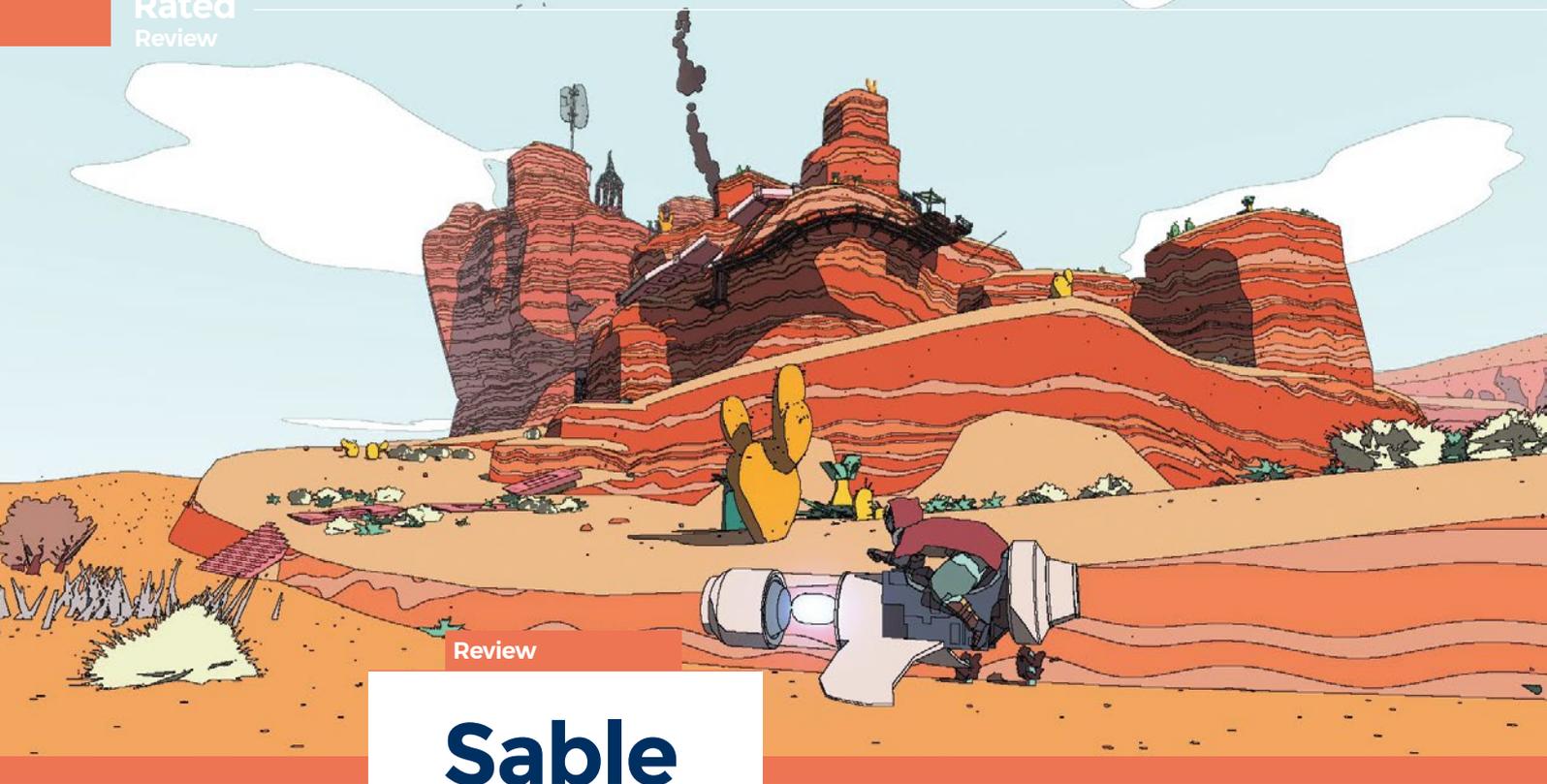
- 1-9**
Trash. Unplayable; a broken mess.
- 10-19**
A truly bad game, though not necessarily utterly broken.
- 20-29**
Still awful, but at a push could be fun for two minutes.
- 30-39**
Might have a redeeming feature, but otherwise very poor.
- 40-49**
Adds in more redeeming features, but still not worth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

PLUS

- 101. Stream of Consciousness**
Grimdark and Irregular, we chat with Dave Jewitt
- 102. The HOTLIST**
The PC's most recommended of games, according to us
- 104. Backwards compatible**
Both Game Boys and DOOM resurrected this month
- 108. Now playing**
Some older games can have a MASSive EFFECT on you...



▲ Page 106: Bored of DOOM ports yet? No? Good, because here's another.



Sable

Out-sand-ding freedom

Info

GENRE

Exploration
adventure

FORMAT

PC (tested) / XBO
/ XB S/X

DEVELOPER

Shedworks

PUBLISHER

Raw Fury

PRICE

£19.99

RELEASE

Out now

SOCIAL

@ShedworksGreg

The first view of the desert, stretched open before you, is breathtaking. You just found your way out of a small, quiet temple, and suddenly there's just the wide expanse of a world waiting to be discovered. It's a moment precision-engineered to make you want to get going immediately. Discovery sits at the core of *Sable*, which tells the story of a Gliding, a desert pilgrimage of sorts. It all starts the day protagonist Sable turns old enough to leave her tribe, the Ibxii, in order to explore the world outside of their territory for the first time. This journey is supposed to expose her to different people, customs, and guilds.

Sable's journey ends with her choosing a guild – any tasks completed for a guild member will earn her a badge; with three badges, she has earned the right to a guild's mask and thus

membership. Strictly speaking, the game doesn't even end there, as there's no fixed end to reach. You can collect as many masks as you like, and even after reaching that point, there's still the journey, the glide through the desert, which you can enjoy for as long as you like. The Gliding isn't arbitrarily named, as Sable's first task is to put her own glider together, her sole means of transport which will carry throughout her adventure. Most of your money will go towards the bike, which is lovingly named Simoon in a ceremony that makes the vehicle appear almost human. This devotion makes sense – for large stretches of the desert, Simoon is Sable's only companion. Unfortunately, the devotion also seems rather one-sided. So much of *Sable* depends on the gliding feeling good, on the journey being the destination, but even with several patches since release, it's not quite there yet. Some equipment for the bike seems merely cosmetic, as it makes handling actively worse from even the starting setup, and even with the most expensive parts, Simoon likes to crest high and fall low over every dune, hanging unmoving in the air for long stretches of time. Softly clipping an obstacle feels like a catastrophic collision, and remembering where Simoon is parked is essential, because sometimes, she may just not come when called, like an unexpectedly stubborn horse.

But *Sable* isn't entirely lost without Simoon – as part of the gliding, she acquires an orb

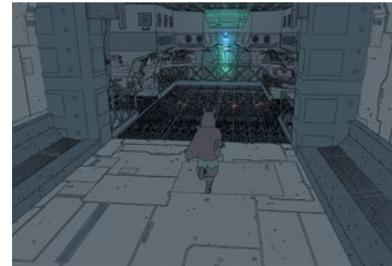
REVIEWED BY
Malindy Hetfeld

> Puzzles, temples, and caves are mostly of a wayfinding nature – how to get energy core A to door B when your arms are full – but thanks to versatile architecture, even this relatively simple puzzle stays fresh.





▲ The joy of climbing a high place and looking down is absolutely identical to that in blockbusters like *Assassin's Creed*. Despite your free-climbing ability, *Sable* manages to make the ascent interesting, too.



that lets her float, aiding her in making jumps between boulders and in easily finding a way down from up high, where many of Midden's temples sit. To get there, Sable has to do a lot of climbing, across the vestiges of old buildings, guided by plants curling downwards. She can climb almost any surface, and her stamina, while upgradeable, is enough to make it up almost everywhere, often also because the game lets you cheese a climb by giving you ledges to rest where there visibly is none.

Every climb is followed by a gorgeous view and a sense of accomplishment; I only wished the camera didn't frequently clip through surfaces (and Sable) at close quarters, making some climbs unnecessarily difficult.

Sable's a gorgeous game, not just due to its Møbius-inspired art style, but because Shedworks are obviously fans of architecture – every town you visit and every abandoned spaceship out in the wastes has a distinct look and feels fun to navigate once inside. But here too, a few annoyances keep things from being fully enjoyable. Depending on my settings, I either fought with very distracting screen tearing or, once I fixed that, pop-in so bad the waypoints on the horizon *Sable* depends upon for wayfinding just wouldn't appear until the last minute. The pin system you're encouraged to use at points of high elevation to mark points of interest for your compass is best ignored; you're better off spending money on a map in each

“*Sable's* gorgeous, and not just due to its Møbius-inspired art”

of *Sable's* seven regions to help you roughly determine where you are and unlock fast-travel to places you've discovered.

Coming across something new is always a joy – outposts and cities introduce you to traders with new bike parts, guild members, and desert denizens of Midden. Thanks to excellent writing, they all have something interesting to say, so running an errand for them feels like you've done something worthwhile, even though, as with many open-world games, what you've actually done is little more than a fetch quest. The fact that this is an entirely non-violent game is both a

mechanical and a narrative component, in that it tells you this is a world where people help each other, appreciate each other, and have need for very little. *Sable* has a great sense of place and manages to paint a living world with little more than hints of its social systems and mysterious spacefaring past.

Sable revels in the almost mindless appeal that makes open-world games so difficult to put down – on the way somewhere, you come across something interesting and decide to take a detour, discovering a collectable activates some primal love for gathering, and you keep going. But *Sable* is made of what big-budget games use to pad themselves with. It's a massive game for a small studio, but it consists of a very specific type of busywork – if you don't mind that and don't fear having no direction, *Sable* is a gorgeous trek across the desert. 🗺️

HIGHLIGHT

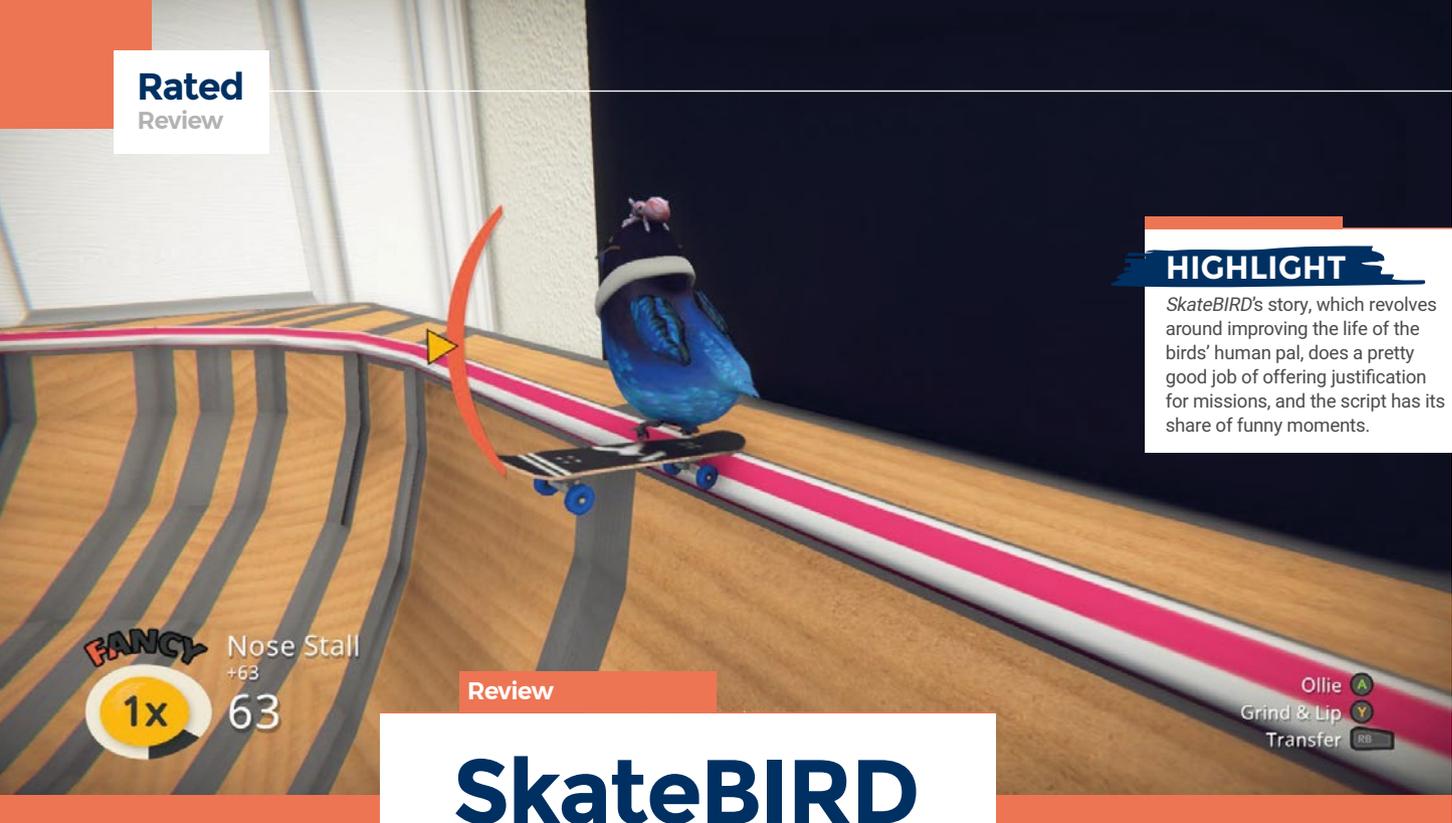
Sable's soundtrack – by Japanese Breakfast, alias Michelle Zauner – was described as a collaborative process that made the artist fall in love with ambient music and flex her creative muscles. Since she followed the development process so early, *Sable's* music grew and changed organically with the game. *Sable's* brilliant soundtrack adds a lot of atmosphere – Zauner has even enthusiastically called the song *Better the Mask* her finest work yet.

VERDICT

Beautiful to look at but still plagued by bugs, *Sable* offers ultimate freedom – and on the flip side, the calculated boredom that comes with it.

70%

Rated
Review



HIGHLIGHT

SkateBIRD's story, which revolves around improving the life of the birds' human pal, does a pretty good job of offering justification for missions, and the script has its share of funny moments.

Review

SkateBIRD

SkateBIRD isn't ready to leave the nest

Info

GENRE
Skateboarding

FORMAT
XBO (tested) / XB S/X
/ Switch / PC

DEVELOPER
Glass Bottom Games

PUBLISHER
Glass Bottom Games

PRICE
£15.49

RELEASE
Out now

REVIEWED BY
Andrew King

VERDICT

SkateBIRD nails the soundtrack and offers a ton of customisation, but it's just a frustrating mess to actually play.

40%

On the surface, *SkateBIRD* appears to capture the essence of its simple pitch: *Tony Hawk's Pro Skater*, but you're a bird. It's got a fantastic pop-punk soundtrack, with grooving ska tracks and funky instrumentals overlaid with the dulcet tones of lecturers doling out avian factoids. And, wow, there are a lot of birds in this Xtreme aviary. Before you even start the game, you'll contend with a robust character creator, replete with tons of breeds, customisable colours, and a wide variety of accessories.

But there's more to the bird than the sheen of the plumage, and the debut game from Glass Bottom Games is dealing with a pair of clipped wings. *SkateBIRD* has the worst camera that I've dealt with in a game in years; it's straight out of the PS2 era. It's constantly getting stuck on geometry, especially in the opening stage, which is set in the bedroom of your bird's big human friend. The way the camera freaks out is almost nauseating. It runs around the screen like one of our hero's barnyard cousins with its head cut off.

Then there's the level design itself. The best thing I can say about it is that it will give you a new-found appreciation for the elegance of a THPS stage. Even after I felt like I had a solid handle on the mechanics, I was constantly falling over invisible bumps on the ground, or ramps that, for some reason, began an imperceptible inch above the floor. The result is that it's much easier to fall off your board than it is to string a

few tricks together. When a late game mission required me to complete four objectives in a row without bailing, I almost set the controller down at the sheer impossibility of the request.

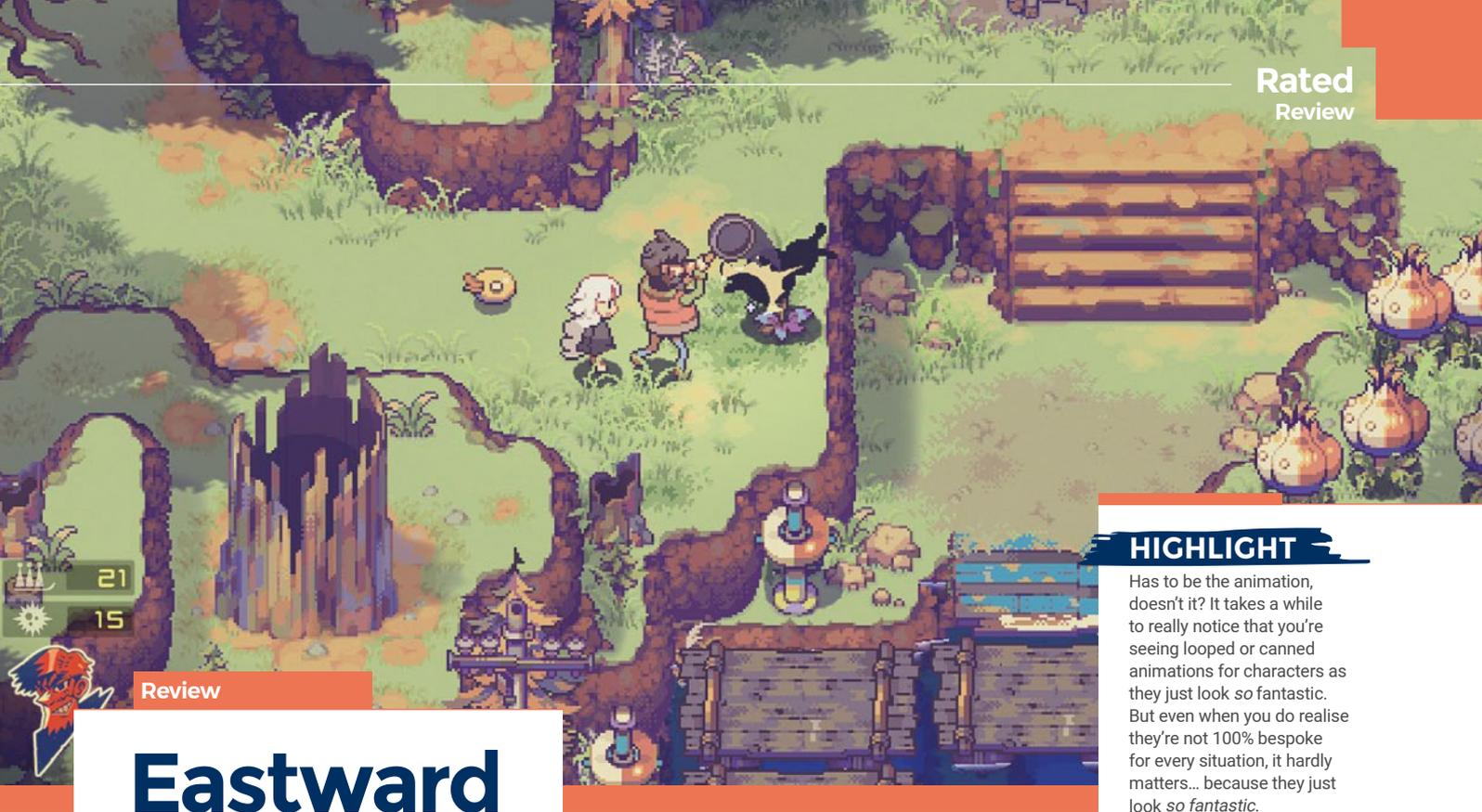
These problems are compounded by the fact that *SkateBIRD* has no move list for players to reference, so if you forgot how to do a trick, good luck. There are tutorials in the menu on the basics, like how to ollie, kick flip, grab trip, etc. But if you forget how to do anything slightly more complicated, you're out of luck. One mission required bouncing off a vent fan – something you're taught at the beginning of the section, with no ability to reference it again – and I spent a solid hour trying to work out how to do it correctly.

From the big things, like its camera and level design, to the smaller quality of life features – like including a way to relearn moves after the solitary time they're first introduced – *SkateBIRD* is hampered by consistent fumbles. This game may star winged skateboarders, but it never manages to get off the ground. [W](#)

“The way the camera freaks out is almost nauseating”

✓ A scarf, a hat, and John Lennon glasses: *SkateBIRD* offers plenty of accessories and almost as many bird breeds.





Review

Eastward

HIGHLIGHT

Has to be the animation, doesn't it? It takes a while to really notice that you're seeing looped or canned animations for characters as they just look so fantastic. But even when you do realise they're not 100% bespoke for every situation, it hardly matters... because they just look *so fantastic*.

Underground, overground, it's all pan-demonium

It's often trite to describe something as 'charming'; a hand-wavy descriptor usually acting as shorthand to mean 'cute' and not much more. *Eastward* is charming, though. It really is. It's definitely cute, and it certainly fills your heart with that sort of adoration things do when they're both of the 2D sprite variety and superbly animated, so your common use of charming is covered there. But it gets so many other things right that you can't help but be... well, *charmed*.

Eastward tells the story of Sam and John, the former a young girl who was discovered in mysterious circumstances by the latter. The enthusiastic and forthright former sees the stoic latter as a father figure of sorts, and attempts to live a normal life in the underground mining community the two are part of – going to school, making friends, and so on. But Sam also yearns to head overground into the world above, something expressly forbidden by the underground powers that be. Handily, both Sam and John are soon enough exiled to the above lands, and from there need to head – all together now – *Eastward*. It's quirky and characterful, riddled with surreal little touches here and there, and an attention to detail that sees anything from daft little incidental touches on characters (like wiping snot from their dribbling nose) through to an entire (albeit small) *Dragon Warrior*-style RPG to play on an in-game console.

“It’s quirky and riddled with surreal little touches”

Where *Eastward* stumbles a bit is in how much it readily lifts from other games. The overall experience can be seen as *Zelda: A Link to the Past*'s adventuring and combat style, mixed with *Breath of the Wild*'s cooking, by way of *Earthbound*'s quirky, surreal, yet warm atmosphere. Plenty of other titles get the homage treatment along the way too, but the fact is it just works really well. If you know what you're looking at you'll see where stuff comes from, where inspiration has struck, but playing *Eastward* you're met with an assured, confident design that doesn't feel like a pale imitation of the things that came before. From the smartly designed puzzle work of switching between characters and their differing powers in order to progress, through confronting the bullying brats at school with your delightfully nerdy friends (not quite) in tow, it all works really well.

Eastward is easy to recommend and the sort of thing that I can see people wanting to play through multiple times just to stare at it, just to be drawn in by that atmosphere, to admire Joel Corelitz's wonderful score. But there are some out there, like me, who will tire of it a bit sooner than might have been expected. It's some 20-plus hours long, depending on how quickly you push yourself through, but it feels like something that would have suited being half that length. All the same, it's still a very good game and a great debut from Shanghai-based Pixpil. 🐣

Info

GENRE
Pan-adventure

FORMAT
PC (tested) / Switch / Mac

DEVELOPER
Pixpil

PUBLISHER
Chucklefish

PRICE
£21.99

RELEASE
Out now

SOCIAL
[@eastwardgame](#)

REVIEWED BY
Ian Dransfield

VERDICT

A supremely characterful game and a lot of fun – just ten hours too long.

84%

Rated
Review

HIGHLIGHT

The standout sequence takes place on a speeding train, an extended action film set piece in which you clamber onto the roof and battle against the wind as well as your foes, then drop down into carriages full of traps, all accompanied by furious backing music.



Review

The Legend of Tianding

For the many, and the kung-fu

Info

GENRE
Platform brawler

FORMAT
PC (tested) / Switch

DEVELOPER
Creative Games and
Computer Graphics
Corporation

PUBLISHER
Neon Doctrine

PRICE
£17.99

RELEASE
Out now

SOCIAL
@LiauThiamTing

REVIEWED BY
Jon Bailes

VERDICT

A classy comic book
action adventure.

76%

Liao Tianding was a real historical figure in early 20th century Taiwan, a Robin Hood-style thief rebelling against Japanese colonial rule. But this game is no biography. In Taiwanese developer CGCGC's vision, he's a cocky action hero defined by a roguish chuckle, reminding his enemies that he's a step ahead of them, and can beat them even when he isn't. The man and the period inspire a cartoon folk yarn with an Indiana Jones sense of adventure. Fortunately, like Liao, *The Legend of Tianding* has the slickness and confidence to make it work.

In part, that's down to its episodic comic book styling. Neat cel-shading and black borders create a clean, dynamic look. Cutscenes resolve with pace, with still panels slapped across the main view. It's as fluid as the animation of Liao's signature flowing red sash, as he conspires to break into the city's mansions and military depots, facing down treacherous collaborators and hapless Japanese police.

Liao's personality equally shines through in the game's knockabout brawls, combining skill and thievery to evoke classic Jackie Chan. Weaken an enemy with dagger slashes, and a secondary attack sees Liao instantly wrap them in his sash, pilfer their weapon, then fling them in the direction of your choosing, perhaps to add juggle damage with a rising kick, or send them careening into hazards. The result is a series of hectic, dancing scraps full of improvised weapon switches, executed with remarkably tight controls.

Indeed, progress is often surprisingly breezy, whether tackling police squads or platform challenges constructed from grinding buzzsaws, poison pits, and swinging axes. Screens that look destined to serve up pain fall to unfussy chains of air dodges, grapples, and flying kicks, making you feel like a badass kung-fu outlaw.

So much so in fact that it's a shock when one of the game's bosses hands that badass right back to you. These are fair fights, with clear tells for their attacks and reliable means of avoiding them – if you're quick – but expect to stall on them increasingly in later levels while you study their patterns (unless you reduce the difficulty level). Depending on your stance on such things, they're a bodycheck against an otherwise smooth flow, or precisely the kind of grand show that chief villains should put on.

Indeed, they're probably worth savouring since downtime between action sequences is a little excessive, despite the entertaining story. While the main missions are substantial, there are only four, which feels one or two short, and a lot of toing and froing between, as you zip around town seeking out allies who invariably ask you to fetch supplies before offering help. Side quests, too, are half-hearted, simple errands or contrivances to revisit previous stages and search for hidden items.

The Legend of Tianding doesn't quite have the perfect balance of its protagonist, then, but crisp presentation and action more than do him justice. Despite some unevenness, you should have the last laugh. 🤘



Review

HIGHLIGHT

Is there anything more exciting than getting a new hat? Obviously not, and *Something We Made* knows this, hence why there's all sorts of delightful headgear to collect in *TOEM*. Some hats have specific uses, but mostly their sole purpose is to make you feel good and look even better.

TOEM: A Photo Adventure

Get me pictures of Spider-Man! And a moustache! And a fluffy sheep!

When playing *TOEM*, it struck me how few games require you to actually take in what's around you. Giant arrows often direct you to your next objective,

while glowing outlines highlight pickup-able objects, eliminating the need to really analyse your surroundings. You may even spend more time looking at the minimap in the corner of the screen than on the street you're hurtling down.

But in *TOEM* you need to really look if you're to solve any of the game's charming puzzles. Sometimes you'll receive a direction that's obvious. "Take a photo of a snowman". "Take a picture of the hotel". Sometimes it's more of a cryptic clue. "Something distorted". "Hang in there, buddy". As you whip out your camera, the perspective of the world shifts. Suddenly you can peer behind buildings and spot things that are obscured from the isometric world view. Is that an animal crawling around down there? Snap it to add to the compendium. For a seemingly simple black and white world, there's so much to discover on every screen – each level a delicately created diorama.

TOEM's plot follows the usual arc. A youngster leaves home on a quest – in this case, to venture up a mountain to find the mystical *TOEM*. But rather than a sword and shield, your only weapon is your trusty camera. And there's no conflict: your sole method of progression is by helping people in whatever way you can. Grateful citizens award you with a stamp for your community card – acquire the requisite number of stamps and you're granted a free bus ride to the next locale.

Oh look, a yeti wants a photo of fluffy things. Snap! There you go, sir.

It's a wholesome twist on the hero's journey, and an affecting one. At the end of your trip – which will take around five hours if you dally to aid everyone you can along the way – the photos you've taken are displayed as the credits roll, and it's like a trip down memory lane. Oh, I remember that fashion show! That balloon animal! It's like a holiday. A memorable holiday, one so perfect, so charming, so lovely that you never want it to end.

Thankfully, there are a handful of well-hidden secrets to discover after the credits scroll off screen. But *TOEM* is a game that will stay with you long after it's all over. It's the very definition of wholesome, yet it's not cloying in any way. The dialogue is fleeting but fun, and the characters are beautifully drawn from just a few lines (in both the literary and graphical sense). Take an evening to explore this world. Take a good look at everything. You won't forget it in a hurry. 📷



▲ The isometric world switches to first-person view when you whip out your camera.

Info

GENRE
Puzzle adventure

FORMAT
PC (tested) / PS5 / Switch / Mac

DEVELOPER
Something We Made

PUBLISHER
Something We Made

PRICE
£15

RELEASE
Out now

SOCIAL
@SWMGames

REVIEWED BY
Lewis Packwood

VERDICT

A heartfelt bundle of loveliness that will raise your spirits and warm your soul.

87%

Info

GENRE
Narrative adventure

FORMAT
XB S/X (tested) / PC
/ PS5 / PS4 / XBO
/ Switch / Stadia

DEVELOPER
Deck Nine

PUBLISHER
Square Enix

PRICE
£49.99

RELEASE
Out now

SOCIAL
@DeckNineGames

Life is Strange: True Colors

And that's why I love you

Life is Strange: True Colors is where the series' themes really arrive front and centre. With just shy of a decade of storytelling behind it, the *Life is Strange* games are known for narratives revolving around themes like family, friendship, and the communities on which they're built. Where previous entries orbited around these concepts, though, here it's all met head-on. And it's all the better for it.

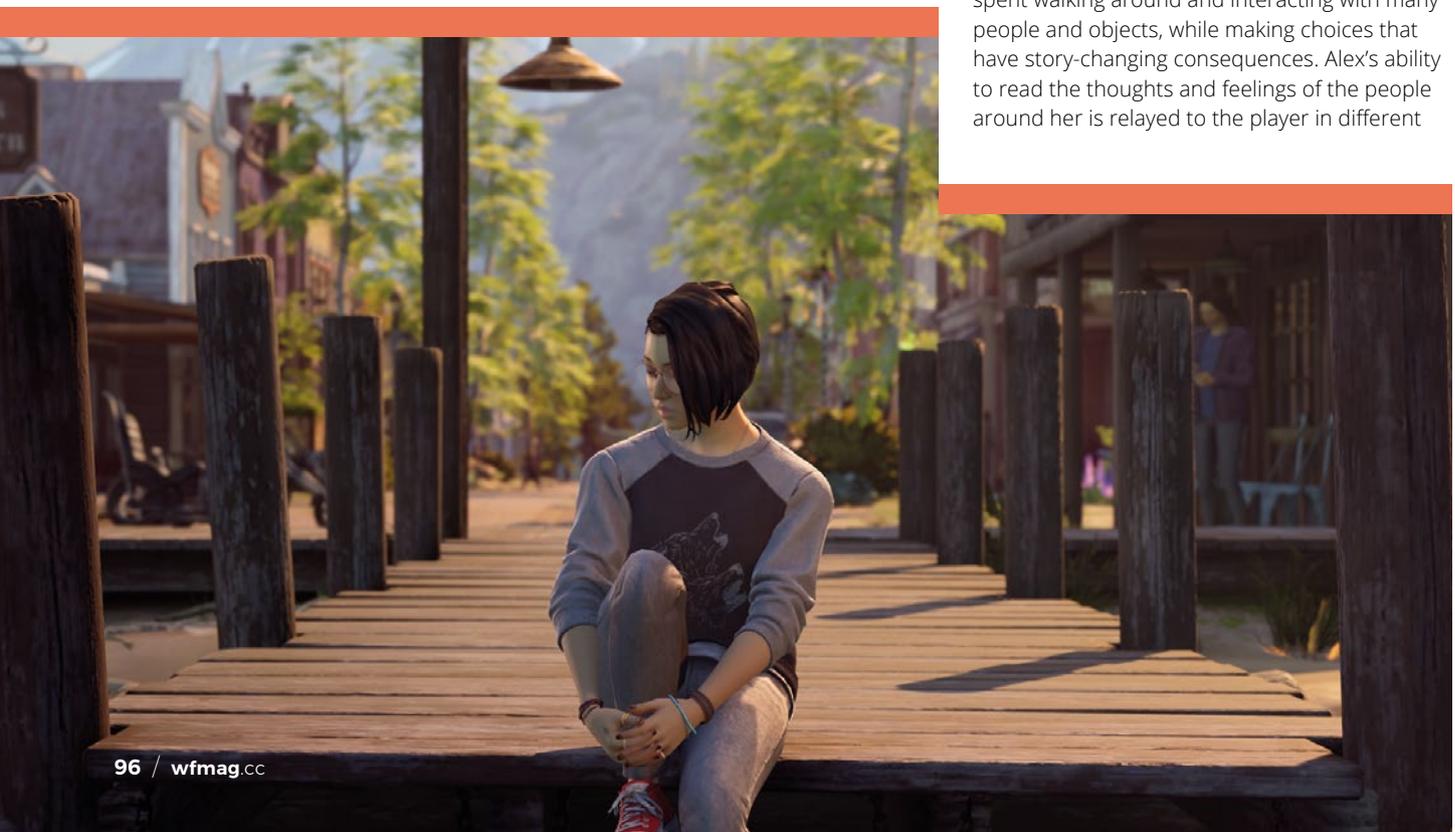
Players take on the role of Alex Chen; our protagonist has been impacted by the harsh realities of the foster care system, one that kept her and her older brother Gabe estranged for many years. Without a stable upbringing, Alex's childhood saw her handed off to multiple facilities and homes. Eventually reunited with Gabe and

moving to live with her brother in Haven Springs, a breathtaking Coloradan small town, Alex has a chance to start over. But starting over isn't easy when you're an empath, with the power to both see and feel other people's emotions. Alex's powers often overwhelm her to the point that the emotions of others become her own. That traumatic upbringing further complicates things, with bouts of anger and depression coupling up with her power, the difficulties of living in one's own mind combined with the intensity of feeling *everyone* else's mind along the way.

Haven Springs becomes both a place of new beginnings and new challenges. Tragedy strikes the locale and Alex becomes personally involved in an unravelling series of mysteries. *True Colors* doesn't veer too far from the mechanics of previous titles; much of the player's time is spent walking around and interacting with many people and objects, while making choices that have story-changing consequences. Alex's ability to read the thoughts and feelings of the people around her is relayed to the player in different

REVIEWED BY
Jervon Perkins

✓ At times, players can sit down, enjoy the view, and listen to the amazing soundtrack.





- < Alex has the power to see people's emotions.
- > Alex Chen can romance Ryan or Steph. Both feature satisfying subplots.



ways – the emotional resonance of some people is strong enough that memories can linger on certain objects, for example. Holding down a button while Alex walks around presents a world brimming with emotions, coloured in typical spectral representations (red as anger, blue as sadness, gold as love, etc.), while interacting with these elements in the world reveals people's hidden intentions. It can never truly communicate the overwhelming nature of Alex's powers, but it does a decent job of giving the player a taste of what it means to be an empath.

True Colors takes a decidedly lighter direction in its story compared to previous *Life is Strange* titles. Alex's life is by no means easy – she's been through a lot – but the focus isn't on her previous traumas as much as it is about the possibilities that come with her new life. The struggles that Alex deals with during her present life are handled with care, but she's never completely bogged down by them. This conscious narrative choice to restrain the emotions a bit more than the series has tended to before works in its favour. It shows that not every *Life is Strange* game needs to concern itself with pulling players into the depths of despair, and makes this entry the most uplifting and approachable one.

This doesn't mean that *True Colors* lacks gravitas, though. The game asks bigger questions about grief, death, and identity, and forces players to consider how far they're willing to take Alex's empathic abilities. There are no easy answers delivered on a platter for the harder questions, either, and that's one of its biggest strengths.

At one point later on in the game, Alex is forced to decide if she will help relieve someone of their crippling hatred, or let them deal with it on their own. Does she 'play the hero' and 'save

the day? And how will that affect the ending? Not all 'right' choices are obvious.

True Colors is the best-looking *Life is Strange* game to date. Alex and the rest of the cast look impressive, especially in terms of facial expressions – the game begins with a close-up of Alex's face as she's interviewed by a therapist. Her uncertainty, anxieties, and eagerness all translate, eyes darting back and forth and a sheepish smile emerging at one point. It's humanising; a way in which better graphics genuinely contribute to your engagement with the game and your attachment to the story and characters within it.

Musically, *True Colors* has an impressive variety of familiar and lesser-known tunes, including works from Angus & Julia Stone, Novo Amor, and mxmtoon, all providing Haven Springs with a quiet, easy-going, and nostalgic atmosphere.

Songs are used to make points, or underline Alex's desire for stability – such as when she stands on the bridge outside town, watching the sun-drenched

sky peeking over the mountain tops as *Home* by Gabrielle Aplin plays out. At darker times, players are invited to listen to Dido's *Thank You* on repeat, following a pattern established by Alex in her younger years when her home life began to fall apart. Even weeks later, these songs continue to conjure vivid memories of playing the game. They're smart and, fittingly, empathic choices.

Critiques of the game are honestly hard to come by. Beyond a few glitches, and occasional frame dips, the game runs well. The story doesn't feel rushed, nor does it feel like it overstayed its welcome during its 12-plus hour playtime. Franchise fans will be delighted with *Life is Strange: True Colors*, while newcomers will find an assured starting point for this blend of narrative and adventure. It's a fine way to see out 2021, and among the best games of the year. 🗣️

“The game asks bigger questions about grief, death, and identity”

HIGHLIGHT

True Colors is the most ambitious and well-told story in the *Life is Strange* series. Alex Chen's tale forces players to make some difficult decisions, and none of them have easy answers. The game balances lighter and darker tones, making it an easy recommendation for fans and action-adventure enthusiasts.

VERDICT

A big step up for the *Life is Strange* series, *True Colors* blends true empathy with smart writing.

89%

Review

Metroid Dread

Mighty Morph Ball power ranger

Info

GENRE

Metroidvania

FORMAT

Switch

DEVELOPER

MercurySteam

PUBLISHER

Nintendo

PRICE

£49.99

RELEASE

Out now

SOCIAL

@mercurysteam

REVIEWED BY

Ryan Lambie

▶ The moments where you enter the E.M.M.I.'s patrol zones are genuinely tense. *Metroid Dread* earns its title here.

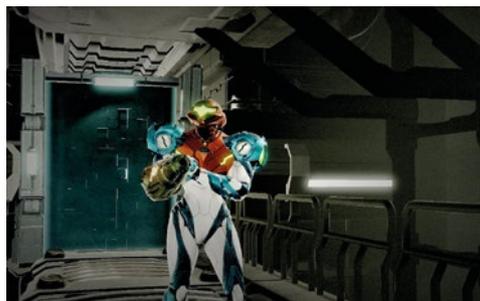
Long is the way and hard, that out of hell leads up to the light – especially if you're poor, luckless Samus Aran, robbed of her weapons and armour and dumped in the deepest crevices of the planet ZDR. Samus has been in these situations numerous times in the past, of course, and so off she goes, in search of a path back to her ship – and, as always, hunting around for the odd handy weapon or upgrade along the way.

The formula that *Metroid* established back in 1986 remains intact here: the maze-like levels filled with mindlessly aggressive enemies, the hidden abilities that help you unlock new paths, and the overweening sense of astral coldness. The major new addition, though, is the E.M.M.I.: a deadly, panther-like breed of machine that patrols certain discrete areas of the planet. A marked contrast to those mindlessly aggressive

enemies of traditional *Metroid* games, E.M.M.I.s will track and kill you on sight; although it's possible to stun them with a well-timed button press, it's such a tough action to pull off that, for large stretches of *Metroid Dread*, you'll need to avoid them at all costs – should an E.M.M.I. get within striking distance, they'll slaughter you with a single hit.

There are six of these critters stalking parts of ZDR (or seven if you count the one you spar with in an early tutorial), and they really add to *Metroid Dread's* murky texture. The areas the E.M.M.I. patrol are clearly marked out, both visually and musically, and entering each one is enough to leave a knot tightening in your stomach. The E.M.M.I. are fast, but developer MercurySteam has blessed Samus with just enough speed and agility to jump and slide out of deadly situations – assuming your skills and reaction times are up to the task. There's a certain thrill to running around an E.M.M.I. kill zone, keeping a few steps ahead of the patrolling exterminator, and perhaps sliding through a tight gap to safety, or performing a nimble wall jump to leap over an E.M.M.I.'s head and through the nearest exit.

These cat-and-mouse moments contrast nicely with the more typical *Metroid* stuff surrounding them: uncovering hidden routes, upgrading your weapons and abilities, and gradually learning more about the hostile planet





HIGHLIGHT

Metroid Dread's animation is exquisitely detailed. It's easy to zero in on the fluidity of Samus' movement, but it's the animation on the E.M.M.I. robots that's worth picking out: every part of their sleek, feline bodies has been lovingly animated to create a palpable air of menace.

you've wound up on. *Dread's* developers have added plenty of variety to the style and look of the usual corridors and rooms: the cold mechanical look of early areas gradually gives way to flooded caves and even organic areas full of lush alien flora.

The labyrinthine map is studded with bosses, too, which change up the tempo once again. These are hulking, multi-stage affairs that can sometimes feel as though they take hours to kill. Still, MercurySteam has deftly straddled the line between approachability and old-school toughness here: bosses will punish poor reflexes or lack of memorisation brutally, and you'll see the Game Over screen often during these encounters. But the game seldom puts you back more than a screen or two from the battle area, there are no lives or continues to speak of, and some bosses will yield extra energy capsules or missiles if you know how to prod them in just the right way.

For this writer, at least, the more formidable opponent in *Metroid Dread* is the map itself. ZDR's world is a sprawling one, and it's often easy to find yourself stuck in some darkened corner of it with no obvious idea where to go next. Revisiting areas is an expected staple of the Metroidvania,



- ▲ The melee attack from *Metroid II: Samus Returns* is back, but it feels more refined in *Dread*.
- ◀ Anyone who longs for the old-school difficulty of early *Metroid* games should be happy with *Dread*.

“Seriously, the feeling of finally getting the old Morph Ball is grin-inducing”

but there were times in *Dread* where I found myself heading back to old areas, not because I'd collected a new, boundary-expanding item, but because I was hunting around for hidden exits I might have missed.

With these frustrations, though, come satisfying pay-offs. There's a quiet thrill to finally spotting the destructible blocks that hide a previously unexplored path. And more satisfying still: the occasional moments where you get to charge up an Omega Cannon, which you can then use to finally turn those horrifying E.M.M.I.

into a smouldering pile of scrap, which in turn yields a new ability (seriously, the feeling of finally getting hold of the old Morph Ball skill is grin-inducing).

This is *Metroid Dread's* essence, I think: it's an action platformer that piles on the tension, and even the occasional sense of helplessness at times, before rewarding you with a cathartic, air-punching victory. 🗨

VERDICT

Tense, absorbing, satisfying: a side-scroller classily updated for the 21st century.

82%

Why not try...

Itch.io roundup

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



Project Corpse

Echo7Project / £1.00 / wfmag.cc/ProjectCorpse

The approach of emulating PSone-era graphics for unsettling horror has produced some fantastically uncanny results. Lightgun shooter *Project Corpse* takes the opposite approach, oozing with eyeball-bleeding maximalism.

Rattling bullets, undead screams, and chugging guitars set the soundscape for this face-first hurtle into a haunted arcade cabinet. Alternative paths add variety, and it follows *Time Crisis'* cue, where you can take cover at certain points, intensifying rapid decision-making in an already frantic shooter. *Project Hatchet* had me transported back to the arcade from the first hurtling hatchet I shot out of the sky.

Homebound

JazzPaw / Name your own / wfmag.cc/Homebound

Homebound's a short prototype teasing a bigger project, but it's so lovely and poignant that I couldn't help sharing it. You play as Jam, an anthropomorphic fox who wakes, can't sleep, and so takes to wandering their small apartment.

A story unfolds as you interact with the contents of this enclosed space, allowing *Homebound's* exploration of depression and agoraphobia to play against the established setup of 'cosy' games.

Here, the usually comforting personal and private space is reimagined as a tether, littered with unpacked boxes and reminders of missed loved ones.

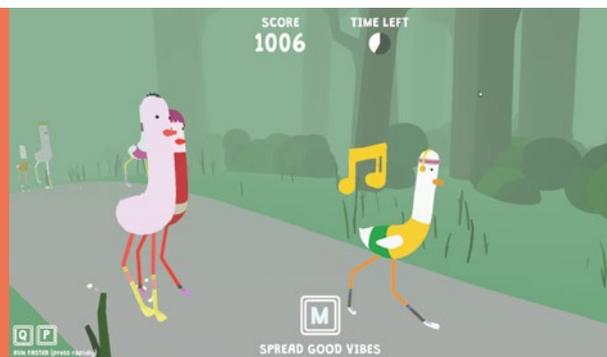
The bonus title this month is *Spookware* (wfmag.cc/Spookware), a horror take on *WarioWare's* minigames.

Sluggish Morss: Pattern Circus

Jack King-Spooner / £8.00 / wfmag.cc/Sluggish

King-Spooner's 'claypunk' offerings are always original, darting between poetic musings and toilet humour, and this is his most visually and structurally interesting work yet.

Straddling the line between game and audio-visual art exhibition, *Pattern Circus* features music by King-Spooner, Helena Celle, Charlotte Strawbridge, and Beth Sbresni. Chittering, grungy electronica, melodica-heavy dub, and noise punk mingles with showtune-esque storytelling numbers. Impenetrable at first, sure, but apt to make anything else you play after seem almost insultingly drab by comparison.



Good Vibes Jogging

andyman404 / Free / wfmag.cc/GoodVibes

If you've spent time on Itch.io, you'll know the platform has a thriving culture of themed game jams. October saw the fourth edition of Tallbeard Studios' OST Jam, a "non-competitive game jam with the goal to inspire new ways of approaching game development through music".

Music was provided by The Two Hour Album Challenge community, which also raise money for foster kitties, just in case you were wondering how much wholesomeness could fit into one project. *Good Vibes Jogging* is a tiny browser game about a bird running in the park, with a dedicated 'Spread Good Vibes' button. You can play it during a tea break, and I hope it makes you smile as much as it did me. 

▶ STREAM OF CONSCIOUSNESS

Dave 'IrregularDave' Jewitt gives us some regular answers this month

What's your favourite game?

I'd be hard-pressed to choose just one, but *Dark Souls* is certainly up there.

And why is that? What is it about that particular game that resonates so much with you?

I think the mixture of the Grimdark fantasy setting, the mixture of monster/medieval/magic lore, and the cycle of finding new challenges and overcoming them really appeals to me. Personally, I find it almost cathartic when I play these kinds of games – they take up so much of the little brainpower I have, that the piece of electric meat that sits within my skull can't focus on anything else. Getting crushed in *Dark Souls* over and over again is almost meditative.

What game was it that got you into gaming to begin with? What are your enduring memories of it?

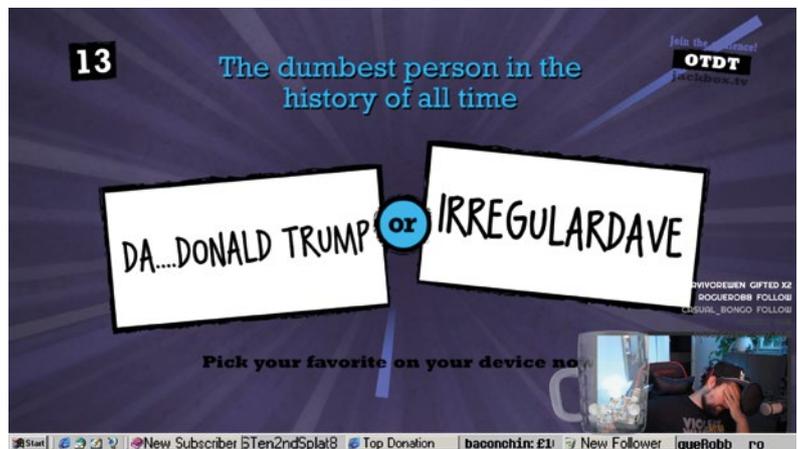
My first console was a Mega Drive, but all I remember from playing is getting extremely frustrated at *Earthworm Jim*, and my sisters kicking my butt in *FIFA 98*. No mercy.

The family computer had no games on it, but I remember distinctly loading up MS Paint again and again, drawing chaotic squiggly lines, and filling them with random colours. That's basically a game for a poor kid in the early 2000s, right?

Has there ever been a point you've been put off gaming? If so, why?

My interest has always ebbed and flowed, at least before I started working at GameSpot, but being so close to the games I love means there's always something exciting to sink my teeth into.

The only time I really felt disenfranchised with gaming is during a lot of the Gamergate controversy. That whole event really showcased an ugly side of gaming... but it helps to remember that the angry jerks are very much the loud



minority of the gaming community, and keep in mind all the love, support, and good that gaming and the people within gaming have done.

What's the appeal of playing games for an audience – whether that's pre-recorded or livestreaming?

Personally, I found playing games for an audience appealing because that's the kind of content I have consumed for so much of my life. I still watch the same content creator (Northernlion) that I did back in 2012. I probably watch more Twitch and YouTube than I do 'traditional' television. I got just as much enjoyment from watching Rooster Teeth's *Red vs. Blue* in 2003 than I do anything else here in 2021.

Over the past year, livestreaming was a real saviour to me. Like many, the isolation weighed heavily on my mental health; at the worst of it, I went over 100 days without seeing a human being. But having a small community around me that I got to virtually hang out with – and create experiences with – a few evenings a week was such a lifeline during the toughest times. 🍷

IrregularDave streams three or four times a week: Tuesday, Wednesday, Friday, and Saturday – find him on Twitch, right here: wfmag.cc/Irregulars



“All I remember from playing is my sisters kicking my butt in *FIFA 98*. No mercy”

The Wireframe **HOTLIST**

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

The games for... **BIG ADVENTURES**

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

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

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

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

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

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

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

The Outer Worlds / *Obsidian Entertainment* / **84%** (Issue 28)

Monster Boy and the Cursed Kingdom

/ *Game Atelier* / **84%** (Issue 6)

Nioh 2 / *Koei Tecmo Games* / **80%** (Issue 38)



The games for... **REPEATED PLAY**

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

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

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

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

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

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

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

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

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

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



The games for... **SOLID STORY TIMES**

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

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

Whispers of a Machine

/ *Clifftop Games/Faravid Interactive* / **85%** (Issue 14)

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

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

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

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

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

The Walking Dead: The Final Season

/ *Telltale Games/Skybound Games* / **81%** (Issue 11)

The Procession to Calvary / *Joe Richardson* / **80%** (Issue 40)

The games for... **FIRING UP BRAIN CELLS**

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

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

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

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

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

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

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

Total War: Three Kingdoms

/ *Creative Assembly/Feral Interactive* / **82%** (Issue 16)

It Takes Two / *Hazelight Studios* / **81%** (Issue 51)

Wanna Survive / *PINIX* / **80%** (Issue 42)



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

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

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

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

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

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

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

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

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

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

Catastronauts / *Inertia Game Studios* / **82%** (Issue 1)



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

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

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

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

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

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

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

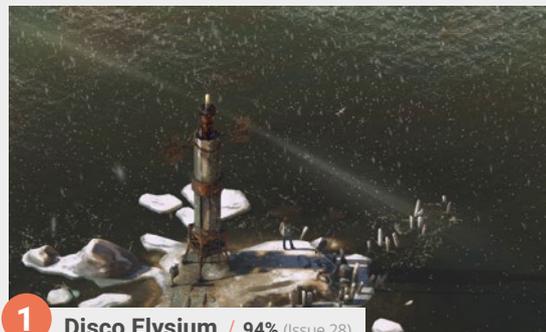
Hypnospace Outlaw
/ *Tendershoot/Michael Lasch/ThatWhichIs Media* / **86%** (Issue 11)

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

Chicory: A Colorful Tale / *Greg Lobanov* / **83%** (Issue 54)

Xeno Crisis / *Bitmap Bureau* / **81%** (Issue 33)

PC Top 10



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

9 Can Androids Pray / **90%** (Issue 21)

A healthy dose of existential anxiety in a minimalist, bite-sized package.

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

A focused puzzle game masquerading as space empire-based grand strategy.

Backwards compatible

WRITTEN BY RYAN LAMBIE

Oh Boy

Like a phoenix from the flames, my once-battered, neglected, vaguely pestilent-looking Game Boy is gradually returning to a cleaner, more usable state. You may remember in last month's issue that I managed to get this very tired piece of 1989 tech working once again – mostly by taking it all to bits and cleaning the years of corrosion and muck off the connectors and components. What I'd initially suspected would require some drastic intervention actually turned out to be quite straightforward – once I'd put it in a new case and added some replacement buttons, it immediately looked a couple of decades newer.

One thing I can't fix with a bit of isopropyl alcohol and a toothbrush,

though, is the Game Boy's ailing LCD screen. The pixels have failed around the edges (possibly due to a liquid spillage incident at some point), and the areas of the screen that are working look faint and smeary. To remedy this, I'm fitting an IPS screen kit from RetroSix (retrosix.co.uk), which provides a massive upgrade from the original Game Boy's dot matrix panel.

Even for a novice, this one's easy to install: you don't have to remove dozens of components, as you do with the Sega Game Gear's screen mods, or solder wires to get the brightness control working, as you do with the Game Boy Advance's equivalent mod. Instead, you simply remove the Game Boy's original PCB, then drop the replacement screen



▲ For reference, here's my Game Boy before work began. It looked like something washed up on a desert island.

into the handheld's shell, using a handy clear bracket to ensure it's nicely aligned. I then took a bit of double-sided tape (also included in the kit) and used this to secure the mod's driver board to the back of the screen. With this tacked down, there's a narrow ribbon connector to insert into the new PCB; this PCB is then screwed down on top of the screen, just as the old PCB was. Finally, there's a wider ribbon connector which goes from the PCB to the Game Boy's motherboard.

I loosely put the console back together, threw in a *Super Mario Land* cartridge, and... success! The difference in quality is immediately clear: the IPS screen's pixels are sharp and crisp, and the horrendous ghosting of the old dot matrix display, god rest it, is thankfully absent. You can even change the colour palette with a tap of the contrast wheel, making this a kind of Game Boy Color in disguise. At this point, I could simply de-solder the speaker from my old PCB and install it on the new one, put the console back together, and call it a day. Instead, I'm going to address the Game Boy's scratch sound problem at the same time...

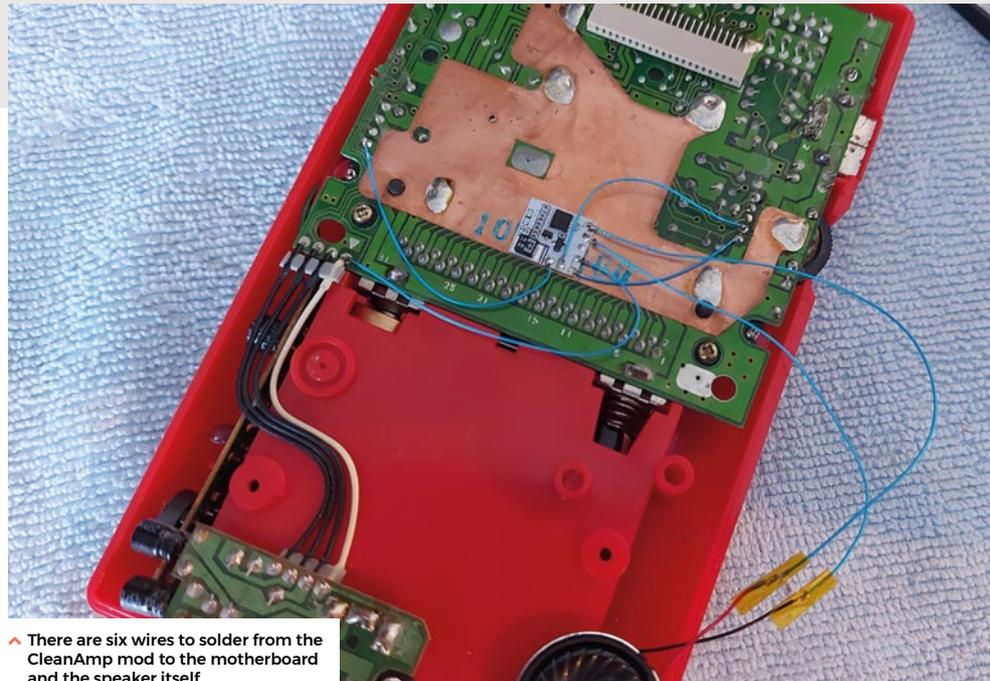


▲ My Game Boy with its new IPS safely installed. I can actually see what Mario looks like now.

Art of noise

Also from RetroSix, I have the CleanAmp Audio Amplifier, which is said to vastly improve the volume, quality, and power efficiency of the Game Boy's stock amp. Bear in mind, though, that the CleanAmp requires a 1 W speaker – which is packaged with the IPS screen kit mentioned earlier – because the Game Boy's standard 0.25 W speaker won't work with the mod.

The CleanAmp board is absolutely tiny, no more than about 20 mm on its longest side, and sits on the back of the Game Boy's motherboard (again, a little tab of double-sided tape came in useful here). Unlike that screen mod, the CleanAmp also requires the soldering of six wires – it's not a drop-in solution, then, but still simple enough to install if you're comfortable with a soldering iron. You'll need to solder four wires from the mod to the requisite points on the motherboard, and then solder a couple of wires from the mod to the new 1 W speaker. What's slightly strange about the speaker provided by RetroSix is that its preinstalled wires are extremely short – the correct length for use in a Game Boy Advance or even a Game Boy Pocket, perhaps, but far too titchy to reach the CleanAmp mod in an original Game Boy. This means you'll

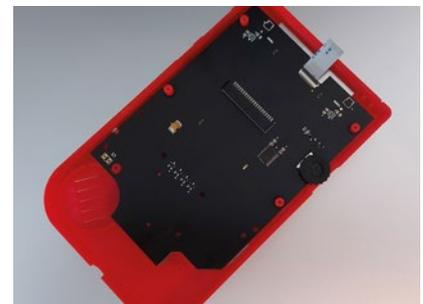


▲ There are six wires to solder from the CleanAmp mod to the motherboard and the speaker itself.

have to solder two extra lengths of wire from the mod to the speaker in order to cover the gap – arguably the fiddliest bit of the modding process. Still, I managed to get the whole job done in about 20 minutes, and made sure my extended speaker wires were nicely protected by wrapping a bit of Kapton tape around each one (you may want to use heat shrink tubing here – something I don't currently have in my tool-kit).

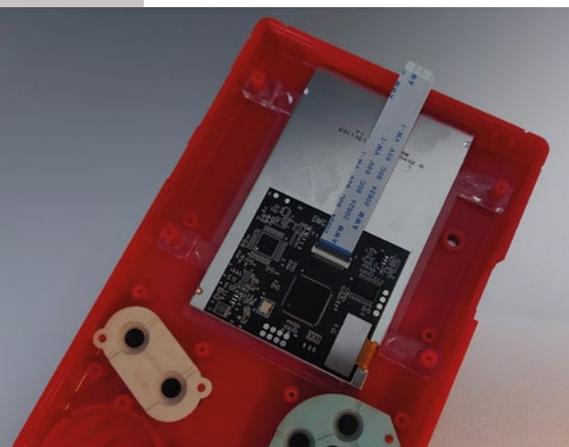
With the soldering out of the way, I just had to secure the new speaker in its home in the front half of the console's shell using the circular bit of double-sided tape provided. It was at this point I thanked myself for allowing plenty of slack in my speaker wires, since the next tricky bit is plugging the ribbon cable from the PCB to the motherboard, and at the same time ensuring none of the wires from the CleanAmp mod are snagged or pinched by the shell. After a bit of wiggling and tutting, the console was soon back in one piece.

The big surprise came when I turned the Game Boy on again: I'd accidentally



left the volume dial cranked up to maximum, and believe me, this amp mod is *loud*. Far louder, in fact, than you'd ever really need unless you were dead set on trolling your neighbours with the *Super Mario Land* theme tune played at *The Who Live At Leeds* volume. Still, turn the dial down a bit, and the Game Boy sounds glorious: clear, bright, and infinitely better than what the battered, dusty old original speaker could crank out.

To sum up, then: old consoles are wonderful. But they're even more wonderful when they're brought into the 21st century with mods like these.



Backwards compatible

WRITTEN BY IAN "FULL SCREEN" DRANSFIELD

Resurrection of evil

It's a day ending with 'day', so of course there's something new to do with *DOOM* doing the rounds. This time it's something I had to jump on the day it released: *DOOM 32X Resurrection*, a mod made to fundamentally beef up the original Sega port of id's classic shooter. Brief history lesson: *DOOM* came to the ill-fated mushroom-shaped Mega Drive add-on the 32X in 1994, and was... lacking.

It was missing maps, missing multiplayer, missing the BFG 9000 unless you cheated, missing enemies like the cyberdemon, and featuring some of the worst implementations of the original *DOOM* music known to humanity. Honestly, the soundtrack is hilarious garbage. It's all down to that old chestnut known in the business as 'a rushed development process'. Dozens of prototypes, rumoured post-release revisions, id's own John Carmack working non-stop to get the game ready for the 32X's release – it all piled together to

make one of the poorer console ports of *DOOM*, as well as one of the versions of the game where monsters, unable to do anything other than face the player, were unable to fight between themselves. Fittingly, it was hellish.

So there we were with a rough, rushed, unfinished-feeling version of one of life's great games. *DOOM 32X Resurrection* started out in 2020; a player curious about whether the 32X version's source code was still about fell down one or two rabbit holes, ultimately bringing together a team of seven to do a wee bit more than just up-res things and add back in the BFG. *DOOM 32X Resurrection* is how the game should have been on the format.

Full screen – if you want it – is available, along with a selection of resolutions. A smoother, quicker frame rate. A proper soundtrack, made specifically for this mod by one Spooky Bard. Save support. The monsters can both turn around *and* fight each other. And plenty more, including the ability to map left and right strafing to

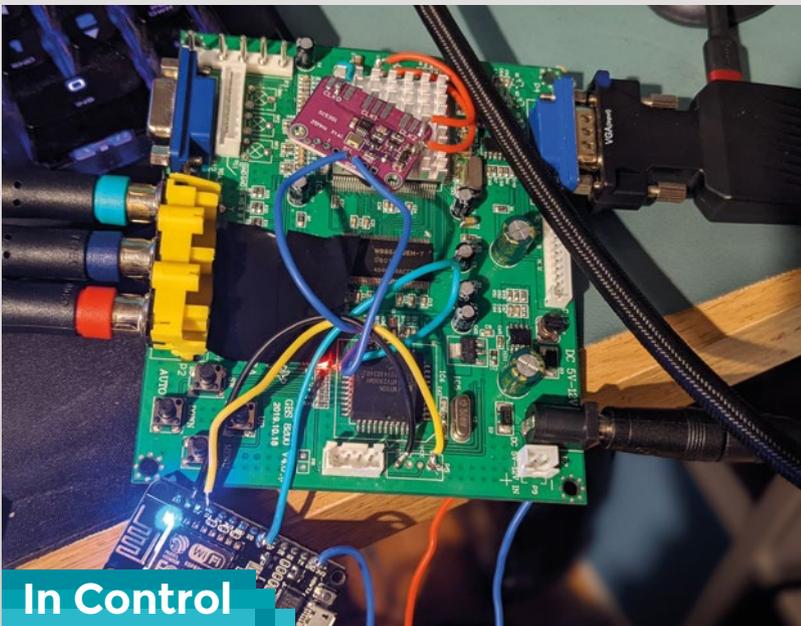


individual buttons. It's a brilliant mod; a complete rebirth – or shall we say resurrection – that acts as a wonderful thought experiment come to life to show just how good *DOOM* could have been on the 32X. Had Sega backed off, slowed down a bit, maybe Carmack and co might have got something a lot closer to this. Maybe the 32X would have had an instant killer app. Maybe Sega's expensive add-on would have had a version of the game that was better than the vanilla SNES version. But that wasn't to be. This mod, however, is to be.

And I didn't even mention the key element here: *DOOM 32X Resurrection* works perfectly – fighting monsters and all – on original hardware. I know this to be true as I played it with the old Mega Drive perched on my knee, cables a-wrangled across the desk as I attempted to keep things a bit neater than they usually are with the 32X and all the cable-y chaos it brings with it.

So yes, it might just be *DOOM* again – it's bringing things up to speed rather than adding anything beyond the original version – but for those obsessed with the precursor to all modern first-person shooters, *DOOM 32X Resurrection* is a superb *thing* to get into. It's another excuse to play *DOOM*, and it's the first time any of us have been able to play *DOOM* on a Sega console that doesn't run like garbage. I'm looking at you, *Saturn*. Check the mod here: wfmag.cc/Doom32X.





In Control

Making old consoles work on new displays is something I spend a lot of time thinking about, rather than boring stuff like bills or housework or buying food. One issue I faced was hooking up my PS2 to a modern display and dealing with the ever-present interlacing that a lot of things just can't deal with. Horizontal 'combing' artefacts all up the wazoo, a fair bit of irritation, video footage unusable without excessive processing or a £250 RetroTINK-5X Pro.

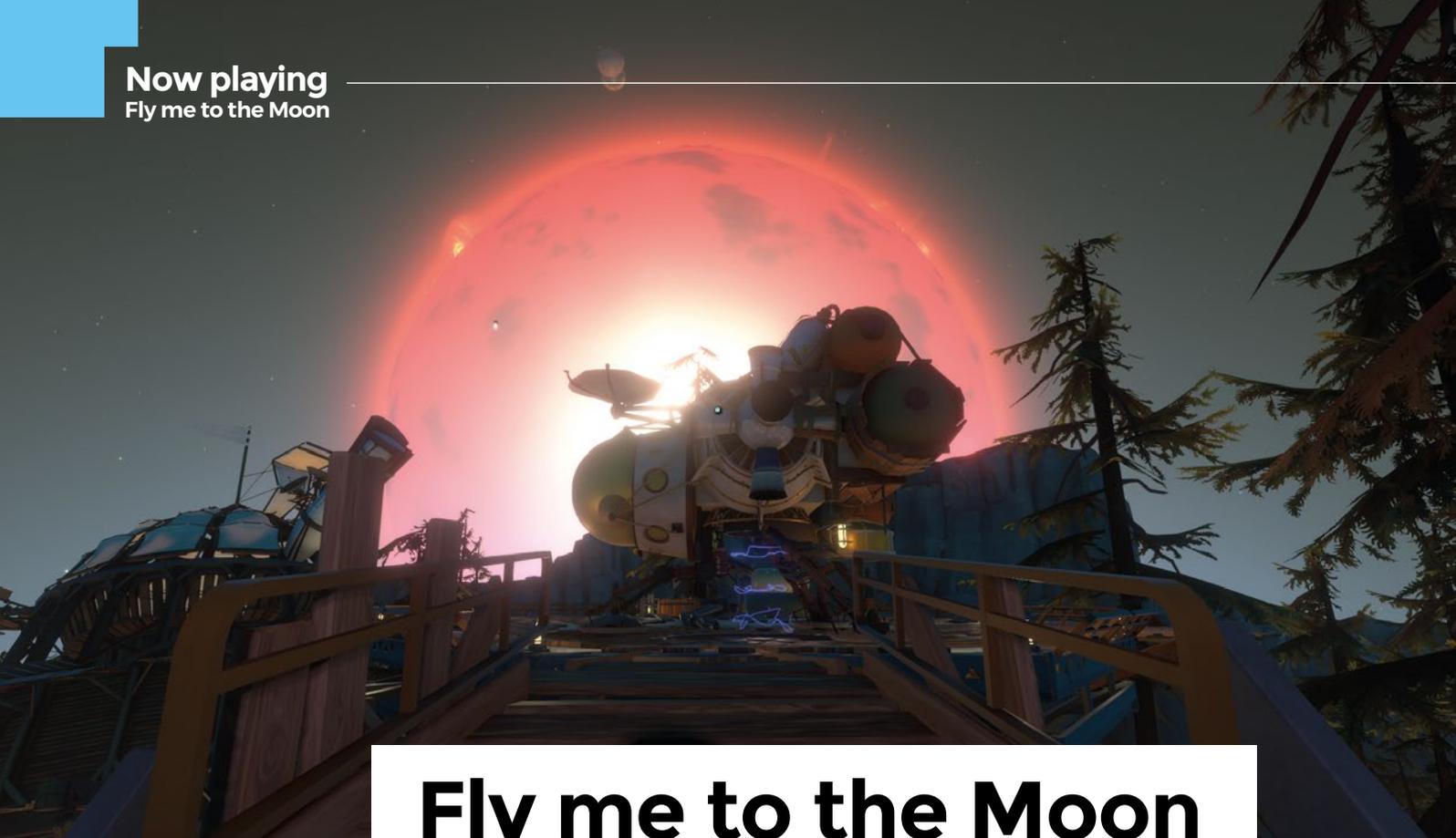
Step forward the GBS Control: originally a cheap video scaler (the GBS8200) used for arcade machines, available for about a tenner from AliExpress. Throw in some coding

magic from modding superstar Rama, add in some other inexpensive parts – a WiFi module, a clock generator, a VGA-to-HDMI converter, four (4) surface-mounted capacitors, plenty of flux and solder, and a few hours of time... and suddenly I've got a £40 bit of kit that looks like *absolute garbage* (as evidenced with nearby photography on these pages), but processes PS2 input signal, employs some motion adaptive deinterlacing, and spits out a really very impressive output signal. A limited use case it might be, but this could well be a big help to some of you looking to get old machines running on new screens – check out all the details through here: wfmag.cc/GBSC.

MAKE IT AGAIN XIII

It's been re-released before, and even received the HD-ified treatment for PS4 not long ago, but the fact is *PaRappa the Rapper* needs a proper revisit. Especially as the PS4 version didn't work properly owing to lag/timing issues on modern tellies. No, we need a true rebirth – or even sequel – in the series about a beanie-sporting dog who raps to impress a sunflower, after learning karate from an onion (who himself openly admits nobody likes him in guitar-based spin-off *Um Jammer Lammy*). Do whatever magic is necessary to fix the timing issues, and let us enjoy one of the purest expressions of joy known to humanity once more. You gotta believe, and all that.





Fly me to the Moon

This month, Ryan belatedly catches up with *Outer Wilds* – an ambient mood piece about exploration and discovery

I desperately want to get better at *Outer Wilds*. I'm a few hours in now, and I've died horribly from coming into contact with something called 'ghost matter' on a lonely planet. I've wandered among ancient, alien buildings and then been flung into the air so powerfully by a rogue weather system that I've wound up in a planet's upper orbit. I've accidentally crashed into the side of deserted space stations; I've foolishly sling-shotted my craft straight into the fiery depths of a nearby star.

It's fair to say, then, that I'm a bit rubbish at *Outer Wilds*. Yet there's still something intoxicating about its homemade-looking spacecraft, which look like they've been knocked together out of some dustbins and bits of scrap wood. The soundtrack, by Andrew Prahlow, is a wonderful mix of ambient sounds and the cosy twang of banjo strings.

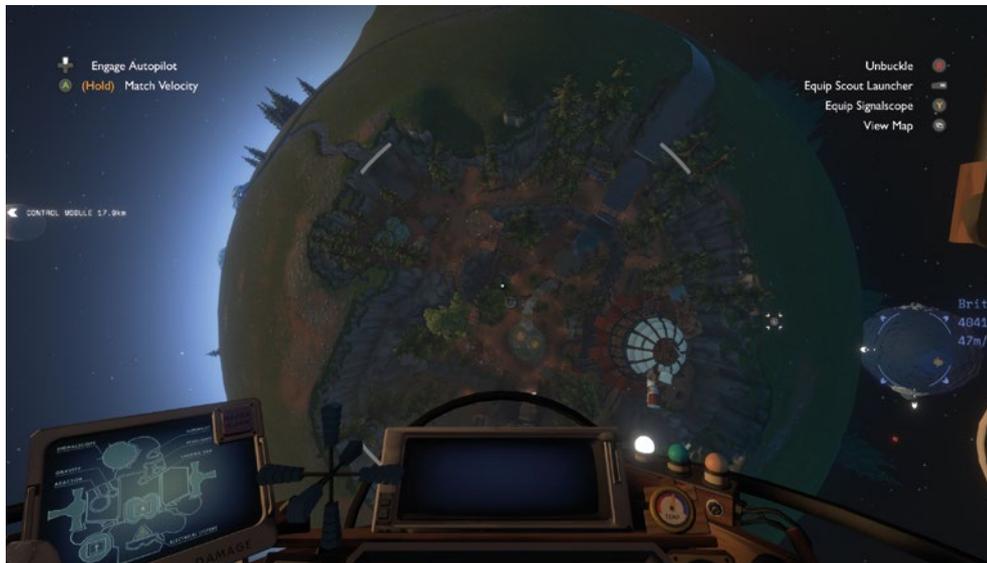
Then there's its overarching air of mystery: why am I trapped in a time loop, forced to either die over and over, or watch as the entire solar system dies in a startling blue flash? What does it have to do with a seemingly extinct alien race of beings, the Nomai, whose texts I'm asked to decipher with my handy translation machine?

I like how *Outer Wilds* treads the line between whimsy and intense sim. You play a brave space explorer, but you also happen to be a four-eyed amphibian rather than a human.

Your craft is fragile and needs frequent repairs, yet those repairs simply require you to land, get out, and hold down a button on the damaged areas. Planets orbit one another, and require careful navigation (or judicious use of your autopilot function) to safely land on, but the game's universe is charmingly bite-sized.

Like *Super Mario Galaxy*, *Outer Wilds*' worlds are compact spheres of hidden texts, puzzles, and mysteries. Sometimes there are strange structures orbiting those planets, too, which you





can dig around in for nuggets of lore or clues as to where you need to go next.

Outer Wilds doesn't offer the illusion of a full-scale universe as *Elite Dangerous* or *No Man's Sky* do, but the sense of being a lone space explorer is still as palpable as it is in either of those games. It's also bloody frustrating at times.

You can be watching in awe-struck wonder as the aliens' language unfurls in spirals, its arcane shapes morphing into the English alphabet on your translation device's monitor, but then the moment is ruined as you're flung to another part of the planet by an unexpected storm.

Deaths can occur suddenly and often in *Outer Wilds*, and the ability to simply climb back in your ship and blast off again doesn't entirely ease the building sense of irritation – sure, each loop is a maximum of 22 minutes long, but when you were achingly close to uncovering a new revelation, having spent a chunk of your precious time precisely landing your craft and picking your way to the right place, only to find your life snuffed out by a fiery chunk of space debris, it was enough to leave me swearing at my PC monitor like a particularly famous TV chef.

Mobius Digital's game has a certain way of working its way into the imagination, though. At one point, I got so tired of my brittle craft bouncing off various bits of the solar system, I simply stopped. I looked up at the sky from the vantage point of my home world, Timber Hearth, and watched as time cycled between night and

day, and the neighbouring planets drifted by. And I watched as the sun slowly grew in size and the death of my little solar system grew near. To my surprise, an urge to get moving again suddenly clicked in, and I found myself clambering back into my ship and blasting off into space. There were only a few precious minutes left before I – along with everything else – would be annihilated in a blinding flash, and I'd be sent tumbling back to the beginning again. But I realised that I wanted to explore anyway, just for exploring's sake.

I'm beginning to think that modern video game designers may have stumbled on something with games like *Outer Wilds*: that the medium is uniquely suited to give players phantasmagorical experiences – like falling through wormholes or experiencing first-hand the death of an entire planetary system. Cinema has come close, but even it can't quite

capture the sense of cosmic scale and awe that games such as *Outer Wilds*, *No Man's Sky*, or *Observation* do in their most powerful moments.

I've only just started to scratch the surface of *Outer Wilds*' compact universe, but it undoubtedly has me in its cunning, uncertain grasp. If there's a constant refrain in *Outer Wilds*, it's that every minute is truly precious – and that even in the face of imminent death, we're at our most alive when we're immersed in the thick of it, roaming, exploring, and solving the mysteries of the universe. 🌌

“Outer Wilds’ worlds are compact spheres of hidden texts”

Wireframe Recommends



Captain Blood

AMIGA/VARIOUS

For some reason, *Outer Wilds* often had me thinking about Exxos' cult exploration oddity from 1988. It wasn't a particularly great game, but the process of roaming planets, picking up aliens, and deciphering their language was an absorbing one.



Observation

PC, PS4, XBO

A game I previously wrote about in issue 55, *Observation* is a more scripted experience than *Outer Wilds*, but it's still an unforgettably eerie sci-fi adventure that sees you step into the role of a computer controlling a near-future space station. Yes, it's a HAL 9000 simulator!



No Man's Sky

PC/VARIOUS

Another game we've covered umpteen times in the past, but it bears repeating: Hello Games' space sim is an almighty achievement, and only continues to impress with every passing update. Its planets have the psychedelic quality of a Roger Dean painting too, which can only be a plus.



Mako the most of it

A first dip into the Legendary Edition, Ian re-tackles Mass Effect

I swear I only turned this on to see what it looked like on a big, newish telly. And I only bought the *Mass Effect Legendary Edition* because of favourable exchange rates making it about £25. Genuinely, I didn't intend it to get as out of hand as it has, but... well, at the time of writing, I'm pushing 30 hours in the remaster of the original *Mass Effect*, close to catching up with (excellent) antagonist Saren, most planets you can land on very much landed on and Mako-d around in to the point of boredom, and very much played more than you need to in order to see what an old game made new looks like on a modern display.

After playing through *Mass Effect: Andromeda* not too long ago and documenting that effort here on these very pages all the way back in issue 15 (yep, just realised that was less 'not too long ago' and more 'quite a while ago'), I had a feeling in my brain of what I thought – what I *felt* – about *Mass Effect* as a series. It was something I once loved, but something that I'd moved on from. It felt odd. The characters weren't as interesting as I remembered. Missions were bland, and the storyline forgettable.

Turns out that was just *Andromeda* corrupting my brain. The original *Mass Effect* is still superb fun – even with the modern updateifying BioWare has undertaken for the *Legendary Edition*, it's still clearly a 14-year-old RPG made for console. But it's also one of the most assured, defined, confident universes to drop right into I've ever seen in gaming. From the moment things kick off, you're aware of what's going on: you're on a human ship in a galaxy teeming with sentient alien life. The aliens are established, while humans are the upstarts. Few in power trust humans, or want to give them an inch. There's an existential threat on the space horizon, and this human crew is in the best position to make a difference. From there, you go.

One thing I just want to segue off towards here is how *brilliant* your interactions are with the





Council – three representatives from alien races who oversee the affairs of ‘civilised’ space. The Council does not trust humans. You are a human. Every time you contact them, they pick at you, needle you, treat you – frankly – like someone they don’t like or trust. It doesn’t sound like much, but it works phenomenally well and really reminds you, consistently, both of who you are and what your place in the power structures of the universe is. It also makes hanging up on the Council after they’ve spoken to you like a child again all the more fun.

Anyway, yes, aside from space phone calls with disappointed space parents, *Mass Effect’s* other thing that’s had me smiling the most has been the Mako. It’s your six-wheeled personnel carrier-slash-tank used to navigate the surface of any planet you encounter which you’re able to land on. Controls of the Mako have been tweaked to make it a bit less hellish compared to how things originally were, but the feel of things is still pretty much as it was. That is to say, it’s like riding a horse in *Skyrim*: you point in a direction and really just try and go there as much as possible and, even if it’s a sheer face of rock in your way, eventually you’ll probably get over it. It’s dumb, the physics are still a bit messed up, planets are both too big but with too little to actually do on them, and once you’ve realised it’s a case of one mission, two side artefacts/bits of debris to discover, and three minerals to find then you’ll realise just how little the planetary sections evolve as you play.

“I’ve found myself driving around every single planet I can”

I’ve found myself driving around every single planet I can, though, taking in the views and gawking with delight, a feeling of genuine discovery washing over my insides. It’s less involved than even day one *No Man’s Sky*, but that’s not the point: you’re on an (almost) empty alien planet, you’re

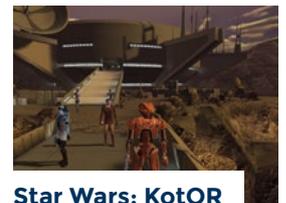
exploring, you’re discovering, and you’re going wherever you like. Time has shown *Mass Effect* wasn’t quite as open and free as I once thought, but it still feels like you’re out

there. It is, as they say, a vibe. And that’s before I even start gushing about how much I love going through every single codex entry and reading all the flavour text for every one of the dozens of planets you can check out in the game. Why yes, I am a nerd.

Oh yeah, it looks OK too. Like a 14-year-old game with fresh wallpaper layered over it, the original skeleton and raggedy animation visible just below the surface. Might as well get that in there, given it’s the entire reason I switched *Mass Effect* on to begin with. 🗨



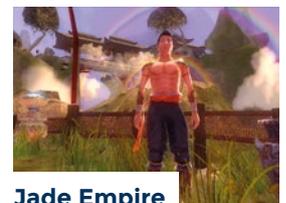
Wireframe Recommends



Star Wars: KotOR

PC, SWITCH, XBOX, MAC, MOBILE

Recently re-released on Switch and getting the remaster treatment for PS5, BioWare’s big *Star Wars* tie-in is still one of the best examples of western RPGs – even if it is clunky and very much aged these days.



Jade Empire

PC, XBOX, MAC, MOBILE

A surprisingly bold attempt at something almost entirely different by BioWare, *Jade Empire* was an RPG with Chinese history and folklore at its centre. It also turned into a shoot-’em-up at times, hilariously.



Dragon Age: Origins

PC, X360, PS3, MAC

An impactful and still excitingly well-written opening to the then-new franchise, *DA:O* might not have quite been the *Baldur’s Gate* follow-up people hoped, but it was fantastic in its own right.

Killer Feature

Halo: Combat Evolved / Halo 2



Halo: Combat Evolved / Halo 2

20 years ago, the first-person shooter put its shields up

BUNGIE / 2001, 2004 / XBOX

Halo: *Combat Evolved* wasn't the first to do it, we're sure. Best to get that out of the way quick smart. For one, plenty of space sim and space sim-adjacent games had been running with the shields-and-armor health system for a while by 2001. But it was Bungie's breakthrough FPS on Microsoft's then-brand-new console, the original Xbox, that made people really sit up and take notice. Then duck back behind cover because their shields had been breached.

Yes: regenerating shields and static health, to give it its name from TVtropes.org. The system whereby as long as you've not been attacked for a few seconds or so, you will definitely have at least *some* protection from any future incoming attacks. Shields hold up against a few hits until being depleted, then your health starts taking the hits. Get out of trouble and your shields will recharge, but the health needs a magical, wonderful medikit to be bumped back up. It was a simple system, and a great one; allowing for more dynamism in play, a more daring approach that wasn't as reliant on the older FPS playstyle of edging forwards, bit by bit, to try and lose as little health as possible. It also rid the world of the scourge of having 1% health and knowing any damage at all would end your game.

But it wasn't the end. It was the same series a few years later that modified things and made a new standard

in gaming. Again, it probably wasn't the first to do it (*The Getaway* in 2002 springs to mind), but *Halo 2* was the game that brought recharging health and shields to the fore and popularised what would become a mechanic we now completely take for granted. The system is so utterly ingrained in modern gaming culture that it hardly even stands out these days – it's like pressing the bottom face button to jump, or using the right trigger/button to accelerate or shoot. It's just something that's *there*.

In this bold new world of not requiring Red Cross trademark-infringing medical packs to be grabbed, players could simply get themselves out of trouble, hide for a bit, and watch as their shields and health crawled back up to maximum again. It has its critics as a system, and a lot of those critiques are fair – chief being that it can slow play down to an absolute plod for those playing it safe. But there can be no denying the positive impacts it had on a wide variety of genres over the years that followed.

The move to regenerating shields/health in both games meant *Halo* and *Halo 2* – and the FPS genre in general – could move further away from its early days as a maze-and-key-'em-up. *DOOM* will always be a legend, but it was about knowing how to get around a maze, finding the things you needed to find, and taking as little damage as possible along

“There's nothing wrong with making games easier; it doesn't have to be a rush to git gud all the time”



the way. Other first-person shooters had – generally, with a few notable exceptions – taken the same approach. *Halo* helped to codify the notion that FPS games could be about set pieces; about one battle, then another, then another. It didn't have to be one long slog through a level with the same itty-bitty health holding back progress the further you got into things – once you'd survived a single encounter, you would always face the next one with at least *some* chance of getting through it. Overdone as a system it might be, and there are arguments for it making games a lot easier of course, but it *is* superb all the same... and there's nothing wrong with making games easier; it doesn't have to be a rush to git gud all the time. *Ahem*.

Similar systems had popped up in the likes of Rare's *GoldenEye 007* and less-Bondy follow-up *Perfect Dark*, released in 1997 and 2000, respectively. Armour (aka shields) didn't recharge but could be topped up with pickups, while health could only go down as you played through a level. As I say, 'similar' – and definitely not the same. We're creatures of leisure, and the automation afforded by shields/health regenerating after a few seconds out of the line of fire was all that was necessary to push the feature over the top and make something The Standard. It's almost a good enough thing to make you forget that *Halo* turned 20 recently and time is an unrelenting horror show. Almost. 🗨



BACK TO THE WELL

As noted, *Halo: Combat Evolved* wasn't the first game to offer recharging shields and/or health, nor was it the first FPS to do so. We actually covered it all the way back in issue 32: the first game we know of to feature recharging health (technically stamina, but same thing) was *Punch-Out!!*, released 1984 in arcades, closely followed by RPG *Hydlide*. The first FPS with recharging health was *MIDI Maze*, or *Faceball 2000*, which released on Atari ST, Game Boy, SNES, Game Gear, and PC Engine from 1987 through 1993. A 20th anniversary feels apt to talk about a game like *Halo*, though, and frankly, it was Bungie's games that pushed the new normal in plenty of titles to follow.



Next Issue

ON SALE 6 JAN



ROLL7'S SKATEBOARDING
CLASSIC GOES GLOBAL

Don't
miss out!
Subscribe
pg76

ALSO

- ▶ Our pick of 2022's essential upcoming releases
- ▶ An in-depth guide to card game design
- ▶ The wonder of relaxing skateboard games
- ▶ Make your own arcade skateboard sim

Editorial

Editor

Ryan Lambie

Email ryan.lambie@raspberrypi.com

Features Editor

Ian Dransfield

Email ian.dransfield@raspberrypi.com

Sub-Editors

David Higgs & Vel Ilic

Design

criticalmedia.co.uk

Head of Design

Lee Allen

Designers

Sam Ribbits, Harriet Knight

Contributors

Jon Bailes, Dan Cooper, Antony de Fault, Konstantinos Dimopoulos, Natalie Dunning, Amelia Hansford, Malindy Hetfeld, Rob Hewson, Andrew King, Pavel Kirsanov, Lewis Packwood, Jervon Perkins, Nic Reuben, Jordi Santonja, Mark Vanstone, Roman Vishnyakov, Howard Scott Warshaw

Publishing

Publishing Director

Russell Barnes

Email russell@raspberrypi.com

Director of Communications

Liz Upton

CEO

Eben Upton

Advertising

Commercial Manager

Charlie Milligan

Email charlotte.milligan@raspberrypi.com

Tel +44 (0)7725 368887

Distribution

Seymour Distribution Ltd

2 East Poultry Ave, London EC1A 9PT

Tel +44 (0)207 429 4000

Subscriptions

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

To subscribe

Call 01293 312192 or visit wfmag.cc/subscribe

Subscription queries

wireframe@subscriptionhelpline.co.uk



This magazine is printed on paper sourced from sustainable forests and the printer operates an environmental management system which has been assessed as conforming to ISO 14001.

Wireframe magazine is published by Raspberry Pi (Trading) Ltd, Maurice Wilkes Building, St. John's Innovation Park, Cowley Road, Cambridge, CB4 0DS. The publisher, editor, and contributors accept no responsibility in respect of any omissions or errors relating to goods, products or services referred to or advertised in the magazine. Except where otherwise noted, content in this magazine is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported (CC BY-NC-SA 3.0).
ISSN: 2631-6722 (print), 2631-6730 (online).



PHILIPS

Monitors

get
in the
moment

innovation ✨ you



Momentum 32" 4K UHD, LCD display with Ambiglow
326M6VJRM

4K
Ultra HD



VESA CERTIFIED
DisplayHDR™ 400



UltraWideColor



Adaptive Sync

Available at:

amazon

ebuyer.com

SCAN[®]



ULTIMATE IMMERSION

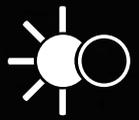
with the
AG49UCX

DQHD
5120x1440

120 Hz

1 ms

AMD
FreeSync
Premium Pro


HDR 400

Available at:

amazon

OVERCLOCKERS UK

AOC

f @aocgaming

t @aoc_gaming

ig @aocgaming

aocgaming.com