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Yacht Club's armoured hero goes rogue

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Team Fortress 2: death by a thousand cuts?

t may be 13 years old, but *Team Fortress 2* is still an exceptional game. A distinctive visual style with unique characters who are still quoted and memed about to this day, an open-ended system that lets players differentiate themselves from others of the same class, well-designed maps, and a skill ceiling that feels sky-high… even modern heavyweights like *Overwatch* and *Paladins* struggle to stand up to Valve's classic.

Except it has two problems: it's jam-packed with hackers, and Valve has washed its hands of the whole game. In a report by the ever-reliable ValveNewsNetwork, it's reported that Valve has stopped development on new *Team Fortress 2* content, nominally to get all hands on deck for *Half-Life: Alyx*. Outside of community-made stuff (of which there is still a healthy amount), we can't expect any new maps, weapons, or balance updates. Maybe forever, maybe not. Trying to predict Valve's whims is impossible.

That lack of support is exacerbated by the game's European servers being overrun with hacking snipers who can headshot you from across the map in an instant. And it's not something that happens once or twice every few matches – at its worst, I've had to re-search for matches *16 times* before finding one that was remotely playable. The main culprit is a notorious hacker from Germany who floods games with bots with racist names, and has been doing so for years, but he's not the only one. Say 'Matt [S]-Service' to any *Team Fortress 2* player, and they'll roll their eyes and sigh.

These hackers have been active in the game for years (with their bots clocking thousands of hours in-game), and Valve has seemingly done nothing

JOE PARLOCK

Joe Parlock is a freelance games writer and founder of **ubi-source.com**. His favourite games are *Sonic*, *Left 4 Dead*, and *Assassin's Creed*, but he also loves RPGs, simulators, and stealth games. When not writing, he loves nature, photography, and chilling with his dog.
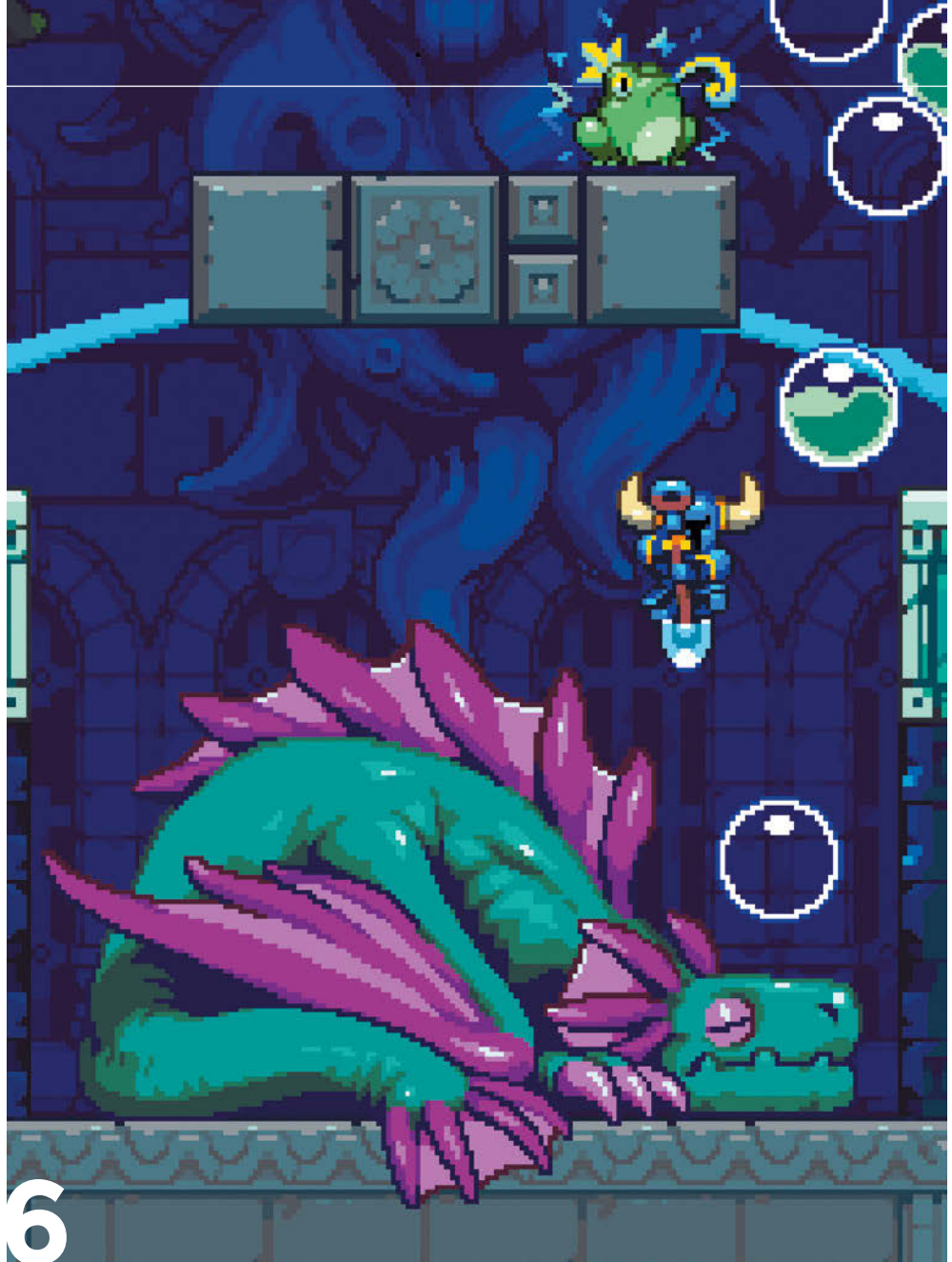
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to stop it. Using the in-game reporting tool does nothing. Reporting their Steam profiles does nothing. Kicking them does nothing because another four will join in their place. Even Valve's own anti-cheat service is useless, as it works on a delay to prevent the rapid development of hacks that can circumvent it… at the cost of the matches they ruin in the meantime.

So for Valve to drop *Team Fortress 2* when it is in such an unplayable state is not only a kick in the teeth for the players, it makes no sense for Valve's business. One of the defining features of *Team Fortress 2* is its item economy, with players buying and selling weapons, hats, and other cosmetics through the Steam Community Market.

As of writing, *Dota 2*, one of Valve's more recent cash cows, has 26,175 items for sale through the market, with every sale giving Valve a cut of the money. *Team Fortress 2*, the game Valve's allegedly abandoned and which is seen as being on life support by its community, still has 21,347. Valve is going to cut off a perfectly fine revenue source for absolutely no reason. The game still has a healthy player count and an item economy comparable to such heavy-hitters as *Dota 2* and *CS:GO*, but that won't last if Valve keeps treating *Team Fortress 2* the way it is.

Team Fortress 2 is a classic. It has an established fandom and numerous third-party community servers. With a little bit of maintenance, it will, for the most part, take care of itself. It doesn't need to give us new maps and game modes every six months; it just needs the odd balance patch occasionally. Most crucially, Valve needs to sort out the game's ridiculous hacking problem. The community will take care of the rest – and that'll only be good for Valve in the long run. ⓦ

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DIG
FOR
VICTORY

**Yacht Club Games and Nitrome
team up to bring us the rogue-lite
spin-off, Shovel Knight Dig**

You'd be forgiven for thinking that Yacht Club Games might have grown a bit weary of *Shovel Knight* by now. The studio has, after all, diligently supported its 2D platformer for the best part of six years, beginning with the original game – *Shovel Knight: Shovel of Hope* – in 2014, and complemented by a series of free expansion packs released in the years since. But while designer Alec Faulkner said in 2019 – jokingly, no doubt – that his studio's "sick of making *Shovel Knight* games," Yacht Club's dealings with its armoured, spade-wielding hero are far from over. Not only does the studio have a full sequel planned, but it's also teamed up with British developer Nitrome to make a spin-off – *Shovel Knight Dig*.

Recalling such vertically oriented titles as *Downwell* and Wireframe favourite *Mr. Driller*, *Dig* is a frenetically paced rogue-lite that sees the titular Knight descend a series of procedurally generated mines. Its snappily paced levels are strewn with hazards and treasure, and while the hero's bouncing attacks are straight out of the original game, *Dig* places greater emphasis on speedy completion times and the obsessive collection of loot. Rotating death machines constantly encourage your rapid descent, while the devious placement of the finest gems in the most trap-filled places means you'll constantly be balancing your survival with the need to collect treasure to spend on vital upgrades.

Establishing itself as a reliable purveyor of mobile games in 2004, Nitrome leapt

to wider attention with its multi-platform puzzle-platformer, *Bomb Chicken*, released in 2018. Certainly, *Bomb Chicken* served as a valuable showcase for Nitrome's long-standing ability to make accessible 2D games with chunky, likeable pixel graphics – something that Yacht Club saw as a natural fit for *Shovel Knight*.

"We'd been fans of Nitrome for a long time," says Yacht Club developer David D'Angelo when we asked him about the studio's decision to collaborate on a *Shovel Knight* spin-off. "We were interested in creating a more bite-sized experience version of *Shovel Knight* that you could play in small sessions, and they're kings of mastering that kind of feel, so we reached out to them."

Shovel Knight Dig's mechanics and visuals, meanwhile, are very much Nitrome's creation. "Typically, Nitrome is steering the development, and Yacht Club is riffing off what they've built," D'Angelo tells us. "Ideas frequently come from us, but they're usually there to complement what Nitrome has already been building."

To find out more about *Shovel Knight Dig*'s development, then, we had a brief chat with Nitrome boss Jonathan Annal. Here's what he has to say about *Dig*'s new shovel mechanics, subtly revised visuals, and an underground food vendor named Gastronomole…

You've had a long history of making games already at Nitrome, so what was your reaction when Yacht Club contacted you about making *Shovel Knight Dig*?
In a nutshell, excited! Several of us were already fans of the *Shovel Knight* series, so we knew straight away that it was something we had to try and make happen. ➡

> **"We were interested in creating a more bite-sized experience"**

❮ *Shovel Knight Dig*'s more rounded sprites and richer colour palette give it a subtly different feel compared to its NES-inspired predecessor.
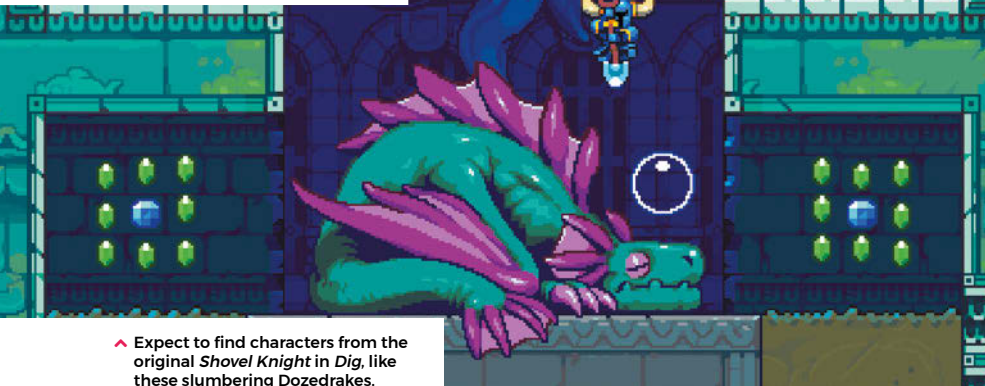
Expect to find characters from the original *Shovel Knight* in *Dig*, like these slumbering Dozedrakes.

We've been privileged in the past, in that we're able to do our own thing. We don't usually work with any IP unless it's one we truly have a lot of love and respect for, and *Shovel Knight*, for us, is right up there with the very best.

One of the things I like about both *Shovel Knight* and *Bomb Chicken* is how they have simple controls that are so carefully balanced. When it came to *Bomb Chicken*, how long did it take to fine-tune the bomb-laying mechanic?
It actually all started out from us wanting to make a platformer with in-depth controls playable with one hand. The biggest challenge to overcome was getting an attack and a jump in there with a single input. Our first prototype involved a sprite which spawned boxes underneath to gain height. We soon realised we needed to make the boxes disappear as having so much on-screen clutter was undesirable, and that's where the bombs came in. [The main character] started out as a wizard, but I had a silly suggestion to have it be a chicken that laid the bombs, and the chicken was born. The rest of the chicken's moveset came fairly naturally after that, during the first round of ideas.

Have *Shovel Knight Dig*'s mechanics taken a similar amount of fine-tuning, given they're now being used in a different context – mostly digging down, as well as pure platforming?
The initial idea of getting a blend of fast and frantic digging mixed with platforming was implemented fairly quickly. Yacht Club knows their character better than anyone and helped us get that classic *Shovel Knight* feeling spot on. It took quite a lot of fine-tuning between us to get it to the state it is today. For example, suggestions like keeping your character's momentum as you break out of the dirt makes the digging

stay fast and buttery smooth. After lots of iteration, it now feels very natural and is a joy to play.

How did the concept of *Shovel Knight Dig* come about? David D'Angelo said they wanted a more 'bite-sized' take on *Shovel Knight*, so was it a case of passing ideas back and forth to find one that clicked?
Yacht Club had a general idea of what they were after, but they were really quite hands-off and trusted us to throw some ideas their way. Really honing the gameplay around 'digging' seemed like a natural extension of Shovel Knight (he's a knight with a spade, after all).

> ## "We're allowed to pitch whatever we feel passionate about"

We took inspirations from the likes of *Downwell* – fast and frantic with clear defined goals – and *Spelunky* – huge amounts of replay. The blend of digging and platforming at this speed is something we hadn't really seen before.

Can you talk a bit about how you came up with *Shovel Knight Dig*'s look? It still has that retro sprite style, but the colour palette's a little warmer and more varied, and there are some new, subtle character movements in there, too.
We were originally aiming the very first mock at a classic luxury SNES feel, as this seemed like the next logical step after the game's first series. After a bit of iteration,

we played around with a more arcade Game Boy Advance style for fun, and we instantly all knew it was what we were looking for.

How fluid is the creative process between you and Yacht Club? Is it a situation where both sides are free to pitch in ideas?
The process is all fairly fluid. We're pretty much allowed to pitch whatever we feel passionate about and then get feedback. It's usually only things that may clash with any existing lore or suggestions on how to expand upon or refine an idea.

When it comes to the levels and procedural generation, what's the process of ensuring that the resulting stages are enjoyable and don't get too repetitive?
There are quite a lot of lengths we've gone to to try and make repetition less apparent. There are probably too many to mention, but to give you some idea, here are a few. Firstly, there are a huge number of stages in each theme with thematic enemies that live there. After each 'run', the deck of levels are shuffled, and the ones you've already played are sorted to the back of the pack. Some generic enemies are also shuffled in a similar way, so on one run you'll be fighting an army of blobs, and the next a cluster of propeller rats.

Some of the more memorable set-piece levels we also iterate versions of. This means that even though a player may think they recognise a stage, they never truly know quite what to expect. We make sure that worlds don't just focus on new mechanics, but also have a variety of different gameplay types. For instance, one

Don't get excited for a full *Shovel Knight* sequel just yet – Yacht Club's embarking on another game before it starts on *Shovel Knight 2*, D'Angelo says.
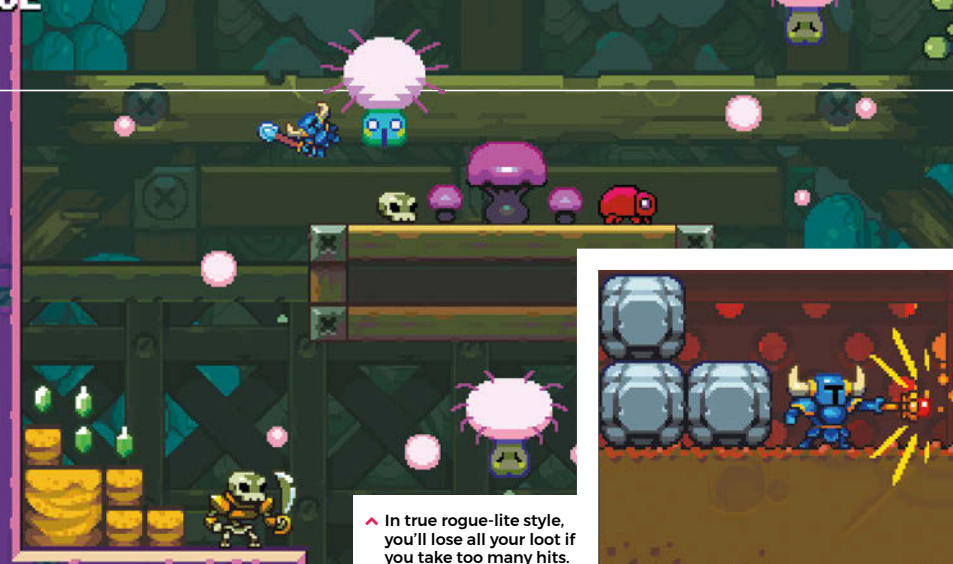
↑ In true rogue-lite style, you'll lose all your loot if you take too many hits.
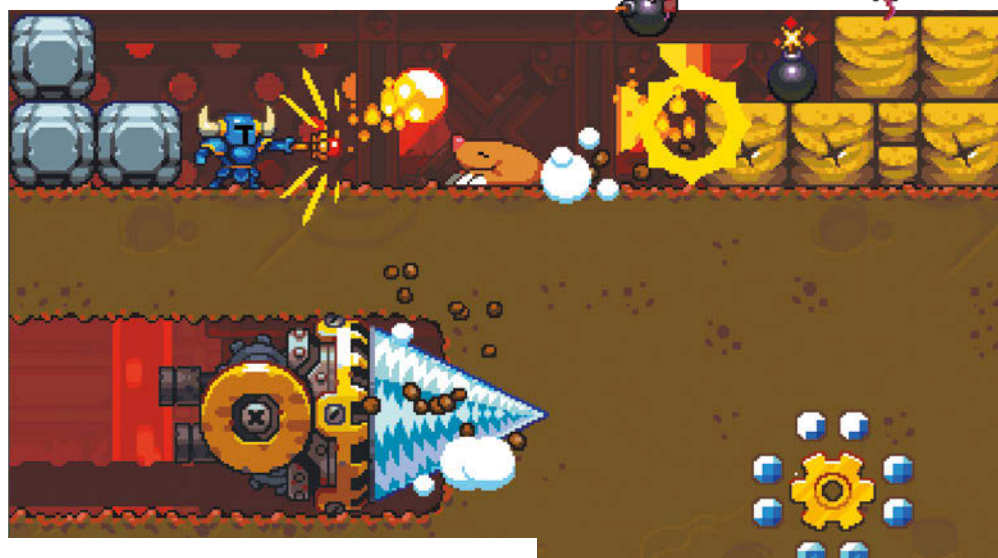
↑ A mobile version of *Shovel Knight Dig* hasn't been announced yet, but given Nitrome's track record, it must be a shoo-in.

'Well' will be all about the classic down-thrust move, and another will be frantically digging between giant drills. Even the boss stages have a large variety of arena layouts so that the battle feels fresh each time you play.

You must be around 18 months into development by now; what's been the biggest challenge so far? And what do you have left to work on before the game's complete?
We have still got a fair way to go, but already have all of the bosses and themes pinned down and are working our way through them. I'd probably say that the most difficult challenge so far was to get the game feeling 'just right' in the first place. I'd definitely say it was well worth all that iteration in the end, though.

Given your track record for mobile games, are we likely to see a touch-enabled version for mobiles, perhaps with a portrait play area?
Oh, now that would be neat. We will be announcing more platforms as we progress further, I expect. But for now, on that matter, our lips are tightly sealed.

↓ He may only be an NPC, but we're quite taken by Gastronomole, the purveyor of mega mushrooms and fortified roasts.

Shovel Knight Dig doesn't have a release date as yet, but what stage are you at in development, roughly?
We're both keen to make this the best it can be, so it's a tough question. I'd say we are in the thick of development right now, currently tackling remaining stages and bosses. There is still a lot to do, though, so I really can't confirm a release window.

Finally, can you talk a little bit about the process of creating the mole vendor character? Does he have a name?
His name is Gastronomole. He sells food to weary adventurers underground. The idea is to have a pool of health-based goodies to buy – some even come with unexpected gameplay benefits.

Take the fortified roast, for example – a whole roast chicken wearing full battle gear. This special roast not only refills a player's health, but adds an extra shield on top, so the armour takes the first hit from an enemy before any of your life is even touched.

Another neat idea is that of thematic food. For instance, in the mushroom mines, he sells a mega mushroom which grows the player's health pips to a larger size, but in the lava stage (already shown off in screenshots) he might sell food that's burnt and less nutritious. ⓦ

Shovel Knight Dig **is in development for Nintendo Switch and other unannounced platforms, with its release date still to be confirmed.**

DIGGING IN

"Nitrome had a clear idea of the digging mechanics they wanted to try out, so the first month was putting together a prototype and honing in on exactly how Shovel Knight would move," Yacht Club's David D'Angelo says of *Dig*'s early stages of development. "Once we felt his core actions were solid, we started building the world and stages around them."

The process of building those stages was, however, one of the major hurdles the two studios faced. "The biggest challenge has been nailing down the core loop of the game," D'Angelo adds. "We felt we had solid player mechanics and fun enemies and objects, but getting three stages to feel fun in a row, where there was tons of variety, unexpected moments, exciting items to grab, mysteries and treasure to uncover… it took a fair amount of time to get all the pieces to click."

A Frog's Tale

We talk to developer AJ Norman about his deceptively deep adventure of loss and acceptance

Info

GENRE
Zelda-like

FORMAT
TBC

DEVELOPER
AJ Norman /
Cathar Games

PUBLISHER
TBC

RELEASE
TBC

For Minneapolis-based developer AJ Norman, *A Frog's Tale* didn't begin with a design document, or a slab of code, but a piece of music about his cat, Roy. A DJ and electronic musician intent on breaking into the games industry, Norman started work on a portfolio of music for an imaginary game – and being a fan of 16-bit era role-players like *Super Mario RPG* and *Chrono Trigger*, he started writing "big, romantic melodies" in the vein of a Super Nintendo game.

"When you're writing songs you have to come up with, 'What does this song sound like? It sounds like a desert level or something'," Norman says. "So having to come up with a context or use for these songs was like a world-building project. I had to come up with a bunch of ideas to fill in the gaps. You have stuff like character themes, recurring melodies. It was like the game was starting to come together without me even knowing it."

From those songs and story ideas, *A Frog's Tale* gradually coalesced: a top-down *Zelda*-like about an amphibian hero and his adventures in a cosy fantasy world. In many ways, the project's the realisation of a childhood ambition; as a nine-year-old, Norman would spend hours tinkering with GameMaker and trying to make his own *Zelda* homage. "It's like my whole life, I've been trying to make a game," he says. "But I'm not a super-talented programmer – I reach this ceiling where I can't wrap my head around the programming I need to accomplish the ideas I have in my head."

Over the course of the past two years, *A Frog's Tale* has gradually evolved into a full-blown commercial project; with Norman in the role of creative director and composer, the game has artists in France working on the pastel-shaded pixel art, and Quebec-based studio Cathar Games working on the programming and implementation side of things.

Although still in its early stages – Norman hopes to have a playable demo ready later this year – *A Frog's Tale* is already shaping up to be something more than just another retro throwback. It's a deeply personal project for Norman, not just because of his youthful affection for top-down adventures, but because he's using it as a means of communicating the emotions he felt when his father tragically passed away in early 2019. "The game may look like your typical RPG fare, where you're trying to find the special item and save the world or whatever, but underneath that, there's a lot of personal struggle," Norman says. "The characters
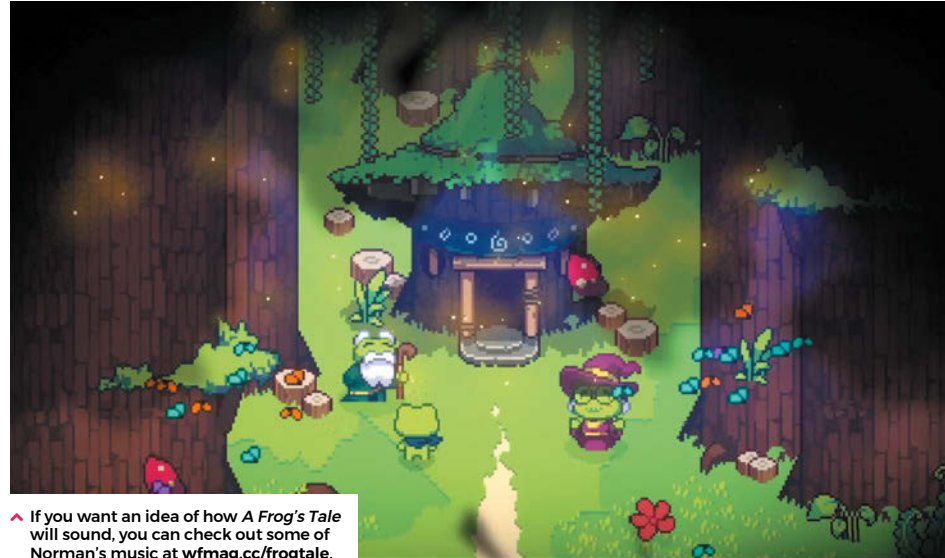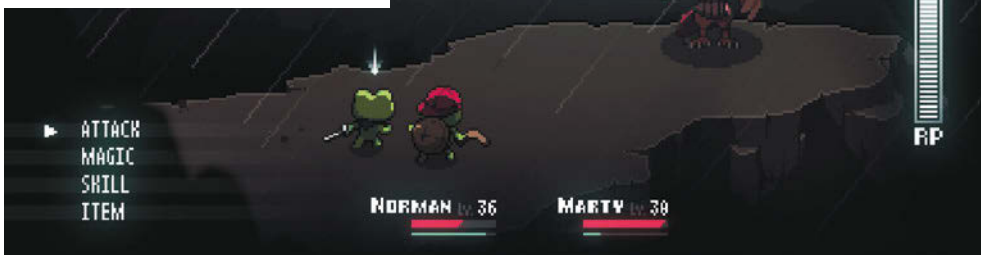
⌃ **A frog's favourite website? Reddit.**
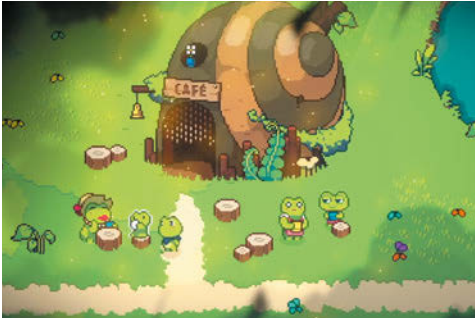
At this stage, *A Frog's Tale*'s sprite design is clearly a big draw. "It took me a long time to find artists who fit the vibe I was going for," Norman says.

If you want an idea of how *A Frog's Tale* will sound, you can check out some of Norman's music at wfmag.cc/frogtale.

look really cute, but they're going through some serious stuff. At the end of the day, I hope the stories can really connect with people that have gone through something similar."

A Frog's Tale, then, has formed part of Norman's natural grieving process, he tells us: a means of processing the sudden loss of a loved one, and turning that difficult experience into something universal. "Maybe the game can bring comfort to those who are having a hard time with loss, like I was," Norman says. "It's not an easy thing to go through. What happens in the game is what I hope happens in real life – it's my optimistic look on death, and learning to accept it and find closure when it wasn't something possible to get yourself. The main character struggles a lot with that in the game, but learns to accept it. I think it wraps up in a really nice way."

Far from a melancholy game, *A Frog's Tale* will explore its emotional themes with the lightness of touch you might expect from a homage to 16-bit JRPGs and adventures. As well as *Zelda*, the game's role-playing elements will draw from the likes of *Paper Mario* and *Mario & Luigi*, while the battles will take the form of rhythm-action minigames (see box). The game still has a long road ahead of it, as Norman hopes

> **"The characters look cute, but they're going through some serious stuff"**

to use the playable demo he's working on to either attract a publisher or form the basis of a Kickstarter campaign. But the online response to *A Frog's Tale* has already been positive, and while Norman's never headed up a project of this scale before, he's clearly determined to see it through to completion. "I want to make a name for myself in this industry, and make something special – even if it is my first game," Norman says. "It's not impossible as long as you find the right people to help you with it. That's the important thing as well – you can't do everything yourself. You need help. You need friends. So that's what I've been focusing on – finding the right friends to make this the best game it can be." ⓦ

We're most intrigued by the character journeys Norman describes: "Their flaws can mostly be traced back to their relationships with their parents," he tells us.

FROG CHORUS

Given Norman's background as a musician, it's only fitting that rhythm and timing will be key to *A Frog's Tale*'s combat system. It's an idea he first came up with while playing *Mario & Luigi* on the Game Boy Advance, he tells us. "When I was playing it, it didn't seem like there was a clear indication of when to press the button. You'd get, 'Good', 'Great', 'Wonderful', or whatever, but there was no clear thing that tells you to hit the buttons to get the perfect timing. I wanted to press those buttons to the beat of the music. But when I did, I didn't get very good timings. It seemed natural to me to do that. The battle music is really good, and you're already tapping your music to the beat of it. So it seems logical if an attack lands right on the beat when you're jamming with the music anyway."

A Frog's Tale is being built in Unity, albeit with some custom frameworks to handle the 2D graphics and rhythm-based battles.

Iron Danger

Re-record, don't fade away, re-record don't fade away, re-reco...

L et's make save scumming a thing of the past. The act of saving your game at the beginning of your go on a turn-based strategy title has long been the preserve of those who don't want to live with the consequences of their actions. *Iron Danger* looks to make that act of cowardice into a core mechanic of its own brand of real-time tactical combat – but instead of save scumming, you're time travelling; rewinding past actions to try again and rework your decisions. It's a twist to the typical format, bringing more dynamism and elements of real-time strategy to proceedings… oh, and developer Action Squad Studios describes *Iron Danger* as 'based on Nordic mythology retold in the vein of *Lord of the Rings* meets *Transformers*'. So there's that.

Designed from the very beginning with a rewinding feature at its heart, *Iron Danger* offers up a different take on the usual hack-and-slash batter-'em-up – a freedom you don't
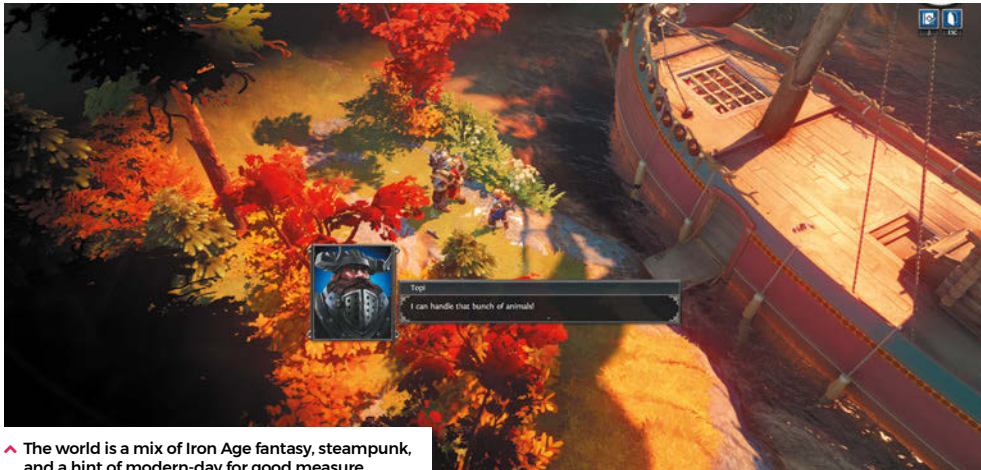
find elsewhere. "We were really adamant about pursuing the time rewind mechanics because it was something we had not seen before – ever," explains Jussi Kemppainen, game director on *Iron Danger*. "We were laser-focused on creating a game that you could not get from anywhere," he says. "We wanted to bring something totally new into the world. Something that had never existed before and something no-one else was pursuing at the moment. For our team, that was the driving force during the sometimes difficult production process."

This focus on rewinding meant the game ended up – naturally – coming out as something different to the norm, something Kemppainen is proud of. "For the player, the biggest change is that they do not need to play it safe," he says. "It is totally possible to just run in head-first to the most intense scenario and then afterwards try to figure out how to deal with it. If it all goes sideways, just go back in time as long as possible and try something completely different. It allows for unprecedented freedom of exploration of tactical ideas without the fear of failure."

This design focus on the rewinding mechanic did result in some tweaks being made to the formula, though – no approach à la *Dynasty Warriors* was on the cards, as too many enemies on screen would have, basically, broken things. It's a lot of AI logic to rewind at the same time and reimplement when the player starts going again. "We resorted to making most of the enemies incredibly difficult to counter the [smaller] numbers," Kemppainen says. "This proved to be the right decision. With the time rewind abilities, it is possible to pit yourself

⌄ **Time to breathe, and always time to rewind.**

⌃ The world is a mix of Iron Age fantasy, steampunk, and a hint of modern-day for good measure.

⌄ Being able to rewind your actions gave Action Squad carte blanche to make encounters punishingly difficult. If you fail, just rewind and try again until you don't.

against incredibly difficult enemies, and you can still eventually come out on top, as you have all the time in the world to perfect your tactics.

"The game mechanics also gave us a fresh take on more grounded combat, as everything is based on real-time strategy under the hood," he continues. "In turn-based games, your tactics are not 'realistic': you are playing with a different set of rules. But in our game, you get to experience a hectic, ever-evolving combat scenario with more true-to-life, real-time tactics but with the usability of a turn-based game."

Despite the rewinding – and repetition by design – there's a focus on *not* grinding through *Iron Danger*; a desire to respect the player's time and make them focus on the more important stuff – not replay sections for the sake of it. This is achieved through elements like a lack of loot – there isn't even an inventory in the game – and a focus on combat in design, rather than the more 'tedious', in Kemppainen's words, elements.

Another step away from the tedium of sameyness comes through *Iron Danger*'s embrace of Finnish folklore and culture. Rather than looking elsewhere for inspiration,

> **"What we perceive as mundane is exotic for everyone else"**

Action Squad is doubling down on what it knows. "For me personally, taking Finnish inspiration was a great way to honour our own quirks," Kemppainen says. "Only a handful of games have actually been Finnish in style. What we perceive as mundane is exotic for everyone else around the world – and as we are a nation of five million people with our own language and habits no-one understands – it really *is* exotic. So I wanted to embrace Finland and our folklore. It is full of unused gems of stories and themes."

As the first release from Action Squad, a lot is riding on *Iron Danger*. Even with the team's combined experience at the likes of Rovio, Supercell, Remedy, and more, Kemppainen acknowledges the studio is "an unknown entity." "We struggled a lot with finding funding and a publisher," he says. "It was not an easy sell: first-time team making a debut game with never-before-seen, unproven game mechanics. But we were always able to keep going thanks to Sami [Timonen, the CEO's] relentlessness. In Finland we call it 'sisu' – he has heaps of it!" It roughly translates as 'grit' – and there looks to be a lot involved in the making of the game. ⓦ

HOW IT ALL BEGAN

The roots of *Iron Danger* go back to 1998, when Action Squad's CEO Sami Timonen was still in school. "We had to read Finnish folklore, *Kalevala*," he explains. "The stories were really inspirational, so I felt that it would be cool to create a new folklore with a [different] angle. I got a vision to mix elements of our folklore with modern action movies. I started to draw sketches of these ideas.

"Later, I went through comics, and I thought that if Marvel has Thor and there was a Captain Britain and a Captain America, why don't we Finns have our own superhero, like Captain Finland? So, I painted a concept of that. At a later stage, I had my superheroes fighting against mechanical tank bears in a World War 2 setting with Finnish folklore vibes.

"[We eventually made a live-action proof of concept trailer], and during post-production, I got more and more inspired by the *Kalevala* [and other folklore]. I wanted to step back in time to the Iron Age with my superheroes, bringing with me some of the mechanical elements of the modern world. What would be cooler than steaming tank bears made back in the Iron Age?"

‹ The decision to include mechanical units wasn't done for attention, or really for any reason other than the team liked them. So they put more in. Solid reasoning, to be fair.

Headlines
from the virtual front

02

03
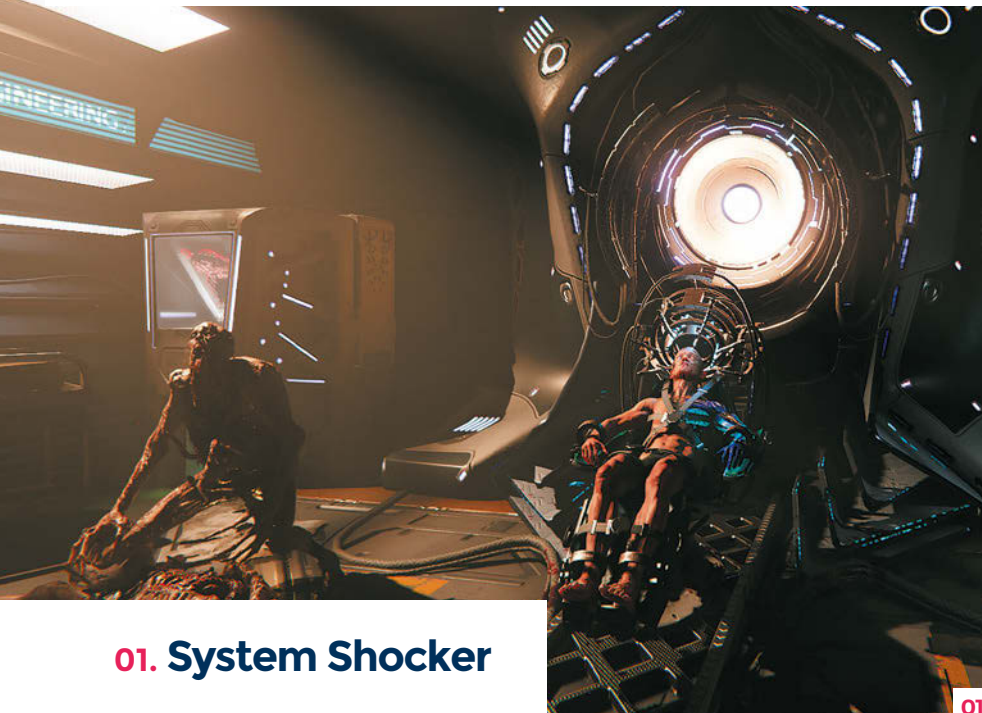
01. System Shocker

Not issue 31's cover star – that's still safe – the *other* one, *System Shock 3*, is reportedly done for, with most of the dev team having left OtherSide Entertainment and the project entering an enforced limbo. Maybe even an outright cancellation. This sad state follows Starbreeze pulling out of publishing duties as part of its restructuring and selling the rights back to OtherSide. The studio was unable to find any publisher willing to take on the project, and given how putrid *Underworld Ascendant* turned out, that might be of little surprise. Still, people have lost their jobs, and that's no cause for pithiness. Hopefully, all those negatively impacted can sort things – or have sorted things – out for themselves.

01

02. Fergie time's up

Rod Fergusson will be out of the Coalition's doors at some point in March, not joining Dan Houser, but instead on his way to Blizzard to oversee the *Diablo* franchise. Fergusson had been at the *Gears of War*-only studio since 2014, but was involved in the production of every *Gears* game released at the time of writing. So, waist-high cover in *Diablo*, then?

"I began working on *Gears of War* over 15 years ago," Fergusson wrote on Twitter, "and since then it has been the joy of my life. But now it's time for a new adventure." An adventure in *LOOT*.

03. Luxury consoles

A Bloomberg report claims Sony is struggling to keep the cost of the upcoming PlayStation 5 down, owing to the increased cost of obtaining parts for the console. Scarcity of components means manufacturing costs are rising, and Sony's pursuit of NAND flash memory and DRAM – both popular with smartphone manufacturers – seems to be to blame. One element pushing the cost up that *wasn't* unexpected for Sony was the cooling system, which sounds like it'll be more than capable of kicking out that heat – seems the company may have learned from the jet engine PS4 Pro. All said, it's looking like the PS5 will cost at least $470 (£360 – but it's never a straight conversion) right now.

If Sony brings back former CEO Ken Kutaragi just so he can tell us all to get two jobs to afford it, then it's fair to assume time is, indeed, cyclical and not a linear path as we might once have foolishly believed.

Space Channel 5 VR: Kinda Funky News Flash incoming

Activision Blizzard says new *Call of Duty* 'already generating excitement' in playtests. WHODA THUNK IT

04

05

06

04. Anthemic do-over

We offered a bit of a hazy verdict on *Anthem* back on its release just about exactly a year ago. It wasn't awful, but it really wasn't much else other than *there*. It's taken a while, but BioWare has caught up with Wireframe's almighty train of thought, admitting the game hasn't been much cop since launch, and promising a significant overhaul of both the game and its systems in coming months.

Studio chief Casey Hudson wrote: "We will be focusing on a longer-term redesign of the experience, specifically working to reinvent the core gameplay loop with clear goals, motivating challenges, and progression with meaningful rewards – while preserving the fun of flying and fighting in a vast science-fantasy setting." But has the space-horse bolted already? It'll be more interesting than actually playing the game finding out, that's for sure.

05. GeForce (not) Now

The streaming wars aren't exactly as intense as we were led to believe they'd be, but we are still getting twists, turns, and victims in this largely bloodless conflict. Nvidia's GeForce NOW service – a competitor to Google's Stadia that, instead of streaming from a library of games, streams from the library of games *you own* – has lost access to all Activision Blizzard titles. This means no *Call of Duty*, or *Call of Duty* – not *even* a *Call of Duty* is available through the service. Details haven't been released, beyond that this was as a result of an ActiBlizz request.

We're going to go a bit deeper into GeForce NOW (and the rest) in a future Wireframe, so keep your peepers peeled to see if the loss of ActiBlizz games actually matters in the slightest.

06. Moving Houser

As of March, Rockstar co-founder and creative force behind a good deal of the studio's overall output, Dan Houser, will leave the company. Take-Two Interactive – Rockstar parent – made the announcement as part of a notice sent to US financial regulators, and the company's stock dropped five percent shortly afterwards.

While not solely responsible for the written work across Rockstar's games, it shouldn't be understated just how much Houser has contributed to the studio's output over the last 25-or-so years, with writing credits on almost all titles released by his company. Nor should it be understated how many eyebrows were raised when he appeared to praise a 100-hour work week and the culture of crunch behind it, but hey.

Brother – and the other co-founder – Sam Houser will remain as president of Rockstar.

Fable Fortune dead on 4 March, Flaming Fowl Studios announces

The Outer Worlds Switch port delayed; coronavirus to blame

Incoming

Summer in Mara ⬆

We're suckers for a good life simulator, and yes that is the genre we're going with here; *Summer in Mara* looks to be another one that could potentially eat up many an hour as we go about... well, existing in this tropical archipelago. Since its success on Kickstarter, the project has come along a fair bit – but the core remains: exploration, crafting, and that all-important farming to get on with. Mixed in with a bit of *Wind Waker*-style sailing, and you've got just enough of a USP to make *Summer in Mara* that bit fresher than the bevy of other exist-'em-ups (that's a better genre name) doing the rounds.

Chicory: A Colorful Tale ⬇

Dogs! Always with the dogs. Anyway, *Chicory: A Colorful Tale* might have to suffer through that terrible American spelling, but it does still look magical all the same. Fittingly, you play as a pooch with a magic paintbrush, tasked with restoring colour to the world. You do this by exploring and solving puzzles, helping other creatures along the way. It's *Ōkami* by way of *Animal Crossing*, basically, and it's something to keep an eye on for those of us looking for some true escapism.


Alien Hominid Invasion ⬆

Developer The Behemoth is returning to its breakout hit for the studio's fifth game, with *Alien Hominid Invasion* acting as a 'reimagining' of the original *Alien Hominid HD*. For those bereft of memory, that game was a distinct throwback to arcade shooters of yore – since imitated widely, it's still a great. We're looking forward to seeing what the team does with *Invasion*.
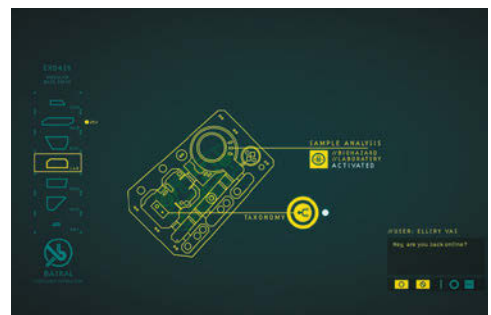
In Other Waters ⬆

Simplistic presentation and straightforward design mask a more complex narrative in this one, with players controlling an AI and having to guide a stranded xenobiologist through unknown waters on a voyage of discovery. Exploration, discovery, research, and – importantly – forming a strong bond are the key elements here. This could be a good 'un.
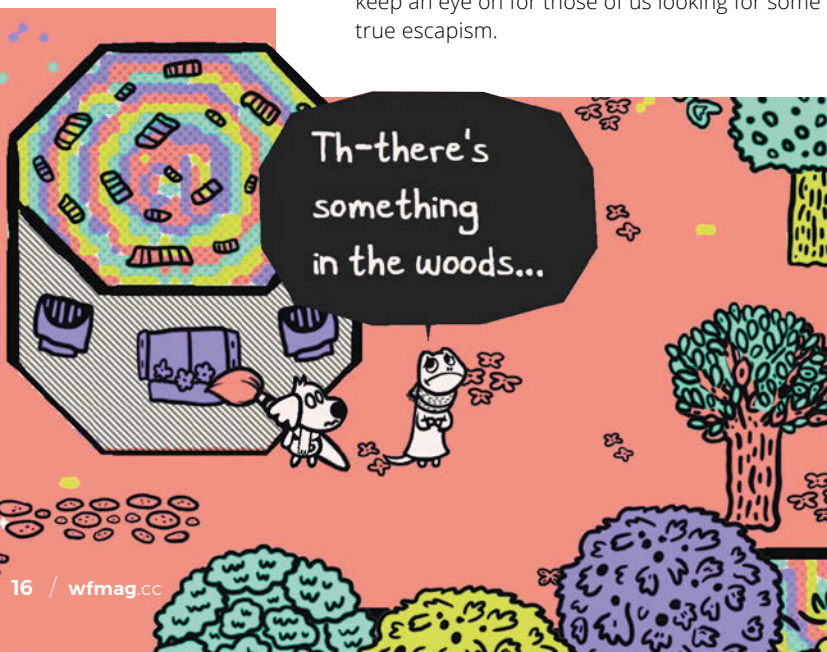
Conan Chop Chop ⬆

What happens when you mix the harsh, unforgiving fantasy world of Hyboria with a developer known for its work on bright-and-airy, casual-focused titles like *Shopkins* and *Wild Life*? *Conan Chop Chop*, obviously. Bringing the visual style you might expect from a studio such as Mighty Kingdom – cartoony, basically – *Chop Chop* darkens the colour palette a bit, ups the violence significantly (not much death in *Shopkins*), and lets you and up to three other players quest across Hyboria on a mission to… well, crush your enemies, see them driven before you, and so on and so forth.

What could have been a throwaway effort has actually ended up a contender for 'something we're really looking forward to', and in an odd way we were happy to hear of the game's delay to spring – this showing there's a real effort being made to try and polish the finished product, and not just accept whatever's there and release it to the world. As long as the violence is epic, the loot plentiful, and the netcode solid, *Conan Chop Chop* could well find itself one of the dark horses of co-op multiplayer in 2020.

Bushiden ⬇

A Metroidvania mixing the look of a 16-bit era *Castlevania* game and the cybernetic enhancements of Samus' finest outings, *Bushiden* offers a sincere tickle of the nostalgia gland. It looks absolutely fabulous, with a real nineties vibe to the sprites, so the only question we have over this one is: will it be fun? Shouldn't be too long a wait to find out, happily.

My Beautiful Paper Smile ⬇

The second title from Two Star Games – aka one-person dev team Gavin Eisenbeisz – *My Beautiful Paper Smile* carries on the mix of distinctive, unsettling visuals and deeply unsettling horror. Where the last game *My Friend is a Raven* dealt with the end of the world, *MBPS* covers a world that still exists, in which all children have to be 'perfect' by order of the mad king. Keep your mask, keep your smile, and make your way through a world that gives no quarter for emotions other than happiness.

WHEN GAMES LOOK LIKE COMIC BOOKS

HOW DEVELOPERS CREATE VIRTUAL WORLDS WITH A COMIC BOOK LOOK

WRITTEN BY
ANDREW KING

U ntil it was roughly 75 percent of the way through development, the original *Borderlands* looked like any other shooter targeting a 2009 release. The September 2007 cover of Game Informer shows off the loot-shooter before it received its famous makeover: a Psycho, looking less like an unhinged, violent desert gangster and more like Chris Pratt's Star-Lord, leaps from his realistically rendered buggy to the Vault Hunter's equally realistic-looking vehicle.

By 2009, triple-A games were still slavishly devoted to realism, which resulted in a raft of titles – the likes of *Call of Duty: Modern Warfare 2*, *Left 4 Dead 2*, *Resident Evil 5*, *Call of Juarez: Bound in Blood* – whose colour palettes looked like onion soup. When *Borderlands* eventually released, it was a shock to the system, with bold lines, bright colours, and outlandish guns. It looked, at least if you squinted, like you were playing a comic book.

Borderlands 3 was released by Gearbox Software last September, nearly a decade after the original surprised players with its unique art style. But, in the time since, much has changed.

Where browns and greens once dominated the landscape, a stylised look is now a quick way to get attention – in both the triple-A and indie spaces. From *Cuphead*'s Fleischer- and Disney-inspired animation to *Far Cry New Dawn*'s pink

"BORDERLANDS WAS A SHOCK TO THE SYSTEM"

and purple apocalypse, developers are now aiming to be as inventive with their aesthetic design as they have always endeavoured to be with their mechanics.

The drab days are over. The combined effect of the *Borderlands* series' success and the growth of the indie scene in the 2010s has ushered in a new era. You certainly don't have to squint any more. Games like Blue Manchu's *Void Bastards* and Shedworks' *Sable* legitimately look like fully coloured, inked-up pages from alternative comic books. Arc System Works' catalogue of fighters has made sure that the Eastern school of comic art has also been increasingly represented as well, with manga and anime-inspired graphics elevating games like *Dragon Ball FighterZ*.

So how do these developers make 3D, interactive spaces look like 2D, artfully framed illustrations? How do they capture the charm, readability, and pop of comic book action? And how do they maintain a singular, stylised aesthetic across years of development?

For those answers and more, we spoke to Ben Lee and Jonathan Chey, art and design leads at Blue Manchu, Gregorios Kythreotis and Daniel Fineberg, who head up art and design, respectively, at Shedworks, and Takeshi Yamanaka, a producer at Arc System Works.

LOOKING BEYOND GAMES

Creating an inspired look requires, well, inspiration. The devs at Arc System Works have a leg up here: they often adapt manga and anime properties, ➜

so developing a game's art style is an act of translation. "Our main goal is to emulate the beauty and dynamics of the original 2D source material," Yamanaka says. "But there is definitely a lot of trial and error involved."

For Kythreotis and Fineberg, the early days on *Sable* – a narrative sci-fi adventure that takes cues from *The Legend of Zelda: Breath of the Wild* – felt like exploring uncharted territory. They weren't aware of any games that captured the exact interplay between 2D art and 3D space the way they wanted to. For the most part, the Shedworks team ended up going beyond games, drawing from the work of Studio Ghibli and the French cartoonist Jean 'Moebius' Giraud.

Comic artists and animators can, however, frame each moment and determine the exact angle their audience gets on the action. *Sable* is a third-person action game that gives the player control of the camera. To bring the comic aesthetic to a 3D space, Shedworks looked to Kythreotis's education as an architect for philosophical and aesthetic guidance.

"You can never control how people are going to interact with a building in a really forced way," Kythreotis says. "You have to design architecture so that it's looser, so that it's based on functionality… We try to anticipate how people are going to interact with it in an architectural sense, rather than in a more scripted shot-by-shot sense."

This means that *Sable*'s world requires a logic beyond mere aesthetics. To
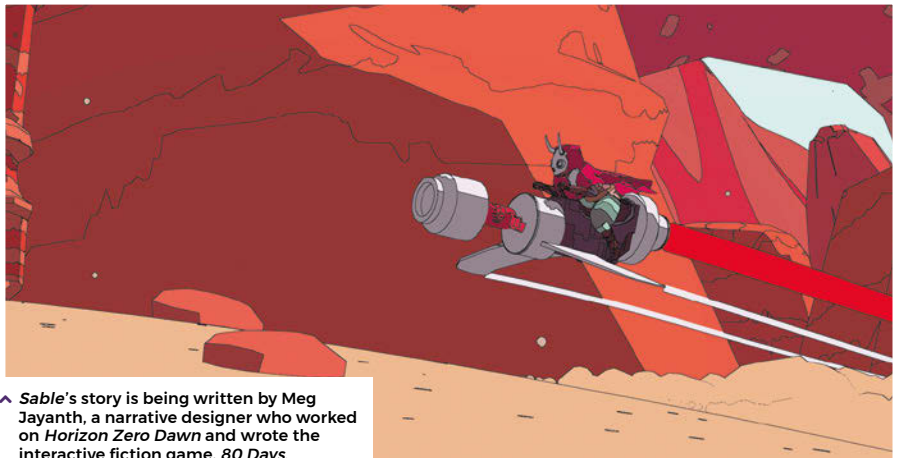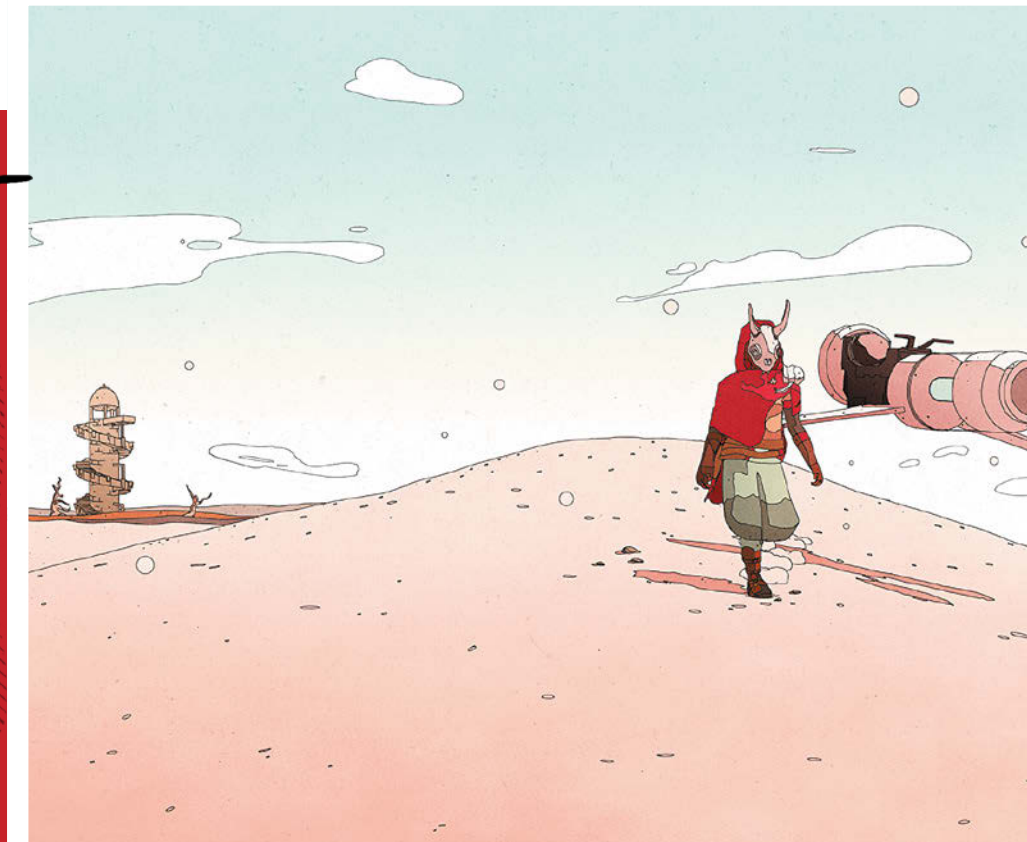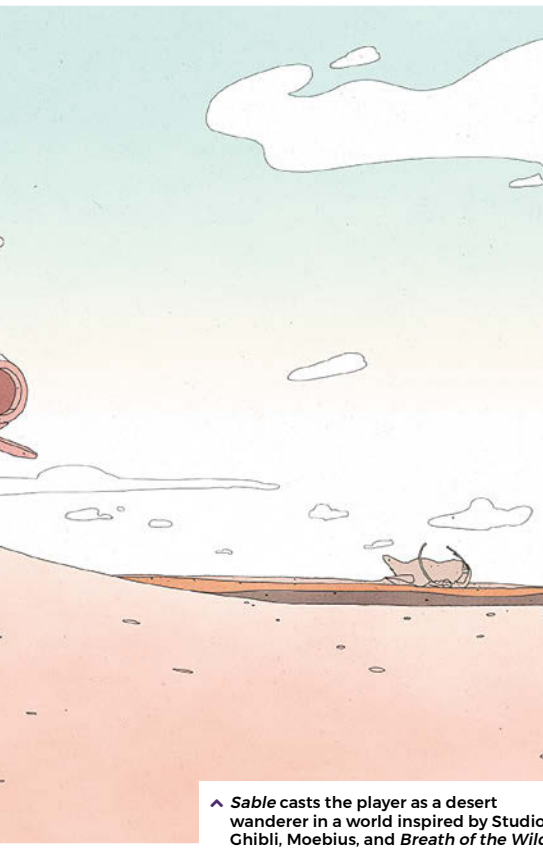

Sable's story is being written by Meg Jayanth, a narrative designer who worked on *Horizon Zero Dawn* and wrote the interactive fiction game, *80 Days*.

that end, Kythreotis has drawn from Arcosanti, the Arizona-based desert living experiment, and the Japanese Metabolists – a school of architectural thought epitomised by Kisho Kurokawa's Nakagin Capsule Tower in Tokyo. When we spoke, Kythreotis was looking to the organic architecture of the natural world. "It just depends on the problems we've got ahead of us," he says. "For some of the architecture I'm designing at the moment, I've got a book on avian architecture, so birds' nests and the like. The approach we take tends to be quite research-driven, and the visuals then come as a natural resolution to context. So, if the context is, 'These people live in

the desert in sand dunes,' then I'll go out and research, 'How do people who live in sand dunes live?' Then it's about world-building culture from that framework. It answers the questions that start to come naturally when you build worlds like that."

For the team at Blue Manchu, inspiration for its strategy-shooter *Void Bastards* did come from the world of video games – and, unsurprisingly for an indie project, from budgetary and personnel constraints. "When we first discussed the project, [the question] was: 'Can we even do a first-person shooter with such a small team — less than five people?'" says Lee, who leads Blue Manchu's art team. "And the solution was: 'How about

Void Bastards' artist, Ben Lee, fought hard for the inclusion of comic book touches, like the inclusion of white borders around the screen.

▲ Sable casts the player as a desert wanderer in a world inspired by Studio Ghibli, Moebius, and Breath of the Wild.

we do LucasArts' *Outlaws* and *Duke Nukem 3D* except with high resolution?' Like the only difference will be that we use high resolution and maybe some bottom lighting. Approach everything else the same. And we were delighted to find that once we did a test scene and we rigged it all up, it actually worked pretty well. But it required a very, very specific art style."

An art style that, according to Lee, drew from games like *Viewtiful Joe*, *MadWorld*, and *Jet Set Radio*. Maintaining that style across the entirety of the game, however, required exacting attention to detail.

COMMITTING TO THE BIT

The original *Borderlands* was built in Unreal Engine 3 – like the more realistic *Gears of War 2* and *Mass Effect 2* – before getting its late-game stylised coat of paint. As a result, it often looks like what it is: a 2009 attempt at photorealism with nineties Marvel art rotoscoped on top. By contrast, Blue Manchu, Shedworks, and Arc System Works have built their games to look like comic books from the beginning. We wondered how they pulled that off.

The short answer? A tight, controlled approach to art direction. Both the *Void Bastards* and *Sable* art teams are small. While art departments at Arc Sys can grow – they vary in size from 12 to 34

members, depending on the project and the stage of production – Blue Manchu and Shedworks are small indies.

All of *Sable*'s art is handled by Kythreotis, animator Micah Holland, and character artist Shanaz Byrne, while *Void Bastards*' visual team is led by Lee, and is composed of three other artists: Dean Walshe, Irma Walker, and Jay Kyburz.

"It was something that I had to be on top of the entire length of production," says Lee, "because it's so easy for it to go a little out of whack. The trick to the *Void Bastards* art style is maintaining that illusion. It wasn't something you could get a bunch of people working on because it's easy for the *Void Bastards* art style to fall apart very quickly if even a couple of things are a bit [off]. So it was a very intense art experience, running it, but it worked because once we nailed down what we wanted to do, we stuck to it really tight. We tried not to let it bloat out too much, and we didn't really add extra features that weren't absolutely necessary. Which is an intelligent way to run an indie project, but it was very controlled. It was much more controlled than [the way] I generally would approach a video game art style. But, it had to be. It just had to be that controlled for it to work."

STAYING THE COURSE

While *Sable* and Arc System Works' oeuvre draws from comics, *Void Bastards*

is the most explicit about the medium of its inspirations. It doesn't just borrow comic art; Lee wants the player to feel as if they are *inside* a comic book. A white border surrounds the screen at all times. Cutscenes play out as panelled motion comics. Loud noises are accompanied by stylised booms and bangs. Games have often borrowed from movies for a patina of prestige; to turn to comics is more unusual, and requires a commitment on the part of the creative team.

Says Lee: "I had a lot of arguments with people about having panel borders and stuff in. People said, 'Let's get rid of them.' But no, it's important. It's really important for the look of this game that the audience understands that it's trying to be a comic. So if I could make things move around ➡

> "CUTSCENES PLAY OUT AS PANELLED MOTION COMICS"

FACES IN SPACE

Void Bastards became significantly simpler as development progressed, with Blue Manchu abandoning some elements of procedural generation. Originally, each new player character was assembled randomly from a collection of face parts. The team ditched this idea in favour of a smaller collection of bespoke portraits. At first, height too was randomly determined from a wide range of values. This was scaled back to three values – short, average, and tall – by the time the game shipped.

and you felt like you were inside a comic, I was doing sort of my job with this game. It also takes a lot of pressure off the rest of the development. If the audience is only expecting to see a comic, they don't expect to see extremely fancy graphics."

Shedworks' efforts require a similarly firm hand on the tiller. For Kythreotis, learning to help a team of artists maintain *Sable*'s aesthetic is part of a larger shift that Shedworks has made as it's moved from developing for mobile to making a larger, premium game for PC and consoles. "My job at this point," Kythreotis says, "is about coherence and making sure the world fits together and the art style remains consistent, and also makes sense within the world we're creating."

Fineberg had to learn the same lesson. "Managing other people is hard – we've literally never done it before," he says. "We hired another programmer a couple of months ago, and up 'til now I'd written every line of code in the entire game. And I just know what all of it does. [There are a] million things that I *just know* and have to explain to him. I never had to think about it before."

IMPLEMENTING 2D ART IN 3D GAMES

Here's a major concern the art director for a game like *Void Bastards* needs to address: how do you create a game that looks like two-dimensional art while offering an explorable 3D world?

"You can use Unity to build 2D games, but 2D stuff, these days, is generally done in a 3D perspective – like you still have a camera," explains *Void Bastards*' Jon Chey. "Our 2D sprites are drawn as flat objects that are actually placed into a 3D world. I wouldn't say that Unity is really designed to make a game like [*Void Bastards*]."

The *Sable* team had to address similar issues. "We were just solving these problems as they came," says Fineberg. "If you've got two rocks, and they're both the same colour, and one is close to you, and one is quite far away from you, how do you know which one is in front? How do you know how far away they are? How do you deal with these things?"

Over at Arc System Works, Yamanaka spelled out a laundry list of challenges, ranging from the readability of a character's silhouette and movements ("Is the character's visibility compatible with the setting and atmosphere?"), to the usage of lighting and shadows, to the way the comic book aesthetic impacts the game itself. That's a lot to consider, but there are also ways to cheat, according to Fineberg. "The anime that we draw on [are] all about framing and composition," he says.

> ## "IF YOU CAN MAKE IT LOOK COOL, YOU SHOULD"

"And in a third-person action-adventure [game with a] third-person camera, there isn't very much that you can do as the designer to get nice shots.

"An obvious trick is in *Shadow of the Colossus*. When you're riding on your horse, it puts the horse in the bottom corner of the screen, so it looks like you're riding toward the distance and it's framed in thirds. And that looks pretty cool. But it only really works because you don't have to do very much. You're just sort of sitting there and letting the horse move forward. I think mostly when the player is exploring they need control over the camera. Gameplay has to come first and if you can make it look cool, you should."

TRIAL AND ERROR

Generally, the process requires (what sounds like) an exhausting amount of trial and error. Kythreotis first determines if a piece of art – like *Sable*'s hoverbike – is a good fit for the world Shedworks is building. Then he sketches it out on paper, a process that helps him determine what problems the design will potentially create or solve. From there, he moves the drawing into the digital space, sketching it out on his iPad Pro using Procreate and an Apple Pencil.

"Every drawing you do is useful even if you're just tracing over older drawings that you did, because when you do

▽ *Sable* is Shedworks' first non-mobile title, and the studio's first game to include buildings – a big change for Kythreotis, who studied architecture at university.
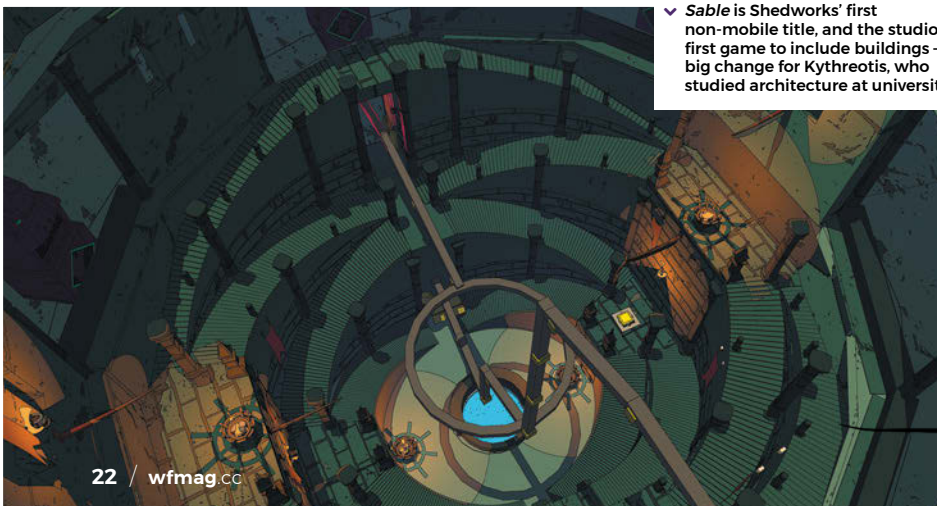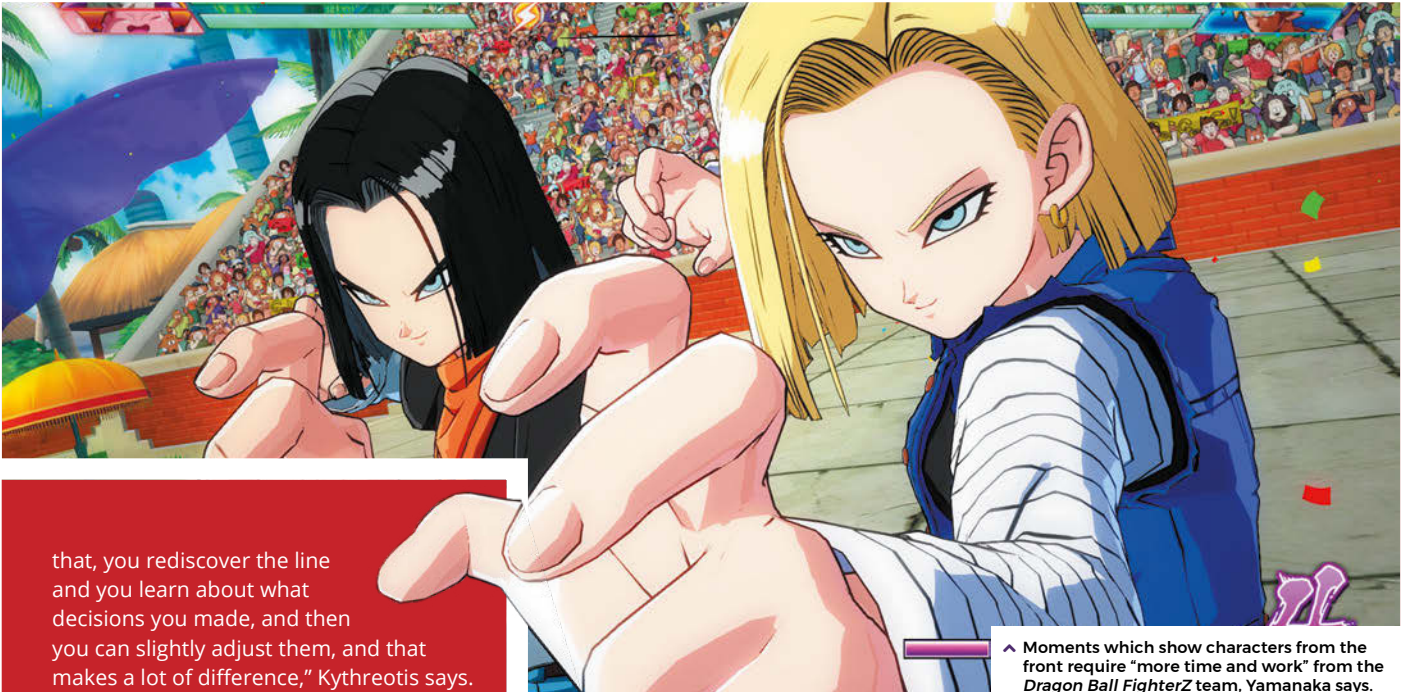
Moments which show characters from the front require "more time and work" from the *Dragon Ball FighterZ* team, Yamanaka says.

More than any previous *Dragon Ball* games, *Dragon Ball FighterZ* successfully translates Akira Toriyama's striking anime art to an interactive medium.

that, you rediscover the line and you learn about what decisions you made, and then you can slightly adjust them, and that makes a lot of difference," Kythreotis says.

From there, Kythreotis takes his sketches into Maya to begin to translate his drawings into 3D. The shaders that Fineberg has written are then applied to the model, and Kythreotis can view the resulting object in-engine.

"When you see it in-engine, that's when you really discover the details of those problems," Kythreotis says. "From there, it's just an iterative process, taking it back and forth, reworking textures, or reworking models. Say I've got a piece of architecture and I want to see the scale in-game. First, before I figure out what it looks like or the colour of it or anything, I'll use a plug-in called ProBuilder and go into Unity and build a first asset using that."

Once Kythreotis has had a chance to see how an object looks in-game, he'll make a prefabricated version of the object and export it to Maya. At that point, he can "work backwards," taking a screenshot and drawing over it on his iPad or with pen and paper. "It just depends on where the model started from and what the function of it is," he says. "If it's a gameplay thing, then that's where I come from. If it's more visual or artistic, then I'll start with pen and paper because I think that's where you can just be as free as you need to be. And then you can worry about solving technical problems later, which I think is a more exciting way to work

than starting with technical limitations off the bat, because then you come up with inventive solutions or you try and do stuff that you wouldn't have tried otherwise. That tends to be a bit more interesting."

HOW THE PROCESS HAS CHANGED

The first game Ben Lee ever worked on, *Freedom Force*, was a comic book game with Jon Chey. The most recent game Lee worked on was a comic book game with Jon Chey. But lots has changed since Lee joined Irrational Games 15 years ago to help get the art for *Freedom Force* in a shippable state. "All of this would have been quite difficult [back then]," Lee says. "Unity did a lot of the work for us... I felt

like we achieved with four or five people what would have taken many more to accomplish ten years ago."

Chey agrees. "Overall, the process of getting art into a game has just gotten easier and easier through the years," he says.

Hopefully, that's a positive sign for the future. With the process of making a game becoming easier and easier – take a look at the subreddit for Media Molecule's *Dreams* for an inspiring shot in the arm – and more accessible to folks at all income levels, here's hoping the next decade will be defined by the same explosive creativity and innovation that has defined the ten years since *Borderlands*. Ⓦ

Interactive

Spirittea

Stardew Valley meets Spirited Away in developer Dan Beckerton's bath house management sim

⌄ *EarthBound* is a reference point for Beckerton, which you can certainly see in the lead character's design.

With movies like *My Neighbor Totoro* and *Spirited Away* behind it, Studio Ghibli is among the most respected animation houses in the world. But its cultural influence has extended far beyond the realms of hand-drawn animation or even cinema; its fingerprints can be seen in video games, too, from the distinctly Ghibli-esque *Legend of Zelda: Breath of the Wild* to indie studio Paralune's *Mythic Ocean.*

"I think Studio Ghibli films are so influential because they're the product of people who were born and raised in a completely different culture from the west," says developer Dan Beckerton. "If you tell two people from two completely different cultures to imagine something and write or draw it, you're likely to get two very different results. I think the shock of Studio Ghibli's different-ness really stays with people."

Spirited Away is a clear influence on Dan Beckerton's current project, *Spirittea*. Like a celebrated sequence from that Oscar-winning film, the game's partly set in a traditional Far-Eastern bath house, where the surrounding

countryside's ghosts come to relax and ease the stresses of the afterlife. *Spirttea*, then, is what happens when you mix the social sim mechanics of *Stardew Valley* and *Animal Crossing* with the fantastical storytelling of animator Hayao Miyazaki; rather than spending your time growing and harvesting crops, you'll be taking care of your spooky customers at the bath house – handing out towels, guiding them to a hot tub, and so forth – and roaming the countryside for more ghosts to coax into your establishment.

"The whole bath house management aspect of *Spirittea* has a sort of puzzle game feel to it," Beckerton explains. "Players can engage with this mechanic as much as they want. If they want to maximise their profits for the day, then great care will be needed when considering spirit placement. But if players just want a more relaxed management approach, then they can simply place spirits wherever they want. They'll still earn money, just not as much."

Spirittea's whimsical management loop was inspired by Beckerton's own visits to the Far East. Now based in Vancouver, Beckerton originally spent four years as an English teacher

> **"I was really enjoying life as a full-time indie game developer and was reluctant to let it go"**
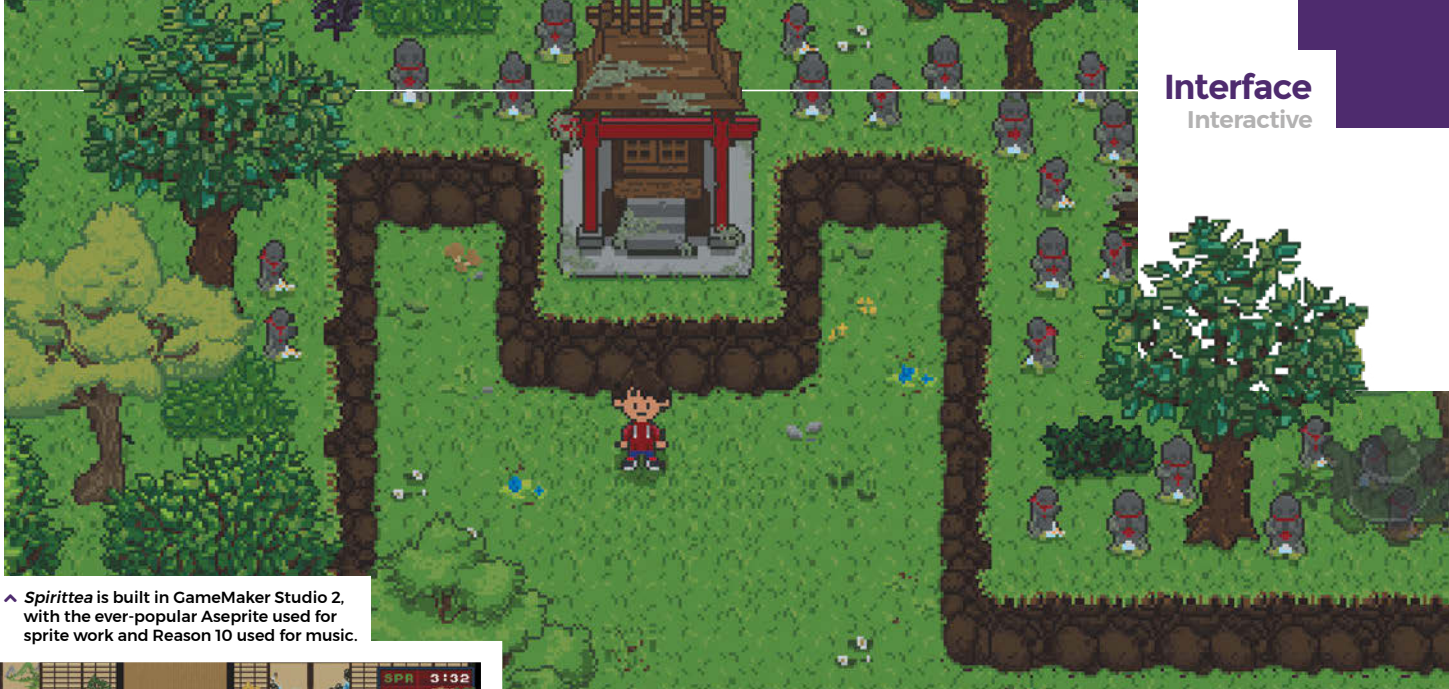
▲ *Spirittea* is built in GameMaker Studio 2, with the ever-popular Aseprite used for sprite work and Reason 10 used for music.
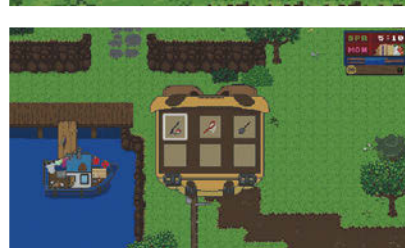
◄ Collecting will be an important part of *Spirittea*, whether it's fishing, bug-catching, or the figures you can win from a gacha machine in the nearby town.

in South Korea, where he visited the country's bath houses – known as jjimjilbangs – and generally soaking up the country's atmosphere. "The layout can vary immensely between locations, and some may offer types of baths not available at others," he recalls. "I once had to contain my laughter after seeing three heated barrels with three people's heads poking out the top of them at one of the bath houses I visited in Japan. It's simply not something you'd see in Canada."

BATHS OF GLORY
It was in South Korea that Beckerton first started thinking about switching his career path towards the game industry, when he took up an online course in Unity. Returning to Vancouver, he made the brave (and "not recommended", he adds) decision to work as a full-time game developer while living off his savings. "I was really enjoying life as a full-time indie game developer and was reluctant to let it go," he says. "I made a deal with my wife that I would work super-hard on my next game, *Spirittea*, until November, at which point I would try a Kickstarter. If it was successful, I could continue to work on it full-time. Otherwise, I would need to finally find a regular job."

Thankfully, *Spirittea*'s campaign has been a success: at the time of writing, it's already passed its CA$18,000 goal. As a solo developer, marketing and funding has, Beckerton says, proved to be one of his biggest challenges of the project so far. "I once looked at Kickstarter as a source of funding to make a game," he says. "What I should have realised sooner – especially considering the name – is that Kickstarter is a great way to *start* your company or project. It very likely won't be your solution to completing your first game, but it can help you build a community around your game while giving you a bit of pocket money to get started. Regardless of how my current campaign works out, I've made a ton of great fans and contacts in the industry, as well as learned a lot throughout the process."

Beckerton's only about five months into development right now, so he's remaining realistic about how long it'll take to make his Ghibli-esque sim: he has ideas for numerous spirit characters to realise, as well as collectable figurines and a side-scrolling minigame that involves collecting magical tea leaves. "I've given myself the target of January 2022 to launch the game in Early Access, but that date may shift depending on if I need to find more regular work," Beckerton explains. "I've got the basic framework set up for the game, but I've got loads more to do. The nice thing is, it's not a daunting amount of work. I'm creating my dream project right now, and I'm enjoying watching it grow every day!" Ⓦ

LONE STAR
Created by Eric 'ConcernedApe' Barone, *Stardew Valley* is an inspiration to indie developers everywhere. Not only did Barone create his much-loved farming sim entirely by himself, but the game's also gone on to become a storming success, with over ten million copies sold to date. "It wasn't until after I'd played the game that I learned about Eric Barone's personal story," Beckerton says. "It was incredibly inspiring to me to hear that one developer could not only make a game on their own, but also make a huge hit. I later heard similar stories with developers like Toby Fox creating *Undertale*, and Joakim Sandberg creating *Iconoclasts*. Though I didn't have a background in anything game development-related, I figured that there's nothing I can't learn if I try hard enough. Developers like Eric, Toby, and Joakim are the reason I took the first step and started making games."

This Is Not My Beautiful House

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 current BAFTA Breakthrough Brit, and founder of Coven Club, a women in games support network. She produces, markets, bizzes and arts, and previously worked on *Fallen London*, *Sunless Sea*, *Zubmariner*, and *Sunless Skies* as producer at Failbetter Games.

"I think a lot of us are anxious about games going somewhere we're not used to"

The BBC, one of Britain's most widely read news outlets, recently wrote an article about Dan Houser leaving Rockstar Games. It's unusual for mainstream media to cover games, but the BBC reckoned the inner workings of our industry were interesting enough to write about for their broad userbase.

To most people, this is a good thing. Closer we come to a cultural acceptance of games as the equal of film and music and art. Further we move from the idea of fat kids eating Cheetos in a basement. Commercially, the more people who think about games, the better, because this grows the number of people we can market to. We should be delighted whenever games break out of their niche and stand blinking in the sunlight of the mainstream press.

But many game devs took the BBC to task for printing an error. The original article, since updated, noted that "Rockstar is still one of the few gaming companies that take years rather than months to develop new games." Devs know this is wrong: most indie developers take more than a year to develop even non-commercial side projects, while triple-A titles take *at least* a few years from conception to release (here's looking at you, *Elder Scrolls VI*). But it's not surprising that people who aren't game developers don't know how long it takes to develop a game. How long do you think it takes to build a swimming pool? How much does it cost to build a car? The BBC's mistake wasn't intrinsically silly, but our industry's response to it – a general, abrasive 'LOL' – will discourage the BBC from covering games again. It's a weird reaction to a nice thing. I think a lot of us are anxious about games going somewhere we're not used to.

A lot of us weren't cool kids. A lot of us are gay. A lot of us have blue hair or tattoos or depression or dream of one day buying a yellow Vespa because that's what Haruko drives in *FLCL*. And a lot of us have had to deal with not being very well understood by people who just seem

▲ *Red Dead Redemption II:* like so many games it took years to make, and doesn't include a secret Vespa (that we know of).

more in tune with the wider world: the people who watch *Love Island*, and the people who go clubbing, and the people who have jobs that other people understand.

It's understandable that many people who've formed their lives around being a little bit different – in an industry defined by not being like those guys over there in the suits – aren't quite sure what to do at the prospect of being part of the same cultural conversation as McDonald's or fashion or Billie Eilish. But this isn't an instance of liking a band before it was cool. Mainstream culture won't cannibalise the niche we know and love better than anyone else. It's just going to expand it and make more people love what we already love. We shouldn't put off mainstream media by snarking at them from Twitter because they don't know as much about making games as we do. We should embrace them, correct their mistakes, and look forward to additional and accurate mainstream interest in the strange, murky world we spend our lives in.

Games' identity is fluid. The Cheeto-eating basement kid is a stereotype for a reason. The PC master-race is still going strong, but they now sit alongside mums playing *Candy Crush* and Twitch streamers talking about mental health and DICE giving game of the year to a goose. Games are getting big enough for the world to take notice. The bigger they are, so are we. Ⓦ

# Toolbox

The art, theory, and production of video games

^ The first in a series of features on narrative design begins with a breakdown of *The Witcher 3*'s side quest, A Towerful of Mice. See page 38.
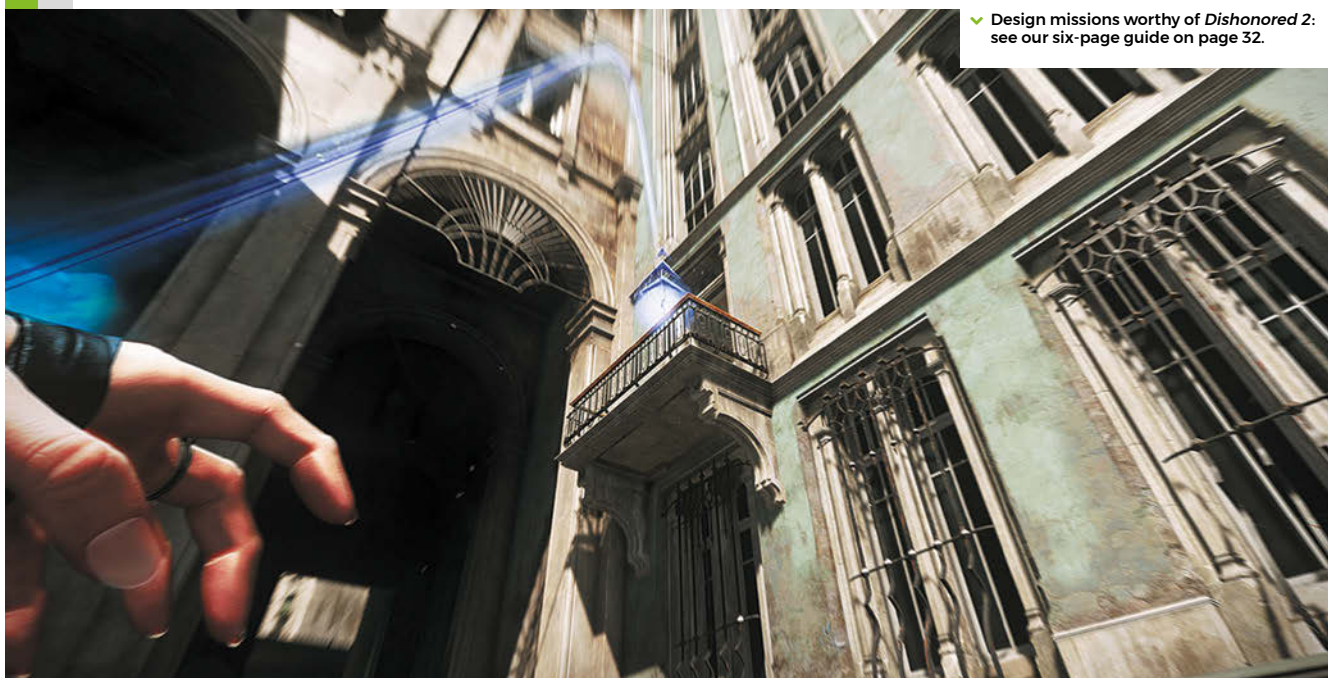
ˇ Design missions worthy of *Dishonored 2*: see our six-page guide on page 32.

The principles of game design

How important is thinking time in game development?
Howard explains – with a little help from René Descartes
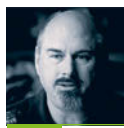
AUTHOR
HOWARD SCOTT WARSHAW

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

It's no secret that one of the greatest stumbling blocks facing my *E.T.* video game development was an appalling lack of time, with a mere five weeks for the entire project. But the real casualty was the loss of tuning and rumination time.

Thinking, tuning, and rumination are all part of a healthy development process. In the grand scheme of design, thinking is what gets us the initial plan for a game, tuning is where we react and respond to what's there, and rumination can provide new components.

Tuning is all about refinement; tweaking what we have in order to make it look and feel better. This is important, but it's focused exclusively on what is already there.

Rumination can open new possibilities, and previously unseen ideas and elements. Groundbreaking innovations can result from the serendipity of stray thoughts and mental

background processing. Serendipity is a valuable asset in game development, and it can only show up when given the opportunity. Rumination time allows one of nature's most dominant forces to come to our aid: entropy. I find it a delicious irony that the randomness of the universe can improve the structure of our design goals and game content.

I think the best way to illustrate the value of tuning and rumination time is an actual demonstration of the creative process, and I can't think of anyone better to exemplify this than one of the great creative minds of the last millennium: René Descartes, the famous French philosopher and mathematician of the 1600s.

By the way, philosophers are people whose job consists of coming up with sparkling nuggets of insight and wisdom that convert nicely to marketing slogans. This is not to be confused with advertising executives. Ad execs frequently employ philosophers, but strictly on a work-for-hire basis. And don't be fooled by titles: mathematician is simply old-school slang for nerd. That said, I would now like to share with you the story of one of Descartes's more noted (and now storied) developments.

Among Descartes's many contributions to humanity, perhaps the most famous is the phrase: 'Cogito, ergo sum', which is Latin for "I think, therefore I am." (In the 17th century, nothing counted unless it was in Latin.) We're all familiar with this quote (at least I think we are, therefore we must be). But precious few know the story of how Descartes arrived at this gem. It wasn't some random flash of insight – it evolved over several rounds of an ongoing creative process.

∨ **The formidable Howard Scott Warshaw, who knows a thing or two about the importance of rumination time in game development.**

Descartes had set out on a quest for pithy yet profound philosophical insights, as philosophers are wont to do. While having a snack one day, an interesting thought occurred to him: 'Dooreetoe, ergo num', which is Latin for "I eat junk food, therefore I am delicious." This never really caught on, because even early adopters in the 1600s weren't quite ready for the concept of junk food. He decided to step back and ruminate for a while.

UNFAVOURABLES

After a particularly raucous Halloween party, Descartes felt inspired. Scrapping the junk food concept, he decided to go in a more esoteric direction with: 'Incognito, ergo summa', which is Latin for "I pretend, therefore I am fabulous." Descartes felt the seed of something special in this idea, but he wasn't quite sure how to water it. He decided to hire a market research consultant to check it out. The consumer testing showed significant resistance to phrases which begin and end with vowels. The unfavourables were overwhelming, with the Extremely Opposed and Somewhat Opposed combining for over 73% of the sample. Respondents also felt (by a 2:1 margin) there were too many instances of the letter N.

Descartes was crestfallen, but he started thinking about these results. He thought and he thought, until finally, he started to think about the fact that he was thinking. Over and over he'd ask himself rhetorically, "Am I thinking?", and each time the reply came back, "I am!" Descartes lost sight of his product and was obsessing over his process. He couldn't let it go. Ultimately, his incessant perseverating became too much for him. He decided to pay a visit to his friend and fellow creator, Auguste Rodin, who also lived in France, just a couple of centuries over.

Descartes spent many hours sharing his perturbations about thinking and thought. This inspired Rodin to create his famous sculpture, *The Scream*. I guess Descartes exceeded Rodin's tolerance for thoughtful ravings.

On returning home in time, Descartes went straight to his lab and began tuning his 'Incognito, ergo summa' product. First, he disemvoweled the head and tail. Next, he removed the Ns. Finally, he dumped the

"Time for rumination is critical to the success of a creative product"
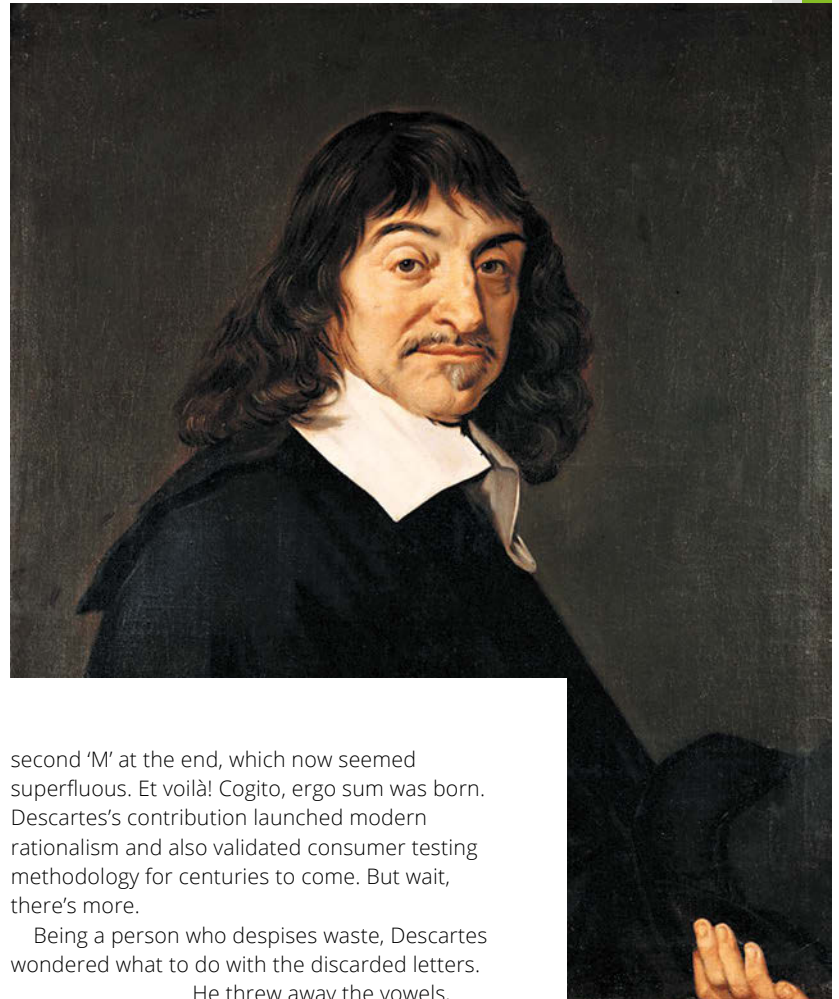
second 'M' at the end, which now seemed superfluous. Et voilà! Cogito, ergo sum was born. Descartes's contribution launched modern rationalism and also validated consumer testing methodology for centuries to come. But wait, there's more.

Being a person who despises waste, Descartes wondered what to do with the discarded letters. He threw away the vowels, because in France vowels are everywhere. But what to do with the rest? He then took the leftover consonants and used them to create a tiny confection which he dubbed 'M&Ns'. Sadly, this never got off the ground because he couldn't write the recipe in Latin, so he was forced to settle solely for the philosophical contribution. C'est la vie!

This is possibly (though admittedly implausibly) a true story. Nevertheless, the fact remains: time for tuning and rumination are critical to the success of a creative product. On *E.T.*, that time simply wasn't available. Of course, in development, everything is a trade-off. In this case, the lack of critical development time provided an abundance of critical feedback once the game came out.

Thinking, tuning, and rumination are all necessary to produce a great game. If I had more rumination time on *E.T.*, we might be singing a different tune today. ⓦ


▲ The formidable René Descartes, a philosopher who knew a thing or two about the importance of rumination time.

▼ Developed in just five weeks, *E.T.* was ultimately brought low by the lack of time to ruminate and fine-tune its mechanics.
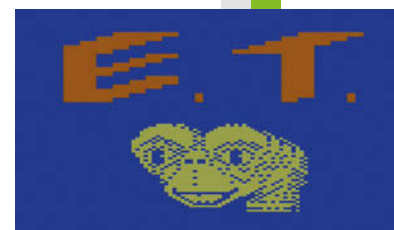
Cycles and seasons in **video game cities**

Simulating seasons, holidays, days, nights, and festivals are a simple way to bring game cities to life
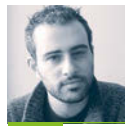
AUTHOR
KONSTANTINOS DIMOPOULOS

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

CYCLES AND EVENTS

Creating overlapping schedules with daily, weekly, monthly, and seasonal events can lead to vibrant civic lives, even if each of these cycles only includes one or two recurring events. Imagine shops that close at night as street traffic dies, a market every Saturday, and a dance every other Sunday, in a town where people dress differently depending on the season, and a supply ship visits once per month. The interplay of these individually simple events would make your world feel more complicated than it really is.

Visiting your favourite in-game shop to find the keeper has gone fishing. Unexpectedly running into a festival in a medieval village square. Frantically looking for shelter every single time those cursed sirens sound. These are just some of the thrills a dynamic urban environment can offer. By contrast, an invariable, frozen city where nothing ever changes – where summer and winter look and feel exactly the same – can feel strange, or worse, plain dull.

Among the countless types of change that can take place in a city – from the great to the small, and the personal to the societal – seasonal and cyclical changes are the easiest to imagine and model in a game. Admittedly, creating the assets needed to simulate the passage of time can be both expensive and time-consuming. We therefore have to make sure that any differentiations are as noticeable, and as easy to implement, as possible. It's also worth pointing out that cyclical changes can be reused throughout a game, and are thus relatively economical to create – especially if they can be produced via lighting or environmental effects and simple triggers.

Such changes can cover all sorts of overlapping temporal scales: day and night, weekdays and weekends, seasonal cycles like harvests, Christmas and New Year's Eve, and even larger scales like, say, the Olympic Games, which only occur every four years.

Cyclical and seasonal change is evident in all cities as they celebrate holidays, go to work in the morning, and welcome tourists each spring.

All cities change throughout the year. Regular parades during important anniversaries were a major spectacle throughout the 19th and most of the 20th century, from Paris on Bastille Day to Venice's annual carnival. Of course, events like these are rarely the same each year; they can be directly influenced by the weather or the impact of a major event. If a war has recently taken place in your game, for example, the great carnival in your capital could be replaced by a day of mourning and remembrance.

Simpler examples of cyclical events in a game city include shops closing their doors every night, just as pubs and bars open for business; a character standing outside her office every afternoon for her daily smoke before she heads back home; or the paperboy announcing the latest news each morning. Actually, there's an almost infinite number of ways to infuse your game spaces with a sense of time, from annual Christmas or Easter decorations to having characters converge on the local church every Sunday.

It's important to make sure your changes are obvious and easy to notice; if they're intended

▲ Seasonal or occasional rain offers a fine opportunity to showcase umbrella fashion, as *Blade Runner* did so brilliantly.

∧ The Clock Town in *The Legend of Zelda: Majora's Mask* is essentially an elaborate clockwork puzzle running on scripted, cyclical events.

∨ In *Dun Darach* on the ZX Spectrum, the passage of day to night is signified by the lighting of the torches found around the city.

to influence your gameplay, then they should be as transparent as possible. So, if every night the vampires come out to feed, players should understand this without too much effort. NPCs should talk of the night raids, and town bells could ring to warn of the impending nightfall. If your town is a clockwork of events, not unlike *Zelda*'s Clock Town, it should definitely be one that's easy to understand.

Cyclical events can also add emphasis to the unexpected. A cosy tavern, for instance, where rumours are routinely shared and team members recruited, would make an impression if it were to be closed for a week. The change would feel almost cataclysmic to the player, and yet no new assets would have to be created by the developer.

Other clever ways of showing the passage of time and its cyclical effects could include the closing of city gates, the sky's changing colour, the yellowing of leaves, or, in the case of *Dun Darach* on the ZX Spectrum, streets lit by torches at night.

THE SEASONAL CITY

Every season and time of day or year has its own characteristics which move civic life forwards and make it interesting. There is, however, a fascinating category of location that is used all too rarely in video games: the seasonal city. These change fundamentally between seasons, and may only truly function during particular periods of the year.

The most common type of seasonal place is the tourist city: a place where tourism is the dominant financial function. This is especially true when local tourism depends on the weather, as would be the case for a ski resort in the mountains, or a holiday spot on the coast. Such a place would only come to life during the appropriate season, and possibly remain deserted for the rest of the year.

Even more extreme cases are those of the temporary, pop-up cities hastily built to facilitate a specific need or event. These can be informal or planned, constructed out of cheap materials, or even formed by caravans as they all settle in a single place. Their civic functions are rudimentary, and are always focused on something specific: a natural phenomenon or a concert, forming a marketplace at the end of a wine season, or celebrating a holy day in the desert as tradition dictates. Temporary settlements also include mining towns set up to take advantage of a small vein of gold, and military camps like the ones the Romans once built. Keep in mind, though, that many of these Roman camps grew to become permanent structures. Over time, even temporary settlements can become civic forms that last for centuries. ⓦ

> **"All cities change throughout the year"**

Home for the holidays

Holiday periods, whether religious or not, can easily be depicted in two ways, even if in reality they're much more complex. First, there are the decorations, which could be found everywhere from public spaces to the inside of houses. Then there are the holiday-specific activities: music in the streets, sermons in the temples, choirs, people taking time off work, groups praying, parties, a possible abundance of silly costumes, or maybe great public feasts.

Designing great
single-player missions

Enliven the player's experience with compelling
objectives, devious twists, and powerful pacing

AUTHOR
PAUL KILDUFF-TAYLOR

Paul is the CEO of Mode 7, an indie
game developer and publisher. You can
find him on Twitter: **@mode7games**

L evel design is a discipline as old as
video game development itself: if
you were being pedantic, you could
argue that the addition of the sun
in the centre of the screen in 1962's
Spacewar! was the first example of an object in a
level being used to augment core gameplay. Level
design can, of course, mean much more than
shaping terrain and placing objects. I'd suggest
that mission design is one intriguing facet which
deserves specific attention.

Missions are effectively a framework of
aesthetic and gameplay modulators that interact
with the physical space of a level; their goal is
to lend direction and significance to a player's
actions. They're a weird and fascinating mishmash
of game and narrative design, and they can make
or break your single-player experience.

While missions often take place in a militaristic
setting, the principles I'll discuss here can apply
to a far greater range of game concepts: a
'briefing' could just be a chat with a friendly NPC,
for example. If you conceptualise a mission as
a loose structure rather than as a restrictive
paradigm, you'll discover a whole wealth of design
concepts which can be handy for getting out of a
development jam or making sure that your levels
stay on track.

BREAKING IT DOWN
Let's start by thinking about composition. Most
game missions have the following components:

- Game Mode
- Objective and Obstacle
- Story Beat
- Setting and Theme
- Twists and Modifiers

I'll be looking at each of these categories
individually, but it's important to note that there's
no set system for devising a great mission
design. A game mode could inform the story, or
a narrative beat could inspire a clever gameplay
trick: allowing time for both ideation and iteration
is key to allowing this process to breathe and
to result in a playable outcome. Being too
prescriptive early on can lead to dead ends.

KillHouse's *Door Kickers*
condenses mission design
down to its bare essentials
in its clear, highly readable
top-down levels.
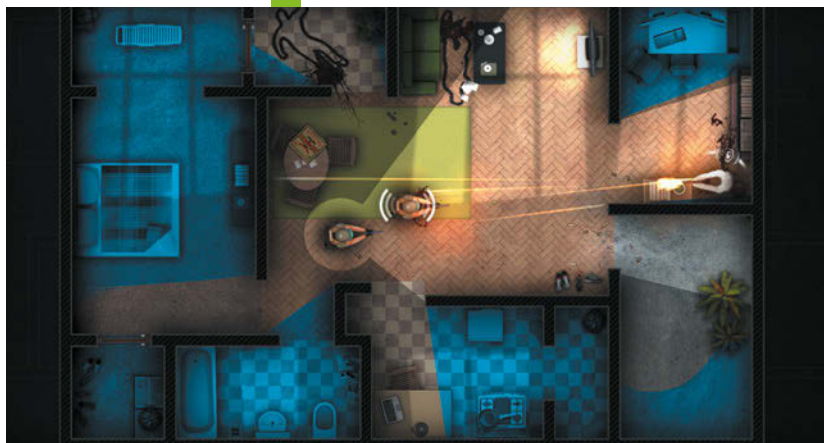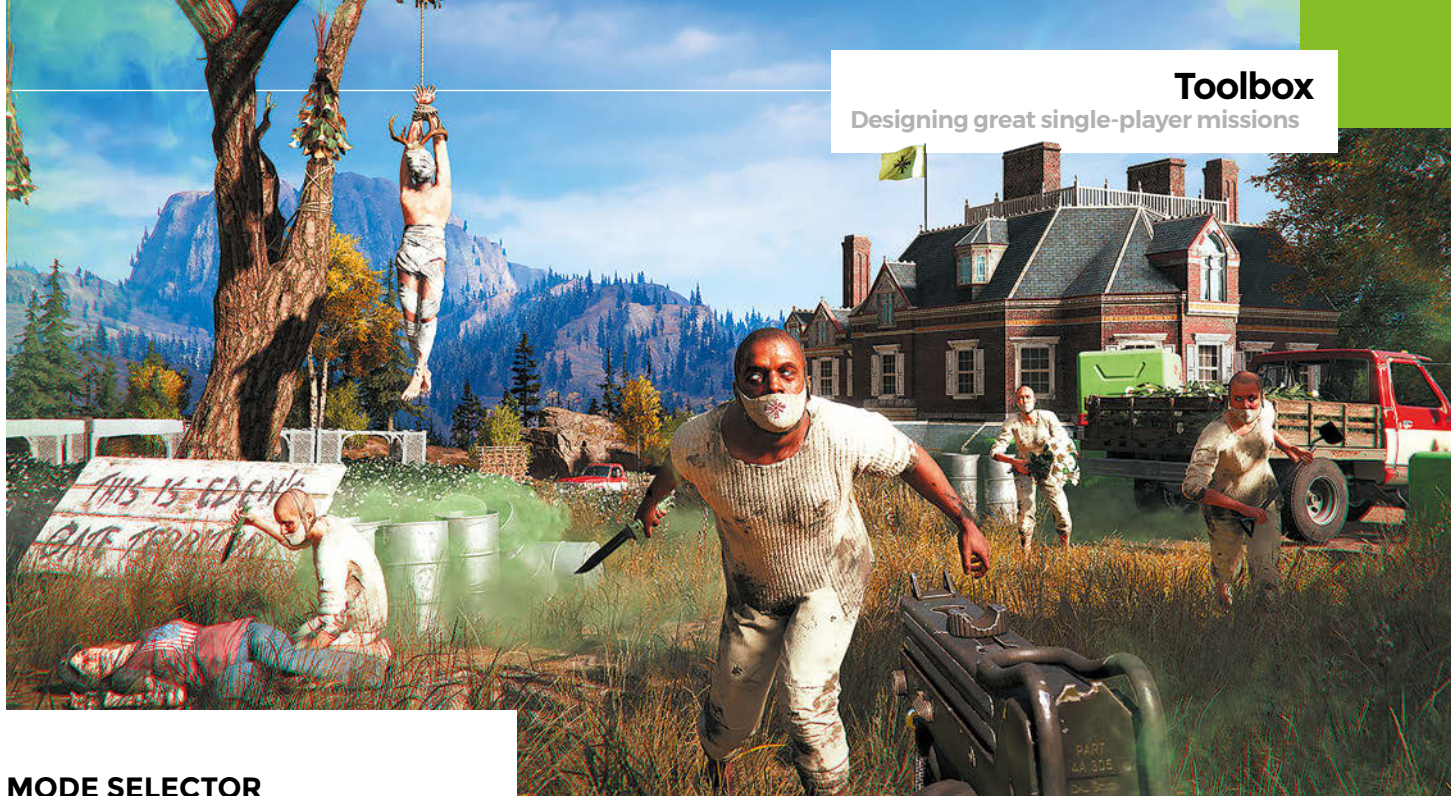
MODE SELECTOR

A game mode is a simple set of rules predicated on a very broad objective: think of something like 'capture the flag', 'escort the payload', or 'defend the castle'. When coming up with a mission design, it never hurts to start with a game mode.

Let's think about some classic game mode paradigms – here's a list:

Extermination
Kill all of the enemies – a common basic game mode going back to the days of arcade titles.

Assassinate
Kill a specific enemy: a *Hitman* or *Sniper Elite*-style mission, for example, or 'destroy the shuttle' from *Star Wars: TIE Fighter*.

Patrol
Stay alive while moving between several points in a level – this can easily be combined with Extermination or other game modes. It's commonly found in combat flight sims.

Escort
Defend a vehicle or character while moving along a route – a common (and infamous) game mode.

Support
Perform a specific minor role, such as reaching a location, then provide cover for friendly characters – common in 'corridor shooters' like *Call of Duty*.

Infiltration
Reach a specific location – often seen in stealth-driven games.

Defend / Hold-out / Horde
Prevent enemies from reaching a specific location, or fight waves of enemies encroaching on your position – easily found in cover shooters like the *Gears of War* series.

Collect / Collect and deliver / Capture the flag
Pick up an item – or several items – and then go to a location. Could also be used with information gleaned from dialogue – this is typically found in RPGs or open-world titles.

Construct / Craft
Assemble a system, or collection of structures, to arrive at a specific end goal. This is something of a special case, as this type of goal is highly dependent on the game systems.

This game mode could be as simple as ascending through a tech tree, or as complex as designing an entire system (such as in a Zachtronics game like *Opus Magnum*).

MAKING THE MOST OF A MODE

There are many other possible game modes you could choose, or you could invest some time in coming up with an original style. The point here is to set up – and ideally test out – the basic rules for the 'meat' of your mission in isolation. Defending or escorting simply may not be much fun in your game: better to find that out early than dig yourself into a hole.

OBJECTIVES AND OBSTACLES

Once you have a broad idea of your mode, you can start to think about the player's goals and objectives, both in terms of gameplay and in the context of your game world.

The player will need to be able to tell themselves a story about the level: where did they start and where did they end up? What, or who, was in ➡

▲ Modern open-world games like Ubisoft's *Far Cry* series often throw heavily constrained gameplay scenarios at the player in an effort to create variation.

TIME FOR DESIGN

It's often a good idea to allocate development time to working specifically on game modes, independent from any concern about level design. A great time to do this is immediately after the game's core design is locked down during the prototype phase at the start of the development cycle. Flipping your core gameplay, or trying out classic paradigms like 'capture the flag' with the toolset you've given players can be a brilliant way of exploring the strengths and weaknesses of your design, but also will give you space to figure out just how far you can push things further down the road.

**Mission Briefing,
Enyo System, 06:00 hours, 2654.110.**

▲ **Figure 1: The briefings in *Wing Commander* are an old-school way of conveying mission objectives to the player – they still have their charm, though!**

THE PERFECT MIX

When it comes to objectives and game modes, it's a good idea to figure out how your single-player campaign will pan out as a whole. If the player finds themselves repeating the same actions, then things can become stale, so consider mixing it up even if you have one 'core' mode that you return to frequently.

their way? Thinking in these terms, before you start to paint in any narrative details or even choose where the level is set, can help to build a strong foundation.

In her superb 2017 GDC talk, *A Narrative Approach to Level Design*, Ubisoft's Jolie Menzel discusses the idea of "movement incentives and deterrents" – an idea which has been explained elsewhere as the 'Push/Pull' theory of design. Objectives (and other incentives such as escaping a threat) propel the player forwards, while fear of approaching danger pulls them back. Keeping this in mind when structuring your mission can really help with pacing: you'll need light and shade to keep things interesting.

Clarity is everything when it comes to objectives. Modern games have taken this to an extreme with waypoint markers and other UI elements designed to keep the player on track at all times. This can feel excessive, but if the player is fundamentally unsure about what they need to do to complete the mission, you can forget any idea of immersion or 'flow'; it's surprising how even highly experienced dev teams can lose sight of this.

The classic 'mission briefing' (as typified by games like *Wing Commander* (**Figure 1**) and early flight sims) is a solid way of setting up objectives and obstacles. However, it can be easy to glaze over and miss some important details. This is

usually improved by in-mission dialogue to reiterate important points, like wing leaders barking instructions in your ear.

Another approach is to put the player into the mission and then guide them in stages: have them meet a contact or collect a map. This can be a good way of managing both information flow and pacing.

DANGER AHEAD

Obstacles, on the other hand, can be more opaque than the objective, as long as they're formidable. They can take the form of the terrain, enemies, lack of information, or any other trial that the player needs to overcome. Foreshadowing is a powerful tool for mission obstacles: powerful enemies can be shown in the briefing, viewed from afar, or even hinted at in dialogue; difficult terrain can be viewed in the distance. Conversely, obstacles can be used to surprise the player and break up pacing – we'll cover such 'twists' in detail later.

BEAT IT

Once it's clear what the player is going to be doing in gameplay terms, and you have some concept of the level's internal dynamics, it's good to think about how this will slot into your overarching narrative.

This process is never clear cut: sometimes you'll simply need to get characters from A to B or reveal a specific piece of information to keep the plot moving forward, and the mission will simply have to bend to those constraints. At other times, though, you may have the freedom to allow the narrative to be inflected by your desired gameplay content: this is why it's never a good idea to set things in stone at an early point.

You should get creative with the way in which story beats relate to mission content: if a friendly character needs to be killed off at a specific point, for example, it could feel unsatisfying to have this happen during a mission where the player is escorting them. Instead, think about how that character might be *useful* to the player and help them accomplish their goals, perhaps sacrificing themselves in the process.

Players are frequently in a highly pragmatic mindset when trying to complete a mission: it's best to keep that in mind when working on narrative design. Waiting, feeling overly constrained by story elements, or being forced into a choice removes the perception of agency and can be highly frustrating.

SETTING THE SCENE
The overall theme or setting for a level can be a jumping-off point for mission design: castles or military bases might suit infiltration-style gameplay, for example. Once again, however, the desired outcome is to aim for synergy, so try to think about deploying the setting in service to the gameplay, rather than the other way around. Players remember levels like *Halo*'s Silent Cartographer and *Dishonored 2*'s Clockwork Mansion not only for their bold, iconic architecture, but also for the way in which they facilitate a variety of playstyles.

> ### "Get creative in how story relates to mission content"

It's not just grandeur that can provide an elegant mission setting: mundanity can be compelling, too. *SWAT 4* (**Figure 2**) was praised for its effective realisation of bland locations like gas stations and houses – these helped to ground the player's actions in the world.

TRICKS AND TRAPS
While your game will likely need a host of bread-and-butter missions to make sure that players get a healthy serving of standard gameplay, it's vital to consider adding a dash of variety.

Twists can be a brilliant way to keep the player on their toes: a vigorous firefight can turn into a tense hunt for survivors, or a chase could result in a standoff. You can take any of the components we've discussed so far and switch them up: introduce a new game mode or change setting mid-level; throw in a new obstacle or change gear with the player's objectives. ➡

DO, DON'T TELL
Wherever possible, significant story beats should take place within missions rather than in cutscenes: ideally, the player should be 'physically' performing an action which has a defined narrative consequence. While there are inevitable exceptions to this, allowing the player to feel like they are driving the story (even if that's not the case in reality) can pay dividends.

❮ Figure 2: 'Boring' locations (like this one in *SWAT 4*) can make excellent mission settings – it's all about how you use them.
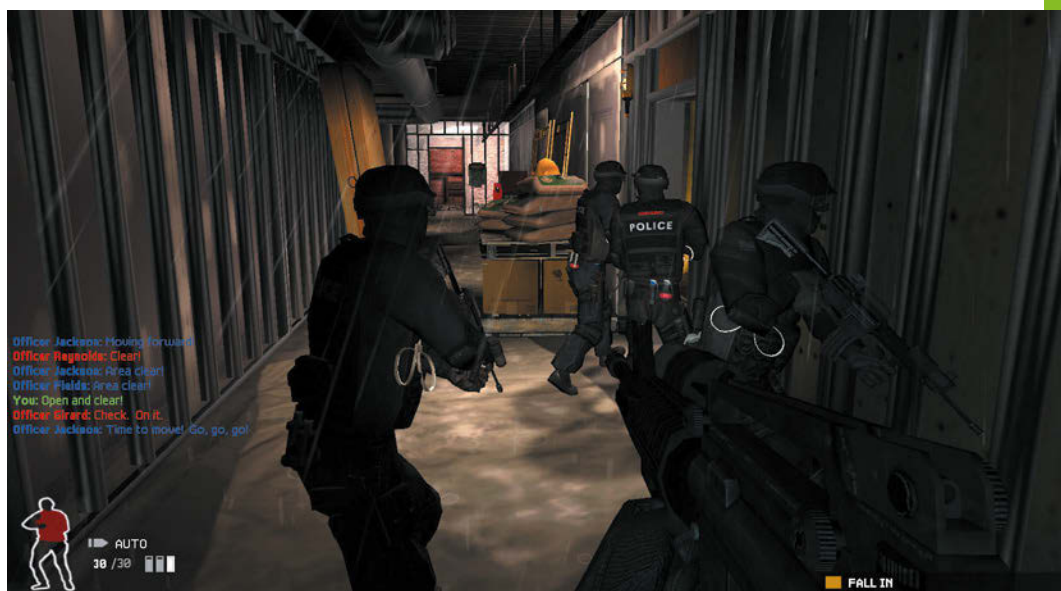
> **Combat flight sims like the *Ace Combat* series can provide an excellent source of inspiration for game mode types.**

BEST-LAID PLANS

A strong foundation for a twist can be to use a tried-and-tested screenwriter trick: "What if the plan fails?" Our heroes are trying to break into a bank vault but someone trips the alarm. The gun jams; the key snaps in the lock; the wizard loses their powers. Try throwing the player a curveball and see how they deal with it.

> **Blizzard's *StarCraft* (seen here in all its recently remastered glory) packs its single-player mission full of tricks and modifiers to challenge the player.**

Even simply transitioning to a new setting, or revealing a dramatic story twist without a defined gameplay effect can create a subtle effect: as long as the element of surprise is on your side, there's a whole host of things you could try.

Occasionally, it can be good to switch things up by introducing a gameplay constraint or modifier. Here's a list of areas you could explore:

Time
Introduce a time constraint for a specific action.

Awareness
Ask the player to go undetected by enemies.

Movement
Restrict or alter the player's movement.

Resources
Change or restrict the player's resources.

Information
Give the player more or less information about what is about to happen.

Openness
Alter the range of choices available to the player.

One note here: modifiers can be extremely annoying if used improperly. I doubt there is a single player in the world who loves a crass time

limit, a poorly implemented, enforced stealth section, or tedious turret sequence. Here are three concepts which might help avoid these pitfalls:

Give, don't take away
Giving the player a special resource or interesting short-term weapon can be more enjoyable than robbing them of their equipment or forcing them to use their starting weapon for a section.

Keep it snappy
Use modifiers briefly and sparingly – modified gameplay is a side dish to offset the main course of your core design.

Praise, don't punish
Let the player get a benefit for succeeding in a modified gameplay section, rather than punishing them for failing. If there has to be a discrete failure state, give them something fun to do while they recover. There's something about modifiers which makes designers panic when it comes to risk/reward, often asking the player to restart entire sections if things go wrong: don't fall into this trap.

GO GO GADGET
The nuclear option when it comes to twists and modifiers is the 'gadget mission' – this is an entire level which is predicated on a heavily altered gameplay. These can be an effective choice for ensuring variation in your campaign, but be sure to apply the techniques above to make sure they don't alienate or bore players.
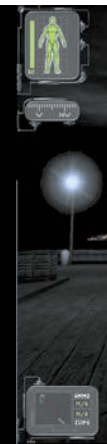
PUTTING IT ALL TOGETHER

A truly great mission is about establishing and playing with player expectations, creating a compelling setup and a thrilling pay-off. This is accomplished by managing the synergy between the various elements we've discussed above, and then working to place the mission within the context of a wider campaign.

Let's take a look at some specific examples of these principles in practice.

Terra Nova – Mission 10

This overlooked classic from 1996 continually riffs on standard mission formats with aplomb: it's packed to the brim with ambushes, plot twists, and even unexpected dropship malfunctions. Mission 10 is particularly notable, as your briefing lands you with an inaccurate map which, if you fail to scout correctly, could result in your squadmates falling into a canyon.

Key takeaway: Messing with the player's preconceptions at every turn is a great approach to keeping your missions lively.

Deus Ex – Liberty Island

This iconic opening mission functions as an introduction to *Deus Ex*'s freeform gameplay as well as working to establish key pillars of the game's lore. The player's briefed that they're required to capture the leader of a terrorist faction that has taken over the Statue of Liberty. This simple objective, coupled with the bold, recognisable visual design of the setting, provides a fixed point around which the player can pivot as they wish. The game's core design allows twists to arise from the emergent gameplay itself: the

Overlooked classic *Terra Nova* toyed with regular mission formats in 1996.

Titanfall 2 includes a great example of a 'gadget mission'.
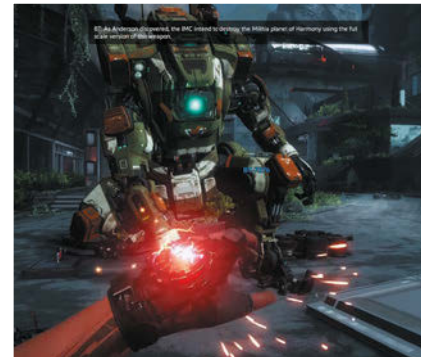
entire composition of the level changes if the player is spotted by a camera, for example.

Key takeaway: Think about how to use settings that complement the core gameplay.

Titanfall 2 – Effect and Cause

A classic 'gadget mission', Effect and Cause gives the player a device which allows them to swap between two distinct time periods while still maintaining the same physical position in space. The gameplay modification here is used to great effect, allowing the player some thrilling options for both combat and movement: two central pillars of the game's lightning-fast first-person action. It also proves useful in narrative design terms, enabling the player to discover more about the fate of a particular character and fill in some blanks around their present situation.

Key takeaway: When using gadgets (both literal and metaphorical), try to ensure they're making a positive contribution to the gameplay.

COD: Modern Warfare – All Ghillied Up

This level tasks the player with the assassination of a nefarious character who's dealing in fuel rods appropriated from the Chernobyl nuclear plant. It leads the player through a fraught encounter with overwhelming enemy forces into the eerie ruin of a devastated city.

Using stealth as a modifier is common in military shooters, but All Ghillied Up employs careful scripting, AI companion dialogue, and a subtle use of binary player choices to ramp up the tension to unbearable levels. Every aspect is keyed into the player's role as a Special Forces operative, and focused around making them feel as if they are truly on a dangerous mission – the subtle transition of the setting is particularly effective.

Key takeaway: Consider how your mission structure can reinforce role-play. ⓦ

Modern Warfare's sniper mission: a masterclass in mission design.

*Deus Ex*'s Liberty Island acted as a fine tutorial.

Of mice and Witchers: structuring quests

What can we learn by breaking down the interactivity of The Witcher 3's best side quest? Quite a lot, as it turns out

AUTHOR
TONY JEFFREE

Tony is Wireframe's new game writing and narrative design columnist. He's also creative director of Far Few Giants, and you can find his work via **tonyjeffree.co.uk** or **@tonyjeffree** on Twitter.
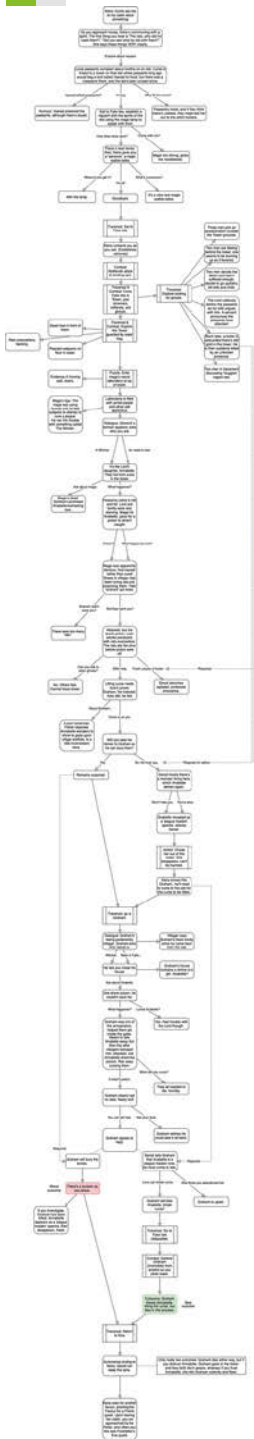
This is the first in a series of columns about how games get written. Where I'll explain the inner workings of how interactive narratives are structured, how compelling non-linear game stories are crafted, and what the hell 'narrative design' means.

The Witcher 3: Wild Hunt is held up as a shining example of game writing, with the richness of its side quests widely singled out for particular praise. As the player roams the open world, these diversions build a landscape gripped by tragedy. The player wanders into a story, affects its course for better or worse, but they can never save everyone. A Witcher is there to mitigate tragedy, not prevent it.

These isolated short stories, then, are the perfect opportunity for us to figure out what goes into a good quest. We can begin by mapping out the story's 'possibility space': a two-dimensional map containing every aspect of the quest, from relevant interactions to the branching flows of conversations, to enemies

▲ **Part of the genius of this quest is its isolation, allowing the writer more creative freedom with the fates of its characters.**

we encounter, to locations we visit. We then arrange these according to their relationships to each other. This is easy for a conversation where a binary choice will directly lead to one of two possible outcomes, but is more challenging when trying to isolate exactly which interactions will trigger or enable other, new interactions in other gameplay systems.

ONE I MADE EARLIER

I chose what many consider to be the game's best side quest, A Towerful of Mice. In it, the player must break the curse gripping an island tower. As you can see in **Figure 1**, the mapping exercise leaves us with an extensive map of the quest's information flow – too extensive, even, to print in full here. To make things clearer, I produced **Figure 2**, which is a simplified version of this quest's possibility space focusing on the key information, while summarising everything else.

The first thing that stands out is the simplicity of the quest's structure: the quest has an 'A plot' wherein the player breaks the curse, a 'B plot' which tells the story of the curse's origin, and two outcomes, one which occurs more or less by default, and one which can occur if you engage with the optional content. And that's it.

Everything to do with the A plot and some hooks in the B plot are on the yellow critical path (a term which means the shortest possible route from a mission's start to finish), and the B plot is mostly in the white, optional paths. Of the two endings, both are tragic, but the most emotionally satisfying and harder to achieve one is simply designed. It's the one where the player

> **Figure 2:** It's worth noting here that at the critical choice point, you can walk away, investigate, then return to make the better choice.

▲ Annabelle's kiss with Graham is visually arresting and packed with emotion. It's not only the most 'moral' outcome, but also the most entertaining.

does the best job, by thoroughly investigating the tower and noticing inconsistencies in the cursed spectre's testimony. Being a Witcher – a professional monster hunter – is a job. If I were to map the whole the game out in the detail I have here, I'd find the same thing over and over: do the job properly, get better outcomes. This is an excellent example of good narrative design; the game is using better story outcomes to influence player behaviour.

KEEP IT SIMPLE

A useful takeaway here is how simple the process of unlocking that better ending is. The designers could have asked the player to interact with optional bits of content throughout the mission. Instead, the player only has to examine one optional object, which is highlighted and placed a few metres from the mission's unavoidable critical path. To unlock the possibility of a better ending, you just have to investigate thoroughly. The other optional content then reinforces the player's suspicion of the spectre, and therefore their likelihood of correctly distrusting her at the crucial decision point.

Another bit of mastery: the player never knows when they've reached the crucial decision point. The dialogues are complex enough that any choice could be a deciding factor in which ending they get. In this example, the crucial decision point is whether you shrug and say "fine" to the ghost's request, or whether you delay by saying, "Not sure I totally trust you…". That's it. From that tiny decision, the whole quest bifurcates, but the player would never know.

This is great game writing for two reasons. First, it means that the outcome feels like the result of all the player's actions rather than one pivotal decision. It consequently makes the game seem extra-impressive, by tricking

"Bittersweet endings are usually the most powerful"

the player into believing there must be more outcomes than there really were. Secondly, it focuses the player. With no clear signal of whether a decision has large ramifications or not, they have to treat every decision as if it does.
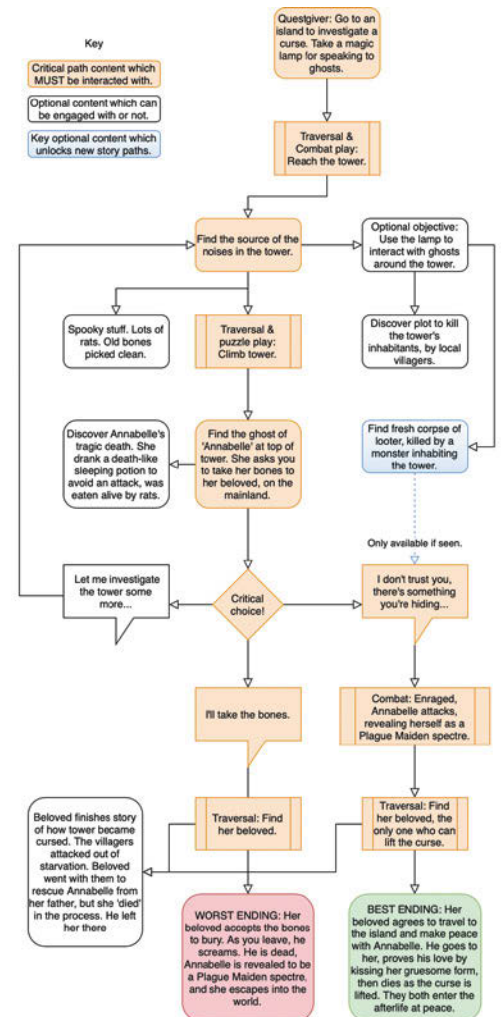
I'll end with a few thoughts about designing endings for interactive fiction generally, and particularly for short stories with few 'true' branching points. You'll notice in **Figure 2** that I've labelled the endings 'best' and 'worst' rather than 'good' and 'bad'. This is because both endings here are sorrowful. If a player feels that they've definitely gotten the bad outcome, they're going to feel annoyed at the game, possibly even reload an earlier checkpoint and try again, thus breaking the fiction's illusion by allowing them to do some mental 'mapping' of their own. If the player gets an unambiguously happy ending, unless they've really earned it, they're often going to feel pandered to, and are unlikely to increase their effort when playing future quests.

Bittersweet endings, meanwhile, are usually the most powerful. They leave us satisfied, but yearning for what could have been. And so it should be with quest endings, or interactive fiction endings generally. Your endings should only be subtly different from one another – slightly happier, slightly sadder, but not outright happy or sad.

There are a million aspects of quest design we could have explored here, but in the end, hopefully you've gotten something from the few I've had space for. Did I choose the best things to focus on? Maybe I did, maybe I didn't. But there's enough good here that I'm going to live with my unique outcome, rather than start over. That's bittersweet. ⓦ

Narrative and UI

Wild Hunt uses simple colour coding to let the player subtly know which dialogue options are on the critical path. Those in yellow irreversibly advance the game to a new state, whereas those in white are simply additional context, and will return you to the same set of options once the dialogue is complete. Two or more yellow options means you most likely only get to choose one: this is a branching point. Although some are tricks, and lead to only slightly altered transitions into the same end state.

△ *Zaxxon* was the first arcade game to use an axonometric viewpoint, which made it look very different from its 2D rivals.

◁ Shoot fuel silos to score points and gain extra flying time.

Code a Zaxxon-style axonometric level

Fly through the space fortress in this 3D retro forced scrolling arcade sample

AUTHOR
MARK VANSTONE

hen *Zaxxon* was first released by Sega in 1982, it was hailed as a breakthrough thanks to its isometric, pseudo-3D graphics. This axonometric projection ensured that *Zaxxon* looked unlike any other shooter around in arcades.

Graphics aside, *Zaxxon* offered a subtly different twist on other shooting games of the time, like *Defender* and *Scramble*; the player flew over either open space or a huge fortress, where they had to avoid obstacles of varying heights. Players could tell how high they were flying with the aid of an altimeter, and also the shadow beneath their ship (shadows were another of *Zaxxon*'s innovations). The aim of the game was to get to the end of each level without running out of fuel or getting shot down; if the player did this, they'd encounter an area boss called Zaxxon. Points were awarded for destroying gun turrets and fuel

silos, and extra lives could be gained as the player progressed through the levels.

For this code sample, we can borrow some of the techniques used in a previous Source Code article about *Ant Attack* (see Wireframe issue 15) since it also used an isometric display. Although the way the map display is built up is very similar, we'll use a JSON file to store the map data. If you've not come across JSON before, it's well worth learning about, as a number of web and mobile apps use it, and it can be read by Python very easily. All we need to do is load the JSON file, and Python automatically puts the data into a Python dictionary object for us to use.

In the sample, there's a short run of map data 40 squares long with blocks for the floor, some low walls, higher walls, and a handful of fuel silos. To add more block types, just add data to the `blocktypes` area of the JSON file. The codes used in the map data are the index numbers of the

`blocktypes`, so the first `blocktypes` is `index 0`, the next `index 1`, and so on. Our `drawMap()` function takes care of rendering the data into visual form and blits blocks from the top right to the bottom left of the screen. When the `draw` loop gets to where the ship is, it draws first the shadow and then the ship a little higher up the screen, depending on the altitude of the ship. The equation to translate the ship's screen coordinates to a block position on the map is a bit simplistic, but in this case, it does the job well enough.

Cursor keys guide the movement of the spaceship, which is limited by the width of the map and a height of 85 pixels. There's some extra code to display the ship if it isn't on the map – for example, at the start, before it reaches the map area. To make the code snippet into a true *Zaxxon* clone, you'll have to add some laser fire and explosions, a fuel gauge, and a scoring system, but this code sample should provide the basis you'll need to get started. ⓦ

A Zaxxon scrolling map in Python

Here's Mark's code snippet, which creates an isometric scrolling map in Python. To get it running on your system, you'll need to install Pygame Zero – you can find full instructions at **wfmag.cc/pgzero**.

```python
import json


WIDTH = 400
HEIGHT = 500


gameState = count = shipHeight = 0


with open('mapdata.json') as json_file:
    mapData = json.load(json_file)
    mapBlocks = mapData['blocks']
    mapBlockTypes = mapData['blocktypes']
    mapWidth = mapData['width']
    mapLength = mapData['length']

mapPosX = 200 + (mapLength*32)
mapPosY = 150 - (mapLength*16)
shipPos = [50,300]


def draw():
    screen.fill((0,0,0))
    drawMap()
    screen.draw.text("PyGame Zero Zaxxon \nCursor Keys
to Control", (10, 10), owidth=0.5, ocolor=(255,0,0),
color=(255,255,0) , fontsize=30)
    screen.draw.text("Altitude : "+ str(shipHeight),
topright=(390, 460), owidth=0.5, ocolor=(255,0,0),
color=(255,255,0) , fontsize=30)


def drawMap():
    global gameState
    shipBlock = getShipXY()
    shipFrame = "0"
    if keyboard.left: shipFrame = "-1"
    if keyboard.right: shipFrame = "1"
    for x in range(0, mapWidth):
        for y in range(0, mapLength):
            bx = (x*32) - (y*32) + mapPosX
            by = (y*16) + (x*16) + mapPosY
            if -64 <= bx < WIDTH + 32 and -64 <= by < HEIGHT
+ 64:
                if mapBlocks[x][y] > 0:
                    if shipBlock == [x,y]:
                        if
mapBlockTypes[mapBlocks[shipBlock[0]][shipBlock[1]]]['height']
> shipHeight+32 : gameState = 1
                    screen.blit(mapBlockTypes[mapBlocks[x][y]]
['image'], (bx, by-mapBlockTypes[mapBlocks[x][y]]['height']))
                    if shipBlock == [x-1,y-1]:
                        if(gameState == 0 or count%4 == 0):
                            screen.
blit("shadow"+shipFrame,(shipPos[0],shipPos[1]+10))
                            screen.blit("ship"+shipFrame,(shipPos[
0],shipPos[1]-shipHeight))

    if shipBlock[1] >= mapLength-1 or shipBlock[1] < 0 or
shipBlock[0] == mapWidth-1:
        screen.
blit("shadow"+shipFrame,(shipPos[0],shipPos[1]+10))
        screen.blit("ship"+shipFrame,(shipPos[0],shipPos[1]-
shipHeight))


def update():
    global count, gameState, mapPosX, mapPosY, shipHeight
    if gameState == 0:
        mapPosX -=1
        mapPosY +=0.5
        shipBlock = getShipXY()
        if keyboard.left:
            if shipBlock[0] > 0:
                shipPos[0] -=1
                shipPos[1] -=0.5
        if keyboard.right:
            if shipBlock[0] < mapWidth-1:
                shipPos[0] +=1
                shipPos[1] +=0.5
        if keyboard.up: shipHeight = max(min(85,
shipHeight+1), 0)
        if keyboard.down: shipHeight = max(min(85,
shipHeight-1), 0)
    count += 1


def getShipXY():
    x = ((shipPos[0]+82)/32)
    y = mapLength -
((shipPos[1]/16) + (mapPosY/16) +
((mapWidth/2)-x))-2
    return [int(x),int(y)]
```


> Our *Zaxxon* homage running in Pygame Zero: fly the spaceship through the fortress walls and obstacles with your cursor keys.
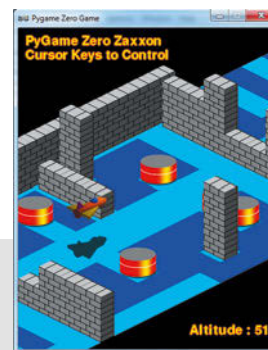
HIGHS AND LOWS

In the original game, phase one obstacles were mostly on ground level, which meant that the player had the option to avoid these dangers by flying at a high altitude, but to score points and earn extra fuel (which would be necessary later in the level), the player has to keep lower to the ground. If the player decided to stay high for too long, a heat-seeking missile came in to destroy the player's ship. Later levels included attacking enemy spaceships, which brought a new level of difficulty as the targets were moving and varied their altitude.

Raise your profile with Ukie Hub Crawl

Want to meet other developers and uncover new opportunities? Then Ukie's series of free events is for you

What is it?

Hosted by the Association for UK Interactive Entertainment (or Ukie to its friends), Hub Crawl is a series of informal events designed to bring indie developers together. Join fellow game developers and publishers and identify new opportunities and strategies to support the growth of your business.

What will I get out of it?

This year's Hub Crawl focuses on educating local businesses on how to raise the profile of their company and products. It consists of a series of free events, located all around the UK, bringing games businesses together to learn about marketing, PR, community management, and IP, along with products and services that can help enhance their own projects.

Each event features a series of short, informative sessions from industry experts, followed by a games panel featuring companies from the local area. Content changes at each crawl, so make sure to check out all the events in your region.

After each session there's a chance to network, share ideas, and have a drink with your peers.

Where's it held, and how much is it?

This is a free event open to anyone involved in the video game industry. You'll find confirmed dates and locations in the table below, and more dates will be announced as the year progresses. You can keep up to date with Hub Crawl events in your area and more at **ukie.org.uk/events-and-training**. ⓦ

Location	Date
London	3 March
Belfast	5 March
Sheffield	6 March
Edinburgh	10 March
Guildford	11 March
Newcastle	12 March

> **Raise your profile at this year's series of Ukie Hub Crawls, taking place at cities all around the UK.**
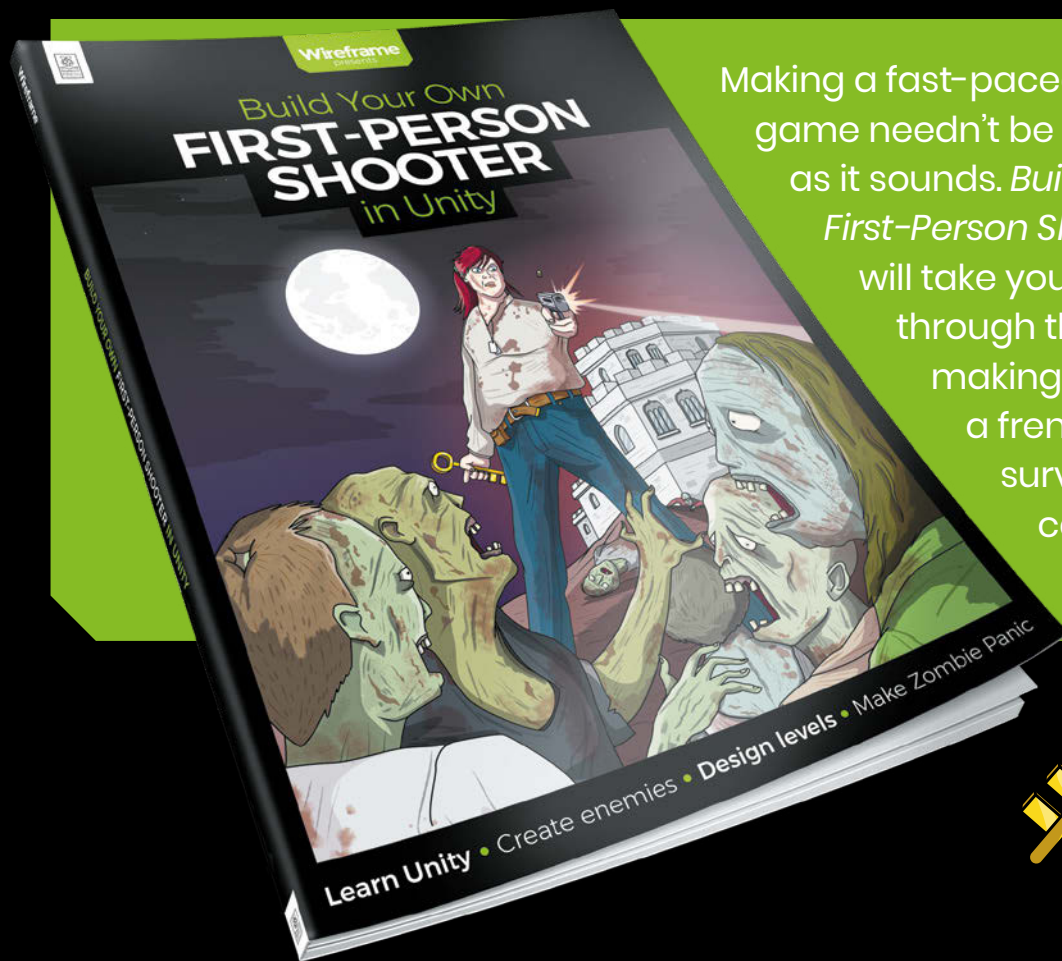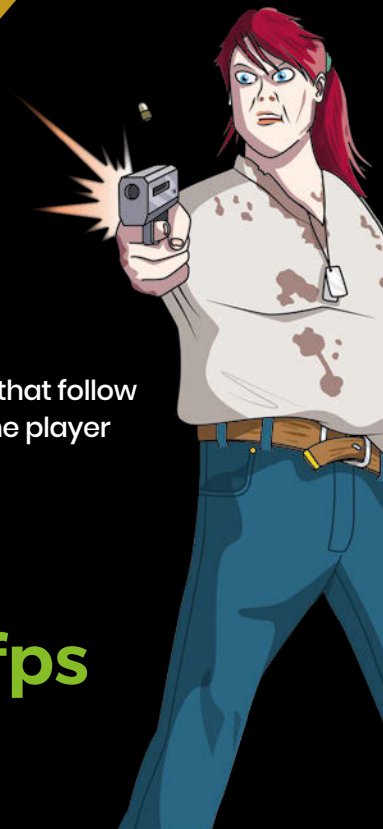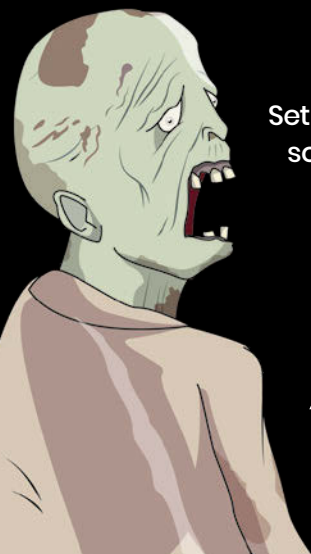
SMALL
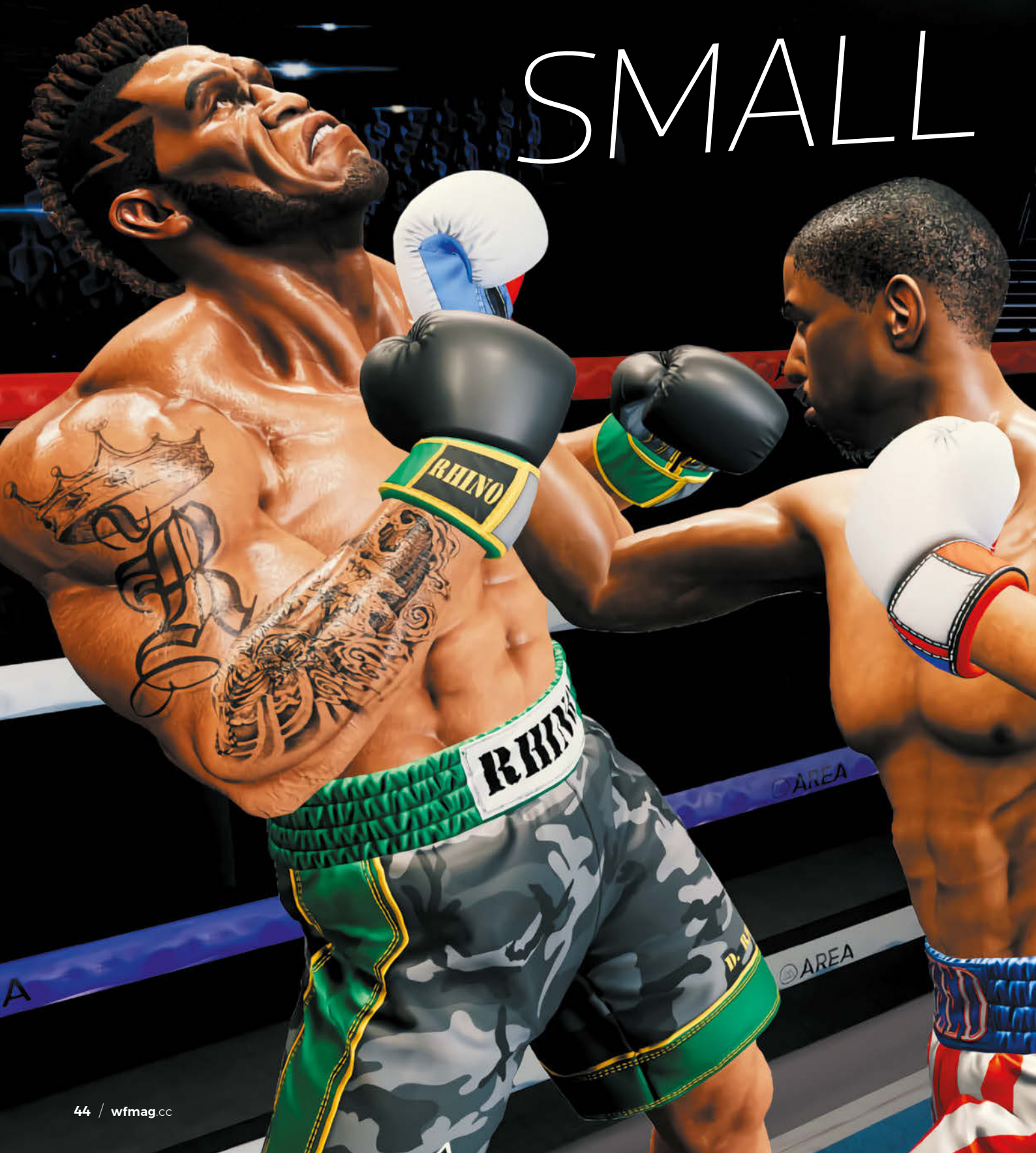
TEAM
BIG LICENCE

Inside the tiny studios making games based on giant Hollywood properties

**WRITTEN BY
AARON POTTER**

While there's definitely an upside to making a game based on a highly revered film, TV, or comic book, for the longest time, development teams working on licensed video games did so knowing that it came with a certain stigma attached. Known in industry circles for having much tighter production schedules and deadlines, games based on recognisable properties have long been synonymous with poor quality and a broad streak of cynicism.

Of course, not all licensed games are bad. Rocksteady's *Arkham* series gave players the thrill of being Batman; 2014's *Alien: Isolation* recreated the aesthetic of Ridley Scott's 1979 movie in painstaking (and chilling) detail, and the recently released *Fallen Order* has been praised in some quarters as the best *Star Wars* game from EA to date. But for every one of these home runs, there's a dud like the assorted *Iron Man* tie-ins from 2008, or the widely derided *Aliens: Colonial Marines*, released in 2013. Whether they're good, bad, or indifferent, triple-A licensed games will always exist in some capacity. But as we enter an era of gaming where more and more creatives are breaking away to form smaller studios, we're now seeing what can happen when tiny teams get to work on some of the most famous IPs in the world.

One such team is Illfonic, a Colorado-based developer currently working on the PlayStation exclusive *Predator: Hunting Grounds*, due out later this year. Before that, though, Illfonic first set Twitch streams alight with the asymmetrical action of 2017's *Friday the 13th: The Game*, which saw a team of player-controlled camp counsellors fend off the formidable Jason Voorhees. ➡

< **Taking place between the first two** *Creed* **films,** *Creed: Rise to Glory* **allowed players to immerse themselves in the ring as Adonis Creed.**

BEYOND THE B-MOVIE

When *Friday the 13th* was in development, there were just 50 artists and designers working on it. But the advantages of having a comparatively small team like Illfonic work on such a colossal IP became instantly clear for its CEO, Charles Brungardt. "We're small enough that talking as a group and getting feedback or ideas from each other doesn't get lost," he explains. "We can also move pretty fast when it comes to trying out ideas. We don't get lost in a ton of red tape, and it allows key stakeholders to have a direct relationship with the IP holders to make the game as true to the licence as possible."

Illfonic's *Friday the 13th* was by no means the first attempt at translating the slasher franchise into a game, but the studio's seven-on-one multiplayer approach made perfect sense for the franchise, and showcased an inspired understanding of the original property. Indeed, the asymmetrical setup proved so successful the first time around that it made sense for the team to see if lightning could strike twice with their next game, *Predator: Hunting Grounds*. "Asymmetric games can break a lot of rules in game design, but making it all work together

A BADASS BARBIE GAME?

WayForward's Adam Tierney is of the firm belief that any licensed game can be good – it's just a matter of taking the right approach. "I think bad licensed games happen when a developer either 'phones it in' or doesn't provide the production with enough time and resources," he says. "It's the notion that, 'This is a *Barbie* game, so we don't have to try that hard.' WayForward's *Barbie* games are some of our most fun and inspired licensed games, with surprisingly badass gameplay mechanics. The way our studio is structured is that each game project we take on is one of our directors' babies for the next twelve-plus months."

is rewarding," Brungardt says. "They excite us because of the fun, but also the challenge it presents by putting two different games together and watching the chaos that can result when people play it. It's also different than the norm of the industry."

NEW TECHNOLOGIES

Based in Los Angeles, Survios is another studio that's attempted to do new things with a movie licence. In 2018, it took its experience of making virtual reality games like *Raw Data* and *Sprint Vector*, and applied them to the evergreen *Rocky* franchise with the first-person boxing title, *Creed: Rise to Glory*. Allowing players to take on the role of boxer Adonis Creed, the game certainly has a layer of Hollywood gloss to it, but Survios co-founder James Iliff points out that the game wouldn't have been made had the *Rocky* property not been right for what the studio wanted to make.

In terms of the team's approach in selecting an IP, "we focus first and foremost about building a great game," Iliff explains. "We then look at IP that also makes sense for gameplay in an abstract sense, and then sometimes we put those two things together. There are undoubtedly movies and shows that are more naturally conducive to the interactive medium than others. A movie IP most certainly has to make sense in the imagination as connecting with some kind of core mechanic, whether that be action, puzzles, stealth, racing, or some other unique mash-up."

Comprising around 50 employees, Survios is another small studio – at least in comparison to MGM, the Hollywood behemoth that owns the *Rocky* licence. But unlike the David-and-Goliath scenarios that regularly play out in the *Rocky* movies, the relationship between the two

▲ *Friday the 13th: The Game* translates Jason's impressive killing capabilities as a hunting vision useful for chasing the seven other camp counsellors.
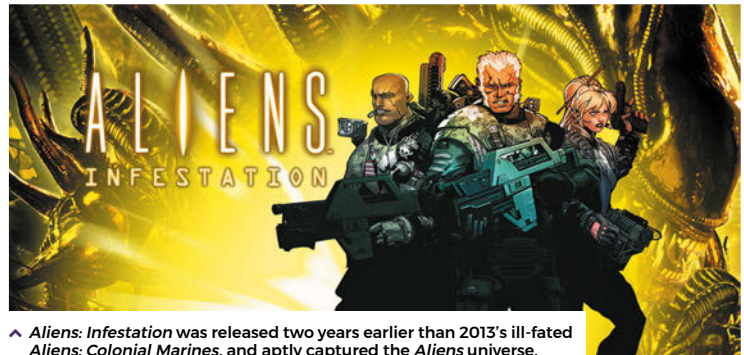
▲ *Aliens: Infestation* was released two years earlier than 2013's ill-fated *Aliens: Colonial Marines*, and aptly captured the *Aliens* universe.

studios was far from combative, says Iliff. "We loved working with MGM," he enthuses. "It's been fascinating to craft an experience that made sense in VR; we got to try new things, like giving you a ghost avatar with the phantom melee system, allowing you to get knocked out of your body, and other mechanics to simulate the intensity of a fight."

SIZE MATTERS NOT

Two years before the aforementioned *Aliens: Colonial Marines* left players shuddering for all the wrong reasons in 2013, a smaller game based on the same licence – *Aliens: Infestation* – emerged on the Nintendo DS. Making the most of its handheld platform's limitations, *Infestation* was a tense and focused 2D platformer, with its exploration, shooting, and tidy pixel graphics underpinned by a devious mechanic: once a member of the player's party was dead, they were gone for good. It was another sterling effort from Californian developer WayForward Technologies, a studio with a deserved reputation for making both original and licensed games.

Together with lead designer Cole Phillips, director Adam Tierney came up with *Aliens: Infestation* by going back and rewatching James Cameron's original film. It was, Tierney says, a case of "breaking down the structure" of 1986's *Aliens* and "trying to recreate the experience."

"What we realised, rewatching *Aliens*, is that it's basically a slasher horror film," Tierney says. "Cameron sets the audience up by making them fall in love with these charismatic soldiers in the first half of the film, then kills them off one by one in the second half."

> *"On recent games I've directed, my teams have been as large as 30–plus people, and as as small as three people"*

As well as *Infestation* and its original *Shantae* series, WayForward has worked with a range of other licences over the years, including *Batman* and *Barbie*, and a terrific 2D Metroidvania based on Tom Cruise's ill-fated 2017 film, *The Mummy*. When asked how WayForward decides which property would work as a game, Tierney explains that the answer isn't all that complex. "Believe it or not, the number one factor usually boils down to, 'Because one of us thinks it's cool'," he says. "A lot of the brands we pursue are often ones based on toys, shows, or films we grew up with, recent brands we love, or classic gaming brands that influenced us. If a brand is available to create a game, whether it's one that's suggested to us by a publisher, or a brand that our studio actively seeks out, it tends to get the most excitement and traction – and ultimately, the likelihood of becoming an actual project."

Passion is important, but part of the reason that WayForward has achieved so much success working with licensed material, Tierney suggests, is also because they've perfected the art of multitasking. The studio might be small by triple-A standards, but its team of 150 can be working on as many as four different games at the same time. "It all depends on what the production needs," he says. "On recent games I've directed, my teams have been as large as 30-plus people, and as small as three people." →

WORKING WITH THE WACHOWSKIS

David Perry is a game development legend most known for creating the *Earthworm Jim* series, but he's also developed games based on licences like *The Terminator* and *McDonald's*. Most notably he helped develop 2003's *Enter the Matrix* on PS2 – a time he thinks back to quite fondly.

"It was fun having movie directors designing a video game," Perry says. "Those two [the Wachowskis] are just incredibly creative, smart, and love video games. I'm not aware of any time before that where the directors considered the video game a part of making the movies. It was certainly the pinnacle for me, and I was known for working on movie games."

Tierney is quick to mention that art style plays a key factor in determining these needs. There are some instances where a lot of talent is required, such as when the team uses an aesthetic he dubs '2D HD art' – as seen in 2010's *Batman: The Brave and the Bold* on the Wii. "In the case of our *Batman* game, we were trying to emulate the experience of watching a TV episode, but also make it just a bit more interactive – a playable episode, we called it. To achieve this, we needed a very large team of animators, artists, and programmers, as well as heavy collaboration with Warner Bros. Animation. We wouldn't have been able to match the style and tone of the TV series with a small team."

A game like *Aliens: Infestation*, then, was one of those special projects where the platform it was being developed for meshed well with the more pared-back art style and markedly tinier team working on it. WayForward could work and iterate faster because of this, all while still maintaining a high bar of quality. "A key difference between those two styles is that, with pixel art, we could add new animations and ideas into the game in a matter of hours," says

> **"We were trying to emulate the experience of watching a TV episode, but also make it just a bit more interactive"**

Tierney, "whereas the 2D HD style on *Batman* might take a week's turnaround to get new elements into the game, because of how that art style is produced."

INTO THE WOODS

Licensed games frequently have a difficult path ahead of them: not only do they have to stand up as playable games in their own right, but they also have to fit into the property or brand they're associated with. This was something the 30-strong Bloober Team had at the front of their minds when they made their *Blair Witch* game. "It's such a perfect match," explains the studio's brand manager, Grzegorz Wilczek. "Bloober Team is all about psychological, disturbing horror games. *Blair Witch* is a horror movie series with a particularly deep lore. It all fits together so well, and we just had to make it happen. And 2019 marked the 20th anniversary for *Blair Witch*, which just made the whole collaboration so much sweeter."

Putting players in the same Black Hills Forest featured in the first movie, Bloober Team's *Blair Witch* tells an entirely new story of a former police officer who, with his trusty dog Bullet,
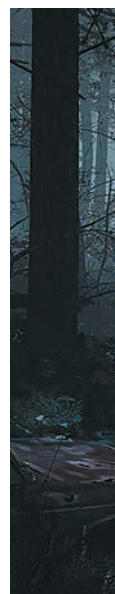
goes off in search of a missing child. Setting this first-person horror experience in 1996 added further authenticity to the series' lore, smartly limiting the player's toolset to devices only available at the time, such as a video camcorder and two-way radio. "Our game takes the well-known setting and introduces original characters into it, characters not typically associated with the *Blair Witch* universe," Wilczek says. "This being a Bloober Team game, it definitely leans more towards the psychological horror genre than the movies have done."

Those who've played the studio's previous games, such as *Layers of Fear* and *Observer*,

^ *Blair Witch* only features period-accurate tech from 1996. This includes Nokia phones that come complete with an in-game version of *Snake*.

> WayForward Technologies implemented what's known as a '2D HD' art style to create *Batman: The Brave and the Bold*'s authentic cartoon look.

v Bloober Team used their prowess in first-person horror games to create a new chapter set within the *Blair Witch* universe.

will recognise its approach to horror in *Blair Witch*. Lionsgate had played those, too, and it was this mutual understanding of each party's talents that laid the foundation for their working relationship. "They've been extremely supportive throughout the development process, helping us make an experience that feels like *Blair Witch* and still plays like a Bloober game," says Wilczek.

Ultimately, while there will always be licensed games being worked on by the industry's largest studios, it's heartening to know that the talents and capabilities of indies have matured so much in recent years that iconic brands like DC, Disney, and others are finally taking proper notice. Now, having spoken to the developers lucky enough to find themselves in such a freeing setup, it's clear that the advantages are manifold: licence-holders get valuable exposure from having their properties attached to a video game, and thanks to the passion and agility of smaller studios, the games beneath those properties are now more daring, imaginatively crafted, and individual than ever before. Ⓦ
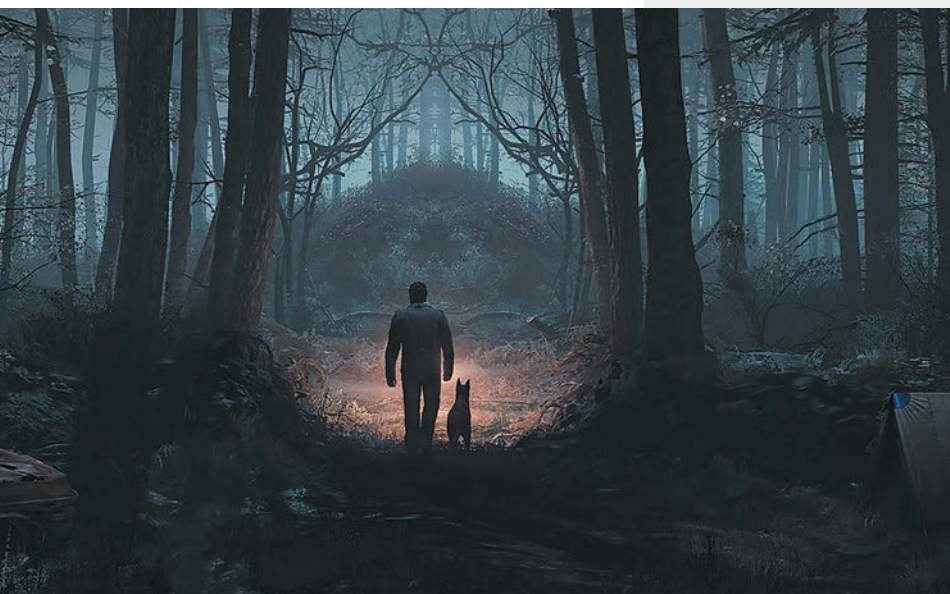
Developer Profile

Peter Molyneux

Britain's most controversial gaming legend: profiled

We looked back at Bullfrog a few issues back, but since then it's been twisting about in the back of our collective hive mind: we need to talk more about the Peter in the room. So here we go: Peter Molyneux. The man of a thousand tall tales; who invented the god game, but who also popularised massively over-egging the contents of his games in some bizarre self-aggrandising routine that went on for many a year, before he was called out one too many times over it. He's a complex character, it's fair to say.

But he's also a man with a fun story of entry to the games industry, first making a game after seeing how popular the software he'd coded had been, and then seeing it utterly fail and moving on to becoming a baked bean exporter. Yes, really. At least that's what we're told. Molyneux's true entry to the industry came a few years after Commodore mistook his business creating productivity software, Taurus, for a much bigger company of a similar name and handed him multiple free Amigas on which to make software, because they thought he was someone else. Wait, what?

Yes, Commodore handed over thousands of pounds of free hardware in a case of mistaken identity and kickstarted what would – eventually – become the birth of a gaming legend.

After the productivity market proved somewhat arid, Molyneux and his cohorts (who had since cleared up the misunderstanding with Commodore) pivoted to games, forming Bullfrog in the late 1980s and porting a friend's game to the format they were now rather familiar with. *Druid II: Enlightenment* was *fine*, but it wasn't until 1989 and *Populous* that things really started going well for the team.

Inventing a new genre isn't something you do every day, so it's no surprise Bullfrog – under Molyneux's stewardship – became known for making games where you acted as an invisible, floating, all-seeing super-manager. Being a literal

Godus made many promises, and it's no exaggeration to say it let many people down.

INSPIRE your followers

god made way for a corporate overlord, lord of a dungeon, oversalting some chips in a theme park – there was a lot of mileage in this concept, and a lot of kudos for Molyneux's work. But two things started to catch up: EA, now owner of Bullfrog, had pushed Molyneux into a management role, rather than a creative one, and he was unhappy. Also: people had started to pay more attention to the man's promises.

HOUSE ON FIRE

While the exaggerations were there pretty much from day one – some of Molyneux's accounting software was called "the most complete database system conceived on any microcomputer" by the man himself – it wasn't really until ol' Pete struck out on his own with Lionhead Software that the world really started to take notice. With a much higher profile than before, and with free reign to say what he wanted outside the confines of EA ownership, the promises trickled out to the press. First *Black & White*, with its life-changing AI. *Fable* would see an

entire world change – and grow – with the player. *Black & White 2* would, no, really, *this time*, feature AI that would be life-changing. And with every tale, the response grew pithier and pithier.

By the time Molyneux left Lionhead in 2012 – again escaping a corporate embrace, this time by Microsoft – people were positively *waiting* for the man to

"Inventing a new genre isn't something you do every day"

make the ultimate outlandish claim. They didn't have to wait long, as Molyneux's new studio, 22cans, launched *Curiosity: What's Inside the Cube*, an online tap-'em-up that saw thousands of players chipping away at a block in a white room for weeks on end, and promised an amazing prize to its winner. That prize was... Peter Molyneux delivering a promise. Which he never lived up to. From that day on, the man became a punchline to many a games writer or YouTuber's jokes: the former

bean exporter had, finally, gone a bit too far for people to let him off anymore.

But Peter Molyneux is undeniably talented – his track record speaks to that. For all the scorn poured on him, however fashionable it became to make him the whipping boy for the gaming internet's misguided rage, this is a man who has had a hand in the creation of an entire genre. A man of more than one all-time classic. Of some of the most original, interesting, funny, smart, and *fun* games ever made. Of a series of titles that brought with them a Britishness not found since the heyday of the 1980s bedroom programming boom, and brought it to a worldwide audience with huge success.

This isn't to whitewash Molyneux's half-truths – his sometimes outright lies, whether malicious or not – but it is worth bearing in mind the man's output when we judge him. He's a character; we'll probably never really trust him again when he makes promises about an upcoming game, he is (by some reports) somewhat difficult to work with at times. But... like... *Populous*. ⓦ

It might not quite have been the all-conquering future of gaming as we were told it'd be, but *Fable* still managed to be a great game – and series – in its own right.
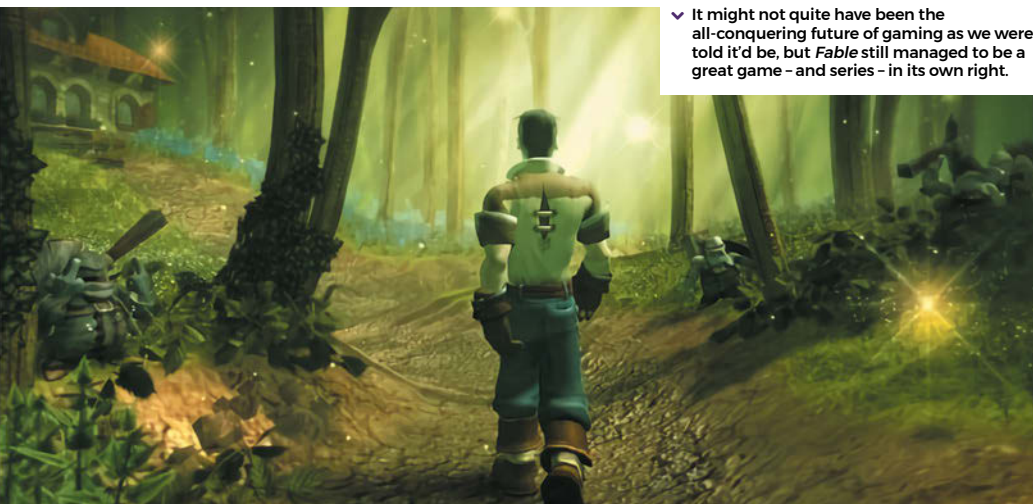
Molyneux's megamix
10 of Pete's performances, picked

Frogs and lions and cans, oh my

01 The Entrepreneur
1984

Molyneux's first game set the tone: you ran a business, making and selling things, setting prices, buying advertising and so on (like the above image, which isn't actually of the game because… it seems to have disappeared from existence). It was not a success and – take it with a pinch of salt – sold a total of two copies, one apparently to his mum.


02 Druid II: Enlightenment
Amiga – 1988

The first project for Bullfrog was this port of a C64 original made by a friend of Molyneux. A *Gauntlet*-alike, *Druid II: Enlightenment* was at the very least half-decent; it played well, it was technically sound – it did the job. But more than that, it offered a springboard to greater things for the new studio, and for Molyneux's creativity. And his tall tales, but we'll get to that.

03 Populous
Amiga / multi – 1989

Here it was: the moment Peter Molyneux invented God (games). *Populous* was unlike anything we'd ever seen before, bringing the sort of creative freedom that comes with a mind approaching the industry from the outside. This was a game made by a man who *had* spent time exporting beans, who was able to see the bigger picture. And it changed gaming forever.
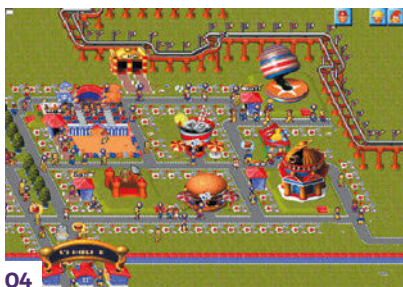
04 Theme Park
PC / multi – 1994

Other big Bullfrog games popped up in intervening years, but *Theme Park* was the first one in a while to feel very Molyneux. Aside from the whole 'floating unseen power' role the player took, there was also the unmistakable 'Peter air' to things with the whole micromanaging stock, rearranging debt with the bank, and dealing with the park's labour union.

05 Dungeon Keeper
PC / Mac – 1997

Even the option to be benevolent flew out the window with *Dungeon Keeper*, as Molyneux grew into his role as tyrant-in-chief behind the scenes (this is entirely conjecture). Another game of building, management, and slapping imps, *Dungeon Keeper* proved both brilliant and wickedly funny – an element of Molyneux's output that tends to be forgotten these days.
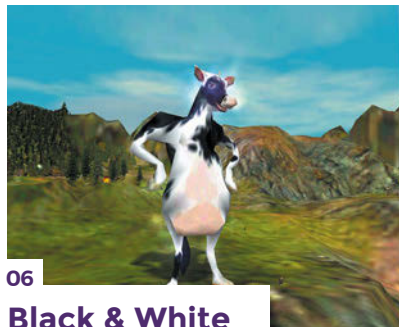
06

Black & White
PC / Mac — 2001

He'd made big promises before, but it was arguably *Black & White* where the boy who cried wolf came out to play. *Black & White* cast you as a god; you could literally do anything a god could do, the animal-deities would learn through complicated AI algorithms, it would change the world and so on and so forth. In reality, the game was heavily delayed, then… *alright*.
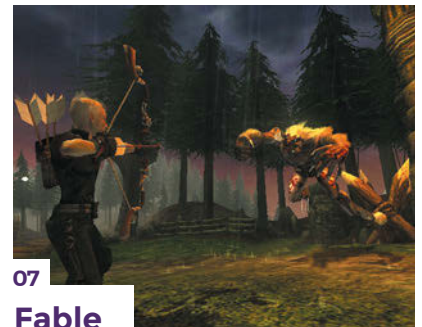
07

Fable
Xbox / PC / Mac / X360 — 2004

And, of course, the big one on the list of porky pies – *Fable*. While Molyneux was waxing lyrical about an acorn growing into a tree as you played, it would have been much better to focus on the fact this was a stylish, funny, and decidedly British action-RPG that was also a lot of fun to play. Its reputation hasn't been tarnished, but the game gets an unfair rap.
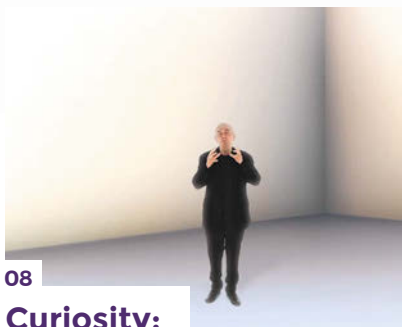
08

Curiosity: What's Inside the Cube?
iOS / Android — 2012

Lionhead behind him, Molyneux moved to his next grand promise: a life-changing prize for whoever was first to break through a giant cube to the delicious cube-cream inside. What this involved was a lot of tapping, nothing else. And that prize? The winner was promised the chance to be a god, and some money. He got neither.

09

Godus
PC / Mac / iOS / Android — 2014

While the winner of *Curiosity* was promised a shot at being a god in *Godus*, he's probably glad that didn't happen. This was meant to be a return to the greatness of *Populous*, and instead 22cans' first *proper* game… wasn't. Half-baked, half-finished (on PC, at least), and not the sort of thing to change gaming forever – except for the worse.

10

Legacy
PC / Switch — 2020

So here we are, awaiting 22cans' next title with bated breath in this brave new world where Molyneux doesn't actively promote things. A successor of sorts to *The Entrepreneur*, *Legacy* sees you tinkering, inventing, and selling things in a Molyneux-ish way. We've needled him over these pages, but genuinely we do hope this a return to form for the man.

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Review

Journey to the Savage Planet

Metroid Primary Colours

HIGHLIGHT

To access later upgrades, you'll need to earn promotions by conducting scientific experiments. Alongside scanning creatures and collecting live DNA, this means completing a range of equipment tests. In practice, these mostly involve killing things in creative ways, such as launching them in the air and shooting them before they land. Everyone needs a hobby.

As you look around your spaceship in *Journey to the Savage Planet*, you might wonder how it ever reached its destination. At rest on the far-flung, untouched world, ARY-26, it's clearly a vessel built on the cheap. The retro chirps from its CRT-screened computers have a certain charm, but hardly scream reliability. As in the classic *Metroid* scenario, you're alone and stranded on an alien planet, but here it seems less likely that you'll ever leave.

The basic premise isn't the only thing *Savage Planet* shares with Nintendo's series, particularly *Metroid Prime*. It's a first-person exploration game, where you scan alien environments, shoot hostile wildlife, navigate hazards, and upgrade your equipment to access new locales. As you augment your spacesuit with double jump and grapple capabilities, or spot cracked walls that you lack the means to destroy and ledges you still can't reach, it can feel very familiar.

But as your rickety ship suggests, this is *Metroid Prime* turned on its head. ARY-26 is a place of natural colour and warm skies. Pastel vistas burst with lush vegetation, while the warbles and cries of nearby animals spark curiosity more than dread. There are dangers, but this is hardly a vicious foreign world that your lone explorer has to tame to survive. It seems like it was managing just fine until you turned up, poking, slapping, and shooting things.

Some rather on-the-nose satire leaves no doubt that you're the invader here, as an exploited corporate employee, sent to determine whether the place is ripe for settlement or resource farming. But it works to cleverly reveal the sinister side of the standard *Metroid* structure. Scanning means gathering data for your boss as much as to inform yourself, while flora and fauna are prodded and pulped in the name of science. Your measly starting equipment and lack of fuel for a return journey, meanwhile, are due to cost-cutting and your apparent expendability. Gear upgrades are programmed into the ship's 3D printer, but you'll have to collect the raw materials to make them.

The humour continues in the field, with moments of gooey slapstick violence never

ARY-26's most common creatures, Pufferbirds, are docile and easy to manipulate – perfect for experiments.

Extending your max health and stamina means consuming these ominous growths of orange goo.

far away. *Savage Planet*'s ecosystem is crucial here, and although it's rudimentary, there's always scope for mischief. Not everything on ARY-26 is hostile, at least unless it's provoked, so sometimes it serves another purpose or is just fun to play with. And with a variety of throwable items, from edible space paste, Grob, to organic tools harvested from indigenous plants, such as trampoline-like egg sacs, adhesive gunge, and explosive buds, shooting critters is often the least imaginative option at your disposal (although it is tempting).

Direct combat is thus less frequent than in *Metroid* games. Some species do always attack, some collectables are gated behind scripted encounters, and there are a few proper boss battles, but the onus is on exploration. When fighting does break out, it's usually a case of timing dodges to expose a weak point, before quickly lining up a few shots, maybe chucking some explosives around to dislodge armour first. It can be taxing, especially as the controls aren't as tight as most modern FPSs, but it's always clear what you have to do, and the pace is rarely too hectic.

Indeed, *Savage Planet* excels as an adventure game that wants you to be adventurous, and to reward rather than punish your efforts. As you progress beyond the large solid base of the landing site, you find yourself atop towering cliffs, or hopping between fragmented islands of rock suspended in the sky. And with that verticality, the game dares you to throw yourself off ledges, whether jumping to bring a grapple point in range, cannoning forward towards a distant platform, or plummeting to lower strata, using a jet boost to slow descent at the last second. The more you power up, the easier it becomes to avoid fatal mistakes, and with so many hidden routes, caves, and treasures to discover, it's usually worth the gamble.

At the same time, your chatty computer and tiny robot buddies help to ensure you don't get lost or stuck. There's no actual map in *Savage Planet*, which seems an oversight at

> **"Shooting critters is often the least imaginative option"**

first, but since everything is trackable, it isn't ultimately an issue. When a path is inaccessible with your current gear, you'll be told what you need and roughly where to find it. If anything, the game gives a little too much away, but it's nice to know that whenever you've had enough aimless wandering, a marker will point you in the right direction.

ARY-26 is an exquisite place to explore (and exploit), seeking out openings, obscured paths, and possibilities. In following that *Metroid* template, it doesn't offer anything dramatically new, even if the framing is different. And that framing – the toilet humour and ironic social commentary – might grate as much as amuse. But it knits together into a coherent thematic whole that adds a fresh energy to proceedings, and that classic design still has the power to absorb, entertain, and satisfy. When they're put together with such expertise, the old parts are as reliable as ever. ⓦ

^ The colourful, organic design is undoubtedly one of *Savage Planet*'s strongest achievements.

VERDICT

A vibrantly subversive homage to *Metroid Prime* that demands to be explored.

84%

^ An online co-op mode feels bolted on rather than integrated into the game, but it works well enough.

› Milo and Lola have died. Time to drink!

⌄ The array of cocktails on show is varied and fun.

VERDICT

Vibrant and playful, yet also profound, *Afterparty* gives the devil his due.

86%

HIGHLIGHT

One character I'll definitely remember from *Afterparty* is Sister Mary Wormhorn, personal demon. Her vivid design couldn't help but remind me of the demon troupe in *The Master and Margarita*, and alongside stellar voice acting, you'll love to hate her, as she tries her best to make your life miserable.

Review

Afterparty

The master needs a margarita

Sometimes adult life can seem a bit like hell – we work day in, day out at jobs which can feel pretty torturous, reflecting upon how our choices might've changed things, upon whether we lost something vital when we became adults. For *Afterparty*'s protagonists and lifelong friends Milo and Lola, these uncertainties are very real. Having just graduated college, they stand on the brink of entering adult life, when they suddenly die and are sent to actual hell.

But as above, so below. After aeons of torment, the demons have grown tired of their nine to five, and now live for the weekend, partying alongside those they torture. Even the Devil has grown disenfranchised, sequestering himself away in his mansion and holding grand parties every night. With the help of trusty cab driver Sam, Milo and Lola discover their only redemption is to beat the Devil in an ancient drinking contest, thus earning their freedom.

It's a goal which takes them all over the underworld's party district, 'Nowhere', and it's hard not to admire *Afterparty*'s hellish neon nightlife, haunting choral bass, and the wonderfully voiced cast of damned souls and demonic entities. The game consists primarily of dialogue, and though it can be occasionally cheesy, it hits the right beats for the most part. The 'drinking' component of the game manifests mainly in a selection of cocktails at every dive

> **"Redemption is in beating the Devil in a drinking contest"**

and pit stop on your bar-crawl to oblivion. Whether 'Witty Vaudevillian' or 'Lovable Lush', each drink provides a different effect, unlocking unique dialogue options, which, although affecting little, do provide hilarious results.

Afterparty isn't really a game about drinking, but the idea does provide the beer pong and dance-off minigames which will keep you relatively entertained through the duration. It also lends the game a structure, a night of madness and escalation, allowing for the creation of one of the most playful representations of hell I've seen. But just like drinking, beneath the veneer of fun and superficiality, deeper reflections are at work. *Afterparty* uses hell to parody and precipice the anxieties of adult life that Milo and Lola are paradoxically fighting to return to. It also explores a fear of losing ourselves, of becoming 'lost souls' consumed by regret, and in turn, those who are willing to remind us of who we are. Because most of all, *Afterparty* is a game about friends – not those who leave you when the party ends, but those who stick around, and will, quite literally, go through hell for you. ⓦ

› **Your journey sometimes doesn't involve drinking.**

^ **Xeno Crisis** looks superb, particularly when compared to Smash TV's Mega Drive port.

Review

Xeno Crisis

Remember: short, controlled bursts

You enter a room, doors open, and hordes of shrieking enemies charge at you like frenzied shoppers at a January sale. It's a loop that has served action games well since the days of *Smash TV* (plus its predecessor *Robotron: 2084* – except that game didn't have any doors), and it's employed to scintillating effect in *Xeno Crisis*. In fact, Bitmap Bureau's top-down arena shooter is so good, it's difficult to believe that such a fast, fluid game could even run on the Mega Drive's antique 16-bit hardware.

A broad menagerie of alien critters barge their way onto the screen in impressive numbers and panic-inducing speed, while your beleaguered space marine scoots around, fending off attacks with volleys of machine gun fire. It's intense, it's absorbing, and enlivened enormously by veteran artist Henk Nieborg's detailed sprite work and some gloriously gritty chiptune music.

The core game's retro simplicity is complemented by some welcome ideas that add a bit more

complexity to all the dodging and shooting: randomly generated networks of rooms mean you're never quite sure what will attack you next; limited ammo means you'll have to ration your rifle bursts to avoid running out just as an alien horde boxes you into a corner; meanwhile, collectable dog tags can be spent on upgrades for your character's abilities. You'll need those upgrades, too, because *Xeno Crisis* offers a pretty stern challenge – it's not off-puttingly difficult or unfair, but it will punish you harshly if you're slow to master the art of, say, rolling to evade clusters of enemies.

If I had a bone to pick with the balancing, it's in small things like the spawn rate of extra weapons; some of these are fun to play around with – shotguns and rocket launchers are particularly meaty – but run out so quickly, and appear so rarely, that it's easy to forget they even exist. Similarly, your marine's melee attack is useful in theory, but its range is so short that it feels too risky to consider using unless you have no other choice.

These are minor niggles when weighed against the precision and sheer polish of *Xeno Crisis* as a whole; I'd even say it deserves to be mentioned in the same breath as some of the Mega Drive's very best action titles from the eighties and nineties.

One final word of advice, though: while the game functions perfectly well with a three-button Mega Drive pad, the process of holding down a button to fix your direction of fire feels like a bit of a compromise. Switching to a six-button pad allows the game to approximate a twin-stick shooter, with the X, Y, A, and B buttons each mapped to a cardinal direction. Play it like this, and *Xeno Crisis* really bursts into frenzied, bullet-strewn life. ⓦ

^ **You'll definitely need these upgrades in the game's ferociously busy late areas.**

VERDICT

Proof that the Mega Drive still has it where it counts, *Xeno Crisis* is a cracking shooter.

81%

Kentucky Route Zero

Coming off the Zero
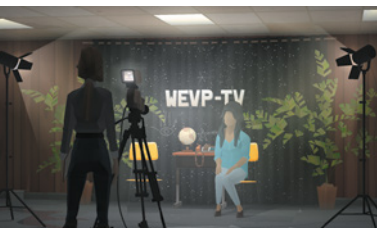
REVIEWED BY
Paul Walker-Emig

⌃ **Un Pueblo de Nada, the interlude that precedes Act V, was clearly something of a testing ground for Act V. I'd also suggest it enhances your experience of Act V, so play it first.**

As has so often been the case during the seven years it has taken Cardboard Computer to get to the fifth and final act of its highly praised magical realist adventure, *Kentucky Route Zero*'s conclusion took me by surprise. We've spent four acts travelling through darkness – on night-time drives, in an abandoned mine, through mould-infested caves – on our search for Dogwood Drive, the location for the last delivery of beat-down antiques delivery driver Conway. Almost every light we've seen has been artificial, accompanied by an electric hum, in the many interstitial non-places we've travelled through – gas stations, warehouses, a roadside dive bar, the seat of a strange intersection between the arcane and the bureaucratic that is the Bureau of Reclaimed Spaces. However, just as Act I opened with the sun setting, Act V beings with the sun rising. It is bright and open in a way the game has never felt before. The small town in which it is set is dilapidated, but beautiful in the glow of the sun, showcasing a scene that is consistent with *Kentucky Route Zero*'s meticulously crafted aesthetic, but nonetheless quite unlike anything we've seen in the game up until this point.

The same goes for the structure of Act V. One camera shot is used, situated high above the flooded town into which your band of travellers emerges to witness the aftermath of the previous night's terrible storm (a bit of context for this is provided in Un Pueblo de Nada, the preceding standalone free interlude that's now been incorporated into the main game). You control a cat, and the camera follows you around 360 degrees as you drop in on conversations, echoes of past events, or prompt an interaction with a pointed "meow." These vignettes speak to the history of the place you are in and the present situation of its characters, connecting the two in a way that's typical of *Kentucky Route Zero* and one of its great strengths.

That Act V sees us emerging from the darkness into the light certainly has some thematic resonance with what this final act is trying to do, but that doesn't mean you should expect some kind of happy, cheery resolution. Cardboard Computer has long insisted that *Kentucky Route Zero* is a tragedy and that it will end as such.

There are powerful emotional resonances built through the heartbreaking personal stories of its characters and the broader themes the game has been playing with over the last few years. We won't recap all that here, but with the game now a full piece that we can look back on in its totality, it's clear that this is a game in large part about capitalism, or more accurately, the experience of living in it. It is a game focused on its victims: shamed, indebted, impoverished, lonely, alienated. It is about the individuals, families,

I still can't get over the unbearable sadness of Ezra losing (or being abandoned) by his parents. Damn you, *Kentucky Route Zero*.

The film *Aristocats* insisted that "everybody wants to be a cat." There is indeed something enjoyable about flitting around the place as an agile feline observer.
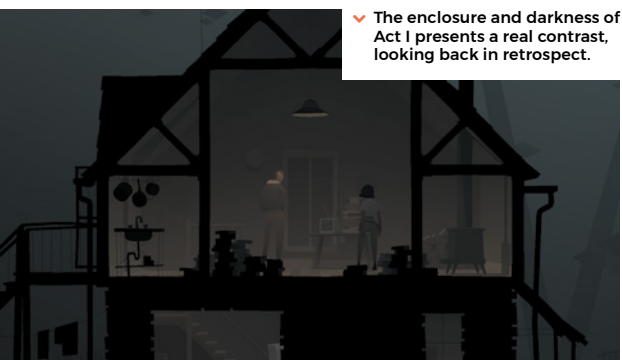
and communities broken by it: the deceased miners who perished in Elkhorn Mine; the fragmented Márquez family; Conway, who, snared in the net of a healthcare system based on profit, slowly slips away; the abandoned young boy, Ezra; and this town that the story ends in, left to rot by the company that once owned it.

This core is important, because as vague and conceptual and experimental as it can be, *Kentucky Route Zero* threatens at times to alienate you. But its clear advocacy for working people; its anger at the injustices they have to face provides an anchor that balances things out. The game allows plenty of space for interpretation, but the sadness it feels for the victims it aims to represent is never in question. It knows that its openness, its narrative flexibility, becomes meaningless if it fails to draw any lines in the sand. The stakes are too high for that. It makes us feel that sadness profoundly, both through the connection built with individual characters and their stories, and a mourning for the many nameless and faceless victims whose history the game gestures to, perhaps never more present in *Kentucky Route Zero* as they are here, represented in ghostly black apparitions that roam around the town. This is all brought to bear in an incredible finale that yet again showcases Cardboard Computer's immense talent for constructing a scene. It left me in tears.

"All brought to bear in an incredible finale. It left me in tears"

Given *Kentucky Route Zero*'s proclivity for leaving things up for interpretation, either narratively or structurally, by letting you as the player guide the direction of scenes via the choices you make, it should come as no surprise that Act V doesn't wrap everything up in a neat bow. There are no mysteries solved, no definitive resolutions.

This is in no way unsatisfying; it feels wholly appropriate for this story. More than that, though, it is essential for generating the sense of hope that pierces through the game's tragedy. The lack of closure leaves it with a distinct sense of possibility. The town you are in is battered, broken, and near-deserted, but residents remain that may just be willing and able to rebuild it. The characters you've been taking this journey with may have found something too. In each other, or in this place, you get the sense that they have a future. Something new, something better, is ready to emerge. This is, I think, the perfect way for a game ruminating on the brutality of the age in which we live to end.

Perhaps partly an artefact of the contingency of *Kentucky Route Zero*'s stuttering release schedule, or perhaps entirely down to the elegance with which it combines its impressionistic writing style with delicately constructed theatre-inspired scenes, this game is able to capture an ineffable truth about the near-decade over which it's steadily been released, one that it doesn't so much describe, but rather, emote. This might sound like a grand, pretentious claim, but play it for yourself, and it'll make you feel it too. Ⓦ

The enclosure and darkness of Act I presents a real contrast, looking back in retrospect.

VERDICT

A remarkable game that manages to marry an abstract style with concrete commitments.

90%

Review

^ Charging your sword offers a satisfying and useful audio-visual cue of when it's time to wallop your enemies.

Bleak Sword

Praise the (distinct lack of) sun

Info

GENRE
Action

FORMAT
iOS (tested)

DEVELOPER
more8bit

PUBLISHER
Apple

PRICE
£4.99/month
(Apple Arcade)

RELEASE
Out now

REVIEWED BY
Jordan Oloman

VERDICT

Providing haptic combat puzzles in the comfort of your hands, *Bleak Sword* is a terrific alt-*Souls*-like.

85%

It's often the case that the most deceptively simple games can be some of the best. This has been proven time and time again in the mobile sphere, where plentiful space is offered to titles that demand little, but end up dominating every commute or few minutes of downtime you have. *Bleak Sword* – a mobile *Souls*-like – knows this all too well, coaxing you into its grimdark dioramas with impressive ease.

The retro pixel art presents a rustic, aberrated look to the player, but with wonderfully fluid animations and a high frame rate, *Bleak Sword* ultimately feels right at home in 2020. This 'less is more' approach is felt in everything from presentation to mechanics, and all the way through to the victory screen that truncates each quick-fire level. This screen is often where you'll pick up an upgrade after toppling a carefully selected squad of beasts and acquire the XP necessary to level up; often a very simple statistical bump to your attack power or defence.

It's impressive how well *Bleak Sword* gathers up the main elements of the *Souls*-like genre and presents them in a stripped-back mobile game. Any muscle memory from *Dark Souls* and its ilk remains useful here – constant rolling and patience until you find a proper opening is key – but it's been seamlessly warped into a top-down experience that feels right at home in your pocket.

Modifiers are thrown into the fray as the game progresses and you move between each world, with status effects inflicted by cobwebs and other environmental traps making the whole thing feel much more claustrophobic and challenging. This claustrophobia is perhaps *Bleak Sword*'s most effective feature, managing, as it does, to create a similar pang of adrenaline felt in a more standard *Souls*-like title.

With some subtle screen shake effects, *Bleak Sword* makes every attack feel impactful, as if you're plunging through your enemies with each strike. Enemies toy with your expectations, like quadruped red-eyed canines that race across the map and then pause for a breath, forcing you to both react *and* think before hitting back. Paired with some of the game's more robust (or exploding) enemies and impassable environmental objects like trees and rivers, your route to victory is constrained and figuring out the puzzle of combat becomes a brain-tickling treat. It's like trying to navigate a haunted *Animal Crossing* town full of murderous leeches and skull-wearing forest spirits.

Boss encounters feel grandiose, dropping behemoths and Goliaths armed with unavoidable attacks into the arena, each undone with extra-careful swipes and taps. A thrilling, aesthetically unique mobile *Souls*-like with all the flair of its console stablemates, *Bleak Sword* is a welcome addition to your home screen and an ace in the hole for Apple Arcade. Ⓦ

∨ Environment variety in *Bleak Sword* is seriously impressive, from murky swamps to dank dungeons where skull totems block your path.
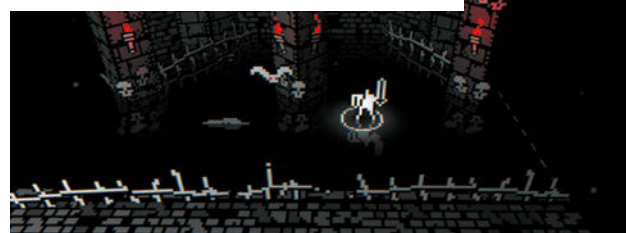
Top fun

Ian's feeling the need for speed in
Ace Combat 7: Skies Unknown

I've always been a sucker for some top gunning. While, admittedly, my need for speed is somewhat lacking on a day-to-day basis, there's an allure to pootling through the sky at many times the speed of sound and firing on people who are 'bad' from a few kilometres away. It should be intense and kinetic, instead – in the most part – it's faintly prosaic, and often relaxing.

So it is that I've always been a fan of the *Ace Combat* series, starting out with the PlayStation original – titled *Air Combat*, at least in Europe – and progressing through almost every entry. It took me a while to get to it (and a few price drops, admittedly), but I finally picked up and have been working through *Ace Combat 7*. And let me tell you, it's like slipping into a hitherto forgotten glove… that… fits… learning to ride a bike… It's familiar and comfortable, that's what I'm getting at.

If I were to don my reviewer's helmet, I would certainly be more critical of a game that, while beautiful and throwing in the odd new feature (weather, clouds), is functionally the exact same game as back in 1995. Select target, get close enough until your thing turns red and beeps, fire two missiles (one for smaller aircraft, three for larger, more for boss battles), sky-rinse and sky-repeat. It's been something of a *pattern* for decades now, and in my considered,

"It's a throwback; an unabashed arcade experience in natty threads"

professional opinion, I would obviously have a bit of a pop at it for being so unchanging.

I'm not reviewing it, though. I'm just enjoying it. And maybe that's the point. *Ace Combat 7* is a mug of hot tea on a cold day: unoriginal, but utterly satisfying. I'm taking it on at what could only be described as a leisurely pace, but that doesn't feel like it matters – this isn't something you feel you're going to miss out on if you don't finish it *right here*, *right now*, unlike so many other modern releases.

It's a throwback; an unabashed arcade experience in natty new threads – make no mistake, *Ace Combat 7* is absolutely *gorgeous* – and while it might involve the high-speed murder of unknown foreigners using machinery built solely to perpetuate the ever-growing military industrial complex, I can gladly leave my personal reservations at the door. Because *Ace Combat 7* is a lot of fun. Just as the series has always been.

I will admit I'm a bit too scared to pop the VR mode on for the time-being, because projectile vomiting all over the dog thanks to headset-induced virtual vertigo doesn't strike me as the sort of thing I want to actively encourage, so there's likely to be bits of *Ace Combat 7* that *do* try something genuinely new I am going to actively ignore. But it's fine, because this still isn't a review. 72%. ⓦ

Backwards compatible

WRITTEN BY IAN 'DYNAMO' DRANSFIELD

ODE, or not ODE?

Piracy. It's about piracy. People want ODEs – optical drive emulators – and their ilk because that means they can download games illegally, put them on an SD card or a USB stick or whatever, and then play them in the original hardware without needing the original disc. Let's not ignore that factor – let's put it right here at the beginning of this braindump. Anyone who claims an ODE isn't used in the most part for piracy is wrong, or a liar. But with every month, year, decade that passes, the claim these fine feats of engineering are solely the purview of those who love grog and pieces o' eight actually loses a bit of truth, and the disclaimer everyone puts on their eBay auction about 'this device isn't for piracy' actually becomes a bit truer.

Because we're losing our games. Slowly but surely, the inevitability of atrophy – or disc rot, or just catastrophic data loss – means little-known gems, well-known classics from formats nobody cares about anymore, mediocre things you'd not care about if you even did remember them: they're all going extinct. The hardware tends to be a) more robust, and b) easier to actually fix if something goes wrong: that's not the problem here. The problem is the actual data storage mediums – right now, floppy disks and tapes are dropping left and right (so floppy disk drive/tape emulators, rather than ODEs), and it won't be too long until CDs and eventually, DVDs, go the same way. We're losing our games, we're losing *history*, and optical drive emulators can actually provide a genuine archiving service – something far better than what you get through PC-based emulation.

For now, I think ODEs will remain the preserve of a tiny niche of the retro community – flashcarts, like the Everdrive, Mega SD, and so on are better known I'd guess, but are still niche. And popular opinion will remain on the side of the Good And True gaming companies with regards to the legality of these hardware modifications. But slowly, the tide will turn, and we'll have to wonder: were they legitimately meant as preservation tools all along? And the answer will still be no. It's about piracy. This safeguarding of history aspect was a happy little accident.

Superstar hero

Did you know there is an ongoing effort to update *Sensible World of Soccer* each and every year? You did? Oh. Well, I didn't, and it's blown my tiny mind. Bringing modern squads into Sensible Software's Amiga (and PC, I *suppose*) classic is step one, but then there's making it work on modern systems (and the Amiga), *and then* there's making it work online too. *SWOS 2020* is, in short, brilliant and everyone should be aware of it. **wfmag.cc/SWOS**

The Lynx effect

We're not short of retro gaming devices these days, whether they're entirely above board, or one of those hastily slapped together Android-powered devices (or, dare I say it, Raspberry Pi-powered devices). The Evercade, when it was first announced, was something I immediately consigned to that second category – but the more that gets revealed, the more my interest is piqued. Launching 9 April, this little handheld looks like the knock-off you'd buy from AliExpress, but is actually backed by licensed cartridges packed with games from the likes of Technōs, Namco, and – brilliantly for me – Data East. More recently, there's been the announcement of an Atari Lynx cartridge, with 17 games from the handheld time forgot (do you remember how you could flip it – physically flip the hardware – for left-handed users? Brilliant). At the time of writing, we're told there are 135 licensed titles announced for the Evercade, with more to come down the line. I am, as they say, paying attention.

Opening Vvardenfell

This is by no means a new (old) thing, but I've had my eyes firmly wedged on the progress of the OpenMW project recently. What's that? Why, it's an open-source implementation of the original *The Elder Scrolls III: Morrowind* engine, with all manner of sparkly new assets and things created for it – as well as compatibility with a plethora of systems beyond the PC original. Now yes, one might have to get a bit creative with how they bring all of this to life, and I'm certainly not about to explain anything here, but the simple fact of the matter is: you can get *Morrowind* running on a Switch. For some reason, this blows my mind more than getting *Skyrim* on the Switch ever could. **wfmag.cc/OpenMW**

The mini-gallery

Seriously, just look at these. Concept art from a cancelled 32X title, *Virtua Hamster*, via the Video Game History Foundation. "The look and fast-paced action of *Virtua Racing* and *Virtua Fighter* combined with an amusing puzzle strategy game and an unlikely group of heroes and enemies." Why, oh why, were you ever cancelled?

Bayonetta

We've got a lot of (witch) time for this

PLATINUMGAMES / 2009 / X360, PS3, PC

Not the first example of bullet time, *Bayonetta*'s witch time wasn't even the first time a reaction-based mechanic that slowed down time to the player's benefit had been used; it was – and is – still one of the killer-est of Killer Features. Why? Because it's the best. Just an absolute joy. Such an uncomplicated feature, but one that raises a fantastic game (and sequel) to legendary status.

You're in a fight – as happens a lot in Hideki Kamiya's world of magic and malice – things are getting a mite hectic, and you need an advantage. You have plenty of combination attacks available, you can leap and run and generally avoid all you like, and you have access to a dodge. All of this helps. But when you learn to read an enemy well enough (and you do get clues), you soon get used to tapping dodge *exactly* at the right moment. On doing so, your enemies slow temporarily while you remain at full speed, giving you a short-lived advantage that can quickly turn the tide. And that's about it.

What makes witch time so special is just how well it's done: it's a tap of a button, at the right time, and you get it. Nothing particularly fancy, and nothing happens that takes you out of the moment – it's a thing you're supposed to do; a thing you're expected to do if you want to progress as the really rather difficult game ramps things up. You have to dodge to survive – what better way to force a player to learn how to

> **"What better way to force a player to learn… than by rewarding them for it"**

dodge, and to learn how to dodge properly, than by rewarding them handsomely for it.

Again, this was by no means the first use of a slowdown mechanic in a game, or a well-timed button press offering the player an advantage. But in *Bayonetta* it is implemented with such consummate ease – it helps the flow of the game rather than breaks it up, and becomes not a highlight reel event to show off but *just a thing you do* throughout the game. It's phenomenally well done.

None of this is even taking into account dodge offset, which when used alongside perfectly timed dodges becomes a key tool in vanquishing Bayonetta's later, more challenging foes. Sure, you can get through on guts and perseverance (and button mashing) alone, but the mark of a true maestro is someone who can conduct themselves with the poise and grace of witch time/dodge offset combos.

And with that paragraph, I have managed to lose a good deal of the audience to a justifiable 'Whu?' face. Apologies there. Basically: *Bayonetta* is one of the best games of the last… *ever*; its mix of stylish presentation and intense, tight mechanics makes it an absolute joy, and it is – like many other Platinum games – incredibly rewarding when you get it right. For me, the peak of that reward is the simplicity of witch time, and for that reason, it earns a spot in the coveted Wireframe hall of Killer Features. ⓦ

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