Wireframe

LIFTING THE LID ON VIDEO GAMES

GAMING THE SYSTEM
THE CHALLENGES OF MAKING
A KICKSTARTER-BACKED GAME

WHEN TOYS MEET RULES
EXPLORING THE FORMULA
FOR GAME DEVELOPMENT

ENDLING

ADVENTURING BACK FROM THE BRINK OF EXTINCTION

Burnout revenge

'm suddenly aware that burnout is a very real problem. I'm a highly motivated person: I taught myself to code and make games, such was my passion for the medium, and I've never struggled with my mental health before.

But this? This is different. This is new. I've never felt like this before, and it's weird and worrying.

Here's the problem: in the final nine months of development on *Lair of the Clockwork God*, I worked *hard*. I didn't crunch, per se, I worked regular hours and had a great work/life balance. But it invaded every waking hour. I worked furiously to keep the list of bugs manageable, waking up every day to find the Known Issues document had grown, and I had 24 hours to shrink it back down to something manageable. Lying awake at night trying to solve bugs, stealing moments on the weekend to polish some graphics or knock off a couple of easy bugs so that I was in a good place first thing Monday morning. It wasn't crunch, but it was full-on.

When the game launched, wouldn't you know it, some people found new bugs. So there was a month or so process of promoting the game while quickly fixing up these issues. During that time, I was super-keen to get going on the next thing, excited at the prospect of finally starting work on the magnum opus I'd been dreaming of for three years. And when the time finally came to get going, I jumped at it, backed by the fact that *Clockwork God* was selling OK, but not amazingly, so I needed to hit the ground running with a new project ASAP. Within a couple of months, I had the basics of my character control down, and some neat AI working – bare-bones stuff, but it was working nicely and getting somewhere.

And then I just… stopped. I couldn't bring myself to write the next feature, no matter how small and mundane it was. The very idea of lifting my fingers to type the first line of code actually turns my stomach. It's a physical revulsion, something Pavlovian, maybe.

The weird thing is, my brain is bustling with ideas, same as always; the curse of the game developer,

DAN MARSHALL

Dan set up Size Five Games back in 2006 before selling indie games online was even really a thing. Following hit adventures *Ben There, Dan That!* and *Time Gentlemen, Please!*, he made the BAFTA-winning *Privates*, *The Swindle*, *Gun Monkeys*, *Behold the Kickmen*, and most recently smash hit indie game of the year (so far), *Lair of the Clockwork God.*

#41

to have 10,000 games you want to make, neatly organised in a queue in your brain, each waiting for its turn. But I can't. I can't do any of them. They've all been patiently waiting their turn for decades, and I'm letting them down as they rot in a queue.

So here I sit, paralysed by the idea that whatever I start making right now is going to dominate the next two to three years of my life. I need to be sure it's something I'm going to relish, and something that I'm going to enjoy making and playtesting. The idea of getting back to the ever-expanding list of bugs fills me with absolute gut-wrenching dread.

Quarantine during the Covid-19 pandemic doesn't help, I suspect. I'm in my house and my home office 24/7, and the beach, the gym, shops, or the pub, the places I'd normally go and take my mind off things, are suddenly unavailable to me.

I don't know how long this is going to last. I mean, there's a practical side to this where it's got to end soon because I need to start making a game to make money, so at some point, I'm going to have to drag my lifeless body over to my computer and force it to start typing.

But not yet. I'm taking some time to actually play some games for once, jot down some notes. 'Research', I'm calling it. It's not something I've really had the luxury of doing before; the cash flow issues associated with indie development don't normally lend themselves to great long periods of predevelopment dabbling.

My motivation has gone, and it's just hugely worrying. This isn't something that's limited to me, sitting alone in my attic, panicking. It's something I've been warned about at conferences from colleagues and peers who are indies and triple-A developers alike. It's something I've seen reflected in tweets and Slack conversations from all over the industry, time and time again. It's something I'm ashamed to say I'd dismissed and failed to take seriously because I was so sure it could never happen to me. And yet, here I am. ⓦ

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WELCOME

I've had a few sleepless nights lately, which has given me a few extra hours to think about the PS5's recently unveiled case design. The entire thing fascinates me: the contrasts of black and white, its stretched curves, and Sony's apparent goal of making sure the console doesn't match anything else in the living rooms of its customers across the globe. Mostly, though, I've been thinking about the practicalities of the thing. It's clearly quite tall – according to some rough estimates, it could be as much as 40cm high, which would make it the loftiest console of all time. Will it fit under my television, even with the PS5 lying on its side? Then there's that white, curvaceous bit of plastic that wraps the height of the thing, like the cladding on a stormtrooper's thigh. Just how delicate is that? Are the thinner bits near the top reinforced, or will they be prone to bending or breaking off entirely if, for example, a manic toddler pushes the thing over?

At the very least, I kind of admire Sony's approach to the PS5. Where most industrial designs attempt to fade into the background, this one goes the opposite way: if anything, it's a conversation piece. No, Aunty Jean, it isn't Dyson's take on an oil-filled radiator, it's actually a fancy new games console.

As if to reassure us, though, Sony hasn't broken with design tradition entirely: once again, it looks as though the on/off and eject buttons are perfectly invisible to the naked eye.

Enjoy the new issue.

**Ryan Lambie
Editor**

END IS FOREVER

IT'S LIKE THE ANIMALS OF FARTHING WOOD, BUT LESS HARROWING: SAY HELLO TO ENDLING

Imagine a world much like our own: accelerating climate change, ecological disasters as a result of humanity's interference, and an endless array of animals displaced or completely wiped out just for being in the way of our desire to be ever-growing, ever-expanding, ever-more dominant over the natural world. Now imagine it from the perspective of a vixen – a mother fox in charge of a few cubs; the last of her species, fighting to survive and protect her brood. That's *Endling*.

'Grim' is the wrong word, though. This is a game of survival, of desperation, of finding ways – any ways – to keep going for one more day, to bring one more meal to your cubs, to not get caught in a trap or grabbed by a marauding, gas mask-toting human. *Endling* is dark, and it offers a none-too-positive spin on how we humans have treated (and are treating) the natural world around us. It's direct in its environmental message, and at times bleak in the outlook it presents. But there's something – warmth, the love of a mother, maybe even a spot of hope – that lifts it beyond just 'grim'.

Your day to day is a case of leaving the den, finding food, and bringing it back to the young 'uns. Along the way, there are obstacles to overcome, other animals to help out, and a changing world to observe – one day a river is clean and fresh, offering ample fishing opportunities. A few days later it's full of garbage, the water dank, all the fish dead, floating, bloated. Another avenue of sustenance – of survival – lost. The cubs grow and begin leaving the den with you, each offering a unique personality and even, eventually, skills of their own to help you out along the way. To help you all survive. It's a haunting, beautiful micro-story of a small family doing what it has to in order to live another day. There might be a monolithic factory spewing black smoke out into the air in the background, growing larger with time, but what does that matter to you? You're just a fox. You just need food, safety for your cubs, and somewhere to sleep.

Naturally, a cub is taken by an unknown human, because we're literally the worst. It's from here the main thrust of *Endling* kicks off – a mission to hunt down your missing cub and continue, somehow, to survive in a world that absolutely, positively will see you dead if you don't work against it. *Endling* isn't downbeat, but it is worrying. We spoke to Javier Ramello, co-founder and CEO of *Endling* devs Herobeat Studios, to try to put our minds at ease.

How did the idea for *Endling* come about? It's a unique narrative for a survival game, that's for sure.
It was early 2018, and I was having a coffee near Sagrada Familia (Barcelona, Spain) with Pablo Hernández, a former colleague and a good friend. I needed someone to create a logo for a side project, and he was one of the best artists I knew. I pitched him with a very early idea that would end up evolving into *Endling*. I told him that this project aimed to convey a social concern, a product that could leave a mark.

He got so excited about the idea that he proposed to join it full-time. He would do the art, and I could do the programming. He only had one condition: 'Either we do something we are proud of, or we do nothing.'

The next step was key. We contacted other colleagues with whom we'd previously worked, and they didn't hesitate to join the team. ➡

Is the whole story centred on the rescue of your one missing cub? How do things keep their momentum through the game?
The player has two clear goals in the game: finding your missing cub and looking for a safe place to live. Both goals motivate the player to explore a dying world and unveil its lore and other secondary stories. The point is that the fox family is not alone around here. Prey and predators have their own story arcs too. Players interact between them and with the environment, and that also has an impact on the protagonist's family. It raises moments of tension, cruelty, despair, and sadness, but also moments of resilience, kindness, cuteness, and humanity.

You mentioned there are decisions and actions that can be taken to change your experience and the overall ending – how deep does this system go?
Depending on some decisions taken by the player, they will experience different in-game situations and ultimately different endings for the game. The endings depend on which [of the cubs are] still alive when you finish the game, which are dead, and how committed you have been in your search for your missing cub. Some other details will add a special touch to ensure the players can wonder what it would have been like to choose another path.
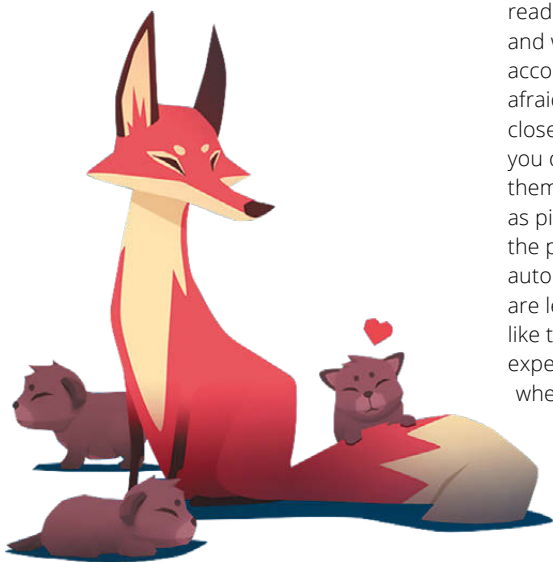
Your cubs represent your 'lives', but it goes deeper than that – how challenging was it to make them something you truly care about?
Your cubs mean everything, and we've put a lot of love into them to give them unique personalities. They're naive at first, but they evolve, they become stronger as they grow up, and they will help you to survive. It's been really challenging to make the player feel like being a mother fox, but it's also very satisfying when you see a real bond being developed.

What techniques did you have to use – what behaviours did you have to implement, maybe – to make the cubs loveable little scamps?
We've been watching videos about foxes, reading about animal wit and behaviour, and we are implementing some features according to what we've learned. Cubs feel afraid of enemies, so they try to get as close to you as they can. They bark if you don't care for them or you leave them behind. They also learn skills such as picking food that's unreachable to the player. Some skills are picked up automatically as they grow up, but others are learned through a system that we like to call 'vital experiences'. Those vital experiences are situations in the game where cubs have an emotional shock and they learn skills that'll help them to survive. Each cub then becomes special due to its learned skills and behaviour, so losing one of them will feel like losing a part of you.

The day-night cycle seems pretty core to the experience – can you explain a bit more of the thinking behind it, and why you went with this mechanic?
We wanted to reflect fox behaviour in nature. They are nocturnal predators, so that's why the majority of the game occurs during the night. Human activity is conditioned by day-night cycles too. That means nights are safer and days are dangerous, to the point that you'll like to go back to your shelter. This mechanic allows us to make the game progress and offers us several tools to maintain the world, to keep it alive, and increase the survival component of the game.

How much does the world around you evolve as the game progresses?
You will be exploring a vast map with plenty of interesting locations, trying to find food for your litter. As soon as you start feeling comfortable with the
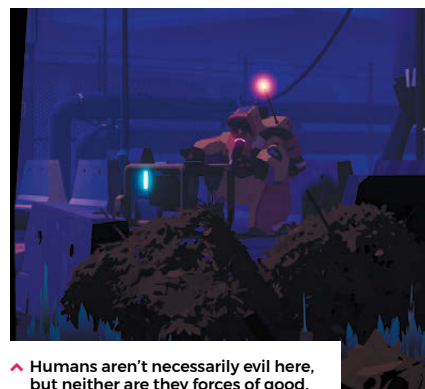
Humans aren't necessarily evil here, but neither are they forces of good.

∧ **If your cubs aren't coming along, just pick them up and make them.**

"THE IMPACT OF HUMANS WILL BECOME EVIDENT, DEGRADING THE ENVIRONMENT"

surroundings of your lair, the impact of human beings will become evident, degrading the environment and eventually forcing you to move forward and look for new shelters to find more food for your cubs.

What prompted the move to a side-scrolling/sandbox mix?

We started developing *Endling* as a pure side-scrolling game because we wanted to have full control of the camera. That way we could deliver a clear message by using environmental storytelling.

However, we realised that to convey to players the idea of having your homeland destroyed and deliver this message of environmental degradation, the side-scrolling setup was not effective, since

as you move right you are leaving your burden and worries behind.

This is the reason why we decided to switch from a linear layout to one where your den is always in the centre of an open level, inviting you to explore. Most importantly, whatever happens in the surroundings will have an impact on your perception of the world, since you will have a presentiment of the decay of your own home – the only place that you thought was safe for your cubs.

Your cubs learn new skills as things progress – does the vixen learn too, or is she in more of a teacher-like role? This adds almost an air of Metroidvania to things – would you agree?
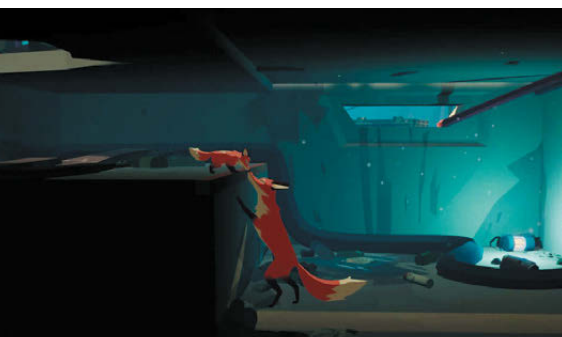
The development of the cubs is slow. At the beginning they're just small balls of fur but, as time passes, they grow up and learn skills – some of those life lessons are traumatic while others are just cute. Our goal is to let the player recognise the cubs not just because of their visual appearance but also by how their personalities are built with player actions.

For instance, one of the cubs may be more agile, allowing him to reach locations that the rest of the litter can't. If this cub dies or none of your cubs have this perk, then that place is not accessible anymore, and you will have to find other ways to [get] your precious food. This way, the ➡

∧ **Obviously you help your cubs a lot, but at times they help you too.**

BADGE OF HONOUR

During *Endling*, the player encounters other animals doing their thing – one such being a badger, trapped and afraid, that the player is able to rescue. Doing so makes this initially stand-offish creature into a friend of sorts, providing the player with fruit it scavenges periodically. So a happy story, then? Nope. "Destiny is not going to be kind to this little creature," Ramello explains. "Her survival will depend on the player's behaviour. She will return the favour, so can become rather a loyal friend… or the world will swallow her presence forever."

game experience of two players won't be the same, and it adds some replayability to *Endling*.

Of course, skills are optional and non-linear, so you may end up unlocking a skill that allows you to get that food source that has been visible and unreachable from the very beginning. It's just like in a Metroidvania game when you get a new weapon or gadget that you now can use to explore new levels.

The game doesn't present humans in a very favourable light – was this the plan from day one?

No other living beings on Earth have been contributing to environmental issues as humans have. The team was concerned about this issue from the very beginning, and every member gives a personal point of view that enriches *Endling*'s setting. We know humanity can do its best but also its worst, and we all know we're not doing our best about this topic.

Are there any good people in *Endling*?

We don't like the idea of categorising people as good or evil. People do what they can. Human greed has gone too far for the world's sake, and that has its consequences. People in *Endling* have

to rely on their instinct and change their behaviour to survive. They are physically and mentally affected by the world's devastation, and we'll be able to see how several characters live their lives in different ways. Some characters can be kind to us, and we can be kind to them.

Obviously, there's a big environmental – and ethical – message behind the game. How did that come about? How is it presented to players?

We believe that the topics covered by *Endling* are of global interest, and we want all of our games to explore deep themes, and invite reflection by players. To develop *Endling*'s narrative, we have investigated what the world will be like in the next 50 or 100 years if we do not change our consumption habits.

The result of the investigation reveals to us a world in which even adaptable animals that today are far from danger, like foxes, have reached the limit of their possibilities. That they are on the verge of extinction. Each scenario addresses a topic of great impact, such as intensive livestock, pollution of the seas and rivers, the accumulation of electronic waste, overpopulation, or climate change.

Is your intention to make players stop and think, or is the setting just that – a setting?

We tackle universal emotions and values because our ultimate goal is to make players feel more responsible for our actions.

From the beginning, we knew that we wanted to sensitise the player by representing a dystopian universe close

to the world we are living in – avoiding any sci-fi element – where we could express our concerns about many different topics. What better way to explore it than through the eyes of an innocent animal.

Do you worry about including a strong environmental message in a game, given so many players veer towards the 'get your politics out of my game' way of thinking?
We wanted to explore the idea of a video game not only as an entertainment product but also as an awareness tool. We aimed to reach both young people who do not consume traditional media, and a more mature population, concerned about the current environmental crisis and other social impact issues.

    Endling is a very emotional game, and for the sake of immersion, we'll avoid making the eco-conscious statement too obvious. The mother fox's only motivation is making sure her litter survives. She can't read or understand humans, so there won't be voiceover or texts talking about how damaged *Endling*'s world is. Our goal is to present this landscape in a way that reflects how we think the Earth can end up being in the near future if we don't act now. *Endling*'s players will make their own conclusions.

How have you avoided *Endling* being one big escort mission?
Through the entire game, you only control the mother fox, but she's not alone in this adventure. Similar to other games with NPC companions, your cubs are a key part

of the experience. You need to protect them and guide them. But cubs will evolve, grow, and learn much like a party member in an RPG game. Eventually, they will be a huge resource, unlocking new skills that will help you survive. That means losing one of your cubs is a tragedy from both emotional and mechanical points of view.

Would you say there's an aspect of horror to *Endling*? I got a vibe from the demo.
Well, we're in a dangerous and cruel world. We'll see obnoxious things happening in *Endling*, always based on

"TACKLE UNIVERSAL EMOTIONS AND VALUES"

real situations that we usually choose not to see. You don't die in a pleasant way if you're killed. We're using the horror component that nature and human exploitation gives us because we know reality can be unpleasant to face.

What engine are you making the game in?
Endling is being developed in Unreal Engine 4. We have been developing games with this engine for years, and we built a good relationship with Epic Games, especially after they granted us one of their Epic MegaGrants.

∧ Home, your den, where you're always safe… probably.

How are you putting together the winding side-scrolling levels in a sandbox/looping/3D way? Is it a challenge to make it all make sense?
Players can interact with some elements in the background and foreground, which work similarly to railroad switches. Some of those elements are obvious, while they can also be hard to find for the sake of the exploration.

How many are working on the game?
So far, there are 21 people right now. We managed to gather a multidisciplinary team of very talented and passionate people that have been growing since we started the development of *Endling*.

What's the biggest thing you've learned while working on *Endling*?
Maybe the biggest thing is to realise that some jobs can sensitise you, making you gain a lot of emotional intelligence.

What's been the most challenging part?
One of the biggest self-imposed difficulties is staying true to *Endling*'s vision, getting the player to empathise with the fox and her cubs while they're unable to reason as people, read, talk, and things like that. They're animals, and in *Endling* they act like animals. You won't see them pull levers or mechanisms that would make life easy for game designers! On the other hand, this forces us to seek creative solutions.

Finally, what are your hopes for *Endling* once it's finished and released?
We just hope to raise some questions. That, and to make players have a moment of introspection before turning off their console. ⓦ

Endling **is aiming for a 2021 release on PC, PS4, Xbox One, and Switch**

∧ In the background, you will see humanity gradually ruining the natural world.

We're all dead here Frigg.

Are you sitting comfortably?

Truth, drama, and tall tales combine in Welcome to Elk

Info

GENRE
Tall tale-'em up
FORMAT
PC / Mac
DEVELOPER
Triple Topping
PUBLISHER
Triple Topping
RELEASE
2020

ake a look at the screens of *Welcome to Elk* across these pages. Then take a look at the game's content warning: "The game contains scenes including deaths, and children experiencing murder and death. Alcohol abuse, prostitution, violence, and offensive language." Doesn't seem to track at first glance, does it? But that's part of the point: a linear narrative title mixed with minigames, *Welcome to Elk* draws players in with its unassuming looks, then hits them hard with stories of genuine impact.

Some of these tales are fiction, some are true. Some were moulded by the team behind the game, while others came from external sources. A lot of stories – and the main inspiration for the game – came from one man: Lauge Christensen, brother of *Welcome to Elk* director Astrid Refstrup, and who seems to have a thousand stories to tell. Christensen's life and experiences – his stories relayed to his sister in the pub –
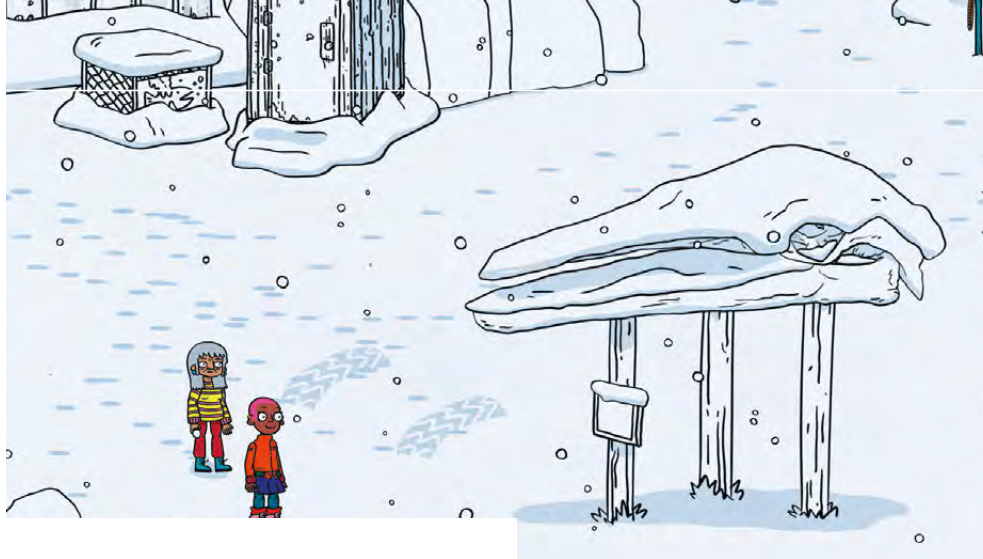
became the foundation for what became the game; the story of a young carpenter named Frigg who finds herself on the isolated island of Elk as part of an apprenticeship.

Murray Somerville, *Welcome to Elk*'s art director and co-writer, kindly talked us through the process of creating the game's narrative. "Storytelling is at the heart of *Welcome to Elk*; we're inspired by the kind of stories people tell one another over a drink at a bar," Somerville says. "Sometimes those stories can be exaggerated despite remaining true. So when it comes to the balance of how we adapt stories and how true or tall they are, that's what *Elk* is really all about.

"We're designing the overall narrative of *Welcome to Elk* as a linear journey, so we use the real stories in different ways. Sometimes we're inspired and stretching them, other times we're telling them almost word for word how they were told to us," he continues. The true stories from the game have made their way online – "They don't give anything away," Somerville clarifies – via Triple Topping's 'Letters from Elk' pages on the game's website. This isn't just done to give a bit more colour to the tales in the game itself, but also so players can read them and feel a bit more kinship with the characters and goings-on throughout the island. "In a way," Somerville explains, "this is us as the magicians revealing our magic tricks: the balance between the true and tall tale is right in front of us."

Back to those looks, though: *Welcome to Elk* looks very much like *something else*. A vague sense of it being of a type, the twee indie game with hand-drawn visuals – and it is that. But it's

⌄ **Safe to say,** *Welcome to Elk* **isn't made with the wee kiddies in mind.**

Less of the dumbass questions please. I don't hold guns not to use them.

^ Bet they're having a giant mammal ('whale') of a time!

also more – deliberately so. "Our art direction for *Welcome to Elk* is intentionally misleading," Somerville says. "We're inspired by the likes of David Shrigley, *BoJack Horseman*, and *Love and Rockets.* They all use visually attractive art to invite an audience in, then sneak in mature and arresting stories, subverting the expectation of the audience. Similarly, in *Welcome to Elk,* we're exploring the dichotomy of tragedy and humour in life, so we want the art style to reflect that."

He explains that it's about finding a balance between the endearing, making sure players can empathise with characters and take them seriously, while at the same time introducing a buffer of sorts via the visuals, so things aren't "off-puttingly gruesome," in Somerville's words. "And of course we still want the game to look pretty!"

Made using Unity, *Welcome to Elk* has been taking advantage of the engine's penchant for rapid prototyping – very handy when playtesting new minigame ideas. The dialogue, however, has been implemented using Yarn, Yarn Spinner, and Merino. "Yarn was also used for *Night in the Woods*," Somerville explains, "It's open source and the folks working on it are just super great for answering questions and otherwise interacting with the community." Flexibility and being able to tweak and change the game's dialogue – owing to the tweaks needed in the stories – is an important facet of the game, after all. "Knowing we wanted to make a linear narrative out of these stories, we drew what we

could and then ad-libbed and moulded them into their own invented beings.

"We want the characters of *Elk* to feel real so players can empathise with them in the stories we're telling. Giving them personalities and lives of their own is really important," Somerville continues. "The fun part is working out the overlapping relationships and then dropping them into the situations of our real stories. It's almost like making theatre – we've created a cast and now we're directing them through the play. The magic is that the characters have become so realised that they now dictate their own direction, the team now fully understands how someone like Anders (our personal favourite character) will act in any given situation. The mixing of invention with the truth is a lot of fun because we're finding new voices to tell the real stories that have been told to us."

Having been in development for a few years now, *Welcome to Elk* is (at the time of writing) in a closed beta phase. It won't be a huge amount of time until the finished product – one that's "not too long" to play through, according to Somerville – will be in our hands. And we're ready for some frozen *Jackanory* action. ⓦ

> **"Our art direction for *Welcome to Elk* is deliberately misleading"**

^ Minigames were introduced to support *Elk*'s narrative, and draw players in a bit more.

THE RULES OF A STORY

Triple Topping implemented a series of rules regarding the stories in *Welcome to Elk*, dealing, as some do, with sensitive topics:

- We can never make a person be portrayed as bad or evil if they weren't in real life.
- We can't use a story involving a real death (or something of similar seriousness) and retell it as a joke.
- With stories of a tragic nature, there needs to be a considerate amount of time that has passed from the event, to handle it with care and not insensitivity.
- All characters have anonymous names to protect the real identities but also to recognise they themselves are not the characters in the game.
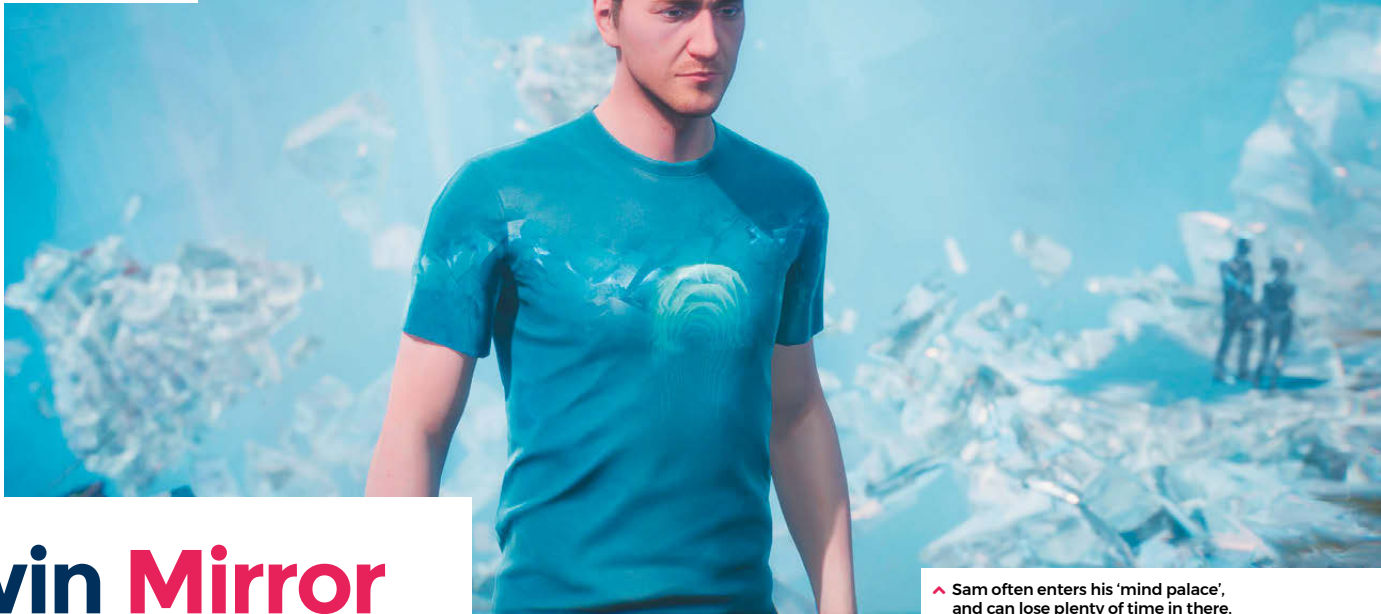
> The visual style draws inspiration from the likes of David Shrigley, mixing the seemingly cute and mundane with more mature themes.

This is it Annie, please sing me one last song.

Sam often enters his 'mind palace', and can lose plenty of time in there.

Twin Mirror

The studio behind Life is Strange reflects on its upcoming adventure

Conversations always have an impact on the outcome of the story, from tiny shunts to huge pushes towards a new narrative outcome.
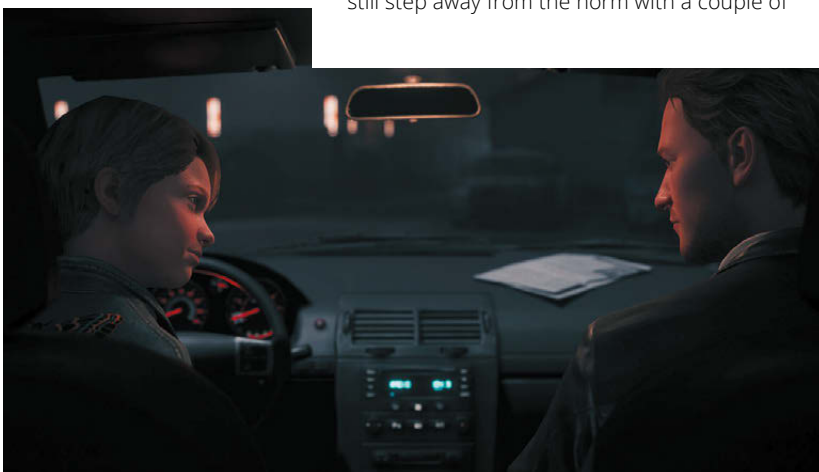

DONTNOD is a studio that stands out from the crowd – not just because of its excellent *Life is Strange* series, but because it's a rare example of a team that doesn't rest on many laurels. Instead, it hops from one new project to another, rarely sticking around on something established (again, *Life is Strange*) for *too* long. So it is we're met with *Twin Mirror*, the newest narrative-driven title from the French team, in which the player controls an investigative journalist named Sam as he returns to his old home. There he revisits and relives memories of the past while trying to navigate the mystery surrounding a close friend's passing – with all the twists, turns, and conversational decision-making you would expect.

While *Twin Mirror* eschews the supernatural elements of DONTNOD's prior releases, it does still step away from the norm with a couple of

elements: Sam frequently enters his 'mind palace' to remember and relive memories, filling the player in on more information; and all the way he is accompanied by a shadowy alter-ego, visible only to Sam, who offers alternative viewpoints and approaches to situations as he sees fit. There's certainly that air of *Twin Peaks*-ishness to things, if only slightly, but it's enough to intrigue. "We tried to develop the story we wanted to tell by staging gameplay features that increase the immersion and build a synergy between narration and game actions," explains Xavier Spinat, head of publishing at DONTNOD. "During the game, Sam will face important choices, and the decision the player makes will change the course of his life."

It's all well and good putting choices into something, but they have to have meaning – and impact – for it to be something that resonates with players. "For a choice to be meaningful, we need to relate to the situation and understand what's at stake," says Hélène Henry, narrative director. "Having a setting that is grounded in reality with relatable characters helps build a more intuitive immersion, a quicker emotional connection between the player and our character, and allows us to focus on everything else." She explains that by introducing Sam's mind palace, the devs are still able to introduce "extraordinary elements and imaginary situations," thus keeping players invested in a realistic setting with a tinge of fantastical to it.

The focus here isn't on player skill or the mastery of anything particularly complex – DONTNOD is firmly in the camp of Everyone Is A Player – but that's not to say there's no

∧ Sam's alter-ego/imaginary friend offers advice, alternative viewpoints, and a bit of a sounding-board for our protagonist.

complexity. *Twin Mirror* doesn't aim to be shallow. "Everything is linked, the gameplay system with the characters and their story and the player, their own experience and how they can possibly act and feel," Henry says. "Creating a main character in a choice-based game is always tricky. You have to leave enough space for the player to put their own feelings and reasoning into the character, but you also need to create a character who is fleshed out enough to not be an empty shell. During the game, most of the player's actions, dialogue choices, and interactions have some effect on how everything adjusts – other characters' actions and reactions during several scenes – up until the end. To make sure that everything works, that all branching is coherent, you need a lot of iterations and testing."

The need for more iterations and testing came about as development on *Twin Mirror* moved from episodic to a one-off, 'full' game experience. This was a decision DONTNOD took itself, a luxury afforded to a studio behind the many-million selling *Life is Strange*, and one the team was keen to take advantage of. "Having episodes meant introducing partial endings and reopenings in the plot and it impacted the rhythm," explains Florian Desforges, game director. "A psychological thriller, with a sense

"DONTNOD is firmly in the camp of Everyone Is A Player"

of unity in the location and time, works better as a single storyline rather than multiple pieces. It did require some adjustment in characters and events, but the game was, in our opinion, clarified and improved by all those changes."

Twin Mirror has been four years in the making – though the initial idea popped up around 2015 – so has had a lot of work put into it. A *lot* of work, according to Spinat: "I wasn't part of the original team that started the idea," he says. "But I know that the game had to go through several stages to reach its final state. Shaping an actual game from a pure concept requires that a whole team, with various talents, all bring their expertise as building blocks for the whole project. The story, the gameplay, the art, the programming, the cinematic direction... everything needs to come together to make the game work properly. And even when the development team think they are done, user research and playtest still bring you new feedback and invaluable insights on how all elements need to be organised and balanced.

"So just counting how many months, and years, were spent in making a game hardly captures the complexity that goes into turning the seed of a game concept into a fully grown playable experience that can be enjoyed by our audience worldwide." Ⓦ

Fights in Tight Spaces

When action, tactics, and claustrophobia collide

There are times when you just want a good solid brawl. Not in real life, oh god, no – none of that silliness, even when it's too warm and you've been cooped up in the house for so long you've forgotten how to use the bus. No, I mean a brawl *in a game*. Thank the powers that be (aka Ground Shatter) for *Fights in Tight Spaces*, then, which brings together fights and tight spaces in a way we've not seen since… well, probably *John Wick Hex*, really. But that quick comparison out of the way, it's fair to say *Fights in Tight Spaces* adds a hell of a lot more strategy and – shock – thought to proceedings over Bithell Games' fantastic-and-flawed film tie-in. Oh, and Bithell Games is also providing support as well as publisher Mode 7, so there's some more crossover for you.

The big move into strategy comes in the form of the deck of cards you're always using to fight. Yes, *Fights in Tight Spaces* is a combination of turn-based tactics and deck-building, with the skin of an action movie skin wrapped around it.

There's going to be lots of action movie references here, by the way, and none of them are being dismissive of the game: "The very first pitch that I sent to Paul [Kilduff-Taylor of Mode 7] said 'Are you interested in *Fights in Tight Spaces*: it's *Into the Breach*/*Hoplite* meets a Jason Statham film?' and it hasn't changed much since then," explains James Parker, founder of Ground Shatter and lead designer on *Fights*. "Fandom of proper stupid action movies has permeated all of Ground Shatter's output," he says. "So I've always wanted to make something that reflects the action trope of a character stuck in confined quarters with a bunch of bad guys. And a few ideas were whirling around in my head on how to achieve that, and in the end, I mashed them all together into what you see now."

The tight spaces of the title are indeed that, with a small grid-based level featuring all of the action in any particular encounter. Even so, the initial plan was to have things even smaller: "Originally I wanted to have *very* tight spaces like the back of a car," Parker says, "but that was going to prove too inflexible. We were also going to go bigger in the environments, but we found that even a classic 8×8 grid ended up too large for the sorts of fights that we wanted to choreograph."

That focus on 'stupid' might make you think the game lacks some cognitive capacity, but with the help of Mode 7 – creators of the superb *Frozen Synapse* – there's definite strategic chops behind the big, burly brawls. "Players love a really clear, bold concept," explains Kilduff-Taylor, "Right from the first trailer we've been

⌄ Every move you can do has a card assigned to it – careful use and management is key. As well as punching.

There's an air of *John Wick* to proceedings, and that's no bad thing.

Who here hasn't wanted to upgrade their headbutt for £120?

able to show characters doing cool, exciting moves as new cards are played from the deck. That's a direct connection between aesthetics and mechanics, which is something I've always been keen on. I love games where you can just take a glance at them and go 'I want to do *that*', so right from James's earliest pitch I felt that we could convey that to an audience without too much trouble. The game's highly readable, but it also isn't boring to look at – that's actually pretty rare, and the titles that nail it tend to do well."

Balance and overcomplicating things are probably the two big worries for any team making a game with a genre mix like *Fights in Tight Spaces*, so it's good to hear Parker is all over it: "The biggest issue is that we're always having to juggle the potential for the player to have too much control in the fight space, and hence it being too easy, or have too little, and hence it being too difficult or frustrating," he says. "So every time we add a new feature, move, or enemy type, we have to be careful about the knock-on effects." Another part of the balance is simply by keeping things uncomplicated. The deck-building aspect is straightforward: a random selection of cards to choose and some enhancements. That's it. "Because we're dealing with all the extra complexity and tactical character movement on top of deck-building," Parker says, "we wanted to keep the metagame more straightforward and approachable and

"Originally I wanted to have *very* tight spaces, like the back of a car"
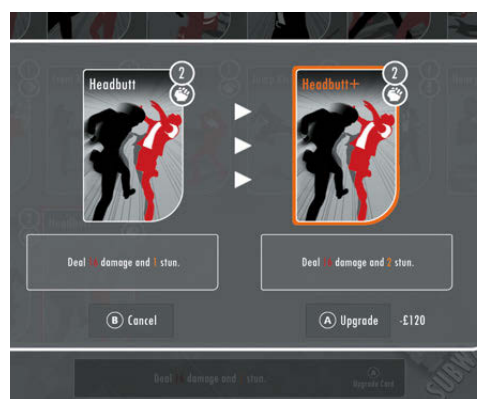
concentrate on the moment-to-moment smashing of baddies' faces into things."

With a title like *Fights in Tight Spaces* and core mechanics revolving around… well, fights that are held in spaces which could be considered 'tight', you might be forgiven for assuming it's all just a throwaway – a bit of a jape to pass the time. Not so, as Kilduff-Taylor explains: "I'd love this game to stand out from the crowd of modern deck-builders and be something that people bring up in conversations about the genre as a whole," he says. "We'd love the chance to build on it as a foundation and add even more ridiculous moves, abilities, and so on – it's something that everyone involved would be delighted to keep working on for a long time." Ⓦ

PUBLISHING DUTIES

This is Mode 7's third published title, and the learning process is still ongoing for Kilduff-Taylor. But still being fresh eyes to the publishing side of things, he does have some insight that other, more established players might not pick up on: "Publishers often think about mitigating risk more than maximising reward," he says. "It sometimes doesn't matter if you have a great idea, concept, or even prototype – if there are red flags around your team or your ability to execute then it's going to be tough for a publisher to sign it. Thinking about your team, your track record, and developing a proven reputation for getting things done will help you enormously."

Headlines
from the virtual front

01

01. Blinding

The ever-changing face of the licensed game takes another step this month (it might already have done if you're reading later in August), with *Peaky Blinders: Mastermind* releasing via FuturLab, of all studios. It was a bit of a shock to hear the team behind the bar-raising *Velocity* and its sequel had pivoted to the world of hasty cash-grabs, but… well, it's obviously not like that this time around, otherwise we wouldn't be writing about it here.

The surprise we might have felt at FuturLab taking the reins on a game-of-a-show wasn't felt internally, though, as studio founder James Marsden points out: "If you take a look at our history, every game has been different; we're genre-agnostic," he says. "We're excited by ideas, and we'll use whichever vehicle that can best-realise those ideas. The only thing that's been somewhat consistent throughout all of our games is our house art style, and we've worked to find a sweet

spot between that and the aesthetics of *Peaky Blinders*."

Peaky Blinders: Mastermind is jumping into a new world where, actually, a license attached to a game doesn't automatically make it something to avoid. Spider-Man and Batman say hello, while Bithell Games' *John Wick Hex* did something both unique and very on-brand with its tactical tie-in. But there's still the echoes of the past to contend with, and there are still times when something is just shovelled out there with a name brand on the front to lure people in. Marsden is confident, though, and points to FuturLab's prior releases as reasons why he should be: "People have a right to be upset about the poor licensed games of the past," he says. "I mean,

people were bored of shoot-'em-ups until we made *Velocity*, bored of Match 3 games til we made *Surge Deluxe*. We're here to help fix the problem."

Working on a big name like this has seen FuturLab use its biggest team to date, too, highlighting another potential aspect of working on tie-ins: the ability to be that bit bigger. It's still not mega-huge – the team topped out at 18 people – but it is the biggest the studio has been to date. Even with that growth, Marsden says it's been pretty straightforward since day one, with none of the IP-holder interference we read so many horror stories about.

With the release of *Peaky Blinders: Mastermind*, FuturLab will earn itself new fans – that's how licensed games work. But it might risk alienating the old guard, too – those expecting nothing more than *Velocity* sequels til the end of forever arrives. There's also the risk of disappointing fans of *Peaky Blinders* – basically, taking on a licensed game means taking on the hopes and dreams of a legion of existing fans, all with their own ideas of what could or should happen in a game version of it.

For Marsden's part, he remains diplomatic: "Well, you can't please everyone. Some folks are going to be disappointed it's not a triple-A open-world adventure game with flat-caps, but we hope our game finds its audience among those who enjoy games encouraging them to think." And generally speaking, the experience has been such a positive one that he says the studio is hoping to handle more IPs in future: "We'd love to do more licensed properties alongside original IP," he says. "I think we've identified a repeatable method for approaching it correctly." Licensed tie-ins aren't the Big Bad they once were, it seems.

No More Robots launches free QA testing: **wfmag.cc/bugblast**

House of Lords calls for loot boxes to 'immediately' be classed as gambling

02

04

03
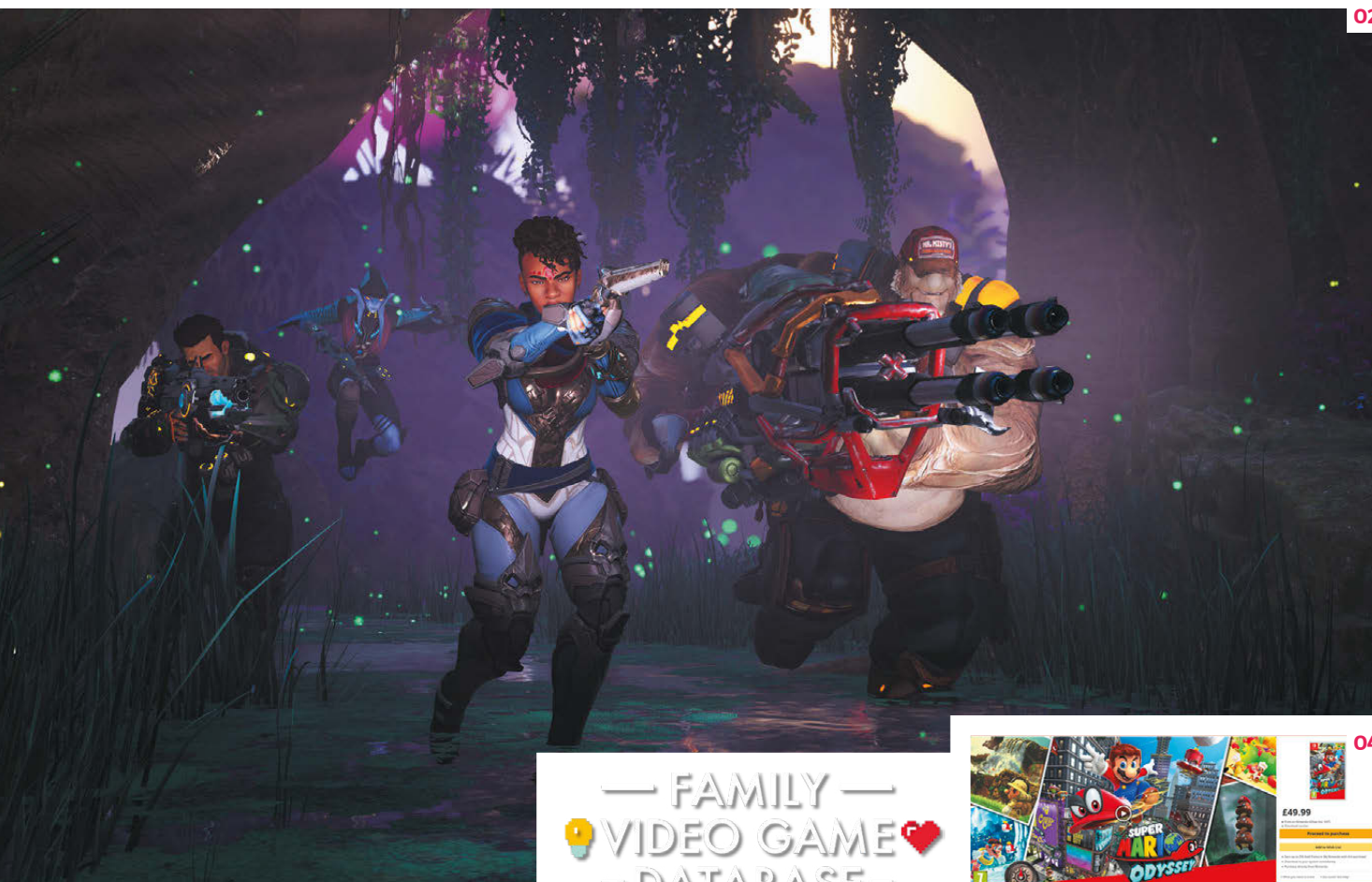
02. Amaz-gone

Crucible, the multiplayer shooter from Amazon Game Studios – developed by Relentless – has taken the odd step of going from released to unreleased. Well, sort of. After a thoroughly underwhelming reaction at its 'pre-season' launch at the end of May, the game was shunted back into the realms of the closed beta at the close of June. It will still be playable by those who sign up, but sign-ups will be limited while the team works to address the plethora of criticisms aimed *Crucible*'s way. With the heft of Amazon behind it, you might assume things will end up getting at least a bit fixed. But we shall see.

03. The tame game

Early July saw the launch of Taming Gaming – aka the Family Video Game Database – a site full of information for people looking to demystify what the contents of specific games are. Hundreds of titles are covered, each with its own page offering an overview and details such as number of players, PEGI rating, accessibility, and whether in-game purchases are part of the package or not. In short: it's a solid resource for people who don't necessarily know what's in a game, offering up clear, concise information that's easily digested. For more: **wfmag.cc/TameGame**.
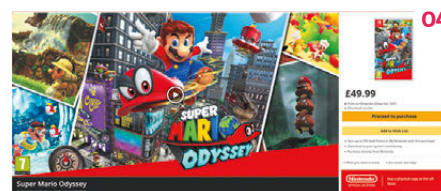
04. Nintendon't

Nintendo has taken the… very Nintendo-ish decision to stop retailers from selling digital codes for first-party titles. The news came out thanks to a customer communiqué from store ShopTo, which stated: "Due to a Nintendo decision… we are no longer able to offer/sell Nintendo digital full games." The ban on digital sales was confirmed by Nintendo, and applies to the EMEA region (Europe, the Middle East, and Africa, fact fans). This means no more deal-hunting across sites; instead, all digital first-party Nintendo purchases have to be made through the eShop. Hmph.

Roblox accounts hacked in support of Donald Trump. Roblox is played by eight-year-olds
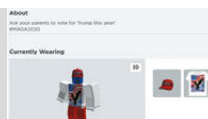
Microsoft tells devs not to make Xbox Series X upgrades paid DLC

05

05. Italy-at-large

We had a look at the Italian games industry in detail back in issue 39, so our eye has been hovering in that general direction recently. Good news, too, because the second-ever First Playable event was held in the middle of July, a virtual version of the show that brings together developer masterclasses, one-to-one developer and publisher meetings, and the Italian Video Game Awards.

We caught up with Thalita Malagò, general secretary at organising body the Italian Interactive Digital Entertainment Association (IIDEA), to find out more about how it was to pivot to digital for such a fresh – and face-time heavy – event.

"The event was definitely a success," Malagò says. "We had over 50 international publishers and 70 Italian game development studios in attendance, for a total of 534 business meetings and 264 hours of business." Not limited just to Italian studios and publishers, Malagò pointed out how happy she was to see international interest in the event. The big fun came in the form of the Awards, though: "During the first day of First Playable, both developers

and publishers were very busy with meetings," Malagò explains. "In the evening, the ceremony was a moment for the community to come together and celebrate what has been done in the last year. The show was definitely the best possible entertainment product in current times."

Ah yes, the old 'current times' line – as you might have noticed, the world's been knocked about a bit in the past few months, hence First Playable being a virtual event. Though that was the case, meetings, talks, and developer masterclasses were still held (as well as the Awards), sometimes with special focus on game development in said 'current times'. "We had 505 Games, Frontier Developments, Sega, and Square Enix Collective on our Discord channel, openly discussing how to secure investment in the current climate," says Malagò. "The fundamentals of dos and don'ts were covered to ensure Italian developers had a good understanding of the best practices when approaching international publishers in a time during lockdown."

As for the event itself, it's something that's intended to grow and become one of the – if not *the* – main shows for the nation, which is precisely why the show did

indeed have to go on, even with such severe restrictions in place: "We already have a number of very good events in Italy," Malagò says. "But unfortunately they are generally not well-funded, and their visibility is often limited within the community and within the country. I hope there will be a growth of investments in already existing and brand new events. They are key to develop the industry."

So another success for the ever-growing Italian games industry, and a fine footnote to our feature in issue 39. Next year, Malagò hopes things will be back to a level of normal that allows the traditional physical event to be held, but she's not averse to the idea of running something digitally to run alongside the main attraction.

"We would have preferred to run our event physically in charming Pisa. We had such an amazing plan for this year's edition," she says. "But, thanks to the pandemic, we learnt a lot of lessons about doing things differently. If conditions will permit next year, we will have a physical event, but we will try to use digital to add value to the pre-existing format."

IVGA WINNERS

BEST ITALIAN GAME:
Close to the Sun
by Storm in a Teacup

BEST DEBUT GAME:
Football Drama by Open Lab

BEST INNOVATION:
Secret Oops! by MixedBag

OUTSTANDING ITALIAN COMPANY:
Stormind Games

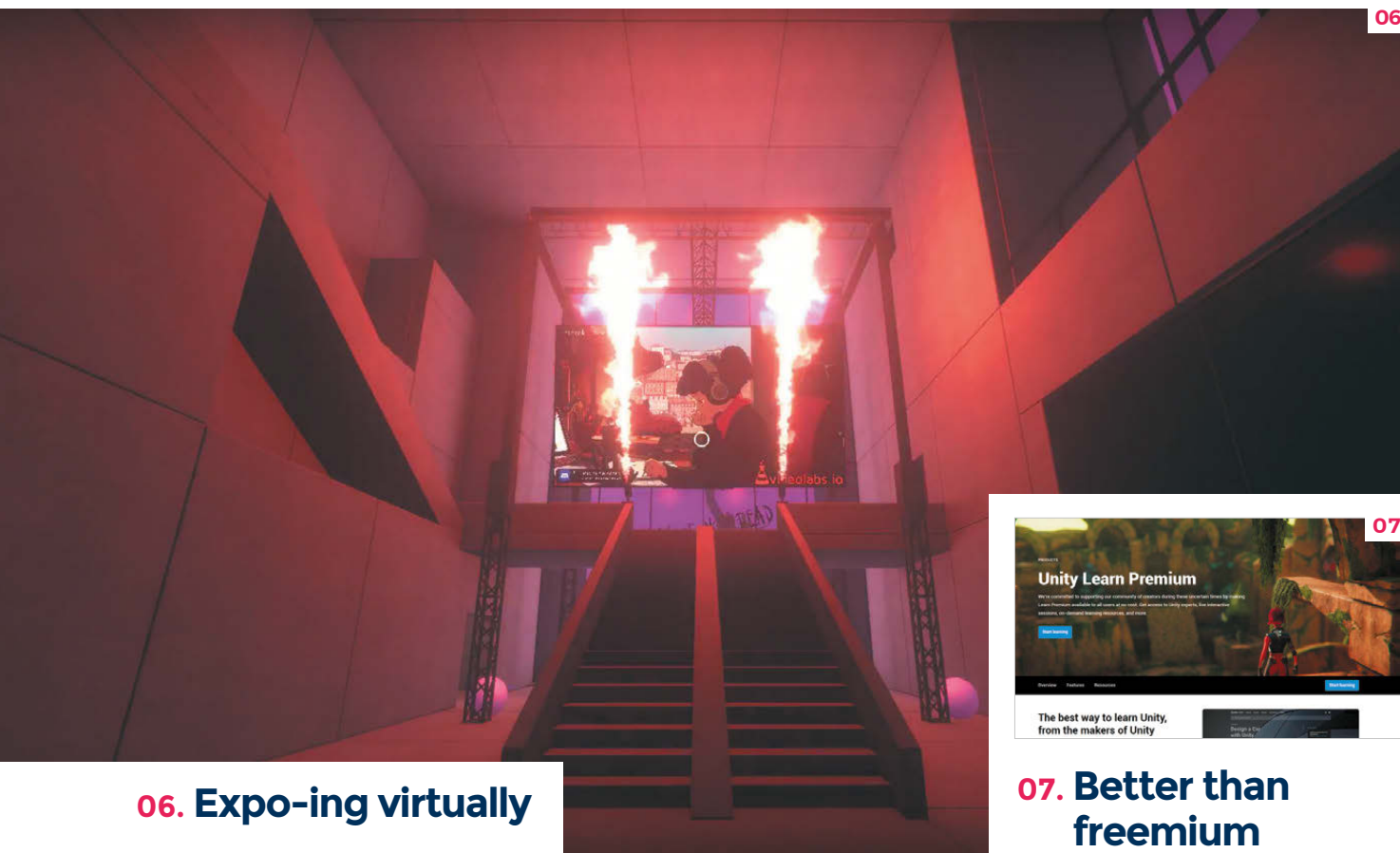OUTSTANDING INDIVIDUAL CONTRIBUTION:
Luisa Bixio (CEO, Milestone)

Rumours point to *Suicide Squad* game coming from Rocksteady

Rumours also point to Microsoft acquiring Warner Bros. Interactive Entertainment

06

07

06. Expo-ing virtually

With events heading the virtual route thanks to the Covid-19 pandemic, we checked in with one organiser to find out the whys and hows of running a remote event – and if there's any future in this approach. A MAZE. / Berlin is a decade-old gaming festival focusing on 'arthouse games and playful media', but for 2020 it ran as a digital-only, explorable space… where every attendee was a flamingo. Of course. "Our first challenge was to create a virtual world that would reflect our spirit… the community is used to an avant-garde, punky setting," says Thorsten S. Wiedemann, artistic director of A MAZE. This meant lots of pink, gorgeous designs for the first-person navigation of the event space, and those aforementioned flamingos.

"For us it's important to create a colourful, loud, and visible platform for all the game authors and developers who would have been at A MAZE. / Berlin," Wiedemann continues. "We can reach totally new people who have never been to A MAZE. before. And maybe they enjoy the space so much that they would like to experience it 'in the real world' when it will be possible again. It might be a little teaser or appetiser."

And the future? "I think it's clever to be creative and flexible… not ignoring the fact that times are changing," says Wiedemann. "You have to stay flexible with everything you do." The physical event will return, but the virtual one might come back soon, too.
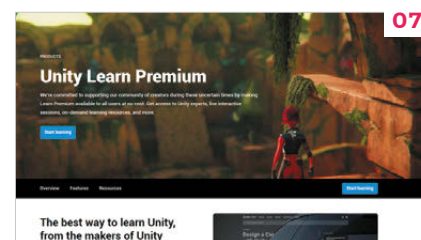
07. Better than freemium

Eight hundred thousand years ago, in March, Unity opened up its Learn Premium platform for anyone to use free for three months. The world has proven it needs services like this, it seems, so the team announced late in June this would be extended to 'the end of forever' (not a direct quote). Basically: Unity Learn Premium, the platform riddled with lessons and tutorials and general materials to help you become a better Unity developer (or just to become one in the first place), is now completely free, and will remain that way for the foreseeable future. No time limits, no restrictions, just free knowledge, the way knowledge should be. Get involved here: **wfmag.cc/UniFreePremium**.

Tencent launches US-based triple-A studio; working on PS5, Xbox Series X title

Kongregate stops accepting new games; reportedly lays off staff

Post Apocalypse

Yes, it's Wireframe's very own letters page!
Here's what you've been saying this month

Issue #40

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

FALSE REVEAL

I'm assuming that by the time this letter makes it to print, that Microsoft will finally have held its launch event for its Xbox WhateverIt'sCalled console. I hope it plays a slightly fairer hand with Sony and its PlayStation 5.

Having sat through Sony's impressive presentation for its new console, my credit card was twitching. But then I started to have second thoughts. Within a day or two, we were told that the new Spider-Man game it had been touting was basically a remaster with some new DLC. *Horizon Forbidden West* was just the kind of title I was hoping for, but that's not due until next year. *Godfall* might actually make it before the end of the year, but other than that it looks like we're being sold a posh new console with just the usual round of sporting game releases to play on it this side of Christmas.

Unless I'm reading the runes incorrectly, it feels like Sony will be launching the console before it has anything of particular note to play on the thing. I'm old enough to remember when people criticised the launch line-up of the PlayStation 2, but I was also too busy playing *TimeSplitters* to notice.

Hopefully Microsoft will remember with its new Xbox that it's all too well having a cutting edge new games machine under the television, but it'd be jolly nice to have something to actually play on it in the next year.
Peter

Ian writes:
I'm here, with you, in the past right now sadly, so am not able to pull back and do the surprising reveal of 'Hark! Microsoft has done good, like!' All the same, I fully expect the company will pull it out of the bag – there's been an increasing, seemingly genuine, push towards actually doing things for the consumers (you know, the players – like us) in the past few years. Whisper this bit, but even though he's an exec and execs are all evil and/or automatons… I sort of like Phil Spencer. Shh, keep it down. However things end up going, though, we've got another generation of consoles to look forward to, and that's always exciting.

NOT A JOT OF HARM

Well – with timing reminiscent of Japanese public transport, I finished Wireframe 39 just as Wireframe 40 dropped through my letterbox. It wouldn't normally take me a whole month to read, but my time has been taken by too many things during June.

The brilliant news is that the transition from twice-monthly to monthly format has done Wireframe no harm whatsoever. The focus

"The transition to monthly has done Wireframe no harm whatsoever"

of the magazine and quality of writing is intact, which was my concern about the format change.

I'm already drooling at the *EVERSPACE 2* article in Wireframe 40, and I haven't even opened the cellophane yet.

Keep it up!
Ben Woodcock

Ryan writes: We'll certainly try! Many thanks to Ben, and everyone else who got in touch over our new monthly format. It'd be remiss to say everyone's happy with us at the moment, though…

JUST AWFUL

Just to let you know I will be cancelling my subscription because I have just seen your *The Last Of Us Part II* review and you gave it 94%, which is just ridiculous. Why is it that most reviewers on YouTube and Metacritic are saying the storyline is god-awful… the story is atrocious, and Naughty Dog is playing politics, and you give it 94%??????? Have you been paid off? MOST PLAYERS ARE SAYING THE GAME IS NOT GOOD, JUST LOOK ON

METACRITIC – so how can you give this 94%… I just do not trust you anymore and do not want to read your magazine.
Damian

Ryan writes: Rumbled. This reply is being written from our luxury yacht, moored at the harbour of our private island with all our ill-gotten loot. Right, where's that review copy of *FIFA 21*? We fancy a new tractor.

> It's not our highest score ever, mind (see page 90).

Shortcuts

The topic of mini consoles came up (see the vote below) – here's what people were saying…

If I could have a mini Amiga loaded with every single Team 17, Psygnosis, Bitmap Brothers, Sensible Software, and LucasArts game then My Life Would Be Complete. **@Pixelated_Ben**

There appears to be a horrible error in your poll: it's missing a tiny Dreamcast. (As for N64, I suspect that'll be a long way off, given that cheapo boards struggle horribly to emulate it.) **@CraigGrannell**

I want a petite PS5 because the current monstrosity won't ever fit on my TV shelf! **@Mark48339665**

Toughest decision picking between the Saturn and Amiga, both big parts of my childhood and love of video games. **@acelariato**

How long until there's a wee Wii? **@CustomPCMag**

▲ The PC Engine Core Grafx Mini: one of many minis.

The burning question

We asked which mini gaming machine would be your dream, and for some reason loads of people accused us of 'forgetting' about the Dreamcast, which is obviously piffle. We simply *misplaced* the option to vote for it (because it would have trounced the opposition). Strong showing for the Amiga, still!
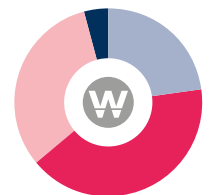
|			
■ Mini N64 - **41**%		■ Tiny Saturn - **23**%	
■ Diddy 3DO - **4**%		■ Miniscule Amiga - **32**%	

Incoming
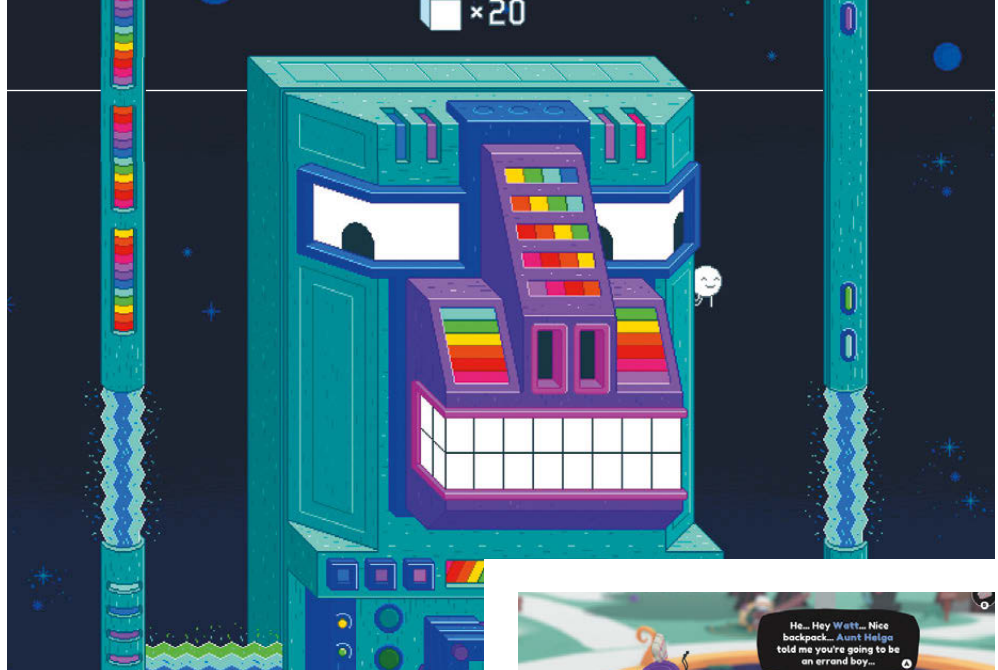
Spinch ⬆

Take your retro looks and infuse them with some psychedelia, with all this layered over a challenging platformer: that's *Spinch*, and it looks fantastic. Jesse Jacobs' superb cartoon art will come to life very soon indeed – it's set for release on 3 September.

Keylocker: Turn-Based Cyberpunk Action ⬇

A cyberpunk-style world where music has been banned – so *Footloose* with more neon, then – *Keylocker* is a JRPG-inspired mix of futurism and loud music. Your moves in battle are conducted (pun!) through a rhythm action game-style, with the turn-based ebb and flow of combat dictated by your keeping of the beat, or not, as the case may be. It's not specifically a unique take, but it is an intriguing one, and something we'll be keeping our eyes on.
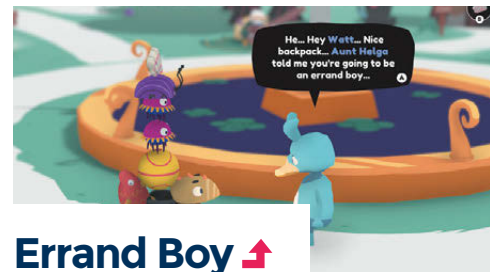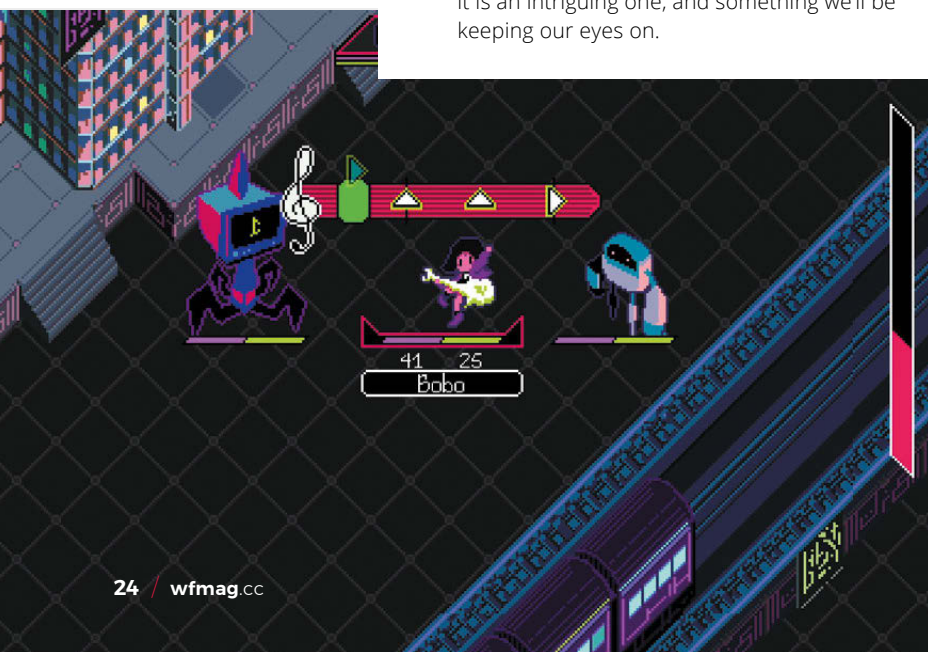
Errand Boy ⬆

Tree Interactive's multi-narrative adventure is still early in development – we're unlikely to see any finished product until later in 2021 – but already it's got us a-cooing. As well as doing errands for people, obviously, *Errand Boy* tells five stories featuring five different heroes, all interweaving with one another and focusing on the larger tale behind it all: helping people in order to save a town from disaster.
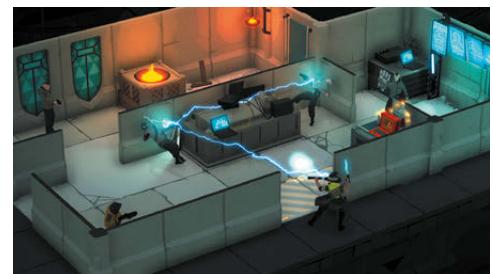
Tactical Breach Wizards ⬆

Wizards dressed in UK police-style uniforms breach-bang-and-clearing their way through numerous encounters in classic turn-based tactical fashion might sound a bit… quirky… and you would be right to think as much. But this one is from Suspicious Developments – creator of *Heat Signature* and *Gunpoint*. So even though it's very early along and might change a great deal before its eventual release, it's almost guaranteed to be a banger.

Hitman 3 ⬆

So apparently this was a '*World of Assassination* trilogy' all along, it's just nobody bothered to tell anyone. *Hitman 3* will arrive in full – no episodic break-up here – in early 2021, with versions planned for the current crop of consoles, PC, and the next-gen PS5 and Xbox Series X machines. It's already exciting, frankly.

What's more exciting is this is IO Interactive finally able to shed the reins of the publisher holding it back – *Hitman 3* is a fully independent production by the Danes, and this new-found (and hard-won) freedom is sure to show itself not just through the game's design, but through IO's dedication to allow players of the previous titles to just, sort of, *carry on*. You see, all levels, progression, items, what have you, all of that will be able to be imported into *Hitman 3*, using the latest game as a platform by which you can enjoy the whole trilogy in one. It's an act of fantastic generosity and one we hope to see pay dividends for the studio – especially as it might encourage other devs to do the same.

Project Oxygen ⬇

It's a code-name, and the game itself has little form at the time of writing, beyond some ideas and a bit of lovely concept art, but we're already hooked. *Project Oxygen* sees a bunch of Polish triple-A veterans teaming together under the banner of Far From Home, to bring this post-apocalyptic, steampunk-y survival game to the world.

⬅ Kingdoms of Amalur: Re-Reckoning

Worth putting a chunk about this in here, because it's unlikely to be on a *huge* amount of radars, to be honest: *Kingdoms of Amalur: Reckoning* is getting a do-over courtesy of THQ Nordic (developed by KAIKO and Big Huge Games). *Re-Reckoning* is the subtitle – THQ loves it some punny names – and not only will it see a visual overhaul and general modernisation of the tech underlying the RPG, but

there'll also be a whole new expansion coming too at some point.

Does any of this matter? Well, yes. *Kingdoms of Amalur* was simultaneously a by-the-book RPG and also a bold and *fresh* take on the lore of the western role-playing world, inventing an entire new space for the game to take place in and genuinely surprising those who played it. It's very good, genuinely.

Spacebase Startopia ⬎

Chalk this one up in the unexpected sequels category: a follow-up to *Startopia*, Mucky Foot's space station management game from 2001, *Spacebase Startopia* is making all the right noises about not really changing much from the original, but adding on top of what made the original such a great.

What that means is there's still the station management aspect to be getting on with – and the curious cast of aliens to keep happy as you do – but there are some empire building and RTS elements on top to sweeten the deal and prevent it from being more than a mere remaster or other such simple update.

The Universim ⬈

The god game genre isn't as dead as you might have thought, and *The Universim* is already making waves (and other such natural events) on Steam after releasing in Early Access. It's a simple case of taking control of a civilisation and steering it through the ages, helping it to develop and spread across a little planet without dying… well, unless an individual gets attacked by wild animals. Or flung into space for besmirching your godliness. It's fun, and it's in active development so will hopefully get better.

Tartapolis ⬈

Picture *My Friend Pedro*, slow it down a few notches, remove the banana and colour, and add in a big ol' splash of exploration and Metroidvania-ness, and you've got yourself *Tartapolis*! Sort of. Solving cases throughout the city, you'll be discovering what hides in its shady underlevels, as well as blasting most of the things that get in your way. It's the 'deep RPG' claims that have most of our attention, so hopefully, this one can do the business by its release in October.
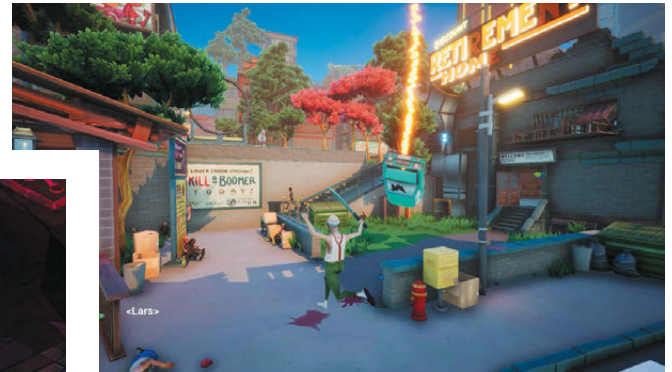
Just Die Already

When you slap 'from the designers of *Goat Simulator*' all over your marketing material, you know you're aiming for a very specific group of people. And yet *Just Die Already* might also be trying to bring older players into the fold, empowering aged characters to wreak destruction on a world that really doesn't care too much about them anymore, using what else, but the power of physics.

Hades

You might already have racked up a crudload of hours in Supergiant Games' hack-and-slash, dungeon-crawling RPG, but that doesn't mean you've seen everything *Hades* has to offer. The final Early Access update out the door, the game that's already pretty much beloved by all those who play it is finally on track for that big V1.0 release later in the year. We'll be taking a closer look as soon as we can, because this is a genuinely superb game, it really is.

Supergiant Games hasn't actually made a bad game yet, and it's a studio that consistently incorporates the best aspects of its previous titles into its current projects. Hence, *Hades* mixes the peak performance of *Bastion*, *Transistor*, and *Pyre* into one big attempt to escape the underworld. It's quick, skilful, utterly intoxicating, endlessly customisable, rich in narrative background, and... can you tell we're fans? *Hades* has been in Early Access a while now, and is in a more than stable position, so we can heartily recommend you go pick it up, if you haven't already. Roll on V1.0.

Calico

Taking care of your community is a common gaming theme. Taking care of your community by making sure the local cat café both survives and thrives, while carrying and sometimes wearing cats – or perhaps even riding them – is a whole other thing entirely. *Calico* does... all those things. Broad appeal? We're not sure. But there is something seriously enticing about taking part in such a laid-back, stress-free experience as this one promises.

Star Wars: Squadrons

We wanted *Star Wars: TIE Fighter 2*, but this will have to do. Expectations are astronomically high for EA's latest take on the galaxy far, far away, and *Squadrons* does at least categorically look the part. Whether its focus on 5v5 online play will translate to something that's a) good, and b) something we want to keep playing for weeks and months on end, we don't yet know. We'll keep an open mind, though.

ESCAPING
OPPRESSION

HOW DEVELOPERS ARE BRINGING THEMES
OF REPRESSION AND RELEASE TO A NEW
ERA OF CINEMATIC PLATFORM GAMES

WRITTEN BY **ALAN WEN**

The cinematic platformer has been around since the late eighties, but actually defining the genre can be somewhat tricky. It might be better, in fact, to describe it as a 2D platformer with a focus on storytelling. Certainly, the sub-genre's early examples – such as in *Another World*, *Flashback*, or *Heart of Darkness* – interspersed gameplay with animated cutscenes, and their comparative seriousness provided a distinct contrast to the colourful, bouncy mascot characters of traditional platformers.

Originally released in 1989 for the Apple II, *Prince of Persia* is the earliest example of the form. Its lifelike animation was famously created using rotoscoping, which designer Jordan Mechner achieved by referencing videos of his brother performing the Prince's movements (for the full story of *Prince of Persia*, see Wireframe #37). Because the Prince moved like a living, breathing human, the dangers that surrounded him felt all the more immediate: fall from a great height or land on a spike, and his life was gorily – and, for the time, realistically – snuffed out.

"This fidelity of animation made you feel like the guy was more alive," says Lorne Lanning, creator of *Oddworld*, a series inspired by *Prince of Persia*. "The reaction that the whole room had when you fell onto the spikes – there was a real punch that was different than when you failed at other games. You really wanted the character to succeed because you're really paying attention to his plight."

That plight is an enduring theme in cinematic platformers. Unlike modern action games like, say, *Wolfenstein: The New Order*, *Prince of Persia* and other games like it aren't straight power fantasies; the latter's Prince isn't armed with a machine gun, but a sword. Similarly, contemporary cinematic platformers place a greater emphasis on your vulnerability in a hostile, unforgiving environment. It would be more appropriate, then, to rename the sub-genre the oppressive platformer. ➡

PRINCE OF PLATFORMING

Prince of Persia may have pioneered the cinematic platformer, but its vulnerable hero evolved in later entries, which gradually moved to more mainstream and accessible territory. The Prince's first reinvention came with 2003's *The Sands of Time* where he transitioned to 3D, forgoing the original's relative realism for flashier acrobatics and swordplay, while his signature party trick let the player rewind their fatal mistakes. By the 2008 reboot, simply called *Prince of Persia*, death was removed altogether.

⌄ **Prince of Persia** may be the first cinematic platformer, but it differs from modern examples of the genre in that its titular character can actually fight.

THE ODD ESCAPE

Markedly similar dark themes run through the cinematic platformers released in recent years. *Inside*, *Black The Fall*, and *Little Nightmares* all see their protagonists traverse an increasingly dangerous world, attempting to escape the spectre of death in one form or another. But we shouldn't overlook *Oddworld*, a much earlier game which first brought these themes of oppression to the sub-genre.

Lanning had originally envisioned *Abe's Oddysee*, the first of a planned quintology, as a movie, which would have been a natural option for him as a veteran of Hollywood's computer animation and visual effects industry. But he also predicted that those same technologies would apply to video games, particularly with the arrival of the groundbreaking PlayStation. Nonetheless, while console developers were eager to jump into the new frontier of 3D graphics, the PlayStation's specs were still rather modest compared to the tech of Lanning's former industries. "Even great art direction would make little difference because the polygon count and processing power was so low," he recalls. "So we chose to pre-render."

Using high-resolution, pre-rendered backdrops was a popular option for many developers in the PSone era, but 1997's *Abe's Oddysee* also rooted itself in the 2D platformers of past generations – specifically,

> ## "YOU'RE ONLY AS FREE AS THIS WORLD ALLOWS YOU TO BE"

cinematic platformers, where a well-animated character could create a deeper connection with the audience. The genre's side-on perspective also served another benefit, since it was easy to control the art direction and what the player saw. "You don't have that 'follow camera' like in a 3D world," Lanning adds, "so it feels a little more like it's about the story."

In a sense, a fixed 2D perspective allows the developer to wield control over the game, its character, even the player. "It's all about the restrictions," says Dave Mervik, narrative designer of *Little Nightmares*. "The fact that you have some control of the camera, but not total control; that you can explore to an extent, but not to your heart's content; these things subtly remind you that you're not in control, and you're only as free as this world allows you to be."

Indeed, the worlds of these cinematic platformers are very much the antithesis of freedom for their characters. *Little Nightmares* is set aboard a hulking vessel where your protagonist, a little girl in a yellow raincoat, is trapped along with other kidnapped children. In *Abe's Oddysee*, the Mudokons are creatures born into captivity, and work in huge meat-processing plants. It's an existence that Abe goes about in ignorant bliss until he learns that his masters, the Glukkons, plan to turn his species into the latest big-selling meat product.

Escaping the system becomes the chief driver of *Abe's Oddysee*, and being caught means almost instant death as the Sligs in charge of security don't hesitate to shoot anyone stepping out of line. While Abe can occasionally use the Glukkons' devices against them, he's largely an unarmed and vulnerable protagonist who must rely on his wits to survive.

Although the appearance and silly voices of the Mudokons might place *Oddworld* in the same child-friendly category as *Mario* (this was apparently how Microsoft saw the series when it published the third title, *Munch's Oddysee*), the subject matter is deadly serious: after all, we're talking about an enslaved indigenous

Escape is the impetus of *Black The Fall*, though it's possible to keep pedalling away like a good obedient worker, and even earn an achievement.

race on the verge of being consumed by an exploitative capitalist machine. Yet despite the overt political commentary of *Abe's Oddysee*, Lanning resists using the 'p' word to describe his games. "If we're talking about management models of societies, it's not necessarily political," he says. "It's more philosophical."

The same could be said of *Inside*, a modern masterpiece that set a high bar for the cinematic platformer. In it, an oppressive force relentlessly pursues the child protagonist, but developer Playdead also consciously leaves its identity, and the overarching story, up to interpretation. "The mystery was half of what made [*Inside*] right," says Lanning. "On creating an ominous presence, they do a good job of touching on really deep subject matter without falling into divisive positions – you're not exactly sure what's going on, but you just know you wouldn't want to be that kid!"

Abe's Oddysee was a major influence on the cinematic platformers *Black The Fall* and *Ministry Of Broadcast*. Like *Abe's Oddysee* and *Inside*, those games also tell stories about an escape from oppression – the difference being that *Black The Fall* and *Ministry Of Broadcast* are about very real totalitarian regimes. In Romanian developer Sand Sailor Studio's case, *Black The Fall* explicitly bears witness to its country's suffering under the communist dictatorship of Nicolae Ceauşescu, albeit mixed in with a dose of fantasy.

For art director Nicoleta Iordanescu, there was no better way to tell the story of an old machinist escaping his prison of industrial labour than through a cinematic platformer. "Two of the most important design decisions embedded in this genre fitted like a glove: the linear progress from left to right and the instant death mechanics drove home the idea of living in an absurd, unforgiving place with no place for a mistake," she explains. "We had

no second thoughts; it felt [like] the proper medium for creating, exploring, and sharing a story inspired both by our own personal history and imagination."

Ministry of Broadcast's small-knit development team (which shares the same name as the game) also hails from former Eastern communist blocs – the Czech Republic and Serbia – but its inspiration comes from the Berlin Wall and how a country can become divided. The game doesn't explicitly refer to communism, but rather an ominous, *Big Brother*-style Regime, which controls a twisted reality TV show where contestants attempt to escape the wall or die trying.

"We never point fingers, because it's not about the leader, the country, or time – it's about the feeling you have," says co-developer Petr Škorňok, who wants the game to resonate with as wide an audience as possible. "It's funny because immediately, people from the US were triggered into thinking we were talking about Mexico and Trump's wall."

With its chilly pixel art, *Ministry of Broadcast* undoubtedly takes inspiration from other early cinematic platformers such as *Prince of Persia* and *Another World*, although creative co-director Sanja Čežek also credits *Oddworld* for influencing the user interface.

"If you remember how the game was telling you where to go, it was really in the background," she says, describing how the sub-genre suits the team's goal for succinctly depicting an oppressive environment. ➔

NEVER ALONE

"One of the pillars of [*Black The Fall*] is that you can trust nobody," says Nicoleta Iordanescu. "Everything that happens in a world where people report their neighbours to the secret police, for the silliest things, means just sharing your thoughts could be extremely dangerous." This led to the team introducing some levity by way of a robot dog you befriend at the midpoint, which is uncorrupted by the same fears as other humans. Similarly, the forthcoming *Little Nightmares II* aims to find companionship in its oppressive world by having Six team up with a new character, Mono.

A story of an exploited workforce being literally consumed made *Abe's Oddysee* ahead of its time. In the age of Amazon, its remake continues to resonate.

While the *Oddworld* series moved to 3D, remakes of the 2D games aren't just nostalgia; they suggest its storytelling is suited to this perspective.

"You're instantly in the scene, you realise you're in an enclosure and you need to get out, but you don't really care why the wall is there. You don't have to think about who divided the whole country – you just want to get out and see your family."

HEROES ALWAYS DIE

When you're running for your life in a game, it's likely to prompt an instinct to hold right on the control stick to flee as fast as possible. But cinematic platformers are also slower paced than their traditional twitch-based counterparts, interspersed with puzzle sections while also allowing the player to pay attention to the storytelling in the environment: the all-seeing eye iconography and surveillance cameras in *Ministry of Broadcast*; the Brutalist monoliths of factories looming in the background of *Black The Fall*; the mountain of children's shoes in *Little Nightmares*.

But while you're trying to escape, you also can't ignore the sight of the many other inhabitants shackled under the weight of their respective regimes, from the people under mind control in *Inside* to the Mudokons of *Abe's Oddysee* going about their jobs, oblivious to their impending fate. In the case of the latter, Abe eventually becomes a heroic figure: during your escape, you're able to communicate with fellow Mudokons and rescue them by guiding them to special portals. Quite often, these Mudokons are in a hidden part of the level, or require the player to risk their lives to rescue them. Abe's selfless acts – and the karma that comes from them – was an ideal Lanning was keen to convey, with Abe's fate ultimately determined by how many Mudokons he manages to rescue in the game. "I really do believe in the karmic relationship of life," he explains. "The idea that you could be successful, the way you got there could really be your demise. In corporate culture, people climb the ladder by stabbing people in the back and just doing all kinds of underhanded shenanigans. But when they get to the top that way, there's a whole army beneath you that would love to see you fail because of how you got there. And I really wanted to build that idea into the game."

Selfless heroics are also a staple of Hollywood movies, however, and lie in stark contrast to the grim realities faced by those under harsh totalitarian conditions. Indeed, this was an observation Lanning recalls when meeting with Eastern European journalists around the time of *Abe's Oddysee*. "I would say Abe's a hero, and they go, 'Heroes are stupid, they always get killed, so no one wants to be the hero'," he says. "I never expected to hear that. But if you came out of the Eastern bloc countries, that might have been your perception."

As someone from the former Eastern bloc, *Ministry of Broadcast*'s other creative director Dušan Čežek puts it a different way. "[*Abe's Oddysee*] is a nice story, but it's fake. When you're trying to escape, the more guys there are, the less chance you have to escape. Our story is the opposite, with an anti-hero where

ANOTHER ARC

Lorne Lanning originally had a different, more plausible arc for Abe. "When we experience something really terrible, we try to flee – the first thought is self-preservation," he explains. "I wanted Abe to escape but then have it weigh on him: 'What am I doing, the clock is ticking on all these others, if I could get out, how could I ever live if they're going to die – I have to risk my life and go back.'" However, he also felt it was important to introduce GameSpeak mechanics and the idea of rescuing Mudokons early on. Ultimately, gameplay trumped storytelling.

you're questioning his actions, but then you're also the one who's making those actions."

JUSTIFYING THE MEANS

Born and raised under the oppressive communist regime in Romania, Iordanescu adds that "good people were forced to do bad things to survive." In *Black The Fall*, you don't have the time or means to save any of the other labourers; you do, however, need to exploit their conformity in moments of stealth by blending in. Later on, you also acquire a laser pointer tool known as a designator, which is used for solving puzzles, but in effect lets you wield the same power as your oppressors. That you're required to manipulate others in order to progress is a conscious part of the design. "The abuse of authority is present everywhere, in the form of the attitude of the guards, but also in your behaviour after stealing the designator," Iordanescu says. "You exert authority over other workers, feeding this power abuse system, regardless of whether you're a good or bad person."

It's a sentiment echoed in *Ministry of Broadcast*, as your protagonist finds himself literally stepping over others to survive. Despite framing the protagonist as an anti-hero, the developers nevertheless insist that you're not actively harming others. But then one set-piece requires the player to lure a guard dog into chasing another helpless contestant so that he falls into a pit of spikes, thereby turning his corpse into a platform for you to get across. "This is totally relevant to our everyday lives – you don't hurt people directly, it's just a side effect of your actions," says Škorňok. "And the effect is always

> ## "YOU DON'T HURT PEOPLE DIRECTLY, IT'S JUST A SIDE EFFECT OF YOUR ACTIONS"

organised by the Regime; you just participate in the situation." Whether that makes us feel better about stepping over dead bodies is, of course, another matter.

That doesn't mean everything is constantly grim in *Ministry of Broadcast*. Its developers create a Monty Python-esque absurdity in its omniscient Regime, which echoes *Oddworld*'s penchant for juxtaposing serious themes with *Looney Tunes* slapstick when you get killed.

Even in the grotesque *Little Nightmares*, which might be a veiled commentary on current generational conflicts, where children are at the mercy of monstrous adults, Mervik manages to conjure up a positive message. "When you're a child," he explains, "you have feelings of hope, possibility, and immortality, but as we're tainted by the inescapable experience of growing up, it means accepting that you're not in control, that you're not immortal, there's no magic, and monsters look just like regular people. The sooner you accept this, the sooner you'll be accepted as an adult. Still, why should you accept this world as it is? Why should you let the monsters run things? Only children dare to ask these questions, and in our game, only children dare to fight back. Who'd have ever thought that the kids would be the ones to save us from ourselves?"

The fragility and restrictions inherent in cinematic platformers mean there aren't easy solutions or direct, satisfying ways to overthrow oppression. Rather, each one is about witnessing a particular world's horrors, surviving against the odds, and striving to reach the light that lies at the game's end. ⓦ

▲ The lore of *Inside* is never explicit, but there's no denying the unremittingly oppressive society it depicts.

▼ *Ministry of Broadcast* arguably looks most inspired by *Prince of Persia*, from its pixel art aesthetics to a preoccupation with spike traps.

JESUS. WHAT IS HAPPENING HERE?

The Forbidden City

LOTTIE BEVAN

Lottie's a producer and co-founder of award-winning narrative microstudio Weather Factory, best known for *Cultist Simulator*. She's one of the youngest female founders in the industry, a BAFTA Breakthrough Brit, and founder of Coven Club, a women in games support network. She produces, markets, bizzes, and arts, and previously produced *Fallen London*, *Zubmariner*, and *Sunless Skies* at Failbetter Games.

"As the developer of a game literally called *Cultist Simulator* with a governmental antagonist called the Suppression Bureau, I should probably revise my sales estimates"

While under communist dictatorship in the 1970s and 1980s, dissenting Czechoslovakians arrived at demonstrations, stood in front of the police, and beat each other up with vegetables. This was to save the police the trouble of doing it with batons, though it also protested against a violent authoritarian regime without doing enough to get arrested. All hail the subversive surrealism of European liberals!

Not that this has anything to do with authoritarian regimes, but China's games market is worth £25–30 billion and comprises 750 million players. It's also a relatively blue ocean for western games, thanks to an infamously difficult approval process required to release there.

Currently, western devs can localise into Chinese and bung their games up on a storefront, knowing that a reasonable percentage of those 750 million people will use VPNs or other workarounds to access their unapproved title. But this is changing.

First to fall is the App Store. Over 20,000 games might be removed from the Chinese version of the store at the end of July for not having gone through official government approval. PC developers reading this might not care very much, but we could soon follow suit. Steam China has launched in alpha but only includes 40 out of 30,000 games. All 40 have been through the official review process. The prospect of a happy backlog of localised western games automatically imported to Steam China looks unlikely. Valve hasn't said it'll cut Chinese players off from the original global Steam site, but neither did Apple, until now.

China's National Press and Public Administration department – the people responsible for approving games for Chinese release – recently made it even harder. Online multiplayer games now need separate Chinese servers so Chinese players only interact with each other. A single untranslated word of English is enough to fail. And only 5000 games a year can now be approved, shared between domestic and international titles across all platforms. In 2019,

only 12% of approved games were international, so we're looking at around 600 games a year. To put that into perspective, Steam sees around 23 new games released each day. One storefront on one platform could theoretically fill an entire year's multiplatform quota in a month.

This is all before you get to content restrictions. Some of the new guidance forbids 'vulgarity, pulp, or kitsch elements or other content that violates the core values of socialism' (no Hello Kitty games for China). You're also not allowed to cast the player in 'the role of a thief or criminal' (tough luck, *Cyberpunk*) or portray 'the supernatural, such as cults, fortune-telling, ghosts, zombies, vampires, etc'. Reading this as the developer of a game literally called *Cultist Simulator* with a governmental antagonist called the Suppression Bureau, I should probably revise my sales estimates.

It isn't all doom and gloom, though. The internet is infinite, and infinity is hard to police. I suspect western indies will spend the next few decades being walled off from the Chinese games market, to the detriment of revenue and cultural exchange. But never underestimate the power of human ingenuity. Keep your zucchini ready: all walls eventually fall. Ⓦ
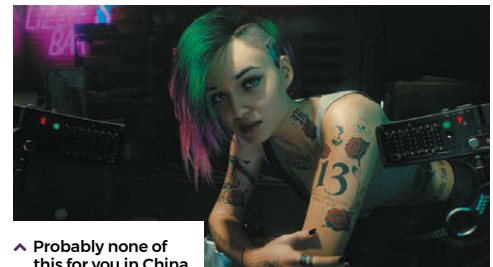
⌃ **Probably none of this for you in China.**

⌃ **Nor... um... this, for some reason.**

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GAMING THE
KICKSTARTER
CAMPAIGN MACHINE

Crowdfunded games aren't a cakewalk for developers – even successful ones. We find out why

WRITTEN BY **KHEE HOON CHAN**

One of the strangest games to go viral on Kickstarter was *Soda Drinker Pro: SipStarter*, whose lofty promises of letting players digitally quench their thirst garnered so much attention that it exceeded its target by at least 16,600%. The campaign's success allowed its developer, Snowrunner Games, to secure a sponsor that gave it more resources to, in its own words, "Make all of the stuff we are working on 1000% better!"

With the campaign's unexpected success, Snowrunner Games launched *Soda Drinker Pro* two years later to much acclaim. "Manages to capture the full experience of drinking a soda," one Steam reviewer complimented breathlessly. "I don't know why I bought this," remarked another.

Such attention is why Jason Thor Hall, founder and game director of Pirate Software, crowdfunded its RPG *Heartbound* via Kickstarter. "The reason I did it was to cause a stir for the game, to get the news media to pay attention to us," says Hall. "At the end of the day, I was mostly using Kickstarter to hack the news."

Pegging its Kickstarter goal at the relatively modest figure of $5000, Hall reveals that this isn't enough to make the game with; what he wanted was to meet the goal within 24 hours. Not only did the studio achieve that, but it also raised $19,272 – almost four times the original goal. And at Christmas 2018, the Early Access version of *Heartbound* was released. It was, by most definitions, a Kickstarter success story.

But making a Kickstarter campaign is almost a science. Having a single, spectacular idea isn't enough; you'll need to consider how to translate that into a tangible product, complete with backer rewards that won't detract from development. Even after the goal is met, more challenges crop up – from managing shipping costs to narrowing the game's scope. All these are compounded by the already high costs of game development. So rather than just raise funds, many developers also use Kickstarter to reach out to their communities. "It's got the largest community size, and it's the most noticed by the media," Hall says of Kickstarter. "Generally you don't hear about Indiegogo campaigns that succeed really well unless it's, like, some ➡

▲ Publishers often requested that Nightdive adopted a different art style, or implemented a new feature in its demo, in exchange for the promise of more funds for the studio's *System Shock* remake.
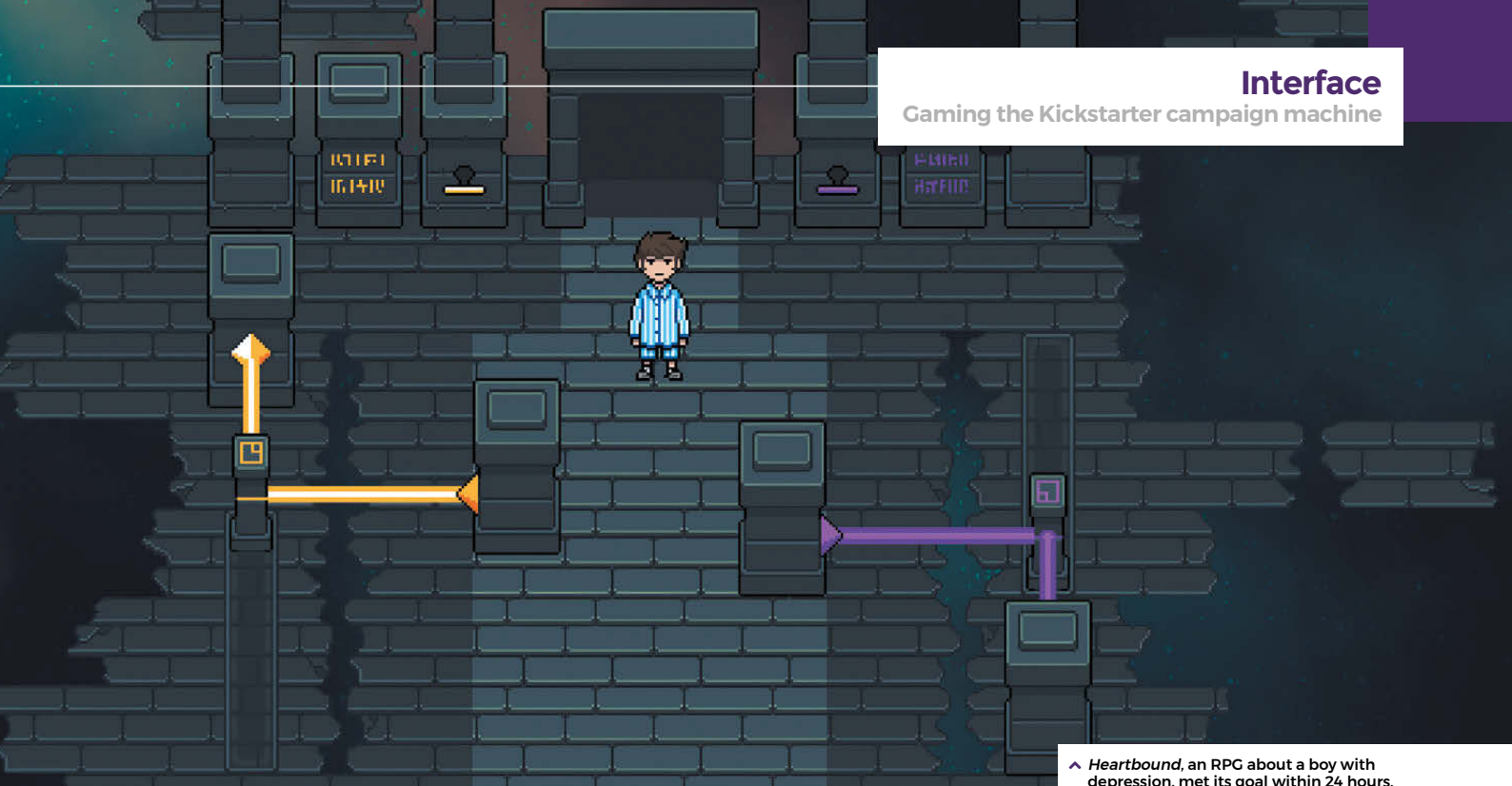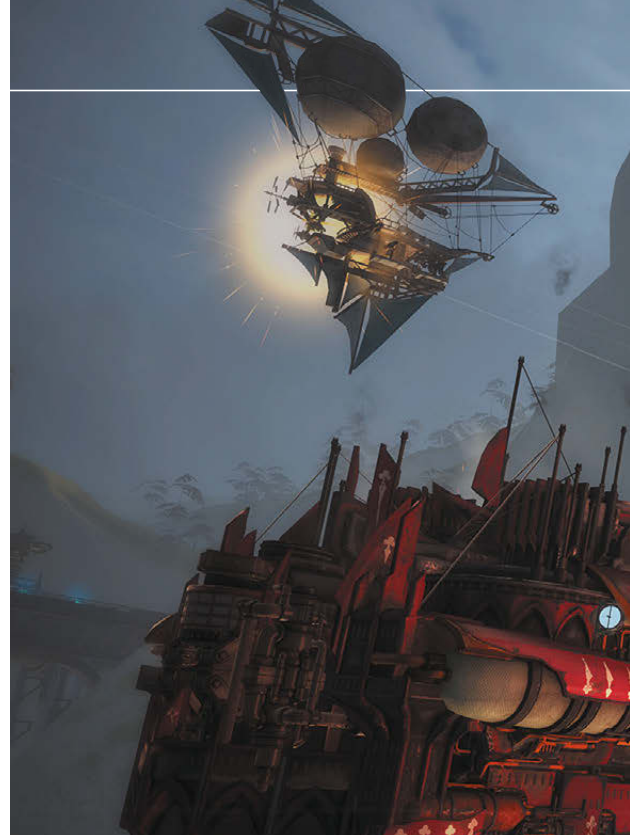
^ *Heartbound*, an RPG about a boy with depression, met its goal within 24 hours.

KICKSTARTER Vs INDIEGOGO.

Indiegogo charges a 5% platform fee on campaigns, regardless of fixed or flexible funding goals. It also has a post-campaign fundraising programme called InDemand, which allows developers to continue raising funds after the campaign. The difference lies in whether they've first crowdfunded their project on Indiegogo. If so, the fee remains at 5%; if not, it's 8%. Indiegogo also charges a 3–5% payment processing fee. Due to Kickstarter's all-or-nothing funding model, it charges a platform 5% fee only if a project is successfully funded. Like Indiegogo, Kickstarter also charges a 3–5% payment processing fee.

astronomical figure. People pay attention to Kickstarter more than they do Indiegogo."

TESTING GROUND

For Tom Eastman, President of Trinket Studios, Kickstarter was also a litmus test for an unorthodox cooking game. Back in 2014, the studio released two mobile games called *Color Sheep* and *Orion's Forge*, but wanted to work on a more ambitious title. Lacking the necessary funds, it turned to Kickstarter.

⌄ Through a puzzle mechanic, *Battle Chef Brigade*'s players can cook up a variety of dishes, judged in a *MasterChef*-style contest.

The result was *Battle Chef Brigade*, a brawler-cum-puzzle game about hunting monsters and cooking mouth-watering dishes. Again, Kickstarter was chosen not only because of its successes with games, but also its fixed funding model, which helped identify how viable its idea was. "Generally, it's also a good way to fail fast, where if no one likes your idea, then you don't work on it anymore, you just move to something else," says Hall. "That was appealing to us, too."

To its surprise, Trinket Studios exceeded its initial goal of $30,000, getting more than three times that amount with a final total of $100,344. That's when the pressure of producing a game that's much grander in scope – and more than what it'd initially planned for – suddenly sunk in. "It was going to be a small game during the pitch, and then it grew into something that was way larger than that budget – even with the higher amount that we got from Kickstarter, which ended up resulting in a longer development time, and us needing to get a publisher for additional funding," says Eastman. "We could have made a smaller game, but it was an opportunity to make something larger that we were really proud of."

One example was character animation. While it originally kept it simple, it wound up committing to detailed animations with more frames, and had to hire more contractors to cope with the workload. Another issue was the game's playable characters. Initially working with a more vanilla story, the studio's promises of multiple playable characters didn't seem like a stretch. Yet the pressure to flesh out their individual stories, in light of the additional funds,

▲ *Guns of Icarus* was Muse Games' most successful Kickstarter title, gathering $198,741 from 4632 backers.

> **"Initially working with a more vanilla story, the studio's promises of multiple playable characters didn't seem like a stretch"**

loomed over the team. "That was almost entirely us feeling the pressure from Kickstarter and our own imagination over [the expectations that] we need more features on the box or something to satisfy people at launch," Eastman says. It's easy to see how projects can spiral out of control from additional goalposts that developers themselves would put up, so as not to disappoint their backers.

PUBLISHERS AND PRESSURES

Imagine the stakes for Nightdive Studios, then, whose *System Shock* remake campaign inhaled $1,350,700 – at least 13 times *Battle Chef Brigade*'s total. The success took Nightdive utterly by surprise.

"At the time, we were only just a team of developers," says Stephen Kick, the studio's founder and CEO. "We didn't have a community manager. We didn't have people dedicated to just answering questions about our community." The number of backers – and the sheer amount of money involved – intensified the stress and its own expectations over the project. "We had, I

think, four or five people that donated $10,000. And then we had 10,000 people that donated $35 for a digital copy of the game, and every single one of those people matters regardless of how much they donated. The weight of that hit us all at once."

Then the publishers came knocking, and the campaign's immense success swiftly propelled *System Shock* into the limelight. "It was really exciting for us to have that kind of attention," says Kick. "Of course, the first things they begin to promise you are that you could build a bigger, better game, your backers are going to be happier, you're going to make more money, that type of thing."

By dangling promises of more support and funds if the team could prove it was capable of producing a blockbuster title, the publishers made incremental demands on the *System Shock* demo, ever-increasing the complexity of managing the project. But the promised funds never came. Nightdive Studios was ghosted by the very publishers that pursued it, who stopped answering emails and ceased ➡

CROWDFUNDING ON

◆ fig

Fig's crowdfunding models are a little different from Kickstarter and Indiegogo. There's the classic rewards-based crowdfunding option that both use, and the other is investment crowdfunding. Say you choose to invest in a game; you purchase Fig Game Shares, which aren't company shares, so developers still retain full ownership of their company and intellectual property. The more shares you buy, the more dividends you'll earn from game sales.

However, Fig is pretty selective about the games it features on the platform, and only run one or two campaigns at any time.

FRESH OUT OF FUNDS

"I knew, going into the press release that I put out, that there was going to be backlash of varying degrees," Stephen Kick explains. "Nobody likes to hear that the game that they donated their money to is struggling. But in reality, it's something that I think every game development team faces at one point or another. We just reached a point where the project was no longer sustainable."

▲ *Hamsterdam*, which featured a hard-hitting kung fu expert called Pimm, was Muse Games' fourth Kickstarter campaign.

all communications, leaving the studio with only empty promises. And this is after Nightdive Studios had ramped up the team to develop a better demo. "They left us with a giant, expensive team to develop a game we didn't budget for," Kick recalls.

Having burned through the bulk of funds raised through Kickstarter just from trying to meet these expectations, Kick felt he had to put the project on hiatus to assess its next moves.

"You have to be willing to find a publisher that wants you to work on the game you're envisioning, and the game you want to make"

SATISFYING BACKERS

The fear of disappointing backers piled on the pressure for Muse Games, a team that's no stranger to Kickstarter campaigns. Known for its steampunk shooter *Guns of Icarus*, Muse had been tapping on Kickstarter to partially fund its games – including *Hamsterdam*, an arcade brawler released last August. Its CEO and team lead, Howard Tsao, pointed out that backers have specific assumptions about the games they support, and when these expectations aren't met, they may feel misled. "Some people look at a Kickstarter campaign almost like a contract deal," says Tsao. "So when they think that a specific item doesn't go exactly to what is written, [they might] not be as understanding."

Game development is also frequently in flux. Keeping exactly to what's being promised in a campaign, especially when the development process spreads over a year or two, is extremely challenging. Take *Hamsterdam*, which was originally slated to be released on the PlayStation Vita. But because developing the game for the console was so tedious, the studio had to drop it from its release platforms. This was a tough call for Tsao, who said some backers were displeased. "In some instances, we just have to give the backers a refund."

Backer rewards were another conundrum; balancing what's viable versus what could attract potential backers is a struggle. For one thing, many developers agreed that physical rewards can mess up an already complex fulfilment process. "I think if we were to do a Kickstarter campaign, we would probably not do physical rewards, or we would partner with another company earlier to make all these things," says Eastman. "It was a lot of work to do physical rewards as it added a lot of management time."

Kick also received similar advice from Red Hook Studios, the team behind *Darkest Dungeon*. "We've got a big box collectors' edition that contains a manual, a SteelBook case for the disc, a figurine, a pin, and custom artwork," Kick tells us. "We also offered a limited number of resin statues, custom laptops, and a launch party we have to host. It's going to be totally manageable and we're going to fulfil those rewards, but there's a tremendous amount of work that goes into designing that stuff, manufacturing it and distributing it."

THE TOOLS FOR CROWDFUNDING

While developers found the Kickstarter tools for fulfilment fairly rudimentary, they think

KICKSTARTER: FOR EARLY ADOPTERS?

"Kickstarter has migrated a little bit towards pre-ordering and getting exclusive content early," says Howard Tsao. "When we first started Kickstarter, it was made up of a small but passionate community out looking for indie projects. So we've just been using the platform ever since, before we launch a project, to try to drive awareness and get early adopters into the game."

it's adequate for smaller-scale campaigns. "Kickstarter organised what they called 'backer reports' really well, which is when people give me their addresses so I can ship them things, or emails so I can send a code," says Hall. "Kickstarter was great for that. Anything beyond that, Kickstarter will not help you with." For campaigns with tons more backers, like *System Shock*, third-party services are indispensable; managing it alone is a logistical nightmare. "Because of the scope of our project, and the fact we had over 20,000 backers, we opted to go for something like BackerKit, because it's a lot of information to handle," says Kick.

One persistent concern that Hall has about Kickstarter, however, is the locking in of pledges; for *Heartbound*, Hall says a quarter of the backers didn't pay for their rewards. Some even pledged a steep amount like $1000, and then opted not to pay when the campaign concluded. This loophole had sunk another studio's campaign before: 2Awesome Studio's *Dimension Drive*. In this case, a €7000 pledge was found to be fraudulent, which caused Kickstarter to retract it at the campaign's final half-hour. Had the bogus pledge gone through, it's not hard to imagine the huge problem it would have caused: the studio would have been €7000 short of its target, but still expected to deliver the game.

GETTING KICKSTARTER ADVICE

Unforeseen circumstances will inevitably beset game development at some point, and that's why the developers we spoke to emphasise the importance of constant dialogue with their backers. "Part of it is communication with

people… and if people are really dissatisfied, working with them through the process. I feel like people are generally willing to listen," says Tsao.

And as for Nightdive Studios, the team has since resumed development on *System Shock* – and helped put to rest some of the community's worries (check out Wireframe #31 for more on the game's progress). Looking back at the game's turbulent Kickstarter history, Kick was grateful for the community's support, some of whom have volunteered to moderate its Discord channel, or even joined the team to aid with development. The thorny publisher issue taught him a valuable lesson, too. "You have to be willing to find a publisher that wants you to work on the game you're envisioning, and the game you want to make, because as soon as you start compromising, there's no telling what lengths they're going to make you go [to]," Kick says. "And at that point you're on a slippery slope, you could end up burning through your funding to try to appeal to a publisher and end up with no deal.

"I'm just so grateful that our other team at Nightdive was able to release a couple of games during that time, which enabled us to keep everything going," he continues. "So it could have gone the other way. And at the end of the day, I'm so happy we're still making this game." Ⓦ

▲ The $900,000 goal set for the *System Shock* campaign was carefully calculated..

▼ Due to *Battle Chef Brigade*'s expanded scope, orc chef Thrash's backstory is being fleshed out further.

RETROGAMING
WITH
RASPBERRY PI

Retro Gaming with Raspberry Pi shows you how to set up a Raspberry Pi to play classic games. Build your own portable console, full-size arcade cabinet, and pinball machine with our step-by-step guides. And learn how to program your own games, using Python and Pygame Zero.

- **Set up your Raspberry Pi for retro gaming**
- *Emulate classic computers and consoles*
- **Learn to program retro-style games**
- *Build a portable console, arcade cabinet, and pinball machine*

Toolbox

The art, theory, and production of video games

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A formula for making games? Discover it for yourself on page 50.

50

Story pacing via *The Last of Us* – see page 66 for more.
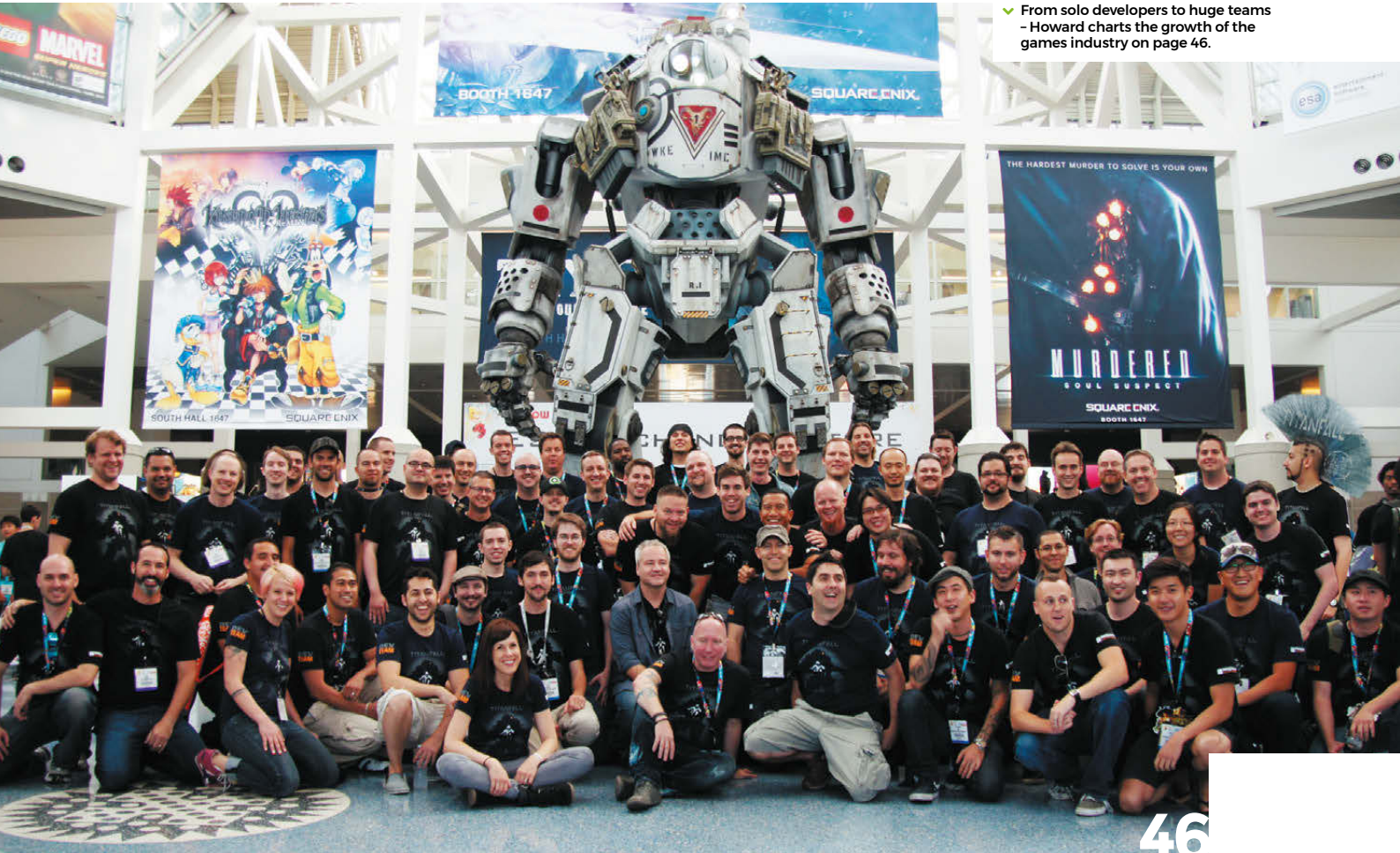
From solo developers to huge teams – Howard charts the growth of the games industry on page 46.

The principles of **game design**

Howard tracks the journey of video games, from birth to now – in all its cyclical nature
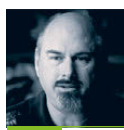
AUTHOR
HOWARD SCOTT WARSHAW

Howard is a video game pioneer who authored several of Atari's most famous and infamous titles.
onceuponatari.com

What does it mean for an industry to mature? Well, it starts out as a baby and then it grows. As an infant, the video game industry only accommodates a few people. And it has one primary toy to play with: the Atari 2600. It's age-appropriate to the newborn player, like building blocks. And it's simple enough that it only takes one person to make a video game. But as babies grow and become children, they require more complexity to hold their interest.

As techniques improve and more memory becomes available, 2600 games get bigger. The game makers need help to improve them. An artist is added along with a digital sound composer, and the differentiation of assets and code begins.

That's good for a while, but soon the child industry enters adolescence and outgrows the 2600. It gets bored and demands more sophistication. More capable consoles arise to vie for the spot of primary toy. More horsepower in the computing requires more people to satisfy its hunger. The programmer becomes *programmers*. Not long thereafter, the artist goes plural as well. Suddenly, the solo game maker has become a *development team*. And once you have multiple units of labour involved, the concept of specialisation kicks in. Suddenly I don't just make a game, I make specific parts of a game. Incrementally, the diversity of a game maker's experience increases.

NEW DIMENSIONS
More people means more opinions. Everyone involved in a game wants to make suggestions,

as well they should. But who decides which suggestions make it in and which don't? There has to be someone who decides in which direction the game will go, a de facto conceptual leader of the effort. A new job appears on the scene: The Designer.

Of course, when a group has two or three programmers, an artist or two, and a designer, someone needs to be dedicated to oversight and managing communication with the outside world during the production, hence The Producer, aka Management.

As time goes on, the computing power grows. There is more you can do in a video game, so it takes more work to realise that potential, so more staff are required. As early adolescence yields to the teens... 2D, or not 2D? *That* is the question!

The answer, of course, is 3D. The advent of 3D game environments is like the rebellious teens. We're going to do it bigger and better. This leads to an explosion in tasks and jobs in game making. Coders specialise in game logic, collision detection,

It's been quite a journey to get us from the Atari 2600 to *Angry Birds*.
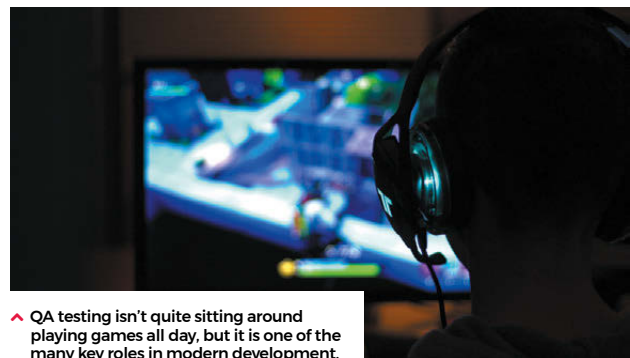
QA testing isn't quite sitting around playing games all day, but it is one of the many key roles in modern development.

AI, complex controller, and state logic, etc. Adding graphics and maths accelerators opens new horizons in display generation and optimisation. That's a lot of kinds of code.

As programmers enhance display capacity, artists and designers enjoy increased potential to explore *their* craft. Art expands to include 3D modelling, textures, animation, lighting, and so on. Design entails high concept, level design, play mechanics, event sequencing, etc. Audio produces music loops, effects, ambient sound, and voice-over. That's a lot of assets.

This brings focus onto code/asset creation and management tools, which begets more programmers. The original code management system was an 8-inch floppy disk, now there are vast databases in clouds that control assets and code versions. Many people enjoy full-time employment providing the tools used to develop a game. Just like a race car driver has no chance without a pit crew, a game cannot succeed without solid tools. It's the meta-level of game programming: I'm not making the game; I'm enabling the game to be made.

I haven't even mentioned an entire other parallel support structure: QA and testing. They were there early on. Atari had some testers to play games and monitor fixes. This has grown to full-blown testing departments that provide a career path for some into video game development. There are successful video game producers who started out as testers.

NEW PATHS

Speaking of career paths, how do people get into games? Programmers go to engineering and computer departments. Art schools now feature digital art production and 3D asset creation majors. Increasingly there are college programmes focused on video game design as well. Video game creator has gone from 'job nobody ever heard of' to common college curriculum.

This is the Video Game Job Tree. In the beginning, there were game makers. Then there were artists and programmer/designers. Then there were artists and sound people and programmer/designers. Eventually, through segmentation of skills and specialisation of labour, there came art groups, design departments, sound production, design teams, and a broad variety of specialised programmers. Management evolved also, from self-directed game maker to multiple layers of responsibility covering huge development teams.

This industry grew from its one-game-one-programmer infancy into a responsible caretaker for game developers all over the world (look at all the jobs a video game contributes to the economy). At times it may seem more like the abusive parent when post-product layoffs come around. But a 'next project' also comes along, and teams are jumbled and reformed. Not unlike movie production.

This article started many years ago with the brand-new phenomenon of a single person making a video game. By the end, we have a mature industry. It reached maturity just like a human life, so naturally, its thoughts turn to reproduction. Ultimately it had a baby, giving birth to app-based games on handheld devices. This is the next generation.

My beloved industry matured to the point where it takes many, many, *many* people to make a quality game. Then app-based games show up on the scene, and suddenly we're all the way back to the beginning where a person can sit down and make a complete game once again. It's the circle of gaming life. ⓦ

> **"I'm not making the game; I'm enabling the game to be made"**

Matters of size

I find it interesting to note that as video games have gotten bigger, computers have gotten smaller. This seems counter-intuitive. Usually one needs more space to hold a larger entity (though on some level it reminds me of the person who deletes files from their laptop because it's too heavy to carry). How long can this inverse size relationship continue? If taken to its logical limit, I suppose ultimately we must arrive at the point where an infinite game resides nowhere.

The question of
the open world

Real cities can be vast, but their game counterparts
don't always need to be so sprawling and detailed
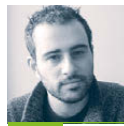
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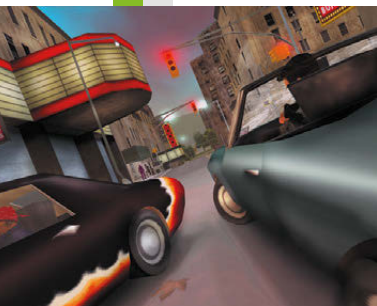
A single, universally applicable,
perfectly economical method of
creating video game cities sadly
doesn't exist – not yet, at least.
What's more, neither accurately
simulating an urban world and all its systems, nor
creating a completely procedural-but-satisfying
setting are realistically feasible options, and
we still have to rely on artists and designers to
conjure small miracles. Thankfully, sometimes
whole towns can be summed up in a few well-
selected words, and the feeling and scale of even
a metropolis can be conveyed via a painting.

When it comes to modern video games,
the level design and early concepts of any
contemporary city will often have to begin with
the choice between an open world or a game
space consisting of more or less observably
connected nodes and sub-areas. It's a choice that
is neither always obvious, nor necessarily tied
to genre.

OPEN SPACES
Open worlds are essentially continuous,
seemingly analogue, and in most cases large
game spaces. They are virtual worlds that can
be freely explored, and where objectives can be
tackled in seemingly any sequence. Players do
not move along predetermined paths, and thus
narrative or in-game structure is often imposed
via gates of all sorts, physical boundaries,
and clever mission design. Interestingly, cities
have always been well-suited to the open-
world approach. Despite monstrous hardware
constraints, civic open worlds have been around
since the 1980s, with *Turbo Esprit* and *Dun Darach*
being early examples, though it was the 3D city
of *Grand Theft Auto III* that defined what modern
gamers tend to expect.

Thankfully, not all open worlds have to be
in 3D, feature cars, or function as sandboxes.
Still, many actually do – the cities of *Saints Row* in
particular revel in their silly and playful nature.
Similarly, open-world urbanism doesn't have to
encapsulate a whole city, nor be restricted by it.
The *Yakuza* series is happy to let players roam
in the confined space of Tokyo's re-imagined
red light district, whereas *Skyrim* sports several
settlements in its world. *Thimbleweed Park*, on
the other hand, crafts its continuous city in 2D,
and could have probably even done so using
only text.

But why do we choose to build urban
open worlds? Why do we enjoy them? Well,
I firmly believe that what lies at the core of
such places is the promise of a vast *possibility*
of space. The sense that anything you see can
be visited. Particularly when it comes to cities,
the experience of unconstrained exploration
is a fantasy come true, and one that ties in
wonderfully with our familiar experience of how
continuous urban space is. Topologies are easier

Grand Theft Auto III doesn't
look as impressive as it did
back in 2001, though its
influence in urban
open-world sandboxes
remains undeniable.

Exploring Hinterlands
Cities and towns located in wider, larger open worlds such as Whiterun in *Skyrim* or
Novigrad in *The Witcher 3* usually have the luxury of not having to deal with inflexible, often
unrealistic boundaries. They do, however, have to ensure they are surrounded by believably
fleshed out hinterlands. The influence of a city doesn't end at its limits. Cities are powerful
magnets, and geographical nodes whose influence can be felt far away. Always try to imagine
what is around each of them, then, and how they're thought of throughout your setting.

^ The realistic open world of *L.A. Noire* is an impressive recreation of 1950s Los Angeles, absolutely worth exploring and studying.

^ The views provided through *BioShock*'s fine windows were crucial in painting the mental image of a vast underwater metropolis.

< The wonderful map of Neketaka in *Pillars of Eternity II* connected the sub-areas you could visit through the city into a cohesive whole. (image via **bit.ly/2C9zHVf**)

to understand too, and getting to master the geography of such a virtual city is feasible and often desirable. Every nook and cranny, and every shortcut hidden in plain sight is there to be discovered and exploited.

Getting scale right can be tricky though, as the amount of assets needed to recreate even a modestly sized town in all its detail is astronomical. Careful abstraction, modular techniques, and visual tricks such as the curving of roads are required to bring assets numbers down to a manageable level, while simultaneously implying size in a world that players can see in its entirety. Even Ubisoft's lush and visually convincing Victorian London of *Assassin's Creed Syndicate* can be traversed in less than 20 minutes, as such attempts were made to trick its visitors by carefully placing quests so as to have them run in (subtle) circles. The boundaries of an open-world city without walls can also pose a bit of a problem. Not all games can follow the example of *GTA V* and exist on islands, nor can all settings depend on supernatural horrors to enforce city borders.

CURATED CITIES

Fractured space, on the contrary, rarely has to obsess with the boundaries of cities. It is more concerned with delineating and logically connecting its more manageable urban nodes while maintaining the illusion of a cohesive, existing whole. Non-open-world cities restrict freedom of movement, but help us curate the urban experience, pace plots, control flow, and place emphasis on specific sections of a city. The original *Resident Evil 2*, for example, takes place for the most part in a police department, and yet the presence of Raccoon City is constantly felt.

The framing opportunities offered by discreet, restrictive places make them excellent at implying civic sizes. *Grim Fandango*'s metropolis of Rubacava consisted of a dozen or so screens packed with detail and carefully crafted

"Open worlds have been around since the 1980s"

backgrounds, whereas the constantly shifting RPG geographies of Sigil in *Planescape: Torment* could never be displayed in a cohesive, continuous way. *Dishonored* also benefited from breaking up its Dunwall into disconnected (but curated and characterful) chunks, while giving its players the mental tools to imagine a complete metropolis. Not only would an open-world city have doubled *Dishonored*'s cost, but it would have also cost the game its focus. This node-like type of spatial organisation allows us, after all, to become intimate with the more familiar scale of the neighbourhood.

Not unlike open worlds, fractured spaces come in all sizes and shapes. They can be 2D or 3D and rendered in a variety of styles. Each space can be anything from a static background to a small open world-like area which renders a specific part of the urban fabric, as was the case with both *BioShock* games. The full city of Rapture was out of bounds, but extensive sections *were* modelled, and players were allowed some spatial freedom. Furthermore, to paint the complete picture of a city that was actually there, views from windows were employed to show off locations that couldn't plausibly be visited due to flooded tunnels and failing bulkheads.

Finally, when it comes to thematically and mechanically connecting those separated, distinct levels in a city, a variety of techniques can be used. Maps, cutscenes like the one introducing Anor Londo in *Dark Souls*, or even interactive and semi-interactive vehicle sections. In some cases, even a textual description of the voyage and a sketch can be enough. Ⓦ

Intracity Connections

Clicking on a map location to be whisked away to it, walking, or simply driving there in a car are all valid options, but cities should always make even more (era and setting appropriate) transportation options available to players. These could be both private and public, and could include everything from teleporters and horse-drawn carriages to subways, motorcycles, and bicycles. Avoiding tedious backtracking while enticing players to explore is a difficult balance to strike, and it almost invariably demands walkable spaces too. Obviously, researching the history, present, and fantasy of transportation can be of immense help here.

Toys **+** Rules **= Game**

Thinking of game design in the context of Toys + Rules = Game unearths useful tools for managing development

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If you grab a football from your garden shed, then you've got a toy. If you take it to the park with some friends, chuck down some jumpers for goalposts, and agree you're not allowed to touch it with your hands, then you have a game. We can express this as Toys + Rules = Game, a term which I picked up via a series of industry colleagues and acquaintances. It's an elegant definition of a game, but it's also a useful framework for examining the process of video game design and development.

Let's start by breaking down each component of the formula into separate definitions:

- **Toy:** A conduit for user interaction designed for entertainment and freely engaged playfulness.
- **Rules:** A set of explicit or understood regulations or principles governing conduct or procedure within an activity.

This leads us to:

- **Game**: An activity participated in via a toy or toys, governed by a set of explicit or understood regulations, undertaken for entertainment.

THE TOYS / RULES MATRIX

On the right-hand side of the Toys + Rules = Game equation, we know there are good and bad games, different genres, and varying levels of design and development complexity. The roots of these differences should therefore exist or, if you prefer, originate in the left-hand side of the equation. It's self-evident that the sophistication of the toys in a game varies, as does the complexity of the rules. This is a good starting point for a matrix onto which we can plot different genres.

Nintendo, which is often said to be a toy company at heart, tends to lean towards sophisticated toys and relatively simple rules for its games. It begins with an enjoyable mechanic, a toy or set of toys which are fun to play with in isolation, before building the game itself around that core. If you strip away the rest of the game, you can derive pleasure from simply running and jumping around in *Super Mario 64*, and the same applies to almost every other Nintendo game you can think of. The top-left quadrant on

⌄ The Toys / Rules Matrix is an interesting way to think about genre.
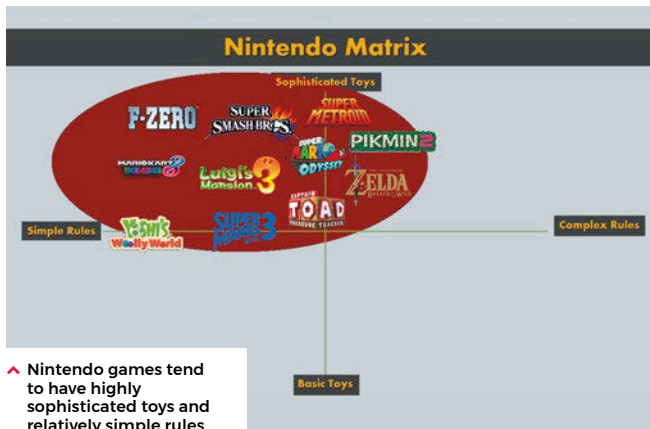
Nintendo Matrix

▲ Nintendo games tend to have highly sophisticated toys and relatively simple rules.

Strategy Matrix

▲ Strategy games are the mirror image of Nintendo on the matrix.

the matrix is where most Nintendo games are to be found.

Developers of strategy games approach things from a more rules-focused perspective and tend to feature relatively basic toys as the conduit for interacting with a complex rule set. That conduit might simply be the mouse cursor and menu systems people are used to using outside of games. The pleasure players derive from these games is about managing an interconnected set of systems; of learning and mastering the rules, as opposed to enjoying sophisticated and novel toys. They are a mirror image of Nintendo in the Toys / Rules Matrix.

"It's a useful framework for examining the process of video game design"

In the top-right quadrant of the matrix, you will find games and genres which have both sophisticated toys and relatively complex rule sets. These include action-RPGs like *Deus Ex* and *Skyrim*. The characters in these games (the toys) usually have sophisticated capabilities, especially in combat, and the worlds they explore are governed by a rich tapestry of complex rules and systems.

Finally, we have those magical games in the bottom-left quadrant which merge simple rules and basic toys in such an elegant way that they feel like more than the sum of their parts. Consider *Super Hexagon*, *Switch 'N' Shoot*, or – perhaps most famously of all – *Tetris*. These games tap into a pure state of flow which audiences find entrancing and irresistible.

DEVELOPMENT OVERHEAD

As you might expect, the more sophisticated your toys, and the more complex your rules, the bigger your development overheads tend to be.

Action-RPG Matrix

❮ Games with both sophisticated toys and complex rules, such as action RPGs, are often big-budget affairs.
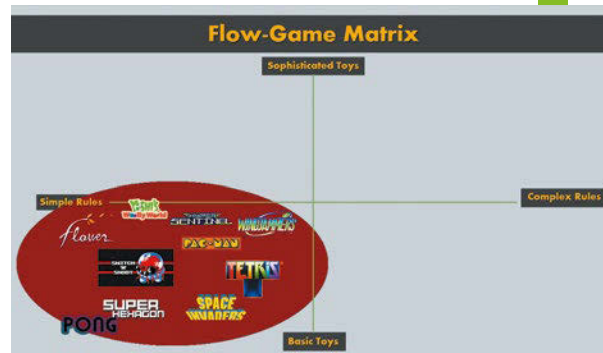
Flow-Game Matrix

❮ The polar opposite to the big-budget action RPGs on the matrix are 'flow games' like *Tetris*.

Sophisticated toys often involve a broad range of possible outcomes for a given input. Mark Brown of Game Maker's Toolkit calls these versatile verbs, which he defines as "one action that can have multiple uses, depending on how you perform it." A good example is Mario's jump, which varies in style, animation, hang-time, and so on, depending on the exact input profile of the analogue stick and jump button. Similarly, complex rule sets involve a tangled network of many different game states each connected to multiple other ones. The resulting increase in development complexity is why your overheads will be greater. ➡

> Nintendo is well-known for adopting a highly iterative process, which helps it to consistently deliver novel toys at the heart of its games.

Figure 1: Thinking about your objectives for the toys, rules, and novelty factor in your game can help to determine how reliant you will be on iterative design and development.

The Toys / Rules Matrix tells us a lot about the variations we see in game genre, then, and it's helpful in determining development complexity, which impacts overheads. But it doesn't give us the complete picture regarding development processes, and it doesn't account for everything which affects your overheads. For this, we need to consider some additional key factors.

NOVELTY DECISION TREE

Novelty isn't a requirement in game development, but without any novelty factor at all, your game must be a perfect clone of an existing game. In other words; Toys + Rules = Game, but (Toys + ToysNovelty) + (Rules + RulesNovelty) = Original Game.

Originality isn't the same as quality. Clearly it's possible to make a perfect clone of an excellent game, such that the quality is high, but the novelty is non-existent.

It is, however, perfectly valid to target a lower novelty factor in one or more areas of design. Emulating successful toys or rules from other games while significantly improving production values can be a successful strategy, for example. As can targeting low novelty in one category but high novelty in the other. We can see this clearly in the strategy games which deliberately leverage the familiarity of the mouse cursor/ menu interface as low-novelty, basic toys. In this case, the lack of novelty is designed to keep the focus on the joy of mastering the rules, which themselves may exhibit a greater novelty factor.

Novelty also pushes you to adopt more iterative design and development processes, which in turn push overheads further upward. A low novelty factor enables a process where it is easier, relatively speaking, to design 'on paper' in a premeditated way, because you have existing examples to mimic. A high novelty factor is more likely to require an exploratory, iterative approach to design and development, since there's no blueprint to follow. This means a significant development investment in trial and error, with a willingness to throw away work when experiments fail.
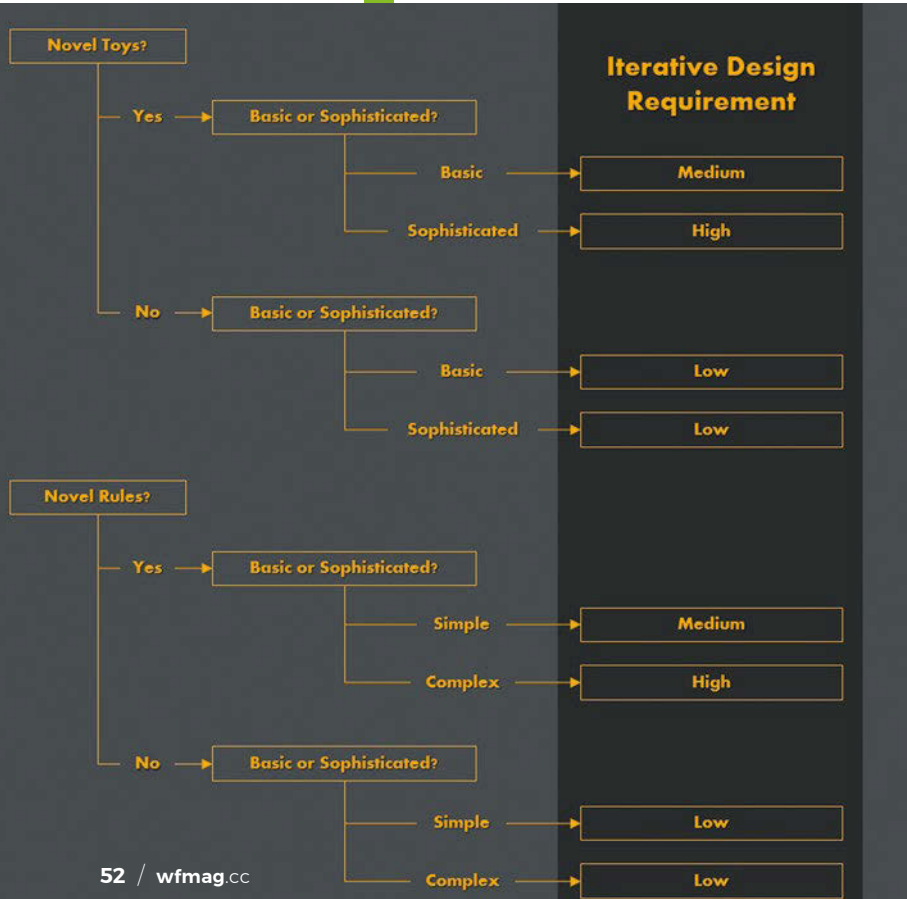
Figure 2: The first prototype of *Wreckout* featured a 'tug-of-war' mechanic as part of the central toy.
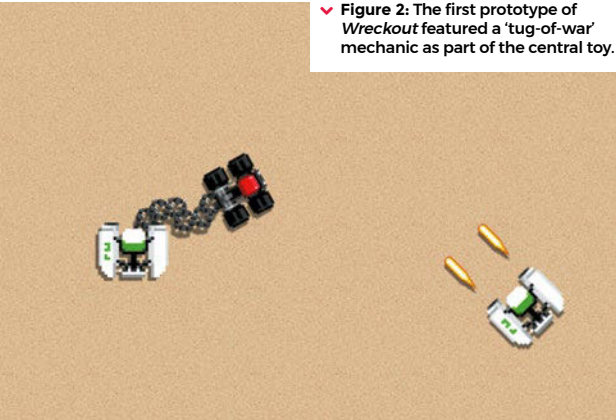
Figure 3: Through iteration, the toy became a 'vehicle-slingshot', and the setting moved to a sports arena with goals at either end.

Like a chef trying to discover a novel dish which is also delicious, you must be willing to get your hands dirty and experiment with real ingredients. Even the most experienced culinary experts will fail multiple times before homing in on a perfect recipe, and since you're working with real ingredients, the cost of each failed experiment is significant. The amount of time and wasted food you can stomach depends on the size of your kitchen, and the number of chefs you can afford to employ.

With this in mind, the Novelty Decision Tree (see **Figure 1**) is a useful tool for determining how reliant your project is likely to be on iterative design and development:

WRECKOUT: NOVEL TOYS, ITERATIVE DESIGN

The development of *Wreckout* grew from the desire to build a game around a novel, physics-based toy. For the first prototype, which featured a top-down view of a car in a desert, lead programmer Jonathan Port started by focusing purely on the handling of the vehicle. This was the primary interaction layer for our toy – the level at which the player has direct control – so it had to feel enjoyable and satisfying in and of itself. In pursuit of this requirement, Port developed a box-shaped vehicle which could move rapidly in any direction – more like a nimble character than a traditional car.

The next stage was to focus on developing a novel secondary layer which complemented this core agility. Port came up with a grappling chain

"It doesn't account for everything which affects your overheads"

which could latch onto enemy vehicles to engage in a tug of war-style mechanic (see **Figure 2**).

While the grappling felt satisfyingly tactile right away, the tug of war aspect worked against the nimble handling of the vehicle. For the next iteration, we abandoned the tug of war and added the ability for the grappling chain to latch onto a ball, giving us a unique 'vehicle-ball-slinging' mechanic – a bit like an Olympic hammer thrower with a car in place of the athlete.

This evolution of the central toy immediately screamed fun, but the open-desert environment meant there was a slow turnaround between slinging the ball and driving off to collect it again. The ball instinctively made us think of sports, so we decided to run with that theme by moving the action into a *Speedball*-style arena with a goal at either end, adding two-player support in the process.

The competitive play this produced was a clear step forward, but something didn't quite feel right. In *Speedball* and, more recently, in *Rocket League*, you progress gradually across the field toward your opponent's goal until you're in striking range, but our novel toy allowed players to fling the ball from one end to the other in a single action, resulting in a more *Pong*-like tempo (see **Figure 3**). Scoring a goal was disruptive to this high-tempo flow, which felt counter-intuitive.

The breakthrough came in changing the rules to better serve our central toy, by switching the goals for rows of bricks, *Breakout*-style. This iteration not only eliminated the disruption – ➡
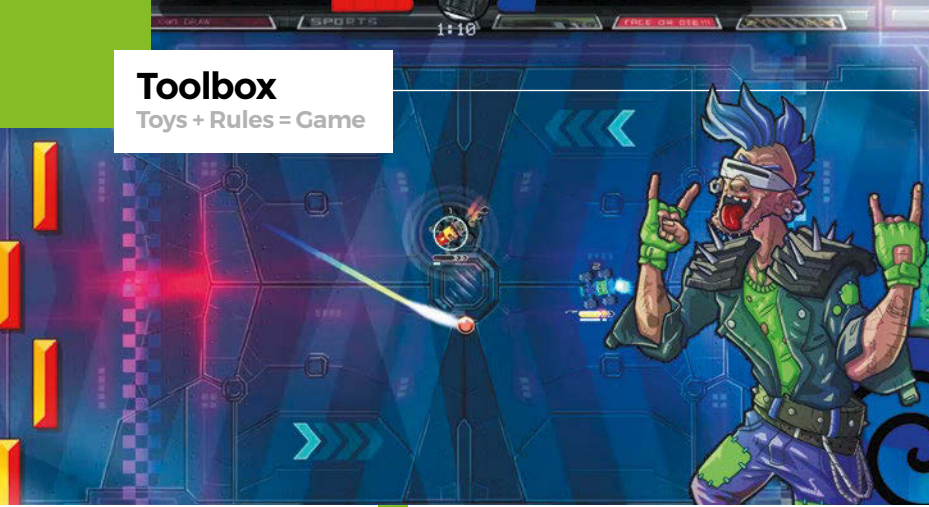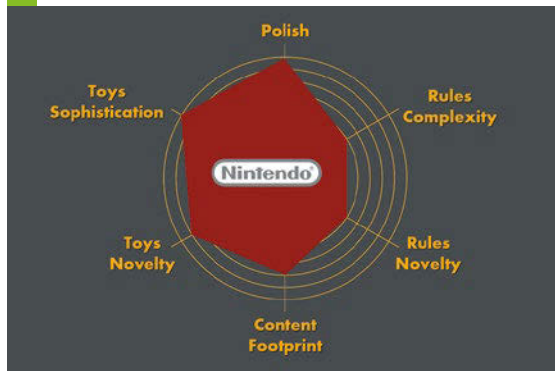
▲ **Figure 4:** We adapted the rules to better suit the core toy by introducing *Breakout*-style bricks instead of goals.

❯ **Figure 5:** You can use this graph to model your overheads. In this example, we see the large overheads of a typical Nintendo game.

❯ **Figure 6:** The developers of *Silk* used rules-novelty and complexity to generate a colossal game world while keeping overheads to a minimum.
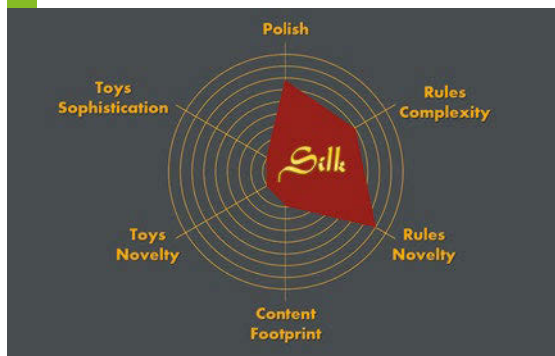
creating intense, fast-flowing encounters – it also introduced a natural negative feedback loop for the leader in any given match, since they would have fewer remaining bricks to aim for. This gave rise to matches where fortunes could turn quickly, bringing a palpable sense of jeopardy to the action (see **Figure 4**).

The deliberate choice to shoot for a novel toy led us to an iterative development process. By allowing this process to lead us from the original tug of war toy towards the slingshot-toy, and by being prepared to throw away anything superfluous to the joy of using that toy along the way, we had homed in on a core gameplay loop which felt intuitive, satisfying, and fresh. This became the beating heart of *Wreckout*, and by keeping the focus on the toy, we could select complementary rules with a lower novelty factor to serve it – taking inspiration from *Breakout* for the bricks and from beat-'em-ups for the round-based scoring system.

OVERHEADS PLOTTER

Development complexity and iterative development aren't the only factors which affect your overheads. We also need to consider the traditional factors of content footprint and level of polish.

If you're cloning *Space Invaders* but creating hundreds of beautiful backgrounds and composing hours of original music for it, then you may have simple rules, basic toys, and a low novelty factor, but your time and budget is still being expanded by your content footprint.

On the other hand, you may be able to quickly turn around a game with sophisticated toys, complex rules, a high novelty factor, and lots of content if you're willing to release a poor game with loads of bugs in it. Polishing a game to high standards takes time, effort, playtesting, and plenty of experience – in other words, it increases your overheads.

From a project management point of view, a single-person developer with a shoestring budget might do best by targeting the simplest of rules, the most basic of toys, minimal content, and a complete lack of novelty. Indeed, for aspiring novices who want to take their first steps in game development, this is the ideal choice, with the classic advice being to recreate *Pong*.

For commercial developers who need to think about marketing a game successfully, not to mention enjoying a creative challenge, you need to push the boat somewhere within the Toys / Rules Matrix, and you always need to push for maximum levels of polish. Choosing where to concentrate your efforts such that the sum of your ambition falls within the constraints of your resources is a task all developers must face. There are many ways of tackling it, and by mapping toys, rules, and their associated novelty factors alongside the two traditional factors, we gain a useful tool for modelling the total impact of your ambitions on your overheads, which I call the Overheads Plotter (see **Figure 5**).

SILK: LEVERAGING NOVEL RULES FOR SCOPE

We recently had the opportunity to work with renowned designer Chris Bateman (of *Discworld Noir* fame) on porting and publishing his exploration RPG *Silk* for Nintendo Switch. One of the interesting lessons for us was how Bateman and his team leveraged rules-novelty and

complexity to generate a colossal game world while keeping the development overheads low.

As you can see in **Figure 6**, *Silk* has very basic toys, and a small content footprint, but invests instead in rules novelty. While *Silk* takes inspiration from *The Lords of Midnight* and *King of Dragon Pass*, it mashes them together in novel ways such that the end result is nothing like the source materials. This allowed the game to be created on a tight budget by a team of five, while still offering a vast range of different challenges – including exploration, trading, battle, and diplomacy. The entire game is underpinned by minimalist systems design, which enabled a small content footprint, and yet it offers players not just a large world to explore, but the biggest handcrafted open world of all time.

This impressive feat was accomplished by focusing the design tightly on two moderately complex systems: a map-engine based on classic tile-based explorer games from the 1980s, and a dialogue engine where the player's party proposes possible tactics in each encountered situation. This latter system is a completely novel design (although inspired by the Clan Ring in

> **"The deliberate choice to shoot for a novel toy led us to an iterative development process"**

King of Dragon Pass), and it creates an entirely unique systems-based way of interacting with the world. This allowed the team to fill out the vast landscape with richness and variety of play, while leveraging minimalism and impressionism in the presentation of the game world to keep the content footprint under control. In this regard, *Silk* demonstrates that the near-infinite possibilities of rules-focused, systemic game design can allow indie developers to go big on scale without breaking the bank.

USEFUL TOOLS

By thinking about the implications of the Toys + Rules = Game definition, we've built a trio of high-level tools which any developer can apply to their project. The Toys / Rules Matrix helps you to think about genre, and to consider which factors are central to your concept. The Novelty Decision Tree helps you to determine how reliant your approach may be on iterative development and the inherent costs that entails. Finally, the Overheads Plotter allows you to bring all of this together to determine the likely production footprint for your endeavour. ⓦ

▲ **Music is extremely effective for creating a strong mood in your game's environments.**

AUTHOR
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▼ **We were fortunate to score (pun intended) the brilliant composer Wilbert Roget, II to write the music for *Anew*.**

Indie reflections:
Making Anew Part 13

Should you use free music? How do you track down a composer to collaborate with? Jeff offers a few tips for indie devs

Music in video games can be much more than simple background noise to fill in silences during gameplay. It can help express a story, define characters' personalities, create mood and emotion, and act as a reward mechanism for players. Done well, the music in a game can dramatically enhance the player's experience and make the game unique and memorable.

FIRST STEPS
There are many approaches to creating and implementing music in a video game. Ultimately, you as the creator must decide what type of music to use, how you will use it to support gameplay, and how to find a composer who is well-suited to your project.

A great way to begin is to research how other developers use music in their games. Fire up your console or digital game library and play through a variety of games, analysing their use of music. Notice such things as the style of music (electronic, orchestral, chiptune, pop/rock, etc.) and how it makes you feel while playing; how frequently the music plays; and whether it loops constantly to create an overall mood in a level, as in *Mega Man*,

or plays sporadically to heighten specific dramatic moments, as in *Dark Souls*. Going further, analyse how other game developers implement musical feedback mechanisms. Brief musical phrases can be used to reward players for discovering a secret area or item, or to indicate if a decision they've made has had a positive or negative impact on the story or game world. Use your research to formulate a plan for the appropriate use of music in your own game.

If you are creating a game that places an emphasis on story and character development, music will be central to the play experience and will require substantial consideration from a planning and implementation standpoint. Developing musical themes, varying instrumentation and orchestration, and deciding how and when to trigger playback during gameplay will be important to the play experience and require time and attention to detail in order to design properly. If your game is more casual in design, the music may simply be a looping track in the background that establishes and maintains a consistent mood or emotional tone.

Many developers struggle with the decision to use free music, 'buyout' music, or to hire a professional composer or musician to score

their game. Avoid free music if at all possible: it is noticeably low-quality in style and technique, often contains degradation due to compression artifacting, and chances are, has already been used in other people's media projects. The quality of for-purchase, royalty-free ('buyout') music has improved significantly in recent years and represents a step up in quality over free music. Sites such as **premiumbeat.com** offer massive libraries of high-quality tracks covering a wide variety of genres. Created by professionals, these tracks will sound much better in your project than the freebies.

Ideally, you will hire a composer to write a custom score for your game – either an experienced pro, or an eager, talented rookie. Not only will their music sound great, but it will also be unique to your game – no one else will have music that sounds exactly like yours! Composers writing specifically for games have mastery of how music functions in an interactive environment to engage with players' emotions and enhance gameplay. Some composers will not only write the music, but also technically implement it into your game world. Bandcamp and SoundCloud are excellent resources for finding established or up-and-coming game composers and musicians.

MUSIC IN ANEW

Anew's composer, Wilbert Roget, II and I approach the musical direction for each area in our game by addressing the following questions: What emotional tone do we want to establish? What narrative information do we want to reveal to the player through music? To help Will frame the musical needs for any given narrative moment or environment in the game, I send him a variety of reference materials including gameplay and story descriptions, 'mood boards' with lighting and colour references, as well as screenshots and video capture of environments-in-progress.

I encourage Will to fully explore many musical styles atypical for the action-exploration genre of game, and to take creative risks with his score. While many games find inspiration in popular modern film scores, Will's music has been inspired by 'art music' orchestral composers such as Einojuhani Rautavaara, Béla Bartók, and John Adams. Instead of blanketing the zones in *Anew* with constantly looping music, we strategically implement it for maximum emotional impact.

↑ Even after music is delivered by the composer, some edits may be needed before implementation into the game.

Will's unique score combines virtual orchestral instruments, analogue synthesisers, and live soloist performances to create a beautiful, otherworldly musical palette that perfectly complements the gameplay and story of *Anew*.

Will and I developed an 'A- and B-side' system for implementing environmental music into the game world. When the player enters a new zone, an A-side main theme plays to establish a mood and emotional tone. After this track concludes, a set amount of time transpires during which no music plays. This rest allows the game's sound design to come to the forefront and alleviates fatigue from continuous music playback. The game then randomly plays one of several shorter B-side tracks, which are tonal variations of the A-side track. After the B-sides have played, the game loops back to the A-side, and this pattern repeats itself. Since music playback is essentially randomised, the score never feels repetitive.

Music plays a crucial role in communicating plot and story in *Anew*. There are several recurring musical themes that weave together the various narrative threads in the game. Each motif is tied to a specific main story element and used throughout the game to coincide with important moments of environmental storytelling. When the player hears a particular theme, they subconsciously note its association with the visual and gameplay elements in the world and assign meaning and importance with its use.

As with certain elements of sound design, music also provides gameplay feedback, builds tension during large-scale boss battles, and can act as a reward mechanism for opening locked doors and solving puzzles. In all cases, the music in *Anew* helps maintain a firm command of the player's emotions and establish a world that feels alive. ⓦ

> ### "Developing music requires time and attention to detail"

↑ Music as reward mechanism: we hear the glorious *Ode to Joy* when completing a level in *Peggle*.

⌄ How often will music play in your game? *Mega Man* (and many retro games) plaster the music wall-to-wall during play.

Fortune favours the bold

If you're interested in working with a game composer, or looking to break into the world of game music, I encourage you to reach out directly to the music makers you admire. Many composers have personal websites with contact information listed. Simply send them a message introducing yourself and your project. Most game composers are talented, down-to-earth people who will take a few minutes to send you a reply.

Developing wall-running in Unity

Let your players defy gravity and dodge enemies with a fleet-footed wall-running mechanic

AUTHOR
STUART FRASER

Stuart is a former designer and developer of high-profile games such as *RollerCoaster Tycoon 3*, and also worked as a lecturer of games development.

We're going to create our very own parkour or wall-running mechanic, as can be seen in games like *Mirror's Edge Catalyst*.

We're going to look at how to create a wall-running mechanic in Unity. You can see this mechanic in action in games such as *Titanfall* and *Mirror's Edge*; the mechanic will allow you to run along a wall in a gravity-defying motion. We are going to use the existing first-person blueprint provided by Unity and extend the code to achieve what we want.

SETTING UP
You'll need to open your first-person character project, which can be made using our Build Your Own First-Person Shooter in Unity book (see left). We'll create the prototype in a new scene so we can try out this new mechanic in isolation. We need to select File > New Scene – we can go ahead and delete the Main Camera. We then select the Player prefab from the Project panel and drag this into the Hierarchy view.

BUILDING OUR LEVEL
Before we can even think about creating a detailed level, we'll have to build some geometry for our character to stand on and wall-run along. We're going to use the basic 3D shapes in Unity to whitebox our level. First, we'll select GameObject > 3D Object > Cube. This will appear in the Scene viewport and be listed in our Hierarchy window. We can now use the Inspector to position and scale our object. On the right-hand side of the Unity editor, you'll find the Inspector panel, which has details about the selected object. With the cube still selected, set the X,Y,Z Position to 0 and the Scale values for the X to 20, Y to 0.5, and Z to 10. We should have something that we can use to make a floor. You may need to move your player character up in the Y direction so that it's on top of the floor. I'd then duplicate this shape by selecting Edit > Duplicate from the toolbar. We can then set the X Rotation in the Inspector to 90.

We're going to build our wall with this piece, but we want this to snap to an edge of our floor. To achieve this, we'll select Edit > Snap Settings... and set the Move X,Y,Z values to 0.25 in each of the fields. We can then hold the **CTRL** key, and

in the Scene viewport, we can use our transform widget to position our duplicate wall shape next to our floor. Duplicate this again, and then move this new duplicate in the X position to have a wall that is positioned forwards of our previous floor and wall. It's a little up to you how you want to build your level out. I duplicated both my original floor and wall again, and put them to the other side of the free-standing wall, so we can use our wall-running technique to traverse between the gaps in the floor.

SETTING UP OUR CHARACTER

The next thing we're going do is add some tags. Tags allow us to mark up certain objects with a label. We can then use these to give objects specific rules – in our example, the character will behave differently when colliding with the walls we're about to tag.

We can do this by selecting one of the game objects that make up our wall pieces; in the Inspector panel, we can select the Tag drop-down and then select the Add Tag… option. We can then simply select the + icon and type in Walls for our tag and Save. To apply this, select

> ## "You can see this mechanic in action in games such as *Titanfall* and *Mirror's Edge*"

all our wall pieces and once again select the Tag drop-down – this time we can apply the Walls tag we created.

We'll need to edit some of our original scripts to handle what we'll be able to wall-run on. There are no massive changes to make, but all the code, including the modifications, has been provided below. The first script we have to modify is the CharacterMovement script. You can just open this in your code editor and modify it to match the following code:

```
using UnityEngine;

public class CharacterMovement : MonoBehaviour
{
    public float speed = 5;
    public float jumpPower = 4;
    public bool Grounded;
    private Rigidbody rb;
    private CapsuleCollider col;
    private float Horizontal;
```

```
    private WallRunning wr;

    // Use this for initialization
    void Start()
    {
        Cursor.lockState = CursorLockMode.
Locked;
        rb = GetComponent<Rigidbody>();
        col = GetComponent<CapsuleCollider>();
        wr = GetComponent<WallRunning>();
    }

    // Update is called once per frame
    void Update()
    {
        Grounded = isGrounded();
        //Get the input value from the
controllers
        float Vertical = Input.
GetAxis("Vertical") * speed;
        if (!wr.isWall)
        {
            Horizontal = Input.
GetAxis("Horizontal") * speed;
        }
        Vertical *= Time.deltaTime;
        Horizontal *= Time.deltaTime;
        //Translate our character via our
inputs.
        transform.Translate(Horizontal, 0,
Vertical);                            ➡
```

GEOMETRY

It's a good idea to name the geometry that makes up your level so that it's easier to find in the Hierarchy view. You can easily do this by typing a new name into the top of the Inspector panel for that game object.

⌄ We can block out a quick level to test that our wall-running mechanic is functioning as we expect it to. This is a common thing to do when you're a developer and want to quickly check on a design.
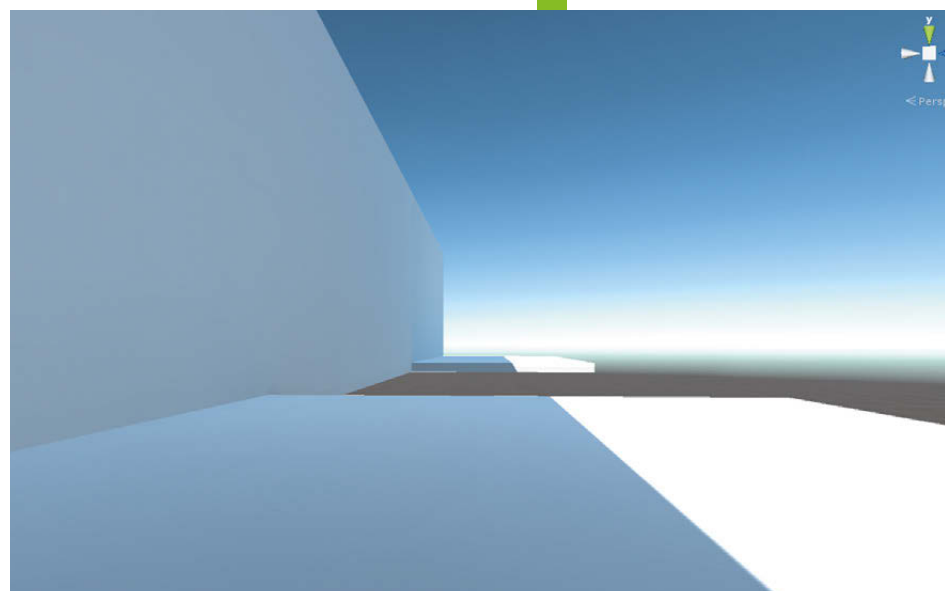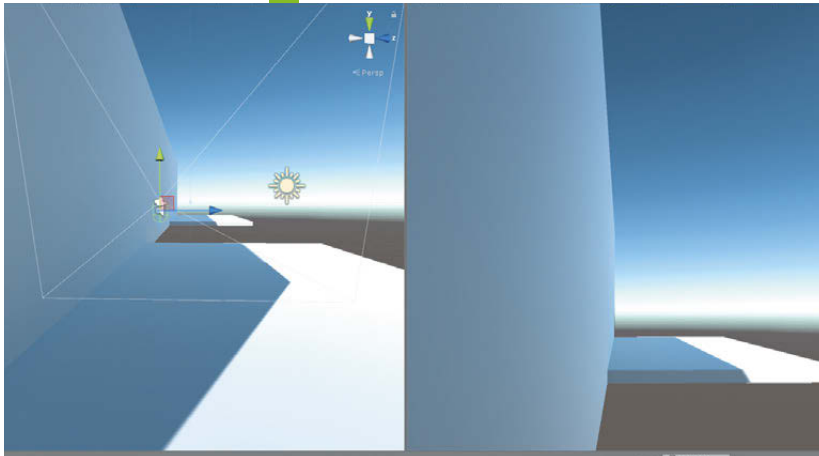
⌃ Don't forget to keep testing out the mechanic as you build out your level, to make sure the gameplay feels satisfying.

```
            if (isGrounded() && Input.
GetButtonDown("Jump"))
            {
                //Add upward force to the rigid
body when we press jump.
                rb.AddForce(Vector3.up * jumpPower,
ForceMode.Impulse);
            }

            if (Input.GetKeyDown("escape"))
                Cursor.lockState = CursorLockMode.
None;
        }

    private bool isGrounded()
    {
        //Test that we are grounded by drawing
an invisible line (raycast)
        //If this hits a solid object e.g.
```


❯ Make sure that all the walls are tagged correctly in the Inspector panel, else the wall-running ability will not work correctly.

```
floor then we are grounded.
        return Physics.Raycast(transform.
position, Vector3.down, col.bounds.extents.y +
0.1f);
    }
}
```

Once you've saved the above, we'll then open our MouseLook script so that we can make the following additional modifications:

```
using UnityEngine;

public class MouseLook : MonoBehaviour
{
    private GameObject player;
    private float minClamp = -45;
    private float maxClamp = 45;
    [HideInInspector]
    public Vector2 rotation;
    private Vector2 currentLookRot;
    private Vector2 rotationV = new Vector2(0,
0);
    public float lookSensitivity = 2;
    public float lookSmoothDamp = 0.1f;
    //Required if we are using the camera to
freelook.
    private CharacterMovement cm;
    private bool resetRotation = false;

    void Start()
    {
        //Access the player GameObject.
        player = transform.parent.gameObject;
        cm = player.
GetComponent<CharacterMovement>();
    }

    // Update is called once per frame
    void Update()
    {
        //Player input from the mouse
        rotation.y += Input.GetAxis("Mouse Y")
* lookSensitivity;
        //Limit ability look up and down.
        rotation.y = Mathf.Clamp(rotation.y,
minClamp, maxClamp);
        //Rotate the character around based on
the mouse X position.
        //Unless we are not grounded or for the
one frame where we set the player to match the
camera.
        if (cm.Grounded)
        {
```

```
        if (resetRotation)
        {
            resetRotation = false;
            player.transform.
localEulerAngles += new Vector3(0,
currentLookRot.x, 0);
            currentLookRot.x = 0;
        }
        else
        {
            player.transform.
RotateAround(transform.position, Vector3.up,
Input.GetAxis("Mouse X") * lookSensitivity);
        }
    }
    else
    {
        resetRotation = true;
        //Free look in the Y rotation based
on mouse.
        currentLookRot.x += Input.
GetAxis("Mouse X") * lookSensitivity;
    }
    //Smooth the current Y rotation for
looking up and down.
    currentLookRot.y = Mathf.
SmoothDamp(currentLookRot.y, rotation.y, ref
rotationV.y, lookSmoothDamp);
    //Update the camera X, Y rotation based
on the values generated.
    transform.localEulerAngles = new
Vector3(-currentLookRot.y, currentLookRot.x,
0);
    }
}
```

Once you've saved this script, we should have all the modifications we need to continue.

Our next task is to add a new C# script to allow for our new wall-running ability. First, select the Player prefab in the Hierarchy panel. We then look in the Inspector panel and select the Add Component > New Script options, and then in the Name field, type WallRunning as our script name. We then select the Create and Add button to generate the script and attach it to our game object. To edit our script, double-click on the script name. We can then add the script below in our code editor of choice:

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
```

```
[RequireComponent(typeof(AudioSource))]
public class WallRunning : MonoBehaviour
{
    public AudioClip audioClip;
    private CharacterMovement cm;
    private Rigidbody rb;
    private bool isJumping;
    public bool isWall;
    private bool playAudio;
    private AudioSource audioSource;


    private void Start()
    {
        //Get attached components so we can
interact with them in our script.
        cm = GetComponent<CharacterMovement>();
        rb = GetComponent<Rigidbody>();
        audioSource =
GetComponent<AudioSource>();
    }

    private void FixedUpdate()
    {
        bool jumpPressed = Input.
GetButtonDown("Jump");
        float verticalAxis = Input.
GetAxis("Vertical");
        //Check if the controller is grounded.
        if (cm.Grounded)
        {
            isJumping = false;
            isWall = false;
        }
        //Has the jump button been pressed.
        if (jumpPressed)
        {
            StartCoroutine(Jumping());
        }
        //If we are pushing forward, and not
grounded, and touching a wall.
        if (verticalAxis > 0 && isJumping &&
isWall)
        {
            //We constrain the Y/Z direction to
defy gravity and move off the wall.
            //But we can still run forward as
we ignore the X direction.
            rb.useGravity = false;
            rb.constraints =
RigidbodyConstraints.FreezePositionY |
RigidbodyConstraints.FreezePositionX |
RigidbodyConstraints.FreezeRotation; ➡
```
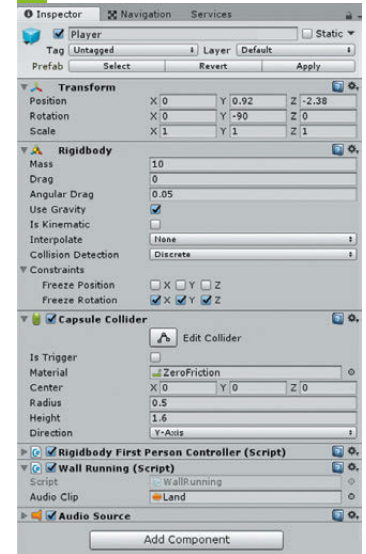

∧ With our script attached and compiled, we can easily drop in a suitable audio clip for when we begin our wall-run.
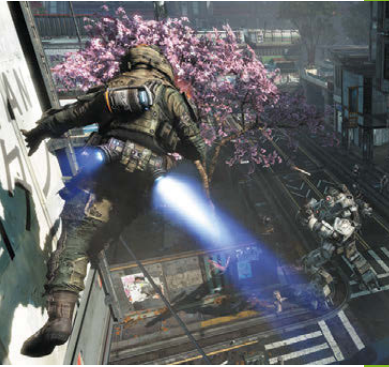
^ *Titanfall* allows the player to use boosted jumps and the player's momentum to keep moving between buildings.

ENERGY

The value for the energy limit should let us just about clear the gap we created earlier. However, you can always make this longer or shorter by making the float value bigger or smaller.

```
                //We also telegraph to the player
by playing a sound effect on contact.
                if (audioClip != null && playAudio
== true)
                {
                        audioSource.
PlayOneShot(audioClip);
                        //We block more audio being
played while we are on the wall.
                        playAudio = false;
                }
        }
        else
        {
                //We need to make sure we can play
audio again when touching the wall.
                playAudio = true;
                rb.useGravity = true;
                rb.constraints =
RigidbodyConstraints.FreezeRotation;
        }
    }


    void OnCollisionEnter(Collision other)
    {
        //Are we touching a wall object?
        if (other.gameObject.tag == "Walls")
        {
            isWall = true;
        }
    }


    void OnCollisionExit(Collision other)
    {
        //Did we stop touching the wall object?
        if (other.gameObject.tag != "Walls")
        {
            isWall = false;
        }
    }


    IEnumerator Jumping()
    {
        //Check for 5 frames after the jump
button is pressed.
        int frameCount = 0;
        while (frameCount < 5)
        {
            frameCount++;
            //Are we airborne in those 5
frames?
```

```
            if (!cm.Grounded)
            {
                isJumping = true;
            }
            yield return null;
        }
    }
}
```

Once we've completed the script, we can save this in the code editor and move back to the Unity editor. As part of the script, we have an option to play a sound effect when we jump and make contact with the wall – this will telegraph to the player that the action was successful.

For this to work, we need to assign an audio file to the new variable we have exposed on our script. This can be located if we look at the script in the Inspector panel. If you select the

"We're going to complicate the mechanic by adding limited energy"

circle icon to the right of the words Audio Clip, you should be able to select a suitable sound effect – something that makes it sound like the player is landing on a surface. If you don't have any Audio Clips listed, you can always import any suitable audio effect as a common audio file – MP3 or WAV, for example. If you find there's an error due to a missing AudioSource, you can select Add Component and manually add one.

We can now test the new wall-running mechanic by selecting the Play button. You should be able to jump as before by tapping the **SPACE** bar, but if we jump at a wall and push forward at the same time, we should be able to wall-run along it until we stop pushing forward. At this stage, it's worth making sure you apply the script to the Player prefab.

LIMITED RUN

Finally, we're going to complicate the mechanic a little by adding limited energy, so the player can only wall-run for a certain length of time. Once the player's energy is depleted, their character will lose their grip and fall.

To get this working, we're going to make some edits to the code already in place. I would only suggest attempting this if you're comfortable with being able to make these changes.

The first thing to do is open the WallRunning script and look for our initial variables – we can add the following code on the line above the **audioclip** variable we defined earlier:

```
public float energyLimit = 3.5f;
```

The next thing to do is to make sure that we trigger our energy to start depleting. We're going to call an **IEnumerator** as a way of timing our ability – we already used one of these to test if we're off the ground when we're jumping.

In this case, we need to start this counting down when we're wall-running and stop it when we're not. We'll use the functions of **StartCoroutine** and **StopCoroutine** to achieve this. First, look for the statement where we test if we're touching a wall – it should be easy to find from the code comments. Then, inside the parentheses, add the following code:

```
StartCoroutine(Energy());
```

As stated, we stop this when we aren't wall-running, so look for the **Else** statement and, in the parentheses, add the following code:

```
StopCoroutine(Energy());
```

We've finished all the setup. Now we need to set the time we can wall-run for and then, after this, disengage it.

An effective way to handle this is to reuse the Boolean we set when the player character makes contact with tagged objects, and set this to false. The Boolean has to be true before the player can wall-run, so setting it to false will have the opposite effect.

To add our **IEnumerator**, go to the bottom of the code and look for where we have our **Jumping** function as an **IEnumerator**. After this, but before our closing parenthesis, add the following code:

```
IEnumerator Energy()
{
    yield return new
WaitForSeconds(energyLimit);
    isWall = false;
}
```

Note that the yield uses a function call: **WaitForSeconds**; the **energyLimit** variable contains that wait time. Because we've made
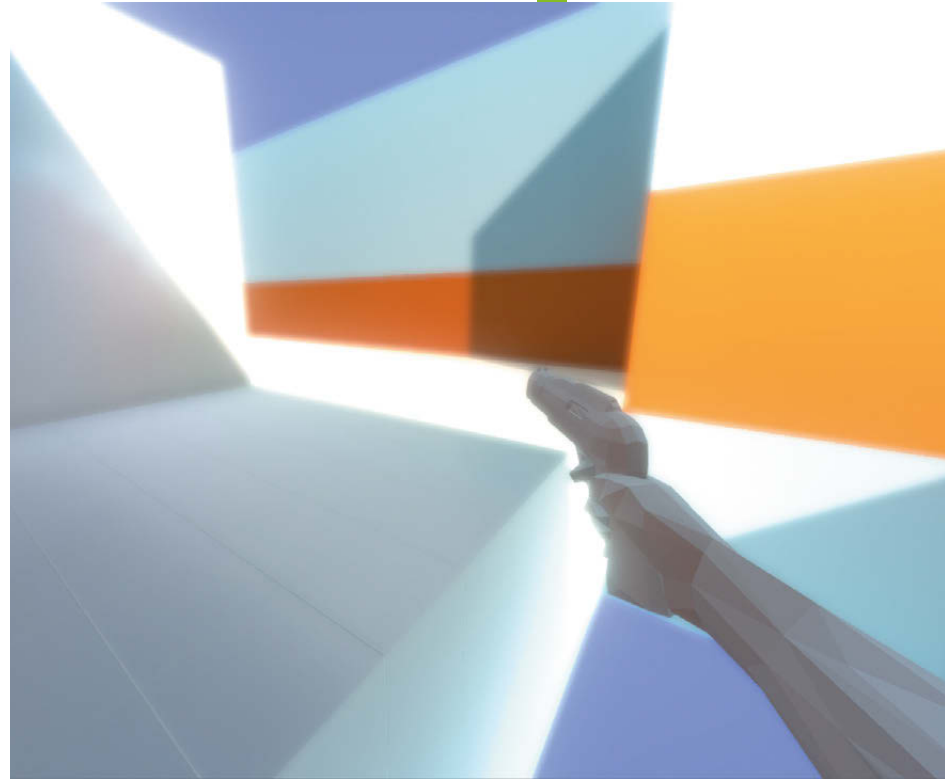
the **energyLimit** a public variable, we can tweak this for the Player game object in the Inspector. Now we can save the code changes and go back to Unity. Hopefully, your log will be free of errors – if not, read what the errors are, and they should give you an idea of what you need to fix the issue.

We can now press Play and test out our limited wall-run. If we jump on the wall too soon, then we'll end up losing our energy and fall off the wall.

By now, you should have the base mechanic working and be able to run along walls to avoid pitfalls. There are some limitations with this implementation due to it locking movement to one axis – rotating the walls, for example, may cause undesirable effects. This is something you can fix by detecting the angle of the wall the Player game object is touching and changing the movement logic accordingly.

You could also expand the mechanic by adding a boost jump between walls, or you could add power-ups that have to be collected to top up your energy. As always, feel free to experiment with what you've developed so far. ⓦ

⌃ **By expanding our test level and adding some prototype assets from Unity, we can start to create the look and feel of the games we're trying to emulate.**
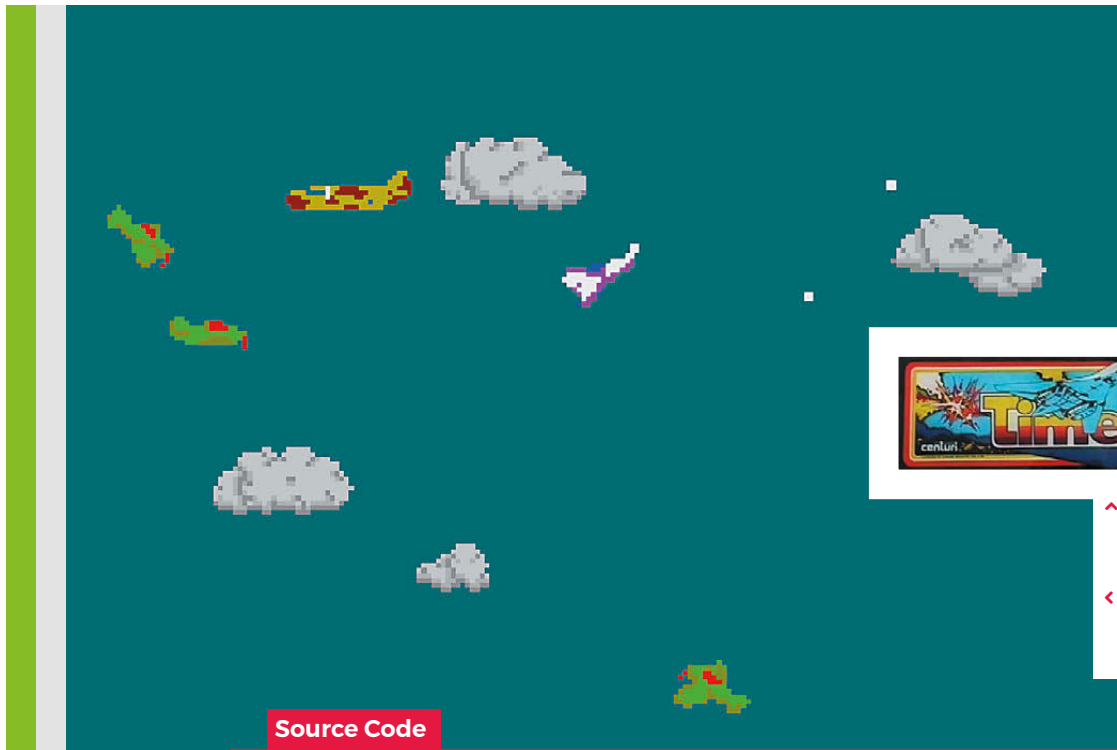
> ∧ Designed by Yoshiki
> Okamoto, Konami's *Time
> Pilot* saw an arcade
> release in 1982.

> ‹ One or two players could
> play *Time Pilot*. Shoot the
> enemy planes and rescue
> the parachutists.

Recreate Time Pilot's
free-scrolling action

Fly through the clouds in our re-creation of Konami's shooter

AUTHOR
MARK VANSTONE

A rguably one of Konami's most successful titles, *Time Pilot* burst into arcades in 1982. Yoshiki Okamoto worked on it secretly, and it proved so successful that a sequel soon followed. In the original, the player flew through five eras, from 1910, 1940, 1970, 1982, and then to the far future: 2001. Aircraft start as biplanes and progress to become UFOs, naturally, by the last level.

Players also rescue other pilots by picking them up as they parachute from their aircraft. The player's plane stays in the centre of the screen while other game objects move around it. The clouds that give the impression of movement have a parallax style to them, some moving faster than others, offering an illusion of depth.

To make our own version with Pygame Zero, we need eight frames of player aircraft images – one for each direction it can fly. After we create a player Actor object, we can get input from the cursor keys and change the direction the aircraft is pointing with a

variable which will be set from zero to 7, zero being the up direction. Before we draw the player to the screen, we set the image of the Actor to the stem image name, plus whatever that `direction` variable is at the time. That will give us a rotating aircraft.

To provide a sense of movement, we add clouds. We can make a set of random clouds on the screen and move them in the opposite direction to the player aircraft. As we only have eight directions, we can use a lookup table to change the x and y coordinates rather than calculating movement values. When they go off the screen, we can make them reappear on the other side so that we end up with an 'infinite' playing area. Add a `level` variable to the clouds, and we can move them at different speeds on each `update()` call, producing the parallax effect. Then we need enemies. They will need the same eight frames to move in all directions. For this sample, we will just make one biplane, but more could be made and added.

To get the enemy plane to fly towards the player, we need a little maths. We use

the `math.atan2()` function to work out the angle between the enemy and the player. We convert that to a direction which we set in the enemy Actor object, and set its image and movement according to that `direction` variable. We should now have the enemy swooping around the player, but we will also need some bullets. When we create bullets, we need to put them in a list so that we can update each one individually in our `update()`. When the player hits the fire button, we just need to make a new bullet Actor and append it to the bullets list. We give it a direction (the same as the player Actor) and send it on its way, updating its position in the same way as we have done with the other game objects.

The last thing is to detect bullet hits. We do a quick point collision check and if there's a match, we create an explosion Actor and respawn the enemy somewhere else. For this sample, we haven't got any housekeeping code to remove old bullet Actors, which ought to be done if you don't want the list to get really long, but that's about all you need: you have yourself a *Time Pilot* clone! Ⓦ

Shooting down planes in Python

Here's Mark's code for a *Time Pilot*-style free-scrolling shooter. To get it running on your system, you'll need to install Pygame Zero – full instructions can be found at **wfmag.cc/pgzero.**

```python
# Time Pilot

from random import randint
import math


gameState = 0
ship = Actor('ship0',(400,300))
biplane = Actor('biplane0',(200,0))
explosion = Actor('explosion1',(0,0))
ship.dir = ship.canfire = biplane.dir = explosion.frame = 0
clouds = []
dirs = [[0,1],[-0.7,0.7],[-1,0],[-0.7,-0.7],[0,-1],[0.7,-0.7],[1,0],[0.7,0.7]]
for c in range(0, 20):
    clouds.append(Actor('cloud'+str(randint(1,3)),
center=(randint(0,1000)-100, randint(0,800)-100)))
    clouds[c].level = (c+5)/8
bullets = []

def draw():
    screen.fill((0,150,255))
    for b in range(len(bullets)):
        bullets[b].draw()
    ship.draw()
    biplane.draw()
    for c in range(0, 20):
        clouds[c].draw()
    if explosion.frame > 0 and explosion.frame < 10:
        explosion.draw()


def update():
    global gameState
    if gameState == 0:
        if keyboard.left:
            ship.dir -= 0.1
            if ship.dir < 0: ship.dir = 7.9
        if keyboard.right:
            ship.dir += 0.1
            if ship.dir > 7.9: ship.dir = 0
        if keyboard.space:
            if ship.canfire <= 0: fireBullet()
        ship.canfire -= 1
        ship.image = "ship"+str(int(ship.dir))
        myradians = math.atan2(ship.x-biplane.x, ship.y-biplane.y)
        mydegrees = math.degrees(myradians)
        biplane.dir = (180-mydegrees)/45

        biplane.x += (dirs[int(ship.dir)][0]) - ((dirs[int(biplane.dir)][0])/2)
        biplane.y += (dirs[int(ship.dir)][1]) -
((dirs[int(biplane.dir)][1])/2)
        biplane.image = "biplane"+str(int(biplane.dir))
        if explosion.frame > 0:
            explosion.frame += 1
            explosion.x += (dirs[int(ship.dir)][0])
            explosion.y += (dirs[int(ship.dir)][1])
            if explosion.frame < 10 : explosion.image = "explosion"+str(math.ceil(explosion.frame/3))
        for c in range(0, 20):
            clouds[c].x += dirs[int(ship.dir)][0]*clouds[c].level
            if clouds[c].x > 900: clouds[c].x = -100
            if clouds[c].x < -100: clouds[c].x = 900
            clouds[c].y += dirs[int(ship.dir)][1]*clouds[c].level
            if clouds[c].y > 700: clouds[c].y = -100
            if clouds[c].y < -100: clouds[c].y = 700
        for b in range(len(bullets)):
            bullets[b].x -= (dirs[bullets[b].dir][0]*5) + (dirs[int(ship.dir)][0])
            bullets[b].y -= (dirs[bullets[b].dir][1]*5) + (dirs[int(ship.dir)][1])
            if biplane.collidepoint(bullets[b].pos) == True:
                byplaneHit()

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

def fireBullet():
    bullets.append(Actor('bullet', center=(400, 300)))
    bullets[len(bullets)-1].dir = int(ship.dir)
    ship.canfire = 5

def byplaneHit():
    explosion.frame = 1
    explosion.pos = biplane.pos
    biplane.pos = (randint(0,800),0)
```

⌄ **Our homage to Konami's arcade classic.**
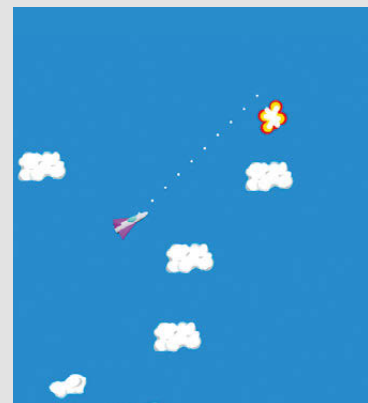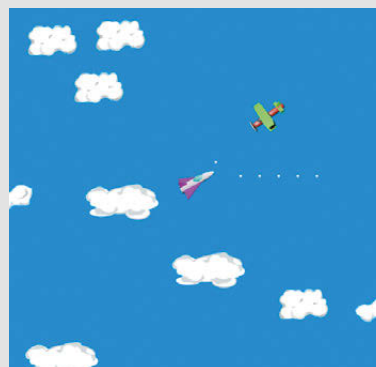
Intensity and pacing in The Last Of Us

How does The Last of Us' standalone prequel Left Behind use rising action in its storytelling? Antony explains all

AUTHOR
ANTONY DE FAULT

Antony is Wireframe's game writing and narrative design columnist. He's also creative director of Far Few Giants. You can find his work on **default.games**, or see **@antony_de_fault** on Twitter.

N aughty Dog's 2013 hit *The Last of Us*, one of the most highly acclaimed video games of all time, has undoubtedly seen some of the most influential video game writing in recent years. It's often regarded as complex, subtle, and 'filmic' (a problematic term). I'm here to tell you that writer Neil Druckmann's structuring is completely run-of-the-mill, and that's fine.

RISING ACTION

In creative writing 101, one of the first lectures you undoubtedly receive is on 'rising action'. The basic theory's outlined in **Figure 1**. The story starts with some explanation of the scenario, then the level of 'action' (I prefer 'intensity') rises. This might come in the form of increased enemy presence (Tusken Raiders attack, then stormtroopers arrive in *A New Hope*), or just more heated drama (Romeo and Juliet fall in love at first sight). The stakes are getting higher. Then comes a climax. Obi-Wan is killed by Darth Vader. After that point in the story, the level of action/intensity slowly falls, until in the final phase, we have a very low-energy conclusion to the story.

However, the astute reader will surely realise that what I've just written is total crap. **Figure 1** has the highest moment of action slap-bang in the middle of the story. But Obi-Wan's death is just a smaller climax on the way to the Death Star assault, just as Juliet's parents forbidding her to see Romeo is just one step on the way to their accidental double suicide.

THE FICHTEAN CURVE

Bear with me, I'll get to *The Last of Us* in due time. Now let's look at **Figure 2**. Here, we see something *much* more useful. The Fichtean curve (ignore the fact it's not actually a curve: we're writers, not mathematicians) acknowledges that instead of a simple pyramid, people have a taste for stories which grow through a series of mini-climaxes or 'crises' until they reach the main crisis in the last quarter of the story. What follows is often then a much quicker fall to calm, low-intensity scenes, not punctuated by crises. There's often a little kicker in the last few lines when the story's themes get hammered home, but, y'know, stories very rarely end halfway through a high-octane car chase. They end with a sunset, a conciliatory conversation, or a peaceful celebration.

I really can't stress this enough. This is the rhythm of intensity people expect to see in all stories, and they appreciate it. It sticks out like a sore thumb when not followed, so unless you know what you're doing and are deliberately deviating from it for effect (as in *The Last of Us Part II*), just don't. All you'll earn yourself is reviews talking awkwardly about 'pacing issues' but failing to really explain themselves.

> **Figure 1: Known as Freytag's Pyramid, this theory is foundational but insufficient. Disregard it as soon as you leave this page.**
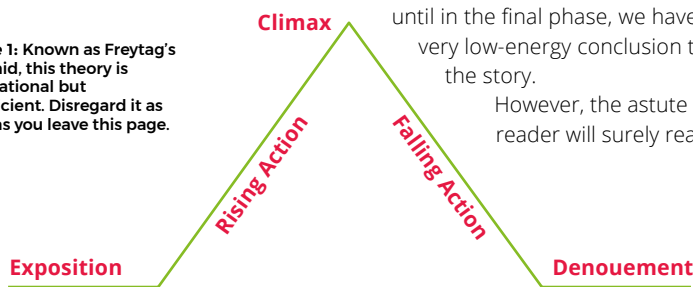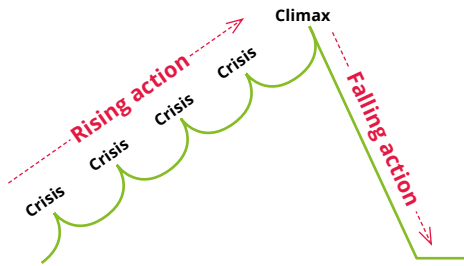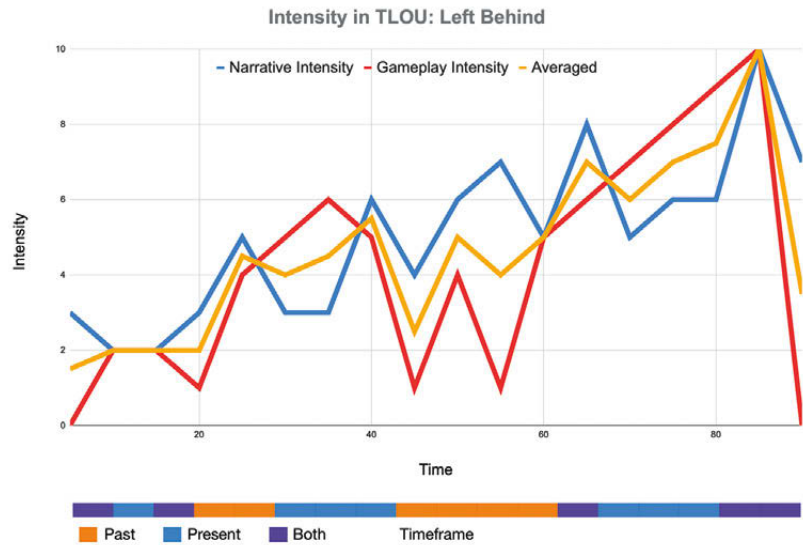
Climax

Rising Action

Falling Action

Exposition

Denouement

LEFT BEHIND

So, a demonstration is in order. The main two instalments of the franchise were too long to play just for this purpose, but *Left Behind* clocks in at only a few hours on a completionist run, so I stuck it on easy and waded in. Having recently played through all parts of the franchise for my own entertainment, I began my *Left Behind* case study with an idea of the game's highest and lowest points already. I decided on a 0–10 scale, with 0 representing the lowest-action scenes in the game, and 10 representing the most intense. I used a timer to pause the game after every five minutes of play. I then used a spreadsheet to record the time elapsed; a subjective judgement of the last five minutes' narrative intensity; and a score for the gameplay intensity. As the game bounces back and forth between two time frames, one being inherently more violent and pressured than the other, I also thought it would be interesting to record which time frame I had been playing in: past, present, or both.

In **Figure 3**, you can see my results, and I have included an orange line which charts the average between the two types of intensity. You can see that it maps very nicely to the Fichtean curve. There are a few observations to make here. First, the narrative and gameplay intensities often serve to balance each other. During an intense cutscene, the player is obviously not actually doing anything. The first five minutes are a good example of this: we start with a slightly intense bit of narrative to hook us, but the player's doing nothing, so overall it's the least intense point in the game. Keeping the narrative quite intense in the final moments of the game serves to counteract the fact that the gameplay intensity shoots down to zero (it's all cutscene), so the action drop-off is less harsh.

During the portion of the game in the past (around minutes 40–55), there's not much to do other than walk around, so at this point the game sustains its narrative peak rather than allowing the average intensity to tank downwards, preserving the curve. The same

effect can be observed in reverse between minutes 70–80.

CONCLUSIONS

But for the climax, to ensure maximum general intensity, Naughty Dog quickly cut between intense, zombie-chased gameplay and fast, revelation-filled cutscenes, twice over. Both the narrative and gameplay must be at their peak at the same time, which is a difficult thing to do in non-text-based games, since you need to either switch modes rapidly as in *Left Behind*, or find a way to deliver your most climactic narrative moment *during* gameplay, of which the only example I can summon right now is *Brothers: A Tale of Two Sons*.

So let this be a lesson: if it's good enough for one of the most critically acclaimed games of all time, and you're not an experienced writer, then it's good enough for you. If you've already got a story in mind for your game, plot its intensity on the Y-axis against your expected playtime on the X, and make sure it's not wildly different from this. If it is, *please* consider nudging events around until it has a more Fichtean look. Until next time, stay safe! ⓦ

TLOU: Part II

Minor spoilers within: *TLOU Part II*'s writing is more advanced, which manifests in a tricksy false ending. After a particularly major climax, one we've been waiting the entire game for, the game gives your character their dream life, and for 20 minutes the narrative stakes and gameplay intensity utterly nosedive. "Ah," you think, "this is an ending." When your character shatters this calm, their actions are imbued with 'wrongness'. The story was supposed to end! Our irritation at the game's rhythmic sin is transferred onto the character, who the game wants us to feel is behaving villainously.

∨ *The Last of Us: Left Behind* **is a bite-sized slice of excellence, perfect for tearing apart.**

GAME
Endling: Extinction is Forever

ARTIST
Herobeat Studios

RELEASE
2021

WEBSITE
herobeatstudios.com

Endling

Endling presents a world ravaged by humanity, on its last legs, and thoroughly defeated by the humans living atop it. You take control of one survivor – a fox – as you make your way through humankind's destruction, trying to survive and to keep your three cubs going. It's a dark setting, no doubt, but there's a glimmer of hope in the story of these plucky animals – and your hand in helping them overcome a fate brought about by another species.

SEEN AND HEARD

making games for the visually impaired

We meet the developers using audio and haptic feedback to increase accessibility in their games

WRITTEN BY MATTEO LUPETTI

We usually think of video games as a visual medium – they're called 'video' games for a reason, after all. But while this focus on visuals dominates discussion in the mainstream, a number of developers are working on projects that focus on non-visual feedback. This is something particularly important for blind and visually impaired players, as it's often the only way they can play, and enjoy, a game like anyone else would.

Getting accurate figures for the number of blind and visually impaired players worldwide is tricky. Arianna Ortelli, from Italian startup NOVIS, says there are 253 million blind and visually impaired people in the world; about 170 million live in so-called 'developed and developing countries', and about 50–60 million of this sub-group are under 55 years old. Since about 40% of the population plays video games – by Ortelli's own measure – NOVIS estimates around 23 million video games players in the world are blind and/or visually impaired.

What we know with more certainty is that blind people do play video games, and they play mainstream titles that aren't even designed specifically with their needs in mind. TJ The Blind Gamer went blind at the age of 15 before deciding to set up both YouTube and Twitch channels, on which can be found mainstream games like *Diablo III* and *Call of Duty*. TJ plays games by following sound effects and, sometimes, with a little help from his viewers and their comments (written as text and converted to audio). But these games aren't, in the most part, designed around the needs of players with visual impairments, and if they *are* somehow accessible, it's more an accidental effect of sound design and a haptic feedback system than anything else.

In fact, during her *Triple-A Gaming While Blind* talk at 2018 GDC, EA Sports accessibility lead Karen Stevens explained how Electronic Arts improved the accessibility features of EA Sports games and created its accessibility portal after discovering there was already an existing (and significant) user base of visually impaired players.

"We already had an audience, but they were struggling," she told those gathered. So what do mainstream games need to do in order to become genuinely accessible to blind and visually impaired users? ➜

Blind players play EA's *Madden NFL* following the commentary, "kind of like listening to a game on the radio," says Karen Stevens.

▲ Pixelnicks' 2D action platformer *Eagle Island* implements many accessibility features, like text-to-speech and options for outlining characters and platforms.

MAKING GAMES ACCESSIBLE

"The most important [accessibility feature] is voiced menus, typically through text-to-speech software," says accessibility consultant Ian Hamilton. Text-to-speech software (screen readers) turn text and elements of user interfaces into voice, and is increasingly implemented as a basic feature of operating systems, as well as software like NVDA or JAWS. As Hamilton explains, both Unity and Unreal Engine are working on native cross-platform support for text-to-speech functionality. "It needs to happen quickly," he says. "Any game available to players in the USA that includes text or voice chat functionality is required by law to ensure that the chat itself and any UI or info needed to navigate to it, and operate it, is fully accessible to blind gamers."

"We already had an audience, but they were struggling"

BINAURAL AUDIO

Binaural ('two-ear') audio is one of the most powerful tools available to create a three-dimensional soundscape. "Binaural audio basically tricks the brain into interpreting an audio source as coming from any direction around your head," explains Purple Jam's Harry Cooper, developer of upcoming binaural audio game *Pitch Black: A Dusklight Story*. "You record binaural audio using either a binaural microphone (two microphones with a dummy head in the middle), or by using a set of HRTFs [head-related transfer functions] to recreate the effect from multiple mono sources, or indeed from an ambisonic [full-sphere] source."

▲ Purple Jam (Connor Harrison, Harry Cooper, and Jordan Barry) explains that *Pitch Black* "stemmed from an interest in explorable music compositions."

Text-to-speech can make interface-based games fully accessible to visually impaired players, but titles involving exploration of environments need ways to make the digital space understandable through 3D sound design, audio equivalents for visual cues, assisted traversal, and other techniques. "Mainstream games already contain some of these things," Hamilton says. "Games like *Grand Theft Auto V* and *Forza 7* are already played by many blind gamers. So the question is how to build on that, to allow a more equal and more complete experience."

In 2003, Matthew Atkinson and Sabahattin 'Sebby' Gucukoglu started adding features to *Quake*, with the intention of making it completely playable – even in multiplayer – by people with visual impairments. *AccessibleQuake* was the result, later renamed *AudioQuake*, with the game modified to be based on 'earcons' – sounds signalling either important gameplay and environmental elements or the lack thereof (like open spaces) – and proving it was possible for mainstream games to be converted to be accessible for people with visual impairments. Projects pop up periodically, like Brian A. Smith of Columbia University and his RAD (racing auditory display) audio-based interface that can be integrated into existing racing games, allowing blind players to get involved.

Fortunately, it's not all the work of the hobbyists and modders – major publishers are stepping up. Ubisoft stands out for the accessibility features of its recent releases such as *Far Cry New Dawn*, *The Division 2*, and *Ghost Recon Breakpoint*. But a lot of video games still fail in this field, even as far as basic elements are concerned. For example, they use small fonts and don't let players resize them – this can be a problem both for deaf and hard of hearing players (when subtitles can't be resized), *and* for visually impaired players, many of whom rely on scalable UIs and on-screen elements that are easy to distinguish.

Then there are the platforms themselves – Nintendo has been inconsistent in its inclusion of accessibility options with its games, but the Switch features no accessibility options *at all*. The PS4 has limited text-to-speech functionality, while Steam doesn't even work properly with existing screen readers. Microsoft, as those paying attention to the company might have guessed, has incorporated many accessibility functions in

▲ Sam Friedman hopes that "companies that develop phones will recognise vibration as a meaningful tool to employ" and improve their "versatility and complexity."

the Xbox One – a text-to-speech function called Narrator, a magnifier, a high-contrast mode, and the 'co-pilot' feature – allowing two controllers to be treated as one.

AUDIO GAMES

Oddly, in the past it was easier for visually impaired players to play some games – at least when it came to specific genres like text adventures and MUDs – with text-to-speech functions able to deal with games in their entirety, thanks to their 100% text-based nature. But the graphical arms race pulled things away from the text-only realms and into a world of far less accessible games. So it was of little surprise to see some developers step up to make games with no visuals, targeted explicitly at visually impaired players: audio games.

Developers of these titles were often blind themselves. "After losing my sight I searched for accessible games that were both interesting and challenging, but I found nothing that fitted my criteria," explains audio games developer David Greenwood, of GMA Games. "The games I did find made little or no use of sounds as a means of providing information to the gamer."

Audio games strongly rely on voiced narration, volume as a cue for distance perception, and stereo panning, with sounds heard in the left, centre, or right channel to guide spatial navigation. For example, a particular looping sound (an earcon) would play in the left channel if a particular object, or hazard, were to the left of the player's avatar, with the sound becoming louder as players got closer to its source.

Audio games cover every mainstream genre: first-person shooters like *Shades of Doom* by GMA Games, *Pokémon*-esque RPGs like *Manamon* and *Manamon 2: The Eternal Requiem* by VGStorm, and adventure games like the *Inquisitor* series by Ivan Venturi (IV) Productions. Venturi, based in Italy, says the most popular audio games in his catalogue are racing titles like *Audio Moto Championship*, *Audio Rally Racing*, and *AudioSpeed*.

Venturi – and the other developers we spoke to – acknowledge that audio games are only a niche market and highlight the limits of this kind of experience. Blind accessibility consultant SightlessKombat says: "The genre reached its peak and point of stagnation about 14 or 15 years ago and – other than a few notable ➡

BLIND CONSOLE

Italian startup NOVIS is testing prototypes of BlindConsole – a mobile platform designed for blind players. Its games, developed with the help of other studios and the local blind and visually impaired community, take advantage of the stereo sound of earphones and of a new haptic device with motion controls that is also capable of connecting to smartphones. "Our targets are visually impaired people and their families. We want to make them play together," says NOVIS' Arianna Ortelli. NOVIS hopes that the technology they are developing will be adopted by other companies and make VR more accessible, too.

▲ Ivan Venturi Productions is now working on *Haunted Space*, designed to be completely accessible to blind players and users with motor and cognitive disabilities.
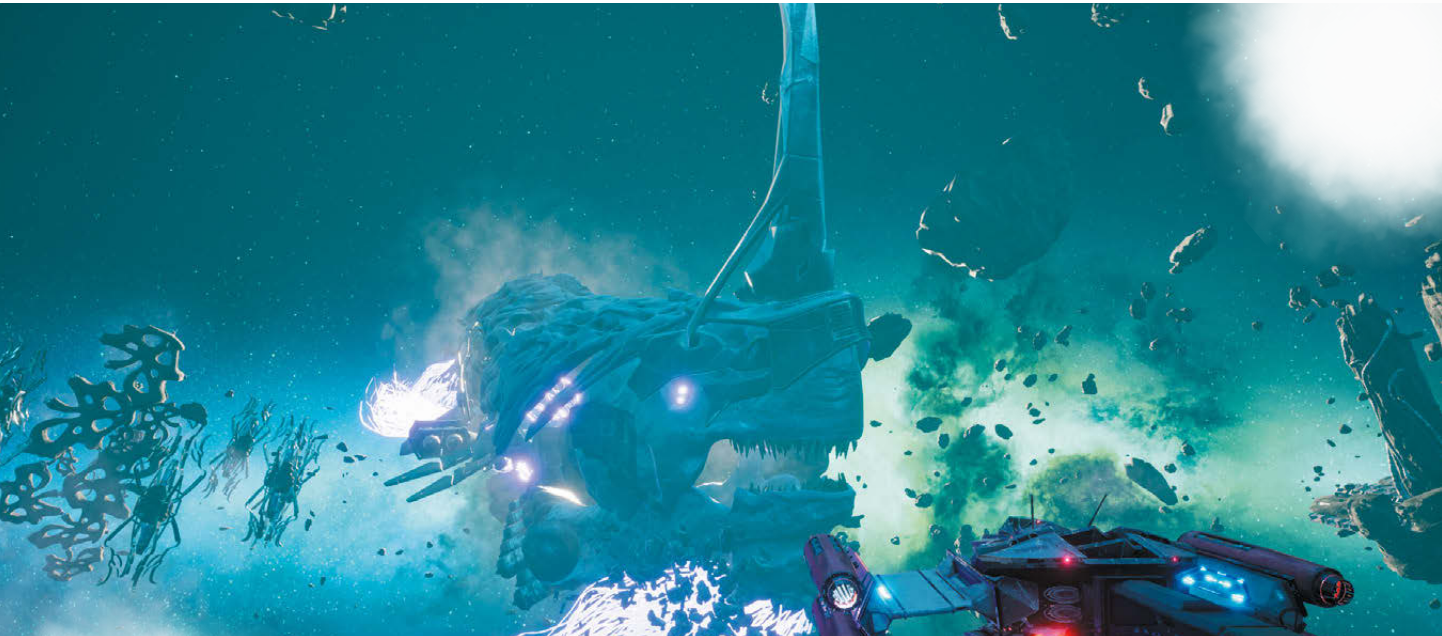
⌄ Paul Lemm discovered audio games after losing his sight. "Not only were they fun to play, but they helped me learn to navigate the world through sound."

SABLE

Sable is software designed to create turn-based audio RPGs that is being developed by Ebon Sky Studios with the help of Brian Fairbanks from Daisy Ale Soundworks. "Sable allows a blind user to create their own audio game, with absolutely no coding or scripting required," says Ebon Sky Studios' Paul Lemm. "It's actually because of the lack of games currently available for the blind that we decided to create Sable, to not only create our own games, but to give the community tools so that they could create their own games, too."

innovations, exceptions, and concepts – hasn't really progressed since." Even a blind audio game developer like Greenwood agrees, and feels that audio games belong to the past: "I strongly believe that accessibility should be built-in during the development of new mainstream games from this point onwards."

Moreover, audio games are usually completely inaccessible to deaf and hard-of-hearing players, and they miss the social aspects of traditional video games. "When you're bombarded day and night in the media about the latest releases and all you hear about from your friends is which games they're playing, those games aren't audio games like *Entombed*, *Manamon*, or *A Blind Legend*," Hamilton says. "Games are a huge part of our culture and society, meaning accessibility of mainstream games can be a powerful tool for societal inclusion."

Audio-only experiences may still have something to teach mainstream games, though. "Audio game developers have had decades of figuring out how to make game mechanics accessible," says Hamilton. "If mainstream developers can learn from some of these efforts, then we'll be in a very good place."

One traditional game strongly influenced by audio games is Daisy Ale Soundworks' upcoming *Lost and Hound*. Players control a corgi named

Biscuit, and are tasked with finding a series of lost items by following noises, voices, and scents, all represented with a 'low humming sound'.

Lost and Hound looks traditional enough, but with sound as its main navigation tool, it's completely playable by blind players. "I have always loved the role audio plays in storytelling," says Brian Fairbanks, the game's Australian developer. "If you think about it, society is full of audio-only methods of entertainment: radio, podcasts, music, and stand-up comedy. Society really doesn't have any *purely* visual mainstream entertainment: we have art and museums, but I wouldn't call those mainstream. I think this says something about how visceral and direct audio storytelling can be."

ALEXA, PLAY...

Audio-only experiences may have a future. One of the most interesting recent developments of audio games are those designed for smart speakers. These games are not only audio-based, but also voice-activated. Alexa and co list a growing series of games, from multiplayer party games like Volley's *Song Quiz* to interactive adventures like *Jurassic World Revealed* by Earplay.

"[Voice control] is a new way to interact with machines," says Dave Grossman of Earplay. "And it comes more naturally to us as humans than buttons or levers or what have you, because talking is the primary way we interact with each other." Lei Xiang from Volley concurs: "They can be

appealing to groups who don't use other platforms as much, like the elderly or the young," she says.

Away from smart speakers and voice control, Niagara-based Falling Squirrel is working on *The Vale* – an action RPG featuring a blind princess who must defend herself after her convoy is attacked by an invading army.

Players explore 3D locations, fight and parry enemies using audio cues, cast magic, and go hunting. Dave Evans, owner and studio director at Falling Squirrel, admits *The Vale* didn't initially begin life as a project targeting the visually impaired. "Without visuals, I could focus my energy on elements of game development that I was most experienced in; namely narrative storytelling and directing actors," he explains.

"We did, however, realise right away that our game could also provide much-needed content for the blind community," he continues. "But it wasn't until we partnered with the Canadian National Institute for the Blind and met our accessibility consultant Martin Courcelles that we learned just how eager many in the blind and low vision community were to play video games."

A TOUCH GAME

Recent technological advances mean it's not just audio that can be used to offer more accessibility. *Blind Spot*, by Sam Friedman, is designed with blind, visually impaired, deaf, and hard of hearing accessibility in mind. In it, players find a series of spots on their smartphone's touchscreen, using their fingers and haptic feedback alone. It's neither a video nor an audio game: it's a touch game.

Though *Blind Spot* was made with accessibility at the fore, it's another game that wasn't born
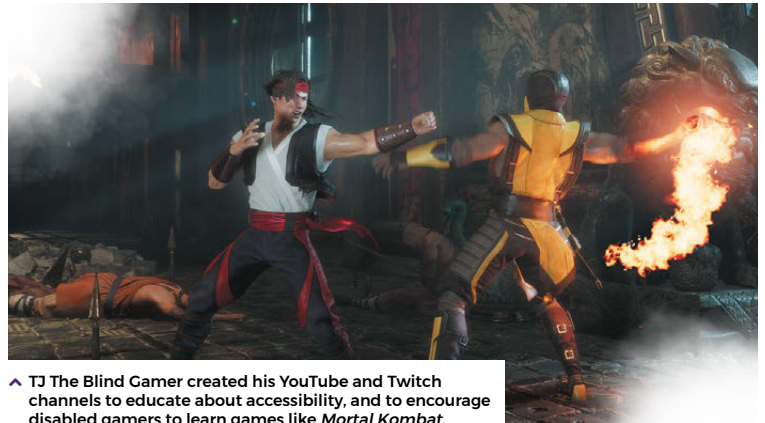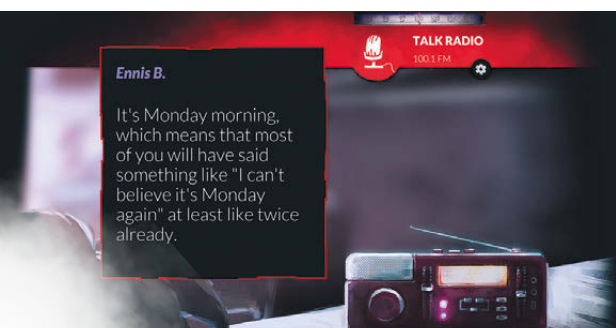
TJ The Blind Gamer created his YouTube and Twitch channels to educate about accessibility, and to encourage disabled gamers to learn games like *Mortal Kombat*.

KILLER INSTINCT

Fighting games are one of the most accessible genres for the visually impaired. "Fighting games require you to know the position of two objects along a 2D plane, and what action each is currently performing," explains Ian Hamilton. "Both players are constantly emitting sound, which communicates their location through the stereo sound field. And fighting games generally have great sound design, with every move having its own distinct sound. There are blind players who play at tournament level without the need for any further accessibility. Ed Boon and Ken Lobb, creators of *Mortal Kombat* and *Killer Instinct* respectively, have both famously been beaten at their own games by blind gamers."

with this focus in mind. "When I get bad anxiety attacks, usually I'll listen to guided meditations, do crossword puzzles, or call my mom and talk about it," Friedman says. "But when I got an anxiety attack at the end of 2018 in a taxi, I felt trapped. I found myself wishing that I had something to do on my phone that wouldn't require me to look at the screen or listen to anything. I wanted a game that could focus my attention and ground me, without the need for any of my senses beyond touch."

"Accessibility can be a powerful tool"

Games like *The Vale* and *Blind Spot* show that video games don't need to be 'video'; that focusing so much on visual aspects doesn't just exclude a part of the population, but an important part of the medium itself. As the industry pushes on towards photorealism, it shouldn't forget who and what it's leaving behind.

"One thing that humans do really well is decide how things are meant to be used or done," says Friedman. "It's easy as a sighted person to decide that screens are for seeing.

"Our bodies take in the world using as many senses as they have available. Why not spend more time fleshing out these other options, making gaming a more immersive and inclusive experience? You have [millions] of people who don't have the luxury of enjoying the visuals on the screen or hearing the sound design from the speakers." ⓦ

Voiced narration, audio, and haptic cues and options for motor and cognitive disabilities make Special Magic Games' *Sequence Storm* completely accessible.

In Accidental Queen's *Alt-Frequencies*, "there isn't a single gameplay mechanic that relies on visual information", and the game supports screen readers.

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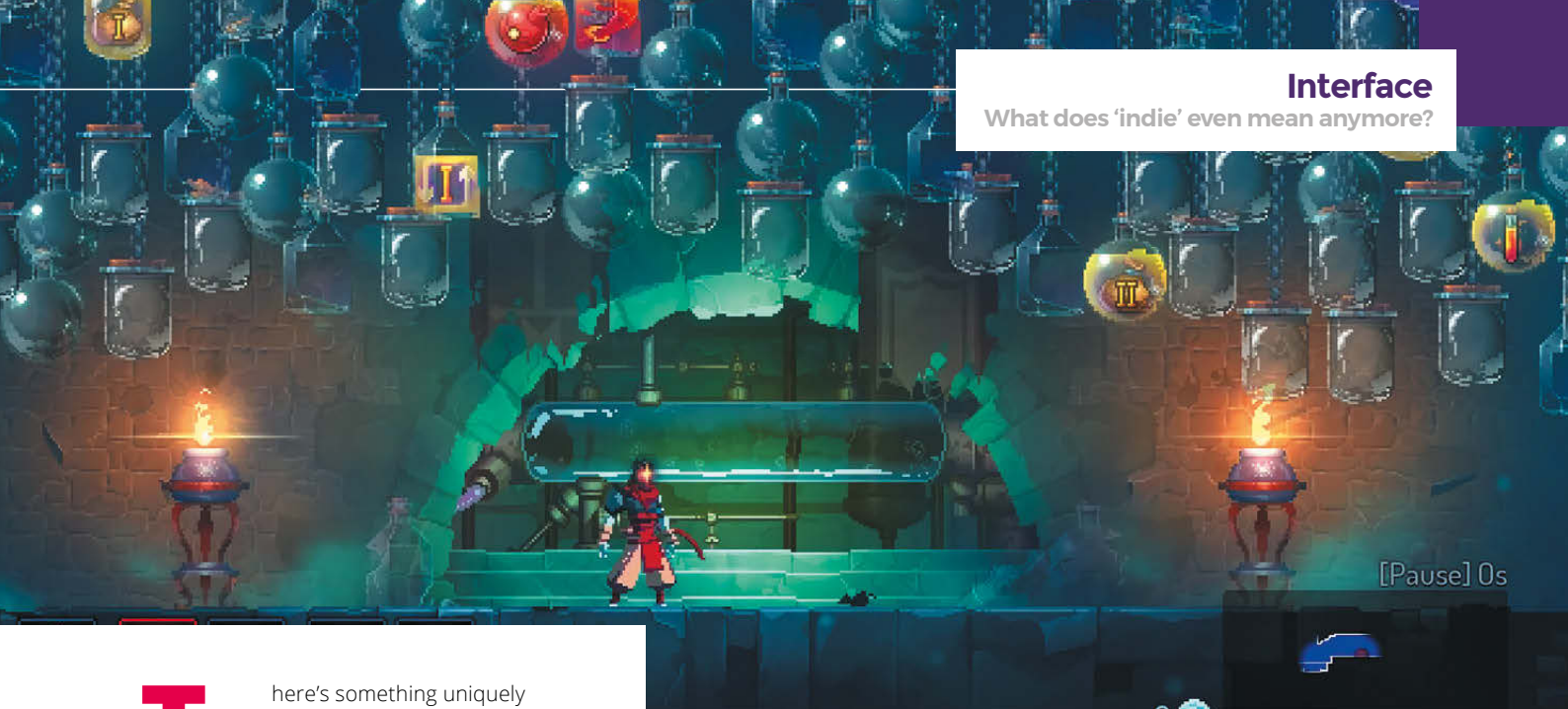
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What does
INDIE
even mean anymore?

For years, budgets for those at the top of the indie space have outpaced those at the bottom. Now, some studios wonder why we use the label at all

WRITTEN BY STEVEN T. WRIGHT

⌄ *Wonder Boy: The Dragon's Trap* **is a complete remake of a Sega Master System game that was largely overlooked in its day.**

There's something uniquely appealing about the label 'independent'. In theory, it denotes freedom from the burdens that would tie down your ambitions, a ticket to explore the limits of your imagination without fear of reproach. In the real world, however, the consequences of pursuing your 'independence' can be dire, and the entire enterprise can be fraught with risk – financial vulnerability, mounting loneliness, or even a simple lack of discipline, with little in the way of a shield to block yourself from the backlash that might result.

Despite this, the inherent lure of independence abounds across many industries, not only for producers, but for customers as well. Since the late 20th century, among certain breeds of consumer, it's become fashionable to support indie businesses like bookstores and cafés in the same way you might forgo a chain restaurant to patronise a local favourite. This logic also applies to the creative industries, like music, where savvy fans of niche genres might boost their indie favourites with a dedicated hashtag, or even rank their favourite artists in terms of their mythical 'indie cred'.

CROSSED WIRES

In the world of video games, the 'indie' label has inspired frenetic debate since its very inception. While the exact starting line varies from person to person, most industry observers can agree a decade has passed since a maelstrom of change (including the democratisation of game design tools) created the modern indie game as we know it, with now-classic megahits like *Braid* and *Super Meat Boy* marking the beginning of an age. Since a flood of competitors followed in their wake, and some early successes expanded both their ambitions and their budgets to match, the very idea of 'indieness' has suffered a perpetual identity crisis. On social media sites like Twitter,

you don't have to look far to find luminaries in the indie space grumbling that developers with dozens of members are still labelled with the term by journalists and fans alike. To Melos Han-Tani, one-half of the team behind the recent PSX anti-nostalgia experiment *Anodyne 2*, the definition of indie is a lot more stringent than some might believe.

"It's a team of one to four, or a team where there's very close communication, and everyone has a roughly equal creative say," he says. "There is huge variation within this term. It doesn't describe what kind of game you're gonna get in the same way as a genre descriptor, but the

> ## "In the world of video games, the 'indie' label has inspired frenetic debate since its very inception"

probability of an indie game having unique ideas/themes are much higher than that of a corporate game. I think people working in triple-A can be as brilliant and unique as people working in indie, but the problem is the structures they work within make it harder for their ideas to have as much influence in the final game." ➡

Anodyne 2's PSone-inspired art style has divided opinions since its release in 2019.

Motion Twin has become famous over the past few years for its unique business model – it pays each of its employees the same amount, and all decisions in the studio are made democratically. No bosses.
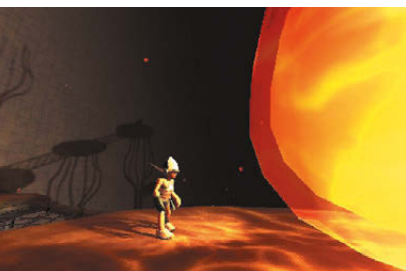
One of *Anodyne 2*'s major themes is "cleaning up the world," which is reminiscent of our real-life struggles with climate change. Or *Super Mario Sunshine*, if that's more your speed.

Han-Tani admits that some might find his take on 'indieness' to be insufficiently current, or too rooted in the ideals of those first-wave games that managed to combine critical acclaim with through-the-roof sales numbers. Even as the mechanics of the industry have changed dramatically over the past few years – where the front page of Steam was once seen as the ticket to success, thanks to the rise of Twitch, now many developers struggle to make their games as 'streamable' as possible – Han-Tani believes that the 'indie community' inherent in the idea of independence still exists, and that still drives his understanding of the term. "It suggests some inherent solidarity between everyone who is indie, but there are many successful creators who just drop out of public visibility, or never tweet about small games or anything. [They] just accumulate money and fame," he says.

Other developers are less reserved in their analysis than Han-Tani. In particular, Joel Nyström of Ludosity – a small studio best-known for their delightful *Zelda*-like *Ittle Dew* – did not hesitate to condemn what he views as a useless relic. "I don't think the term has any meaning or value anymore," he says. "[I'm] not sure it ever had [any]... When you start poking at it, it boils down to scope or some other technical aspect of

production, and like, who cares? Certainly not the public... On top of all this, absolutely no one is using the literal meaning of the word, [which is] the studio has never taken money from some external entity, because it doesn't apply to practically anyone. So as a lover of words, I never use the term to describe anything."

A MEANINGLESS BUZZWORD?

While it's easy to see how some might view Nyström's perspective as a bit harsh, he does elucidate one of the most galling aspects of this debate: ever since the original boom, no one has been able to agree on what the term 'indie' even means. It's difficult to get hard-and-fast statistics on how many of these small teams take external funding, but considering we live in an era where Epic is signing multimillion-dollar cheques for year-long exclusivity rights, it's clear that there are large stakeholders willing to invest in small-studio success, if only for the sake of their own products.

Given all this semantic niggling, some argue that indie has been reduced to a marketing buzzword designed simply to communicate to consumers that a given game is "not triple-A." ("For me, there is triple-A and 'the other games,'" says Frédéric Coispeau of Le Cartel, the developers behind the kaleidoscopic brawler *Mother Russia Bleeds*). Over the past few years, some in the industry have tried to push a sort of hybrid category to denote studios that are ostensibly 'indie' but make games with more resources and higher budgets than the so-called 'basement developers' of the world. That word, 'triple-I', has garnered a thoroughly mixed response, with several developers I've interviewed over the years expressing their distaste for it, with one referring to it as 'jargon-ese'.

Still, it does have its defenders, like Shane Bierwith, executive vice president of the publisher Modus Games. According to him, while it's an inexact measure at best, the company uses the idea of triple-I as a bellwether for whether or not they'll take a studio into their roster. "At Modus, we're generally looking for a specific type of indie game, and that's best defined by 'triple-I' – which we view as a game that has a larger scope and budget, but doesn't fall into the category of double-A or triple-A," he says. "A person who plays a lot of big blockbuster games may consider anything that's not mega-budget an indie game, but just like cinema or music, there's a lot of nuance in the variety of games you can play."

Ittle Dew's brand of sarcastic humour won it many fans back in the early 2010s.
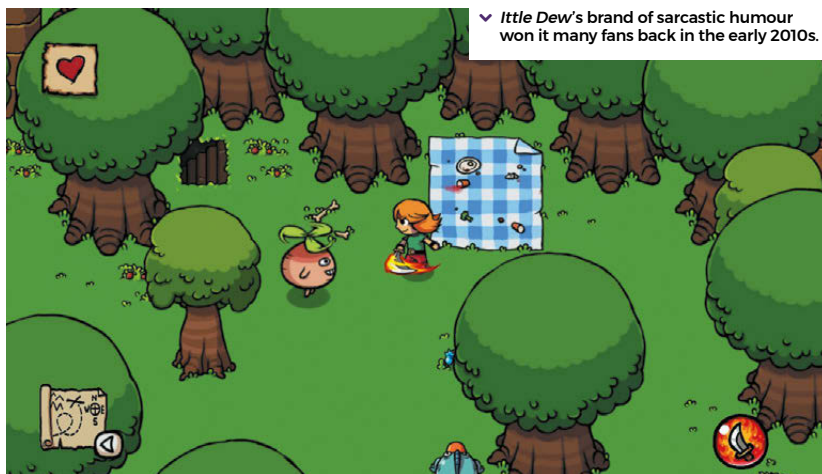
THE MYTHICAL MIDDLE GROUND

While there are certainly exceptions, for the most part, the developers I talked to for this piece expressed exasperation over the online discussions that can sprout up around the endless conflict between 'traditional indie' and 'triple-I.' "Motion Twin would definitely be considered a triple-I studio," says Sébastien Bénard, a designer and major creative force behind Motion Twin's megahit *Dead Cells.* "Obviously, I don't think it's a bad thing, but [smaller indies] are not just competing with us, you're also competing with every other game, with comics, with books, music, everything. I don't think fighting about who is more indie helps you make a better game, or sell your game more successfully."

"I can understand the frustration, but I think [competition] was meant to happen," says Ben Fiquet of Lizardcube, developers of *Wonder Boy: The Dragon's Trap*. "This is a competitive market; the early years where few developers would be sharing the pie are definitely over. So, obviously, if you want to stand out, you need to improve quality... Since talented people who are good at multitasking are very tricky to find, companies are relying on money instead. Are they making good games? That's more than enough for me. I couldn't care less if someone is a 'real indie' or not, whatever that means."

For his part, Han-Tani thinks that if smaller developers want to declare themselves to be 'indie', they need to think about the label in terms of a community that they rely on and contribute to in equal measure. He believes that these studios should examine what he calls their 'genealogy' – the elusive sum total of their influences, favourite art, and overall world-view – and focus on expanding their own understanding of the fundamentals of what makes a video game in order to innovate within it. "Basically, if

▲ Even though Motion Twin now considers itself a 'triple-I' studio, they were fewer than a dozen people when it made its hit game, *Dead Cells.*

you trace the influences of popular or trending games, you'll find a lot of the same names come up – *EarthBound*, *Chrono Trigger*, *Animal Crossing*, *Final Fantasy VII*, *Ocarina of Time*... this has a tremendous influence on the games they make, who they choose to socialise with, and the games they signal-boost."

He continues: "I think it's important for your genealogy to expand beyond 'the classics' – which are classics not just because they're good, but because they were heavily marketed with a publisher that had a gigantic market share – and even beyond games and into other media and life experiences... My recurring nightmare is how every year, GOTY lists have the same random eight triple-A games, and then two indie games which *somehow* managed to be the two of the five

> ## "It's difficult to get hard-and-fast statistics on how many of these small teams take external funding"

indie games based on *Super Mario* or *EarthBound* that sold like 400,000 copies or something and got an anime Netflix series and a visit to the White House... Ultimately though, when you choose to be indie, you're trading the opportunity to 'hit it big' and be really popular with the value of being able to make truly profound games that may reach fewer people but affect them more deeply. The bigger a studio is, the more economic pressure there is, and the less inherent ability there is to push the envelope. I would prefer to live life creating truly interesting/life-affecting work even if it means we don't ship a million units or something. Though shipping a million units would be nice. Maybe I'll go back on my word and make indie *Animal Crossing* next year." ⓦ

⌄ *Anodyne 2*'s flair for the surrealistic is reflected here: the protagonist doesn't enter the car, they become the car, with little in the way of explanation.

Fights in Tight Spaces

No time for subtlety – Ground Shatter's next game needs to get straight to the point, hence the title. This is a game that is indeed all about fights which are held in tight spaces. While initially ideas might have been for *even tighter* spaces, the decision was made to keep them tight, but widen them a smidge. This would all be well and good, but layered on top of this turn-based strategy/card-battler is a visual style that is, fittingly, striking. It looks straightforward, but impressive: and that's exactly what the game as a whole is aiming for.

GAME
Fights in Tight Spaces

ARTIST
Ground Shatter

RELEASE
2020

WEBSITE
fightsintightspaces.com

Developer Profile

David Darling

With Codemasters and now Kwalee, the veteran video game entrepreneur has turned a love of gaming into two multimillion-pound businesses

What do you do if a reviewer has yet to play your amazing new game? Do you forget about using a gushing quote in your marketing material, or simply write one of your own? In the late 1980s, video game entrepreneur David Darling, who co-founded Codemasters in 1986, opted for the latter. "Absolutely brilliant!" he'd offer on the back of game boxes, the words often in capitals. Darling's fulsome self-praise became so infamous that Codemasters eventually began using it as a catchphrase.

Darling is unlikely to try such a thing today. Now aged 54, he's aware the video game industry is a more sophisticated beast, and that his effusive slogans were a product of more innocent times. Besides, Darling says the words merely reflected his belief that the games were so good he wanted to tell the world about them – a passion he still holds over 30 years on.

Since 2011, Darling has been the CEO of smartphone app developer and publisher, Kwalee, employing more than 70 people in Leamington Spa. Specialising in casual offerings including competitive drawing title, *Draw It*, and the *Shootout 3D* puzzler, Kwalee's games have seen more than 400 million downloads so far.

PUSH START
The games industry beckoned Darling even at an early age. As a child, his grandfather – an electronics engineer and designer of some of the first colour televisions – taught him how to build radios and other gadgets. "My physics teacher gave us electronics lessons and taught us how to design and make electronic circuit boards," he says, recalling a love of maths and science too.

Darling was also inspired by the entrepreneurial spirit of his father, contact lens pioneer Jim, whose skills were so sought after, the family ended up moving to Canada before Darling turned 13. "My dad's contact lens design and manufacturing company even designed some of the green lenses [worn by actor Lou Ferrigno] in *The Incredible Hulk* television series," he says.

∨ As far as tag lines go, you can't get much better.
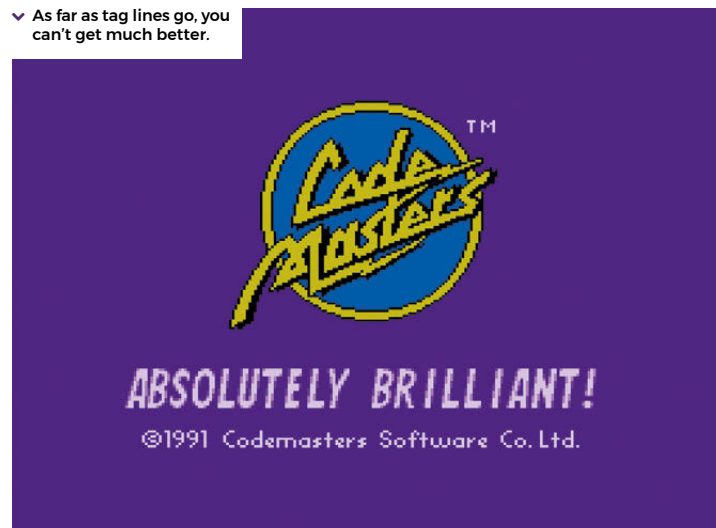
Although he also lived in The Netherlands, Australia, and France, it was in Vancouver where Darling first encountered video games. "I was going to the local arcades and playing *Space Invaders*, *Galaxians*, and *Asteroids*, which is where my love for games started," he explains.

One day his dad purchased a Commodore PET. "His company used a [contact lens] design with different curvatures on the outside and inside, which were quite mathematically complicated and were calculated by hand, so he bought a computer to try and help."

Since his father didn't know how to code, David and his brother Richard converted the algorithms and equations for lens curvature into a program in return for using the computer at weekends to develop games, starting with a *Dungeons & Dragons*-style text adventure. Darling was in his element. "I'm a logical and systematic kind of person – never the cool kid at school discovering the latest music or fashions," he admits. "But I liked programming a computer because you could spend hours designing something, and it was completely up to you whether it worked ⇒

∨ **The Darlings were the cover stars of a 1988 edition of Amstrad Action magazine.**
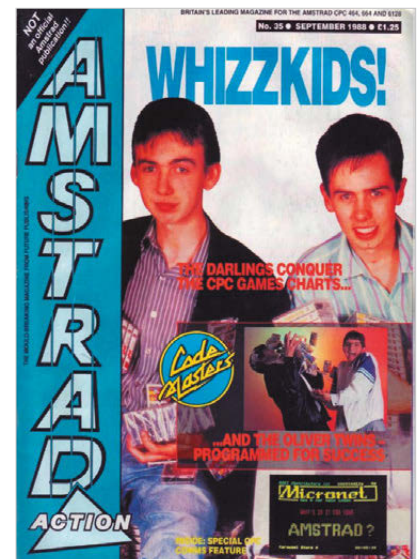
Chiller – based on the Michael Jackson video for *Thriller* – sold around 280,000 copies, making it an undoubted hit for the Darlings and Mastertronic.

Rocket Sky! is like a much simplified *Kerbal Space Program*. And it's great fun.
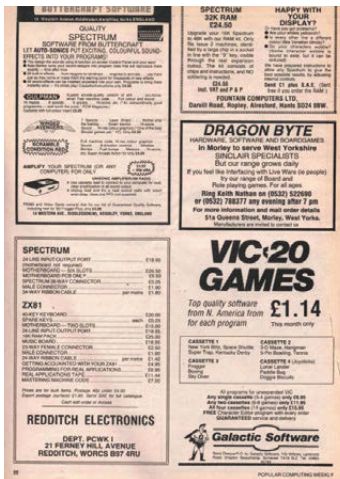
Popular adverts

As a consequence of growing up on three continents, David Darling attended 14 schools. "It was a weird experience because I never made friends for very long," he says. One friend Darling did make, though, was Tim Hoyle, whose father owned a graphic design company which Darling used to create the adverts he placed in Popular Computing Weekly. He promoted VIC-20 games such as *New York Blitz*, *3-D Maze*, *Lunar Lander*, *Boxing*, and *Doggie Biscuits*, sold on cassettes for as little as £1.14 each." I think the adverts cost about £70," Darling recalls. He paid for them by saving up the £5 pocket money he received from his mother each week.

or not. It was like building an electronic machine but far more powerful."

INFINITY AND BEYOND

At the time, new genres were emerging, gameplay techniques introduced and refined, and home computers invented and released. "There was a sense of exploration and discovery because most people hadn't programmed or used computers," Darling says. "It was a new thing to do – like deep learning and machine learning now."

Initially, the brothers cloned *Galaxian*, *Pac-Man*, and *Space Invaders* with friend Michael Herbert, whose family owned a Commodore VIC-20. But after a few years, the brothers were sent back to England to live with their grandparents in Somerset. "We bought a VIC-20 and saved up and purchased a machine code monitor cartridge so we could start writing machine code games," Darling says. "These games could have smoother and better graphics because the code was executed by the processor far more quickly."

The brothers soon got to work on their first games. Richard was the better programmer ("and probably better at maths"), but they soon had titles good enough to sell. They set up Galactic

> "*Dizzy* became a long-running franchise, to Darling's surprise"
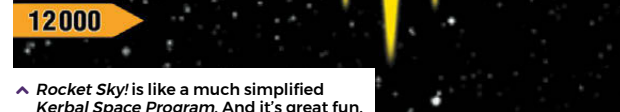
Software, choosing the name because of their love of sci-fi.

SET THE TAPE

The Darlings sold their games via adverts in Popular Computer Weekly. "We'd have people sending cheques through the post which, as kids, we thought was great," says Darling, who would drive to the tape duplicator on his moped, receive a couple of boxes of cassettes, and send the games to Galactic's customers.

When his father arrived home from Canada, however, he told the brothers to go to college. "We wanted to keep making games, so we had an argument," Darling says. "He asked us whether games were going to go out of fashion like hula hoops, and we said we thought games would be around forever because people have been playing various types of games for thousands of years."

Convinced, Jim joined the company. "My dad brought in a sales guy from one of the big electronics retail chains, and we started getting our games into shops such as WHSmith, Boots, and Woolworths," says Darling. "We then got a

letter from an executive at Mastertronic called Alan Sharam. Mastertronic was in the home video industry, so it was doing good business selling VHS tapes, and it wanted to get into computer games."

Sharam asked the brothers to develop games for his company. "They bought some games from us and some other companies, but they didn't always know what was a good game and what wasn't," Darling says. "So we set up a development company called Artificial Intelligence Products, half owned by us and half by them, with the exclusive contract to develop all Mastertronic games."

The Darlings worked on numerous games, including *BMX Racers*, *Pigs in Space*, and *Jungle Story*. But despite earning £200,000 from the venture, the pair wanted more freedom: "We wanted to make games for ourselves again." Selling their share of Artificial Intelligence Products to Mastertronic, the Darlings set up Codemasters in 1986.

DIZZY HEIGHTS
Based in Banbury, the new developer-publisher's first game was *BMX Simulator*, programmed by Richard for the Commodore 64. Codemasters followed the Mastertronic model and sold games at a budget price, and popular themes dominated. "We recognised game developers were interested in space, but that the general public had wider tastes, so we started thinking about what they were already interested in, be it football or Formula 1," says Darling. "We'd do research into whether football was more popular than rugby, or whether tennis was more popular than snooker."

Grand Prix racing, skiing, jet biking, ATVs, fruit machines, BMXing, and pinball all became subjects for Codemasters' 8-bit computer games, mostly sold with the word 'simulator' in their title. Darling enjoyed the spoils of their subsequent success, driving a Ferrari and piloting aeroplanes and helicopters. He also took on other aspiring talent – notably ➔

Nigel's Art
David Darling commissioned local artist Nigel Fletcher to create the box art for many of Codemasters' games between 1986 and 1989, including *ATV Simulator*, *Super G-Man*, *Death Stalker*, and *Dizzy: The Ultimate Cartoon Adventure*. "He did oil painting and ended up doing all of our front covers and game artwork," Darling says. "He really understood the types of games we were making, and gave us a real quality and consistency to our packaging."

⌄ Staff at Kwalee have been able to kick back and play games together, but Covid-19 has forced the company to rethink how it operates in the future.

▲ The *TOCA* series of racing games drove into view in 1997. *TOCA Race Driver* (2002) was the first game to feature a story mode.

the Oliver twins, who developed *Super Robin Hood*, *Ghost Hunters*, *Grand Prix Simulator*, and *Dizzy*. "Philip and Andrew Oliver had so much energy and creativity and worked so hard," says Darling. "We'd go on skiing holidays together – Andrew was like a stuntman with his ski jumps, and I think it inspired them to write *Professional Ski Simulator*."

Of the Olivers' games, *Dizzy* became a long-running franchise, much to Darling's surprise, since he'd taken on the game out of friendship and felt it would flop. When sales were initially slow, he wore a T-shirt reading, "I told you so", but the character raised Codemasters' profile, sales rose, and more platformers and arcade games were made in the series.

CHIPS ARE DOWN

As Codemasters grew, Darling began to assume a more business-orientated role. "Richard carried on developing games until 1996, getting involved in any special R&D projects, but I wasn't such a good programmer and, as more of an ideas person, it made sense for me to

drop out of it quicker. I probably wasn't programming much at all beyond the late 1980s."

He moved Codemasters to a converted farm in Warwickshire and, with a turnover of £3.5 million – more than enough for Darling to buy a new Porsche – sought to create full-price games. Poor sales caused Darling to turn to consoles instead, specifically the NES, a machine he became aware of at the Consumer Electronics Show in Las Vegas. Codemasters couldn't gain a license to create Nintendo games, however, so it looked to bypass the NES's lockout chip, designed to prevent unlicensed development. The move allowed Codemasters to make a string of games for the NES, including the hit

Micro Machines in 1991. Intended to be called *California Buggy Boys*, the game was reworked and renamed following a deal with US toy-maker Galoob.

The partnership also led to the development of the Game Genie cheat cartridge, offering gamers infinite lives, ammunition, or access to a game's later levels. Irked, Nintendo sued – but Darling was more than up for a fight. "If the Game Genie had failed, I'm not sure whether we would have made it," Darling says. "We held our nerve because we had to – we'd put so much into the project that we couldn't really walk away from it, and we believed that what we were doing was completely legal. We've never been afraid of standing up for our rights."

The Game Genie was ultimately a success, which helped Codemasters continue its growth in the console market through the nineties. "Game Genie was really successful in America, and it funded a lot of the development of our Sega Mega Drive games which, in turn, led us on to the PlayStation, which was the first 3D machine that we'd worked on," Darling says.

GOOD TIMES AWAIT

Darling felt franchises were increasingly important, and he worked with more

Nothing has changed

Much has changed in the games industry since David Darling started out as a teenager. Or has it? "At the end of the day, the fundamentals are quite similar," he tells us. "Human beings just like playing games and to be tested and challenged – be it timing, hand-eye co-ordination, or however else. A lot of the games made today are no different to *Space Invaders* and *Galaxian* on that fundamental level."
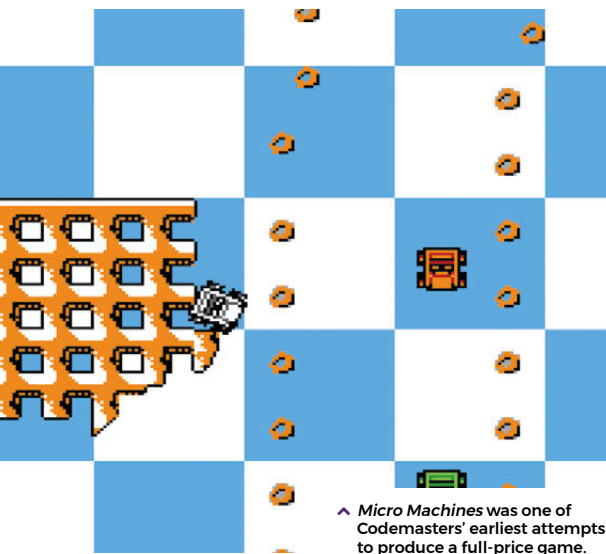
^ *Micro Machines* was one of Codemasters' earliest attempts to produce a full-price game.

^ *Draw It* was released in 2019, and sold surprisingly well in the US.

talented individuals to make them. "Peter Williamson, who had a company called Supersonic Software, did a lot of the early simulators for us including *4 Soccer Simulators*, and he went on to make *Micro Machines 2* on the Mega Drive," Darling says. "Gavin Raeburn did a lot of our Commodore 64 games and later worked as the developer/producer on *Pete Sampras Tennis* and *TOCA Race Driver*. Then there was Derek Morris, one of our best console programmers on the *Colin McRae* series."

In 2007, the Darlings sought a fresh challenge, and decided to sell their remaining 30 percent stake to Balderton Capital, which had been gaining an ever-larger share. "It seemed like the right time," says Darling. "We'd been running the company for more than 20 years and got to the stage where we wanted to try something new."

Darling couldn't set up a competing company for three years, and invested in publicly traded non-gaming companies on the stock markets. "At first it didn't bother me," he says. "After 20 years, it was good to have a sabbatical. But I realised I love making games – it gives me a purpose. I needed to set up a new company, and I saw tremendous opportunity in combining great games with digital distribution and marketing because it's so globally scalable."

Kwalee, of which Darling's father is chairman (the name is Aboriginal for 'wait for me'), initially specialised in iPhone game development and drew on Darling's original background in budget games. "Kwalee was about asking what people wanted to play," he says. "Gamers are a diverse audience that want bite-sized experiences to keep them entertained. I knew the future for gaming was going to grow a massive amount with mobile."

"Game Genie funded a lot of the development of our Mega Drive games"

DRAWING INSPIRATION
At Kwalee, Darling works with Andrew Graham and Jason Falcus, developer of several Codemasters games and Kwalee's chief operating officer. "It's been useful having the experience of making games for many years, because I've seen titles on all kinds of different formats and noted what works and what doesn't," Darling says. He loves finding new talent and approaches, too. "It's also good to use new technology, especially

in a fun game that, under the skin, is quite technically interesting," Darling says, pointing to *Draw It*, Kwalee's biggest hit release to date with more than 80 million downloads. "The game used artificial intelligence to detect what the player's drawing."

So what's next for Darling? "Prior to the Covid-19 pandemic, we were a studio-based company and had no intention of changing this," he says. "We love our physical space and rely on it, but we've been surprised at how well everyone adapted to remote working, especially on the development side where quick communication, creative collaboration, and alignment are so crucial. In some areas, we even saw improvements in efficiency."

As a result, Kwalee is currently hiring for remote roles at the time of writing, although it's also recently opened a second studio, in Bangalore, India. Lessons, it seems, can still be learned, even for industry stalwarts. "Scratch the surface, and there's always more to learn," Darling says. "I don't know exactly what's left to learn – but that's what I like about this industry." Ⓦ

⌄ Kwalee's first remotely developed game, *Bake It*, recently passed ten million downloads in its first month.

Mastering the Magic of Monster Train

STEVE McNEIL

Steve has always loved games, and yet he missed out on the best ones for *ages.*

I begin this month's column with a confession: I am an addict.

I'm not addicted to drugs. I've never done cocaine – even the idea of it makes me sneeze. I'm not addicted to sex, either. Sure, I love fizzy balls as much as the next guy, but I also love crisps, and there are only so many hours in the day. I'm not addicted to alcohol, but even if I was, this isn't a lager magazine. If only it was.

The addiction I want to talk to you about today is much more serious. My name is Steve McNeil, and I am addicted to decks.

It wasn't always so. About five years ago, I was introduced by a mutual friend to James Dean, managing director of ESL UK, at an event at the V&A Museum where *Hearthstone* was being exhibited as modern art. I pretended I loved the game in the hopes of impressing an important man, then thought no more about it. Whenever I looked at the game, it seemed utterly incomprehensible to me.

Then, about a year ago, a regular supporter of mine on Twitch challenged me to play the digital version of a popular deck-building game, Star Realms. I had a nice enough time and, soon after, a friend introduced me to Marvel Legendary, which I also enjoyed. I sought out a computer game version, but had to settle for *Legendary DXP*, a debranded version of the game where Hulk and Iron Man are seemingly replaced by sub-par *League of Legends* fan art. It played identically but felt lesser, and I figured that video game deck-builders just weren't for me. Then someone mentioned Marvel Legendary was on *Tabletop Simulator*, and that is when life as I knew it ended.

After losing myself in that, I started to take a look at all of the big hitters, including *MTG Arena* and *Hearthstone*, the latter of which completely won me over. Its tutorial is exceptionally well put together and, within an hour, you're immersed in an endlessly deep and satisfying game. And, crucially, it's simple enough in essence that you can still enjoyably bash through it if you've had a few beers.

Since then, I've poured thousands of happy hours into *Hearthstone* and assumed it was my forever game but then, *the one* appeared. A recently released indie game on Steam, *Monster Train*, has captivated me in a way no other game has since, well... *Hearthstone*. Many have commented on its less than subtle debt to *Slay the Spire* but, as with *MTG*/*Hearthstone*, for me *Monster Train* is the clear victor. Its art is more bombastic, it's quicker-paced, and everything about it just seems to click. While technically I'm not a reviewer for Wireframe, I nevertheless hereby give *Monster Train* 666%.

One of my favourite things about playing digital deck-builders has been how they allow me to feel smug in contrast to those who favour the expansive, and expensive, physical versions. But then I got drunk in a hotel, and spent over a grand on eBay on every Marvel Legendary card ever. Perhaps this was an article about my struggle with alcohol after all. ⓦ

Monster Train, officially(?) our highest-scoring game ever.

> **"Then someone mentioned Marvel Legendary was on *Tabletop Simulator*, and that is when life as I knew it ended"**

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Reviews, retro games, and lots more besides

OUR SCORES

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Trash. Unplayable; a broken mess.

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A truly bad game, though not necessarily utterly broken.

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Might have a redeeming feature, but otherwise very poor.

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70–79
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Brilliant. Fabulous fun. Everyone should at least try it.

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Never say never, eh?
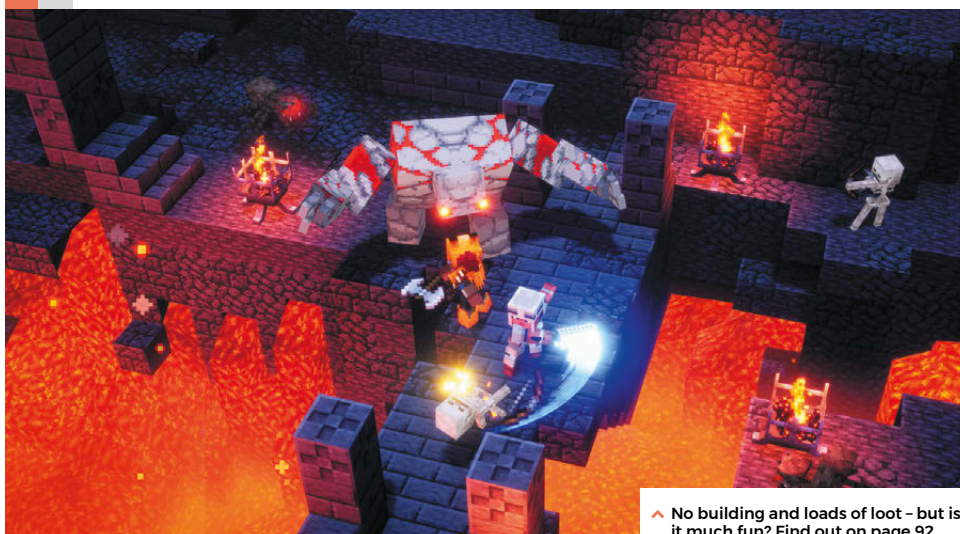
∧ No building and loads of loot – but is it much fun? Find out on page 92.

∨ Page 112: Jason Donovan's finest role since Joseph, no doubt.

PLUS

Review

Minecraft Dungeons

Scarcity is a real issue in these particular mines

Minecraft Dungeons is the rare game that actually *is* too short. But, maybe we should talk about what that means. When you look at itch.io's *Bundle For Racial Justice*, which raised over eight million dollars for the NAACP Legal Defense and Educational Fund and the Community Bail Fund, you might focus on the £4 minimum buy-in to bag over 1700 video games, tabletop RPGs, dev tools, and other bits and pieces. These exorbitantly generous deals are increasingly commonplace, especially in the world of PC gaming (though they're not all for charity). Case in point: for the introductory price of a quid, players can access hundreds of games through Microsoft's Xbox Game Pass; a service that currently includes *Minecraft Dungeons*.

So, when I say that *Minecraft Dungeons* is too short, I don't mean that it doesn't offer the 'proper' amount of value for its £15.99 price point. Notions of value have never been objective, and with the rise of subscription services, inside and outside of gaming, ideas about which hour-count merits which price point have become increasingly elastic. Instead, I mean that *Minecraft Dungeons* is mostly great fun while it lasts, but – as Mojang's first major spin-off for PC and consoles – feels strangely incomplete; like the first third of a much larger game. As it stands, you can blast through *Dungeons* in an afternoon.

That will probably be a pleasant afternoon. With the exception of the final boss, which required some grinding to best, *Minecraft Dungeons* is a breezy action-RPG that works well as a streamlined introduction to games like *Diablo*. Though it, strangely, includes no mining or crafting, *Minecraft Dungeons'* gentle, catchy score, gorgeously blocky visuals, and familiar series enemies and tilesets will make *Minecraft* fans feel right at home.

That's an impressive feat, given how little *Minecraft Dungeons'* mechanics have in common with Mojang's most famous work. Serving as a first step for the hack-and-slash-curious, combat

⌄ **Between battles, you and your friends return to camp where you can spend in-game currency on randomised artefacts and weapons, then plot your next mission at the world map.**
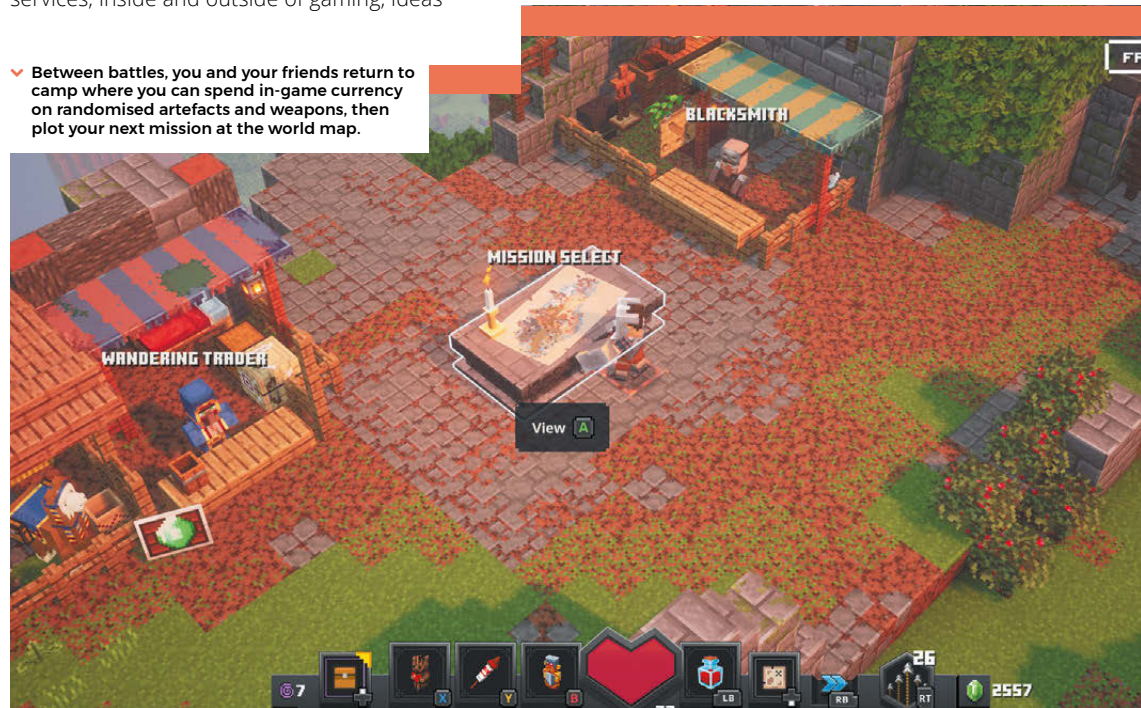
In *Minecraft Dungeons*, your dodge is on a cooldown. So, when enemies mob you, you'll need to be smart with your abilities.

here is simple and straightforward. With an Xbox One controller in hand, you'll press A to swing your melee weapon and pull the right trigger to fire off an arrow. That's it! Those are the only consistent attacks from build-to-build. The rest of the face buttons are devoted to artefacts: equippable objects that grant wildly different special abilities.

Some of these provide area-of-effect boons, like projectile-blocking barriers or healing auras. Some, like winged shoes that up your walk speed to a sprint, boost your base stats for a short period of time. But others are weirder. A fishing rod lets you pull opponents toward you. A purple cube lets you fire off an energy blast. A personal favourite let me load a firecracker into my bow, and blast explosives at enemies. Though the game is simple to pick up and play, it rewards tinkering. The simplicity of the initial skills provides a solid foundation as you work your way through *Dungeons*' unlockable, escalating difficulties.

Dungeons cleverly hides some content throughout the ranks. Though it launched with just ten levels (one of which is a short tutorial), there's still plenty of variety. Some comes from the stage themes, which range from imposing castles to pumpkin patches to crimson mines. But the stages also change from playthrough to playthrough. Though objectives, like tracking down a key or smashing up a buffet table, remain the same, procedural generation alters the level layout each time. Additionally, features that are more challenging to navigate – like runaway rail carts that will whack half your health away and pulsating cages which spawn enemies until you destroy them in the finest of *Gauntlet* traditions – don't appear until you make the jump to Adventure difficulty, which unlocks after you see the end credits.

I have a few issues with some of the nuances of the combat. Namely, the dodge roll, like the artefact abilities, has a cooldown. It's significantly shorter, running down in a few seconds as

"It serves as a first step for the hack-and-slash-curious"

opposed to half-a-minute, but at least on an initial playthrough, it felt like it significantly limited my build options. I could play a nimble character with speedy blades. But, the lack of a consistent dodge roll ensured that I would eat a ton of damage as I pecked away at enemies' health. Instead, I opted for a tank-y build with a massive hammer, heavy armour, and healing spells, which, to an extent, felt like the only option for the cheese grater of a final boss.

In short, *Minecraft Dungeons* is a ton of fun, but feels like the first episode of something larger – not a complete game in its own right. This notion has been hammered home by the release of the first DLC add-on, *Jungle Awakens*, which arrived after this review had been submitted into the void. It's not a free add-on, so while I can say I'm excited to see what Mojang does next with *Minecraft Dungeons*, I'm less eager to pay more money just to make the game feel complete.

But, as we've established, value is in the eye of the beholder. ⓦ

Minecraft Dungeons' environmental art is simple, but pretty, and its soundtrack is effectively evocative of the spaces the game depicts.

VERDICT

*Minecraft Dungeons* is simple fun, but feels prohibitively short.

70%
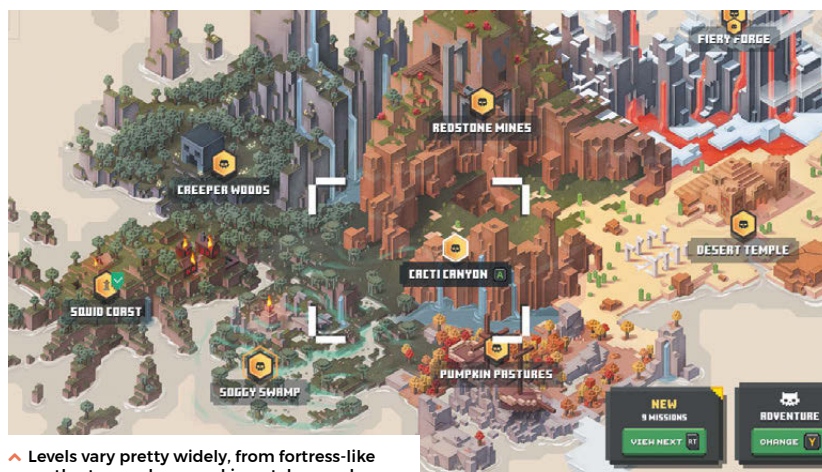
Levels vary pretty widely, from fortress-like castles to spooky pumpkin patches, and more.

HIGHLIGHT

The sound design in *Predator: Hunting Grounds* is fantastic – at least when it comes to the Predator, anyway. You'll hear that signature alien mouth-clicking when traversing the tree-line, and it lets out a fearsome scream after healing that would be bone-chilling if the Predator posed more of a threat.
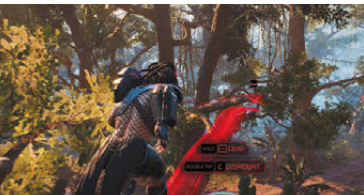
▲ The Predator uses what the game calls 'Predkour' to get around, which makes it easy to glide from one tree to another.

▲ The shooting is serviceable, if only because enemy heads like to explode in an over-the-top display of crimson gore.

Review

Predator:
Hunting Grounds

If it bleeds, we can kill it. Really easily, actually

Info

GENRE
FPS / Asymmetrical multiplayer

FORMAT
PC (tested) / PS4

DEVELOPER
IllFonic

PUBLISHER
Sony Interactive Entertainment

PRICE
£31.99

RELEASE
Out now

REVIEWED BY
Richard Wakeling

VERDICT

A shallow game of cat and mouse with no reason to stick around.

38%

The titular monster in *Predator: Hunting Grounds* is decidedly tame. It only loses to Arnold Schwarzenegger in the original 1987 film because it's bored and fancies a challenge. The iconic alien has already cut through the rest of Dutch's squad at this point, blowing off heads and ejecting hearts with all the ease of a technologically advanced hunter. By the time Dutch has covered himself in mud and set up a bunch of traps, the Predator decides to make things interesting by sparing his life so they can have a climactic fist-fight.

By comparison, the video game version of the iconic monster never manages any climactic fights, with fists or otherwise. Balancing a multiplayer game is a tricky thing to get right, especially for an asymmetrical one that pits a four-person squad of gun-toting humans against a single Predator. In this case, however, developer IllFonic would have been better served by leaning into the Predator's inherent advantages, much like it did with Jason Voorhees in 2017's *Friday the 13th*.

When you're playing as part of a human fireteam, each match begins with your squad dropping into one of three indistinguishable maps. Your aim is to complete a few bland objectives – such as pressing a button on a thing, standing by a thing, or blowing up a thing – before "getting to the choppa" and making it out alive. AI combatants populate the strongholds spread out across each map, but they're too dumb to put up much of a fight, opting to simply charge in straight lines instead of doing anything one might consider strategic. The Predator is, of course, the main threat to your survival and the completion of your mundane checklist of tasks, but even that's a stretch.

Playing as the dreadlocked menace is marginally better than playing as a human, mainly because your lone objective – to wipe out the fireteam before they can extract – is slightly more engaging than anything the soldiers have to do. You have access to all the familiar tools of the trade, such as heat vision, stealth camouflage, shoulder-mounted Plasma Casters, and deadly Wrist Blades, but the problem is that objectives rarely ever give the fireteam a reason to split up or separate. A hail of bullets from four humans is more than enough to drain your health in a hurry, and with the AI posing no threat or distraction, your only tangible option is to dash in for a few quick attacks before running away to heal.

Being stalked by the Predator should be a terrifying ordeal, but as long as you stick together, the overwhelming numbers on your side will leave it face down in a pool of its own blood more often than not. There are occasional outliers where you'll come across someone who's an expert in the art of maiming and killing, but these matches are rare, and even if you're successful as the Predator, there's no glory in victory because the means of achieving it are so tedious. Ultimately, *Predator: Hunting Grounds* lacks the tension and depth to make it worth playing. ⓦ

Review

Granblue Fantasy: Versus

▲ Ladiva, more like Ladunka.

Yes, the lead character is Gran. No, he isn't blue

Granblue Fantasy: Versus marks the RPG series' leap into the realm of console fighters, with its broad cast of characters amassed since the franchise's 2014 beginnings cut back to a rather more streamlined eleven. It's a bit of a surprising move, to be honest.

What isn't surprising is Arc System Works' preservation of *Granblue*'s pristine world design and Hideo Minaba's artistic landscape, all of which makes its way from the Cygames RPG. Nothing is overlooked; all the little details are lovingly crafted and are very much true to source.

That streamlined roster still makes an impact, too, and while it doesn't have as many playable brawlers as the *Tekken* 7s of the world, it's still a diverse cast to get stuck into, riddled with personality. Whoever it is you choose to play as, every fighter is intuitive and simple to get into – auto-combos chain individual moves into full sequences with repeated button presses, while special moves are afforded the luxury of easy inputs. That means you can unleash them with a single button press. It bridges the gap between skilled fighting game players and novices to the genre.

Balance in these easy inputs comes via a small penalty, though – one-button specials, for example, require a longer cooldown than if you pull off the correct, full input. It's a good idea, but sadly doesn't translate elsewhere – combos are automatic and baked in regardless, so advanced players won't find much in the way of

> **"It's a diverse cast to get stuck into, riddled with personality"**

discovery or self-expression in *Granblue Fantasy: Versus*' combo system.

There is stuff to learn, of course, and the game adds a series of extras in the form of glossaries, training sessions, and tutorials to help players of varying ability develop their knowledge and effectively use all of the game's mechanics. Escape rolls and spot dodges, for example, aren't commonly found in other fighting games, so it's good to have a library of knowledge backing them up. The combos might be lacking, but these learning resources do offer a fantastic blend of accessibility and complexity.

And all of this is without even mentioning the side-scrolling co-op RPG mode included in *Granblue Fantasy: Versus*. It's akin to a *Streets of Rage* mixed with loot box mechanics – sans microtransactions – taking players on a journey through the Sky Realm, the setting of the main RPG. Those looking for more to read will be pleased to know there's an encyclopedia stuffed with info about the series, all available at the touch of a button.

It doesn't matter whether you're in the main fighting game or the secondary RPG-lite mode, *Granblue Fantasy: Versus* always feels responsive. There's plenty of replay value through the additional difficulty levels and challenges you'll encounter, and generally speaking, this is a very good fighting game that goes out of its way to offer a little bit more than you'd expect from your traditional one-on-one brawlers. ⓦ

Info

GENRE
Fighting game

FORMAT
PS4 (tested) / PC

DEVELOPER
Arc System Works

PUBLISHER
Marvelous Inc.

PRICE
£49.99

RELEASE
Out now

REVIEWED BY
Ryan Esler

VERDICT

A compelling mix of characters with a solid fighting game backing it up makes *Granblue Fantasy: Versus* easy to recommend.

73%

Goblin
Level 10

Goblin
Level 10

Goblin
Level 10

Hobgoblin
Level 10

Hand Axe

MP 15 /15   Level 10   HP 200/200   MP 17 /17   Level 10   HP 200/200   MP 37 /37

200 %

Review

> **Most enemy attacks are telegraphed, letting you know where to avoid. Areas of effect do get ridiculously large later.**

> **Charlotte sounds as insufferable as her text suggests. Fortunately, you can opt for Japanese audio, or just turn off the voice acting.**
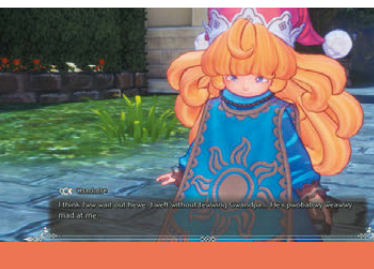
Trials of Mana

A lost classic in modern form

Video game remakes are naturally for modern audiences, but they're also designed to stoke fan nostalgia, carrying a heavy burden of expectation as a result. Given that *Trials of Mana* – known by its Japanese title *Seiken Densetsu 3* – had never been released in the West, until its inclusion in *Collection of Mana* for the Switch last summer, it largely escapes the same level of scrutiny. It's perhaps why, compared to 2018's disappointing and charmless *Secret of Mana* remake, there's more license to really bring the 1990s Super Famicom title to 2020 by not only ditching pixel art but also changing perspective from top-down to full 3D.

Controls feel refreshingly modern, the z-axis allowing you to jump around environments and rotate the camera. Even though battles are ringed off as individual encounters, the real-time combat nonetheless flows seamlessly, as your party of three heroes (chosen from a possible six) execute light and heavy attacks, even dodge roll, all the staples of a modern 3D action game. The targeting system, however, I find finicky, with a tendency to lock onto the enemy furthest away – so you might find at times it's better to do without.

Naturally, the new perspective means there's no multiplayer option like in the original, but it's easy to switch between characters, while the action freezes if you need to access the item and spell ring menus. If there's any criticism, the

> **"The game's second half is essentially a boss rush"**

modern controls and conveniences make most of *Trials*' combat less of a, well, trial. At least the bosses put up a challenge – the game's second half is essentially a boss rush akin to *Shadow of the Colossus* – but it also shows up your AI-controlled companions' limitations. Instead of wasting resources to heal and revive, I often found it easier to just solo with my strongest melee-based character, who also benefits the most from being able to collect particles from enemies you've attacked to charge up a gauge for special Class Strikes.

Outside of combat, everything else feels incredibly old-school. Visuals hark back to the original art (including some of the female characters' notably skimpy outfits), while the new rearranged score also doesn't embellish the original (you can even swap between the two versions to compare). Even though there's voice acting and cutscenes, the story structure remains the same, making for a campaign length that's short by modern standards. Purists will be relieved the *Trials* team haven't done a *Final Fantasy VII Remake* and dragged out a 20-minute plot point into a few hours, yet I can't help but wonder if there couldn't have been more fleshed-out character development or side quests.

Nonetheless, *Trials* retains much of the original's charm, and is probably the best way for new audiences to experience a lost classic. It just might no longer be the masterpiece it's been touted as all this time. ⓦ

VERDICT

For better and worse, *Trials of Mana* is the most faithful JRPG remake you'll play this year.

71%

I really appreciate that *Tonight We Riot* puts its money where its mouth is in regards to its politics. The game is made by a worker-run co-op, embodying the socialist principles the game espouses in its very development.

Review

An exclamation mark above your comrades' heads indicates they've been affected by tear gas and will retreat.

Tonight We Riot

Overthrowing capitalism one mech at a time

Tonight We Riot is not a game that has any interest in being subtle about its themes, setting itself up as an unapologetic, cathartic polemic that charts the progress of the overthrow of a capitalist regime by a worker-led revolution. The game takes the tensions that underlie contemporary capitalism as its focus – low wages, precarious work, a corporate-owned media, and so on – then adds a touch of the absurd to that familiar context. That's not to say that it intends to be flippant with its critique of capital, but that it's comfortable being silly and finds plenty of space to have some fun with giant mechs and radioactive monsters.

The game makes some smart moves when it comes to tying the way it frames its fundamental conflict into its mechanics. It's an old-school, side-scrolling beat-'em-up in the vein of a *Double Dragon* or *Streets of Rage*. The twist is that rather than controlling a single character, you are marshalling a crowd. As you move through the levels, you liberate workplaces to add to your numbers. Start lobbing bricks and they will do the same. Chuck a Molotov cocktail and your comrades will join you to create a barrage of fiery vengeance. If the lead character you are controlling dies, another member of the group will take their place, until no one is left. Ensuring that this fight against a brutal profit-driven regime is a collective one, requiring solidarity and strength in numbers over individual heroics, both differentiates the game from other titles in the genre and resonates with its politics.

When you've gathered a big crowd and you're unleashing hell on lines of repressive police, *Tonight We Riot* can gather a satisfying, chaotic energy. That feeling is, however, too rare. Far more common is the feeling that the obstacles added to make each stage gradually more difficult – from troublesome holes in a rickety pier to barrels of toxic waste – are frustrating and finicky interventions that can barely disguise the shallowness of a combat system that is unable to be stretched far enough to take you to interesting places. This sense that the game is struggling to provide an illusion of depth came to a fore for me when, struggling in a level towards the end of the game, I simply tried running past all the enemies that had been giving me such problems and found myself at the end of the level, a dissatisfied shrug and a mild sense of relief taking the place of the accomplished elation you would hope to get from overcoming a tricky challenge.

I might sympathise with the game's politics, see potential in some of its ideas, and enjoy its pixel art style, but I can't pretend that I was left enamoured with what is, when you strip all of this back: a pretty average beat-'em-up. Ⓦ

> ## "It's comfortable being silly and finds space to have fun"

Within its short playtime, the game offers a bit of variety with a couple of chase scenes.

Info

GENRE
Beat-'em-up

FORMAT
PC (tested) / Mac / Linux / Switch

DEVELOPER
Pixel Pushers Union 512

PUBLISHER
Means Interactive

PRICE
£11.39

RELEASE
Out now

REVIEWED BY
Paul Walker-Emig

VERDICT

An unspectacular, side-scrolling crowd brawler with a socialist ethos.

69%

HIGHLIGHT

Boss fights are a welcome change from plane-to-plane combat, and while some are underwhelming, a few are satisfyingly ambitious. The pick is a huge mechanical spider, which stomps over the landscape, chucking out all kinds of projectiles. It's also a solid but fair challenge, which rewards careful planning and flying.

▼ The story of cocky sky pirates, deadly ancient technology, and talking cats is light-hearted fun.

Review

Jet Lancer

More of a Goose than a Maverick

▲ The three-hits-and-out health system can feel needlessly punishing on longer missions.

Info

GENRE
Shoot-'em-up

FORMAT
Switch (tested)
/ PC / Mac

DEVELOPER
Code Wakers

PUBLISHER
Armor Games

PRICE
£13.49

RELEASE
Out now

REVIEWED BY
Jon Bailes

VERDICT

A sleek jet hampered by excess baggage and unwieldy systems.

56%
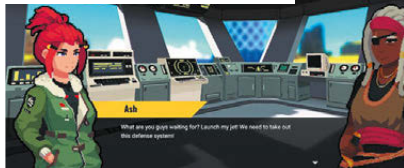
Jet Lancer's blue skies recall classic scrolling shoot-'em-ups like *U.N. Squadron* and *Aero Blasters*, but its biggest influence is something far less colourful – the monochrome 2D dogfighter *Luftrausers*. The stark aesthetic and accomplished air combat of Vlambeer's 2014 title is encased here in warm brightness, a mission-based structure, and boss encounters. It's an alluring proposition. Yet *Jet Lancer*'s execution lacks the clarity of its palette.

The simple pleasures of *Luftrausers* transfer across to *Jet Lancer* well enough. Rotate and thrust controls enable looping turns to throw missiles off the scent, or audacious 180-degree spins that see you coasting backwards, unleashing your cannons on a pursuing assailant. It's a shame then that the compact chaos of *Luftrausers* is somewhat lost in *Jet Lancer*'s broad play areas, as enemies spread out and disappear from view, leaving you shooting vaguely at icons dotting the edge of the screen. Too much time is spent chasing down stragglers, and unavoidable collisions are common, as unseen combatants suddenly cut across your flight path.

Some fancy moves and weapons help counter these inconveniences, but they distract and overcomplicate as much as add meaningful depth. Victories rely heavily on deploying missiles and special weapons, which in practice usually means monitoring two separate cool-down timers to fire them as often as possible. As for defence, a barrel roll dodge manoeuvre is often

> **"Too much time is spent chasing down stragglers"**

most effective if you constantly hammer the button instead of trying to time reactions to threats. And while there are plenty of unlockable upgrades available, few force you to rethink your play style or feel like worthwhile improvements over the earliest available parts.

Different mission objectives similarly add variety but little sense of evolution. Whether you're shooting waves of sky pirates, taking out specific targets, or escorting a ship through dangerous territory, you're usually fending off swarms of insect-like planes. Occasionally there's a bigger twist, like when using your weapons attracts the attention of an enemy super-laser, but these are more extra irritations than interesting challenges. Difficulty is also imbalanced, with extreme spikes, especially in a couple of missions that require you to attain a certain points tally in a three-minute time limit. It's possible to spend hours repeating these, performing near flawlessly and still failing to reach the absurdly high targets. For a game that's otherwise mildly to moderately challenging, and has accessibility options including invincibility that make many stages unfailable, it's a large oversight to gate progress behind these arbitrary tests of skill and luck.

The basics of dogfighting in *Jet Lancer* are still enjoyable, and the breezy presentation remains attractive. But a game about the skill and bravado of jet fighting shouldn't be so clumsily uneven or struggle so much to express itself. Sometimes blue sky thinking creates as many problems as it solves. ⬥

SAI

Rage against the machine
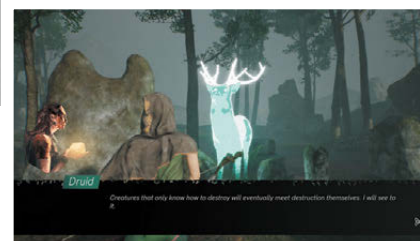
SAI's bosses aren't overly complex, but they throw enough enemies at you to create some hectic situations.

Like the world design of Metroidvanias, the forest loops around on itself and eventually brings you back to previous areas.

I can't stop thinking about *SAI*'s endless, primeval forest. A peaceful community of plants and beasts, with degraded ruins and unmarked pathways that create a feeling of perpetual magic. It's a realm of great power, and it's your job, as a druid, to protect it after an invasion by destructive mechanical forces.

At its heart, *SAI* is a story about conservation. The plot is minimal, with no backstory given to the machines or the main character, and this serves to draw attention to the environmentalist themes. The forest is in danger of total devastation as its inhabitants face extinction, and this is something you find in the real-world news with huge eco-communities being threatened by human development.

As a druid – a preserver of the natural world – you journey through these woods to repel the machine invaders and restore the power of the great oak tree. Using a bow and arrow, the combat is as simple as shooting the weak spots while avoiding enemy attacks, but the fluidity of the animations combined with the fast pacing creates intense action scenarios where it feels remarkably satisfying to clear an area with little more than a few scratches.

Then you advance further inwards into the forest, discovering fallen trees and industrial sites as the land becomes twisted and artificial. It would be easy for Studio Mutiny to use this imagery to say humans are evil, but instead,

it spends more time celebrating nature and all that it holds. *SAI* opts to show us why it's all worth saving, remaining wholly optimistic in its environmentalist agenda.

It's a sensory experience too, with soft woodland sounds constantly sparring with the unnatural rackets of the machines. It creates a feeling that's as elevating as it is ominous, and provides a way for the game to build your relationship with the forest through an emotive connection.

Then there's the bonus 'free roam' mode where you can explore the forest at your leisure.

> **"The plot is minimal, with no backstory given to the machines or main character"**

Use this to find all the collectables which detail small pieces of lore that relate back to real Celtic history. It's clear Studio Mutiny did its research as everything from the character design to the Brittonic language creates a sense of historical authenticity about the game, while the look of the machines' features draws ambiguity to the exact time period in which it is set. It doesn't matter in the end, as the environmentalist message is the important part here.

It's easy to dismiss it based on the one-hour length and the presence of bugs, but if *SAI* gets just a single person to reconsider the impact of their carbon footprint then Studio Mutiny has achieved its goal. Combined with the fact that 80% of revenue goes to conservation charities, this is ultimately a game about the love and care we should give to nature. ⓦ

VERDICT

A short, jagged adventure with a positive message.

65%

Syd Mead-inspired designs rendered in voxels give *Cloudpunk* a distinctive look. Unfortunately for *Cloudpunk*, it's the distinctive look of *Lego Batman*.
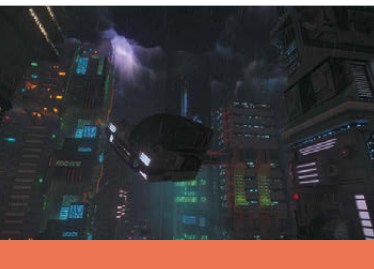
Review

Cloudpunk

Grand Heft Yodel

Nivalis' level design is intricate and labyrinthine, which really sells the illusion of a metropolis but isn't so great for navigating.

VERDICT

A chilled, combat-free courier-'em-up set in an inviting voxel cityscape with plenty of stories to tell, unfortunately let down by bland mechanics and technical issues.

67%

Big cities are rubbish, aren't they? Living in one is an endless meander from one disillusionment to the next, as the novelty value of being able to press a button on your phone to have some underpaid moped driver bring you a sushi platter within 20 minutes gives way to the sheer inhumanity of it all. The grind. The cliff face of disparity between the wretched and the wealthy. Tent villages nestled amongst gleaming glass towers, and other cosmic punchlines.

Cloudpunk, like every rain-slick future with neon skies and hover-cars, is about that. Y'know. How crap everything is. If you're looking for escapism, look elsewhere. If, however, you're looking for a gorgeous open-world city to explore, full of stories, characters, and collectables, then stick around.

The city of Nivalis teems with life. Though *Cloudpunk* is ostensibly about driving a *Jetsons* car, considerable time is spent on foot, where you roam streets crammed with people doing city things: plying wares, smoking tabs, having coffee, wearing jackets, and so forth.

You play Rania, a recent immigrant to Nivalis, on her first night running jobs for an illicit delivery firm. Your task seems perfectly sound at first, but before long you'll be sent on errands of increasing dubiosity. There is an element of moral tension here: fuel and upgrades aren't free, but are they worth becoming a criminal for? It's a quandary, unless you're a libertarian, in which case you

> **"If you're looking for escapism, look elsewhere"**

won't get to those bits anyway because you'd have uninstalled it in a huff about having to play as a woman.

It's an oddly structured game. There is an overarching narrative, but it's nowhere near as compelling as the little vignettes that branch off it. The street seller who's had an argument with his artificial falcon. The android who has become so involved in detective work that he speaks in external monologue. The society of moisture farmers on the outskirts who cling onto survival by the warmth of thermal vents. There are dozens more. At times the game seems best appreciated as a short story collection with an elaborate interface – which, given the literary origins of its chief inspiration (*Blade Runner*, rather unsubtly) is a fitting way to enjoy it.

Unfortunately, there are issues. Moving around the city, even with upgrades, fast becomes tedious. For a game principally involving travel, the traversal being dull is quite the oversight. But it's such a chilled-out game that its quiet stretches are not an unmitigated disaster. Indeed, if this aspect is deliberate, it's eminently faithful to the experience of metropolitan life. Whether that makes for a good video game is up to the player, but for me, a little too much time is spent holding RT and waiting. To make matters worse, regular patches are being issued to deal with *Cloudpunk*'s disproportionate performance issues. It's tricky to get running smoothly, even on a nice PC. Ⓦ

The detail on creatures is lovely, often framed by little more than a blue backdrop.

HIGHLIGHT

Once you're in the submarine, *Beyond Blue*'s meditative ambient soundtrack changes to an eclectic mix of songs by artists such as Sophie Gibson, Miles Davis, and The Flaming Lips, giving you an opportunity to enjoy Mirai's personal playlist. Like the rest of the game, it's amazingly diverse, going from singer-songwriter pop to African hip-hop.

Review

Beyond Blue

Certainly whale-intentioned

The ocean is a fascinating place, and vital to the continued existence of humankind. Educators such as Sir David Attenborough have tried, through both lectures and breathtaking documentaries, to raise public awareness of the state of our oceans and what we need to do to save them. *Beyond Blue* is a new step in this endeavour, a collaboration between Attenborough's acclaimed documentary *Blue Planet II* and game developer and publisher E-Line Media. Given the heightened importance of the gaming industry and the great educational potential of interactivity, it sounds like a great match. Playing *Beyond Blue*, however, you find a game which is light both on education and entertainment.

You take control of Mirai Soto, a deep-sea scientist who became enthralled with the ocean, and especially whales, during childhood. Now, Mirai tracks a family of whales to study their behaviour as closely as possible. In this context, as closely as possible means scanning animals. The story is divided into a set of dives that all play the same way. You start a work day by accessing

Beyond Blue rarely gets dark, unless it focuses on the danger of human intervention in the environment.

a buoy and playing the sounds it recorded. Then you swim towards waymarkers telling you the current location of each animal you just heard. Once there, you scan them to tag them, or you scan them to listen to them, or you scan them to assess how they're doing. There are two different types of scans – one involves a special drone shaped like a manta ray, which can only rotate and pan around its target, making for incredibly fiddly scanning. Then you swim to the next buoy and the whole procedure repeats.

Between each dive, you spend time in your submarine, listening to music, watching documentary clips, reading logs, making calls to Mirai's team – which consists of a marine biologist and a sound engineer – or calling her sister. The dialogue feels natural and the voice actors, including actress and YouTube personality Anna Akana, do a great job. The cast is highly diverse, too. There's a genuine effort to tell an engaging story, but *Beyond Blue* offers next to nothing in the way of gameplay. If you want to know more about what you just scanned, you have to read logs at your submarine in a very basic UI; there's no actual interaction taking place. As beautiful as the virtual ocean is, it also feels mostly empty, with only occasional thought for anything that isn't a whale. There are attempts to teach that don't involve simply presenting you with reading material – for example, when Mirai talks you through an in-game live stream – but these instances are few and very short, to boot. *Beyond Blue* is certainly faithful to the everyday work of a diver, but this staunch realism makes for a tedious experience.

Info

GENRE Edutainment
FORMAT PC (tested) / PS4 / XBO / Apple Arcade
DEVELOPER E-Line Media
PUBLISHER E-Line Media
PRICE £15.49
RELEASE Out now

REVIEWED BY Malindy Hetfeld

VERDICT

Beyond Blue has the ingredients of a fantastic collaboration, but the end result feels unfinished.

55%

The free-form nature of construction means you're rarely limited for placement opportunities. A snap-to grid is in operation, but can be overridden at will, meaning you can make some real free-form monstrosities in your quest to make those *idiots go where they're meant to go.*

⌄ I honestly don't know if this is too many or too few signs.

Review

∧ The simulation of people being people in a train station is genuinely very convincing.

Info

GENRE
Sign-'em-up

FORMAT
PC (tested) /
Mac / Linux

DEVELOPER
DMM GAMES

PUBLISHER
DMM GAMES

PRICE
£13.99

RELEASE
Out now

REVIEWED BY
Ian Dransfield

VERDICT

Like the Waterloo & City line, *STATIONflow* is small and quite boring, but ultimately satisfying and worth a try.

78%

STATIONflow

Sign of the times

I lived in London for five years. My experience there was bookended by positive and negative experiences with the Tube. I left hating the bustle of rush hour, the endless slogs to change lines, *the people*. Why, then, I thoroughly enjoyed *STATIONflow* for as long as I did is completely beyond me, because it does such a very good job of emulating that real-world subway feeling with genuine accuracy. Those head-down sprinters carrying briefcases, the dawdling, backpack-sporting tourists, the elderly folks who need more help than others to get around, only to be met with one of London's many stations inaccessible to those with the inability to use stairs – it's all bang-on.

Your work in the game boils down to this: run a successful underground rail station. With that responsibility comes the job of connecting some paths linking a couple of entrances to your train lines. Set up a signpost to point people where to go, and job done – people flow through nicely, everyone's happy. Mere hours later, it's become an exercise in futility as you try to rejig your layout 'one last time' just to try and make it so those *inconsiderate idiots* are able to leave the platform, navigate down two levels, walk around a corner – it's just one corner! – and catch a connecting train. It'll mean relocating the toilets, of course, and that means editing a hell of a lot of signs telling people where they've moved to. You might

> **"Making sure people get from A to B, and that they do so in a pleasing fashion"**
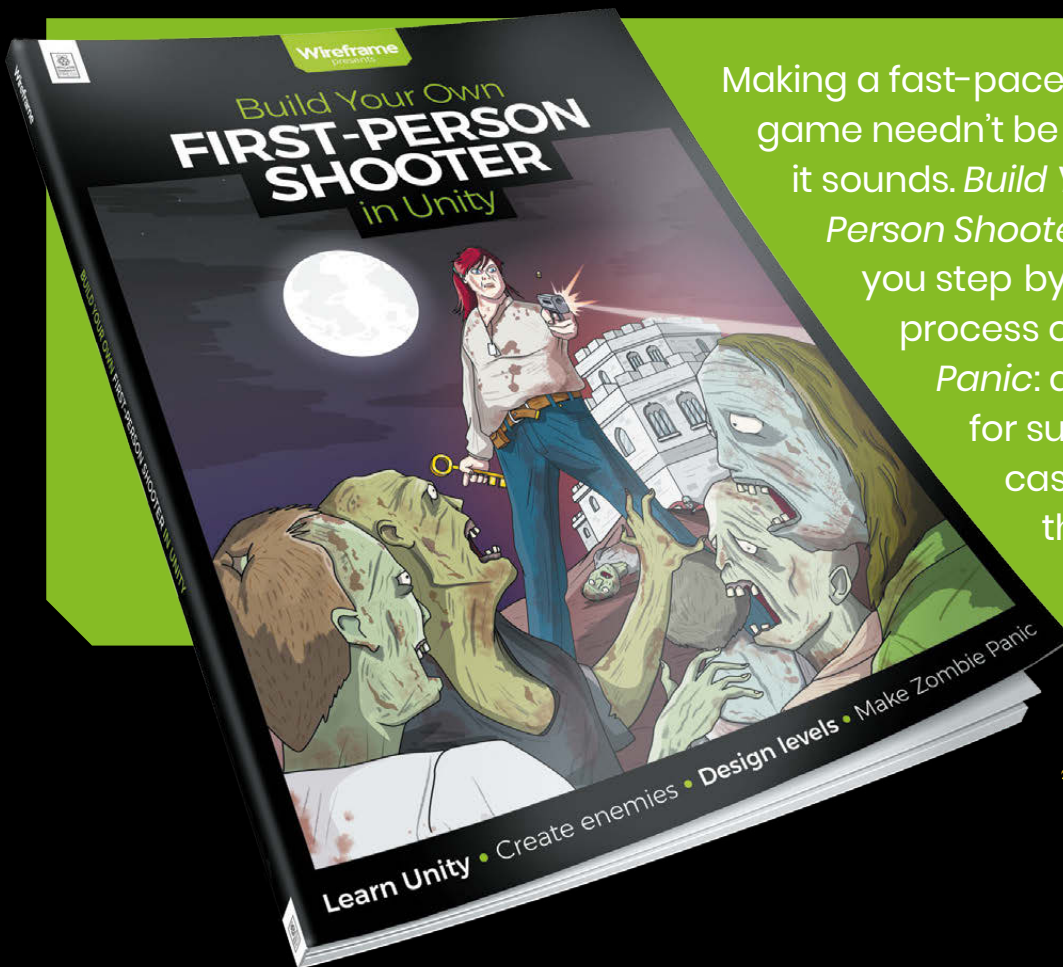
also want to look at putting some escalators in there, though the space will be tight and… yep, you've just realised why it's often so bewildering to navigate an old, established underground station. Turns out these things are *really hard* to design well, and even harder to both design well *and* efficiently.

That's the living puzzle of *STATIONflow*: not just making sure people get from A to B (or C, those lower-level exits), but also that they do so in a pleasing fashion, free of hold-ups and congestion, with information and ticket stations, coffee machines, and kiosks all along the way to sate their commutery (or touristy, or whatever else-y) needs. The game layers complexity on thick, and gives you little pause as it goes about its business ramping things up. I mean, you *can* literally pause it to get your construction and signage in order, but it still overwhelms at a point.

It's a fantastic little game for a few hours, and one I can see myself going back to plenty of times in coming weeks and months to start on a new station and challenge myself anew. It's just a shame that it so soon becomes an exercise in laboriously updating all of your signage to add on one or two little pointers for where people need to go, lest you once again end up with a gaggle of confused tourists blocking up the thoroughfare. Which, more than anything, just gives me more of those London life flashbacks. ⓦ

Backwards compatible

WRITTEN BY RYAN LAMBIE

Blast from the past

My odyssey through the Famicom Disk System's library continues this month with *Zanac*, a 1986 shoot-'em-up that, although released as a NES cartridge in North America, got a bit lost among the crush of bigger games that emerged around the same time. *Zanac* was programmed by Compile, a Japanese firm that would later become better known for the long-running *Aleste* and *Puyo Puyo* puzzle franchises (we previously wrote about the developer in issue 25), and on the surface, it's a pretty typical shooter from the mid-to-late eighties. Like Namco's seminal *Xevious*, *Zanac* is a top-down jaunt through a hostile landscape of swarming enemies that hurtle in from all directions. What instantly stands out about *Zanac* is its turn of speed: that hostile landscape whips by at an impressive lick, and enemy

patterns are complex and aggressive. Originally programmed for the MSX home computer, *Zanac* really pushed that system's hardware, but the NES version is where Compile's design brilliance really shines. One of *Zanac*'s most innovative features is its enemy AI; depending on the player's performance and the weapons they have equipped, the game will change the patterns, types, and frequency of the aliens' attacks.

This might not sound like much in the year 2020 when we have a game like *The Last Of Us Part II*, in which the enemy AI is so advanced that assailants will loudly mourn the loss of a compatriot you've just slaughtered. But what remains evergreen about *Zanac* is its unpredictability: unlike most shooters, there are no repeating patterns to memorise here (although the placement of power-ups

and certain enemy bases remain fixed), so you're constantly forced to improvise and modify your weapons to suit each encounter. *Zanac* comes with a startling array of weapons for a game of its vintage, too: your ship has a primary weapon that can be powered up, but you also have a secondary shot which fires in your current direction of travel, and can be switched for one of seven other weapons by collecting one of the numbered tiles dotted around each stage. These secondary weapons can be further upgraded by collecting the same numbered tile.

All of this combines to create a shooter that, despite its somewhat plain 8-bit graphics, remains absorbingly complex and hugely playable over 30 years later. What's all the more remarkable is how compact its code is; *Zanac* was first released for the Famicom Disk System in Japan, and occupied one side of its proprietary media – meaning the entire thing fits in just 68kB.

Compile continued to push hardware limits for the next decade or so, whether it was the ultra-fast *Blazing Lazers* (aka *Gunhed*) on the PC Engine or *Musha Aleste* on the Mega Drive. For me, though, *Zanac* remains one of the developer's most effective and timeless games.

Zanac Neo

Not long before its sad demise in 2003, Compile made a dedicated tribute to its own lineage with *Zanac X Zanac* on the PlayStation – a collection that included the original versions of the game along with a modernised version called *Zanac Neo*. Brought up to date with pre-rendered sprites and more detailed backgrounds, the latter was a thoughtful and exhilarating update – it revived the original's adaptive enemy AI, and matched it with even more weapons and the kind of combo meter you'd expect in a 21st-century shooter. The 2D shoot-'em-up was pretty unfashionable by the early 2000s, though – particularly in the West, where they were always more of a niche – so *Zanac X Zanac* was only produced in relatively limited quantities. This makes picking up an original copy of the game horribly expensive today – expect to pay anywhere from £130 for a Japanese version to more than £200 for a European edition. If you still have a PS3, though, you can still download it for just a few quid on the PlayStation Store. Phew.

Good egg

You may have already heard of the Evercade – Blaze's handheld console that, unusually, specialises in bundling collections of licensed games onto physical cartridges. Previous carts have featured games from such outfits as Namco, Atari, and Data East, but this autumn will see the release of a new collection that focuses on the work of Codemasters programmers – and Wireframe contributors – Philip and Andrew Oliver. *The Oliver Twins Collection* will package eleven of the pair's best-known games for the NES – the most obvious draws being the *Dizzy* series of adventures (among them *Treasure Island Dizzy*, *Fantastic Dizzy*, and *Wonderland Dizzy*) as well as titles such as *BMX Simulator* and the helicopters-versus-drug-barons opus, *Firehawk*. There's another good reason to buy the cartridge, too: all proceeds will go to the wonderful National Videogame Museum in Sheffield. Read the full rundown of games in *The Oliver Twins Collection* at **wfmag.cc/good-egg**.

Dog star

Again, the 2D shoot-'em-up is far from a mainstream genre these days, but there are plenty of indie developers keeping the flag flying. Only last month, we took a look at *Cygni: All Guns Blazing*, a top-down blaster that brings the polish and production values we never thought we'd see in the genre. On the less aggressive side of the same coin, there's *ProtoCorgi* – a retro shooter heading to PC and Switch this November. About a cute little pixel art pup, it's a side-scrolling affair in the vein of *R-Type* and *Gradius*. If dog-based sci-fi mayhem sounds like your thing, then there's a demo currently available to download on Steam: **wfmag.cc/corgi**.
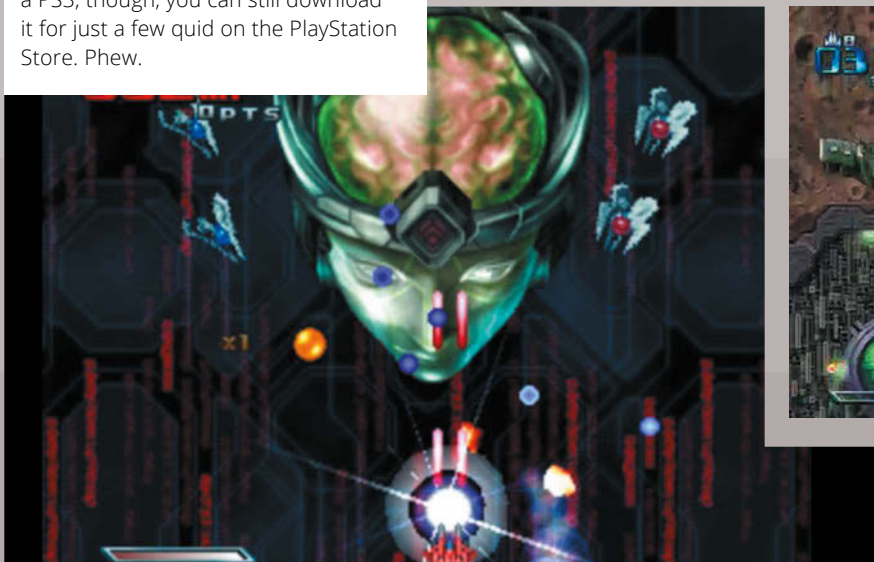
Backwards compatible

WRITTEN BY IAN 'DYNAMO' DRANSFIELD

Show Ryu and Ken

Well now, here I am thinking 2020 is the worst thing that could have happened to humanity and then some fine, honourable, retro scene ROM-dumping types go and release something hitherto mysterious and unknown: the original version(s) of *Street Fighter II: Champion Edition* for the Mega Drive.

If you ever wondered why Sega's console got itself a '*Special Champion Edition*' back in 1993, well – it goes deeper than just a bit of a boast as part of the usual SNES vs MD console wars of the day. Turns out there was originally a version of plain old *Champion Edition* being made by a company outside of both Capcom and Sega, porting the updated arcade version to the home in a way that would make owners of the excellent Nintendo version of *Street Fighter II* Spinning Bird Kick themselves
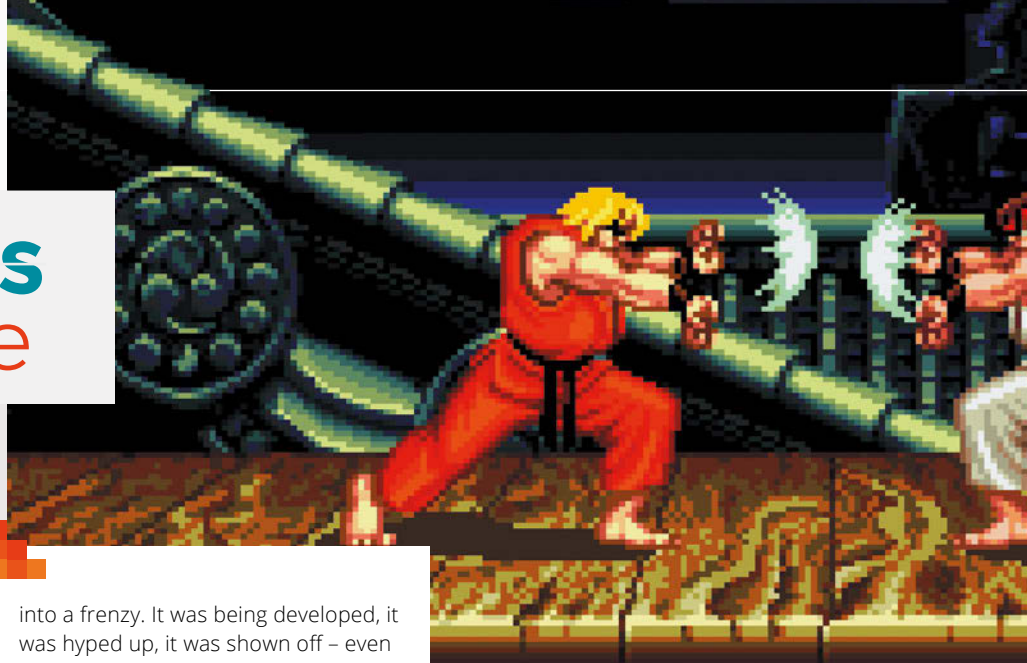
into a frenzy. It was being developed, it was hyped up, it was shown off – even sent to some magazines for preview (and possibly review). Then suddenly it disappeared and was replaced by the '*Special*' edition of the game, made in-house at Capcom.

The specifics of the whys and hows are vague, but it seems Capcom wasn't happy with the product being produced, and Sega wasn't happy with the SNES getting *Street Fighter II Turbo: Hyper Fighting*, which would prove vastly superior to any plain old *Champion Edition* port. So the mostly finished game was scrapped, and the *Special Champion Edition* – with *Turbo* features built-in – was born. The rest is pernickety 'which is best: SNES or Mega Drive' history, and the cancelled version little more than a half-remembered article from Mega, or Mean Machines Sega.

Then early July 2020 arrived, and a couple of prototype ROM dumps were dropped online, ready to be downloaded and played on any Mega Drive emulator you had to hand. They're the real deal – the near-finished version/s of the original *Champion Edition* port, as we almost got back in the early 1990s, and... well, they're actually alright, you know? A novelty

these days, no doubt, and the *Special Champion Edition* is – well, it's night and day, the difference between each port – so it doesn't feel like Capcom or Sega missed a trick in cancelling one version in favour of the other.

What it is, though, is a wonderful feeling of closure. That odd version of *Street Fighter II* on the Mega Drive *did* exist; that awful massive black bar at the top of the screen *was* a thing, and there was indeed more reason behind the *Special Champion Edition* than tiny Ian might ever have understood at the time.

Now, as for the story that *Street Fighter II: Turbo* – the hacked ROM for Mega Drive that's been doing the rounds for years – was not *just* based on the original *Champion Edition*, but also might have been compiled *from the original source code...* well, that's another story for another day. Probably to be told by someone with a far better understanding of it than I have. I'll just stick to battering people as Guile, thanks.

▾ **Two versions, one game. Spot the difference.**
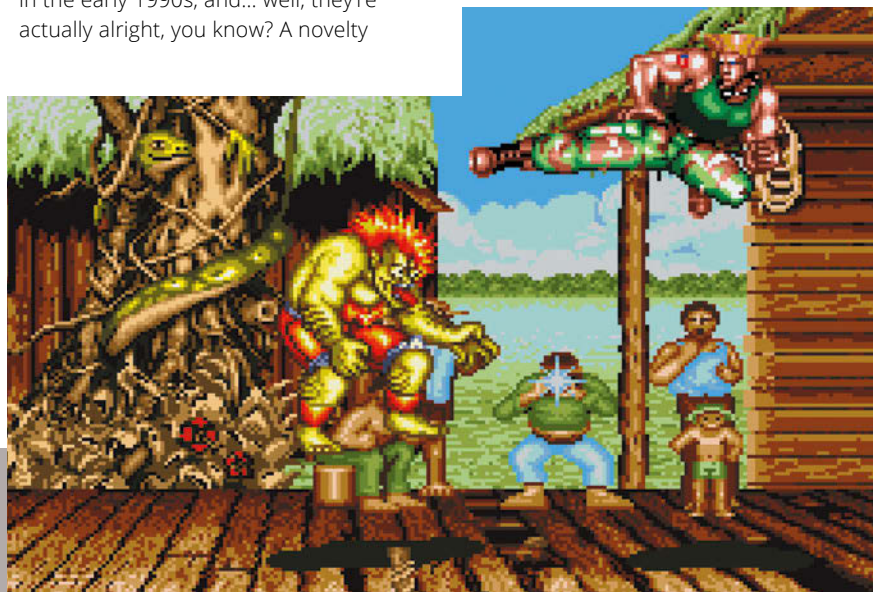
Astro boy

The teeny-tiny Game Gears didn't do it for me, to be honest. A teeny-tiny Sega Astro City arcade cab though? Yeah, I can get on board with that. Measuring just 130 mm wide, 170 mm tall, and 175 mm deep, it's not the sort of cab I'll need to buy another house to fit it inside. Which is a bonus, let's be honest. There are 36 games set to come with the device, but only a few have been confirmed so far: *Virtua Fighter*, *Golden Axe*, *Altered* 'rubbish' *Beast*, *Alien Syndrome*, *Alien Storm*, *Golden Axe: The Revenge of Death Adder*, *Columns II*, *Dark Edge*, *Puzzle & Action: Tant-R*, and *Fantasy Zone* – fair to say that's a decent start. A very good one, actually. It does come down to the emulation on show,

of course, and with M2 not actually being involved I can't say I'm entirely convinced it'll be the tip-top, fancy-pants experience I'd expect from the porting masters. Though admittedly not even M2 could make *Altered Beast* a good game. Yes, I did indeed 'go there'. I remain hopeful, though, and the quality of games on show already has my mouth a-watering. The biggest issue, of course, is the lack of UK release confirmation at the time of writing, with it only being available for pre-order in Japan for launch around the end of the year. Well, best get saving that £104 plus postage plus inevitable customs charges…

Up-rezzing the past

Emulation long ago left behind the concept of just letting you play old stuff with ease. More recently it's moved on to being playing games better than they were – playing them *as you remember them*, rather than as they are. The Beetle PSX HW emulator – that's for PlayStation games, in case it wasn't clear – has introduced a new, experimental feature in the form of texture injections. In short, textures from games can be extracted, upgraded, and reinjected into a game, thus allowing it to play with much higher-quality assets than were possible back in the day. So far, a proof of concept for *Chrono Cross* has been released, and a few other projects such as *Wipeout 2097* have been teased – worth noting this has to be done on a game-by-game basis, so it's not automatic and will take a while for there to be any kind of healthy homemade texture scene around this, if it really does pick up steam at all. Additionally – and obviously – this won't ever work on an original PlayStation console; it's emulation only. *But* the tech is there and working: time to make the past look as good as you imagined it did all those years ago.

KILL ALL ENEMIES

LUIGI COUPLAND   WP 7 / 7

He should see a
doctor for that.
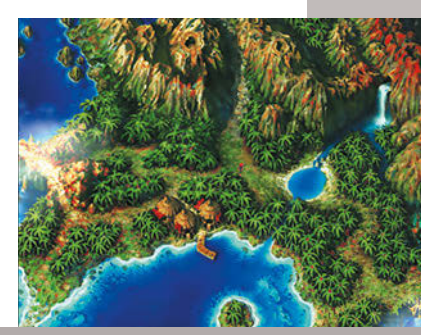
Is the phoenix rising?

Phoenix Point continues to evolve –
Simon wants to know if it's improving

always had a horrible habit of getting into long games at the worst possible times for my education. The first *Syndicate* game was popped into my Commodore Amiga a month or two before I was due to take my A-levels, and in the end, I had to lock the computer away to stop playing it. I repeated the mistake, of course, picking up an innocuous budget re-release of Julian Gollop's *UFO: Enemy Unknown* on PC a few years later, with my degree finals a month off. It was touch and go. I love both games to

this day – particularly *UFO*. I'd not really appreciated the outright tension of turn-based strategy games of its ilk until that moment – I, to my shame, missed Gollop's earlier classics *Rebelstar* and *Laser Squad* on my beloved Spectrum – but snapped up every *XCOM* since. Even that flying one. And especially the modern-day sequels.

XCOM, of course, has gone on without Gollop, but he returned to turn-based strategy himself late last year with *Phoenix Point*. It's a title built on similar foundations, with a few innovations of its own. I bought it, played it on day one, and battled through to the end, missing two deadlines for this magazine in the process. Old habits.

I thought then – and I think I still believe now – that it's a game you have to really, really work to love, but conversely, found it just about possible to do so. The balance of it didn't quite work for me (it's either very easy or very hard, with little middle ground), and I subscribe to the common complaint about the game that there's a lot – a *lot* - of grinding to build up resources. I found myself sighing when my Manticore was ambushed for the umpteenth time, and I had to go through yet another mission to take out an alien outpost. I always made sure I was never too far from a recent save too, when one of the game's launch bugs kicked in.
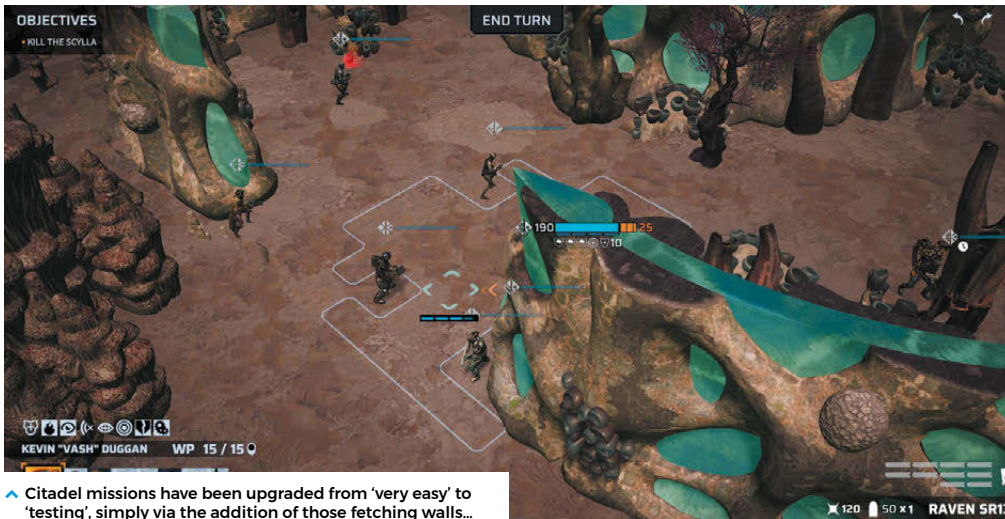
Citadel missions have been upgraded from 'very easy' to 'testing', simply via the addition of those fetching walls...

However, in keeping with its promise, Gollop and his Snapshot Games company have kept evolving the game and releasing new material for it. Plus, there remained the promise of multiple endings, and so I delved back in.

Like watching a good film twice, there's instant pleasure too in going through the early stages of a strategy game such as this when you've previously got through to the end of it. In fact, I had a joyous time mopping up the early missions, and building up key resources faster. Plus, I was less timid about exploring the world, and reaped the benefits of doing so. Explore fast should be objective one.

Furthermore, one of the game's key features is the three other factions on Earth who are also trying to fend off the alien threat and, in a moment of lovely escapism during lockdown, work out how to fend off the Pandoravirus that's enveloping the globe. Thus, I chose to align myself with one of those factions a lot quicker. This certainly made me competitive faster, and it also swiftly brought into play the additions from the first DLC pack, *Blood and Titanium*.

It's a pack that, on the surface, tries to address a few things. Firstly, the fact that once you get to a difficulty tipping point around halfway through the game, you become so powerful and resource-rich that the second half is a lot easier to battle through than the first. A couple of heavies and some good snipers are ample to get through most missions, and still are. Secondly, the addition of cybernetic enhancements continues the idea of mutating not just you,

but the foes you find yourself up against. What I found in practice was that I had fewer resources for longer (repairing cybernetics is expensive), but was more powerful a lot, lot quicker. Investing in cybernetics for my heavies that left them able to basically double their carrying capacity was a very fast way of killing lots of enemies. And, because my morals went out of the window quicker this time around, I stole a fast ship from one of my so-called friends and sent that around the world to trade up resources. I had several ships on the go in the end doing this, before I parked one or two of them up when I kept losing track of them. It became a bit too much like admin.

Still, to the game's credit, it never loses the surprise kill. The strengthened opposition may be offset by your own powers, but it leaves you even more vulnerable to the *XCOM*-esque pain – when your prized soldier is picked off at the end of an otherwise routine mission – which is back with a vengeance. It's of little surprise that the dog sat at my feet keeps learning new, rather harsh, words.

It's evolved notably in just over a half a year, although the balancing remains an issue, and the bugs at times can be mission-ending. I'm glad I'm sticking with *Phoenix Point* though, not least because of the incoming Cthulhu update that looks set to address these very points. Commendably, the updates are coming thick and fast too, notably within weeks, rather than months, of being announced. There's a way to go yet, but this is a sense here of – yes! – the phoenix slowly rising. ⓦ

> **"I thought then – and I still believe now – that it's a game you have to really, really work to love"**
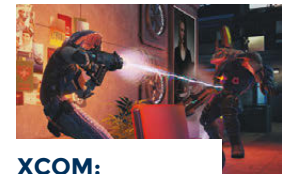
Wireframe Recommends


XCOM 2
PC, XBOX ONE, PS4,
Even in the hustle and bustle of the modern day, taking down aliens one turn at a time continues to be one of video gaming's finest ways of robbing spare hours from your life. No sign of *XCOM 3* yet, mind.

XCOM: Chimera Squad
PC
The same *XCOM* structure, but a slightly different way to approach the game here. *Chimera Squad* was a surprise release earlier this year, and hints at a path forward for the next sequel.
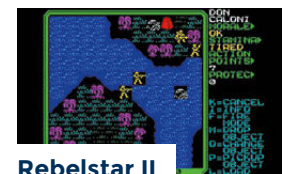
Rebelstar II
ZX SPECTRUM
XCOM and *Phoenix Point*'s creator took £1.99 in exchange for one of his earliest strategy masterpieces back in 1988. *Laser Squad* would follow the same year too, for more turn-based antics.

Chronofear

It's time travel of another kind as Ian blasts
through Command & Conquer Remastered

Given how many old games are
repackaged and pushed out there
with a fresh lick of paint before
being immediately forgotten until
the next go-around, *Command &
Conquer Remastered* has me surprised. What I
see in this package of the original *C&C* and its
first spin-off *Red Alert* is… well, a bit of *craft*. It's
the little things, like tapping space to quickly
alternate between new and old graphical styles
(old is better, naturally), or the lovingly recreated

game install video, which apes the 1995 process
you actually had to go through. You don't have
to go through it this time. But you should, just
once, because it's lovely.

I never actually stopped playing *Command &
Conquer*, it should be noted. I genuinely don't
think a year has passed since I picked up the
first game – on PlayStation, from Blockbuster
no less – wherein I haven't played at least
one skirmish on one of the many *C&C* titles.
Usually *Red Alert 2*, let's be honest.

So while this redone double-pack does have
me all a-frothing at the gnashers, it's not like I
am most of the audience for the game: lapsed
fans. Those who lost track, who see the re-
release as a nostalgia blast, who didn't know
that by jumping through some basic hoops it
was easy to get the old games running, or that
there's still an HTML5 in-browser version of
Command & Conquer knocking about online.
It's always been there.

But now it's easier to get, and it's being *shown*.
It's very present and being pushed by the bods
at EA in a clear and present 'Do you want us
to do more of this?' fashion. It's testing the
water. Do I want more old games with the gunk
power-washed off and a bit of love sprinkled
on top? Yes. Yes I do. Will I pay money for
them? If they're done as well as this, yes I will.

⌄ **The effort to make
everything look spangly and
new is appreciated.**
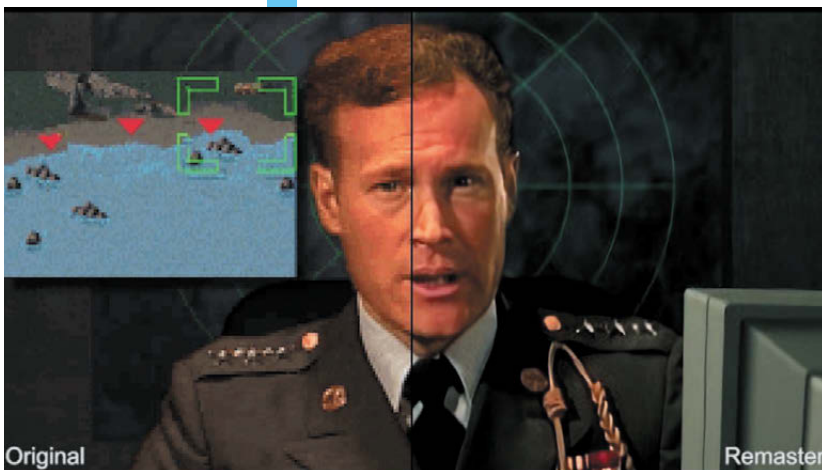
⌃ **What you've got yourself here is an old-fashioned Soviet tank rush, kids.**

Is it cynical? I… It's not. It's really not. I'm so confused. After railing against this sort of thing for so long, I just don't know how to react when a publisher puts time and effort in to do things the right way. So instead of trying to break it all down and compartmentalise my feelings on the matter, I'll just keep on playing the odd mission here and there, and the odd skirmish for an hour or two. Just like I did when I first got into *Command & Conquer*.

So simple, and as warm and welcoming as a flask full of Cup a Soup on a chilly winter's morn, *Command & Conquer* and *Red Alert* both play out much the same as each other, and indeed much the same as they ever did. These are the halcyon days of the real-time strategy game; when clicks per second or whatever the measurement is didn't matter so much, and really all you needed to do was tank rush or put up a wall of Obelisks of Light/ Tesla Coils to destroy your enemy's base or the invaders, depending on which side of the assault you were on. That shouldn't be satisfying – not really – but it is.

There's so much bloody personality in these games, it just oozes with it. The FMV has been upscaled to the point where it looks… well no, it looks pretty bad still, but there's no getting over just how captivating the performance of Joe Kucan as Kane is, or how weird and weaselly Seth is. You recognise units instantly by their acknowledgements, and you know what you're being attacked by from the sound (and arc) of the incoming projectiles. It's utterly competent – I mean that as a compliment, not a back-handed one – and still, even 25 years later, makes me smile like a fool. I'm walking around the house doing impressions of the commando unit.

"This is healthy nostalgia, not predatory"

I'm muting it on a Tanya-heavy mission because *she won't shut up*. I'm seeing if I can beat later levels with nothing more than a few dozen minigunners. I'm in heaven.

I can't – I won't – ignore the fact that there are some hugely irritating aspects in both games. Pathfinding ranges from absolutely fine (when moving in a straight line from A to B) to intensely bad (when in any other situation). The AI on anything above easy difficulty will build with a level of automation that puts the fear of the future of the labour market in me. Strategy is limited to having bigger and/ or more of things, and not much beyond that. You're not going to see high-level competitive *Command & Conquer* play, because it is, on a technical level, not really a good enough game for that sort of thing – at least not in these early examples of the series.

And yet, for the first time in ages, I feel as though the endless pursuit of nostalgia hasn't just been for the sake of itself. In the case of *Command & Conquer Remastered*, a true classic has re-emerged and been brought back from the dead. Enough has been done to the game to freshen it up, and enough respect has been shown that the purists (hi!) are still catered for. Beyond that, plenty of little trinkets and Easter eggs have been buried in there to reward those who plough on through. This is healthy nostalgia, not predatory, and it's quite frankly bewildering that it's come from the vault of EA. Fair play, though, let's get cracking on *Red Alert 2* and *Tiberian Sun*, the greatest of all *C&C* titles. ⓦ
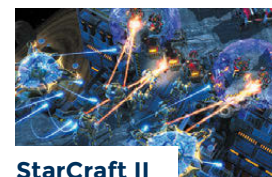
Buzz!

Forget fiddly joypads: for Simon, a big red button was
all you needed for a truly accessible party game

SONY/SLEEPYDOG / **2005** / **PLAYSTATION 2**

The £79.99 asking price for *Samba De Amigo* and its included maracas was always something of a luxury for Sega Dreamcast owners. It came at a point when the Wii was a glint in Nintendo's eye, and the firewall to getting casual gamers involved was still the game controller. What early innovations such as the dance mat, the maracas, and the Donkey Konga drums did was to remove that barrier. Irrespective of age or experience, if you could shake a pair of maracas, you were able to play along with *Samba De Amigo*.

Sony, though, deserves more credit for the push it made when the PlayStation 2 was at the height of its popularity. It had several goes at making more inclusive games. The EyeToy webcam idea was something of a fun novelty, and *SingStar*'s microphones were welcome pushes forward for those whose eardrums could cope with karaoke in the home.

But one Sony game that really opened up a video game to a room full of people was *Buzz!*, initially launched as a music quiz in 2005. In hindsight, Sony took the controller mechanic I'd used to play *Hunt & Score* on my Atari 2600 and turned it into something astonishingly effective and entertaining. Essentially, a group of players are given a five-button buzzer controller each, and play along to a television quiz show.

> **"Playing the game for the first time with a crowd of non-gamers was transformative"**

The evening I unpacked the game for the first time and played it with a crowd of non-gamers was transformative. Those reluctant to even try a video game were in the thick of things in seconds. Gone was the need to explain what pressing 'triangle' on a traditional joypad did; instead, the conversation turned to the irritating host of the on-screen game show (Jason Donovan, as it happened), and trying to avoid treading on the spaghetti matrix of wires after a third beverage.

The game itself? Well, it was always fun, if a little limited. There are only so many questions about eighties pop you can squeeze onto a DVD-ROM before things repeat themselves. After a couple of sessions, people got suspicious that I knew the answers purely because I'd seen the questions before. Many subsequent releases, which I bought over many years – until the series came to a close with 2010's *Buzz!: The Ultimate Music Quiz* – never stopped those scurrilous accusations. They were entirely correct, of course, but my lips were sealed.

Sony continues to dabble with casual titles, but in the tablet era, the appetite for its PlayLink collection of titles wasn't really there. *Buzz!*, though, quietly broke ground without anybody noticing. All the while with that bloke off *Neighbours* reading the questions... ⓦ

Spiritual Successor

The need for a physical controller to play along with a console quiz game is now gone, and instead, players can join a game via a tablet or phone app. The skeleton team behind the *Buzz!* series thus put together *It's Quiz Time*, a terrific party game for Xbox One, PC, and PlayStation 4. With far more questions and diversity of rounds, it was a jump forward. Sadly, with no updates since Christmas, demand doesn't appear to be quite what it was.
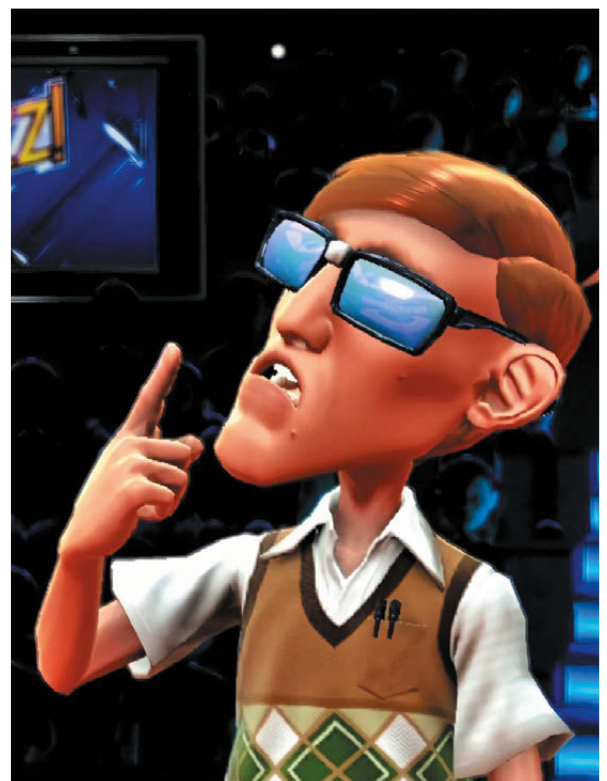
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