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Death Stranding is a mess of weird ideas, and that's a good thing

In the lead up to *Death Stranding*, there were a lot of fingers crossed for a Kojima downfall. There were hot takes and a fair amount of shade aimed at the nonsensical, star-studded trailers. Some say Kojima's games amount to little more than "sixth form creative writing." These people are right. Kojima's work is defined by the lack of creative inhibitions and pop influence of a media studies student from a middle England university – albeit made with the budget and cast of a Hollywood production. And as players and game-makers, this is a great thing for us.

Our increasingly scientific world has given us sanitation, iPhones, and Pop-Tarts. A follows B and so C. We measure, we observe needs, we act to fulfil. Yet our inner lives remain immeasurable. Smart ideas fail while dumb ideas flourish. We behave unexpectedly. We vote for Trump or Brexit when every model and expert tells us it's a bad thing. Because it makes us feel something. For those most rational amongst us, this is frustrating. Don't we see this doesn't make sense? *Death Stranding's* hype and the Kojima cult is just such an irrationality.

Attempts to review or critique *Death Stranding* feel pointless because it's so messy, unabashed, and unique. Its subtext is at times too overt, while at others incomprehensible. Its mechanics are clunky but without compare. This isn't how most other games are – they're digestible, reviewable, understandable. But somehow *Death Stranding*, like the *Metal Gear* series, works. Its illogical game systems sit against its stream-of-consciousness world to create a whole, complete experience. Something unexpected, yet delightful.

Modern triple-A is the work of many aligned and checked rationalities: the publisher. Games pass through teams of VPs, SVPs, and C-suites. They bring people like me in to benchmark and compare. The game is shaped to what is quantifiable, what can be measured. *Death Stranding* has somehow remained a ramble of meaning dumped out with incredible flair.



WILL LUTON

Will Luton is a veteran game designer and product manager who runs Department of Play, the games industry's first management consultancy. He is the author of *Free-to-Play: Making Money From Games You Give Away*, and has worked with Sega, Rovio, and Jagex. He is also an avid retro games and pinball player.

This isn't how big-budget games are supposed to be made. They say something clearly; they follow trends; they can be labelled and filed. Reject the models and you deserve no success. It's the way the world is. It's what people want. And yet Kojima Productions didn't follow the rules.

As I look back over my decade as a game-maker, I see myself become increasingly rational and smart, yet my games are less interesting. Paralysed by analysis and second-guessing, my work has become unsurprising, unadventurous, and safe. We are at risk of letting System 2 thinking – the slow and methodical type of thought – run game development. We need more gut reactions and subconscious ideas reflected in our work.

We're also at risk, however, of falling into the fallacy of auteur theory. Kojima Productions is not one man – it's a team ostensibly in service of one man. Yet I suspect there's higher collaboration across the studio than the games press give credit for, with Kojima being the marketing flag that provides the team freedom under the name of auteurism. The freedom to let their work be complex and loaded with obtuse meaning, rather than clean and full of marketable ideas.

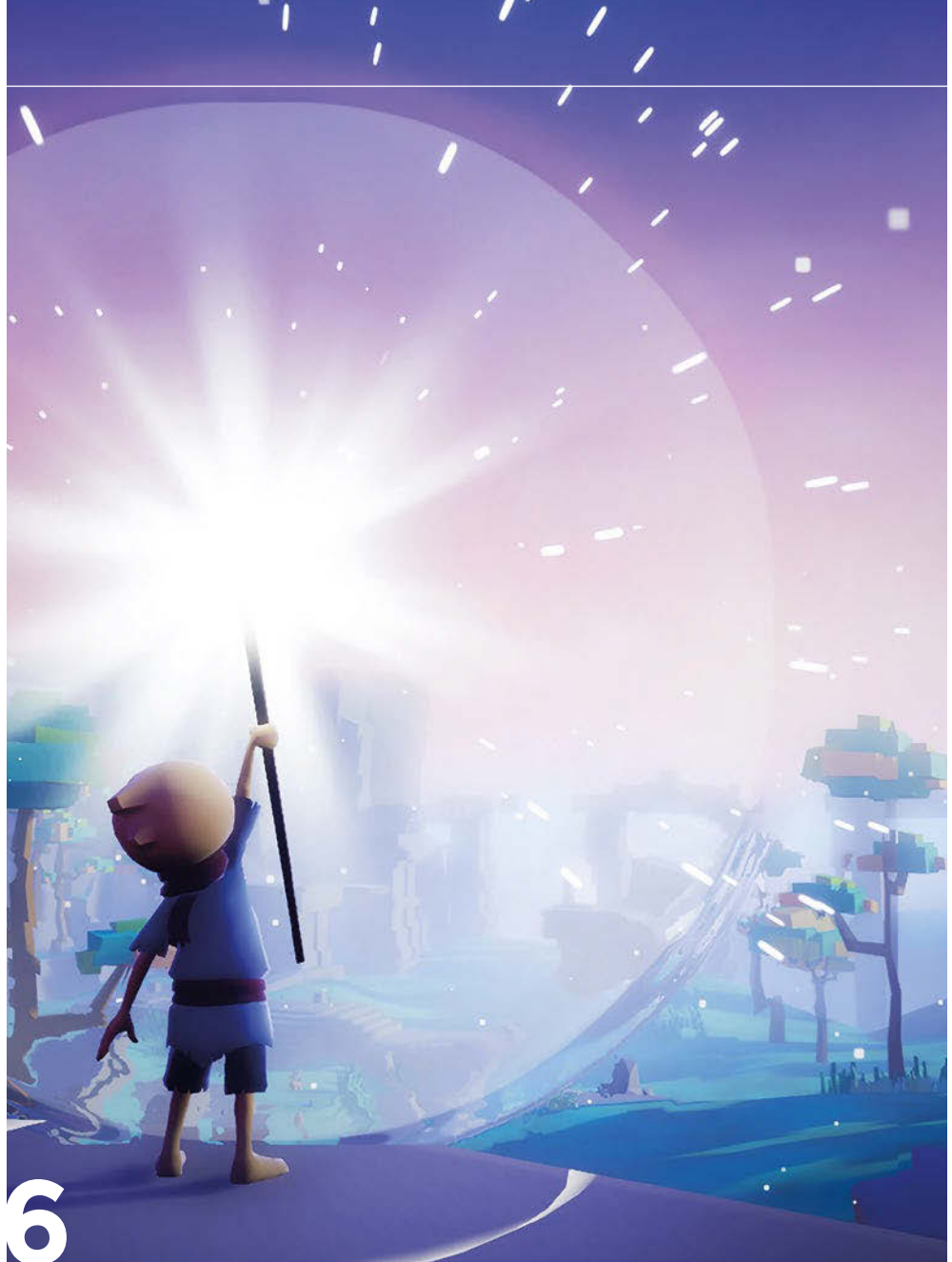
Kojima Productions isn't a model we should follow, and we shouldn't herald *Death Stranding* as an act of solo genius. Doing so makes us miss the real lesson in the game: ideas and our own psychology are complex, and our lack of creative bravery moves us to clean up, streamline, and Disneyfy our work. As we edit and re-edit, we spoon-feed our audience, and an indescribable, human element is lost.

As AI and computing become more and more embedded in our lives, there's a lot of power in our own irrationality. Sometimes we should, just once in a while, let a weird idea pass that feels right. These ideas come from somewhere – and just because we can't express where and why, it doesn't mean they can't drive value, whether that's artistic or financial. 🤖

#30



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WELCOME

As the lovely Steve McNeil correctly observes on page 26, it's almost impossible to look back over a decade of games and come up with any kind of ranked list of great titles. But what we've tried to do, in our epic feature on page 16, is look back at ten years of industry events, new systems, studio closures, indie games, mobile games, triple-A games and oddities that defy classification, and provide a snapshot of just how diverse and vibrant the industry became between 2010 and 2019. It was a decade where a solo developer could change the entire gaming landscape with a single game (that'd be *PUBG*); where a mobile game like *Candy Crush* could rake in as much cash as a triple-A title; and where *Minecraft*, a lo-fi game fundamentally about making things, could win the hearts and minds of a generation of loyal players.

There's little value in arguing whether a tiny mobile game like *Monument Valley* is better or worse than, say, SIE Santa Monica's *God of War*, or whether a three-person indie title like *Celeste* is artistically comparable to something like *Red Dead Redemption 2*, which took the population of a small town to produce. Maybe it's better to hold all these games up – and countless others like them – and champion them as the products of an ever-growing, ever-evolving, and ever-maturing industry.

We can't wait to see what the new decade brings.

Ryan Lambie
Editor



THE WORLD JONAS MADE

Solo developer **Jonas Manke** talks us through the process of making his ethereal exploration game, *OMNO*



OMNO is a textbook example of doing more with less. Its soft-focus fantasy world looks huge and lived-in, yet it's the product of just one person – German animator turned game designer, Jonas Manke. To create his action-adventure, Manke has made cunning use of atmospheric effects and colour to create the illusion of a much larger, more detailed space: fog and dancing particles cling to distant mountains, and shafts of diffuse light illuminate gigantic beasts that roam the low-poly plains.

We got a chance to play a pre-alpha demo of *OMNO* earlier this year, and were immediately taken by the soothing rhythm of its platforming and exploration. You guide a wide-eyed little fellow across a landscape filled with secrets, collecting magical, jewel-like items to charge up your staff, and using it to activate ancient mechanisms and switches dotted around the environment. Your goal is to collect magical orbs that further boost

your abilities, which in turn will allow you to access new areas on the map, from parched deserts to icy tundras. It's an absorbing, charming experience that recalls the likes of *Journey* and *AER: Memories of Old* in its chilled-out, non-violent approach to 3D platforming – and the hours of craft that Manke's put into *OMNO* are clear from the off.

"The first year was hard," Manke says of *OMNO*'s early development, which began in 2016. "I was still working as a character animator full-time, still had a lot to learn, and last but not least, had three wonderful kids to take care of. Working on *OMNO* mostly at night was exhausting, but well worth it."

With a successful December 2018 Kickstarter campaign giving Manke the financing and space to work on *OMNO* full-time, he's spent the past year building puzzles and refining the visuals. So with development on *OMNO* in its latter stages, we caught up with Manke to talk about the game's origins, his design process, and the stresses of being a solo developer.





Given your background is in animation rather than game design, were the other aspects of making *OMNO* a steep learning curve, or were you already adept in those areas?

My background is animation, so I wasn't new to the industry, but I knew little to nothing about making games. In my youth, I played around with level editors – *Quake II* and *III*; *Half-Life* – and also had a glimpse at programming languages, so I had a basic understanding of how coders think. I'm used to working from home as a freelancer. My career in the industry, although it was focused on animation, gave me some helpful insights and basic understandings of how other artists work and think. That was helpful when I started out. For as long as I can remember, it's been part of me to want to learn more, to keep up with technological advances (there have been many of those over the last 15 years), and to improve myself. I guess that applies to most artists in the industry. So I didn't have to change myself or my lifestyle, which made it probably more accessible to start learning all the other disciplines that it takes to make a game – and it's still an endless road to go. My work ethic is probably not very healthy, but there are so many things to learn and discover.

Did you consider other styles first – a 2D platformer, for example?

I knew that I would start working on it as a solo dev besides work, besides family, so the game had to be stylised if it was going to be done within my lifetime. Some tests with hi-res objects – full trees, detailed grass, and so on – looked solid, but lacked originality, and just took too much time for a project like that as a solo dev. Low-poly is a common style, but it's perfect to quickly generate content and assets. It's a challenge for low-polygonal visuals not to feel lifeless and stiff, so it took some tests and a couple of days to find the style for *OMNO*, which mostly works through post-processing, colour grading, fog, and camera ➔



settings. The most important lesson I learned from that was every object has a certain design for a reason – it looks the way it does on purpose. If you work in low-poly, you can't just make a tree look like a tree. You have to make a decision about how to stylise it and why.

How many iterations did your lead character go through before you knew you had his design right?

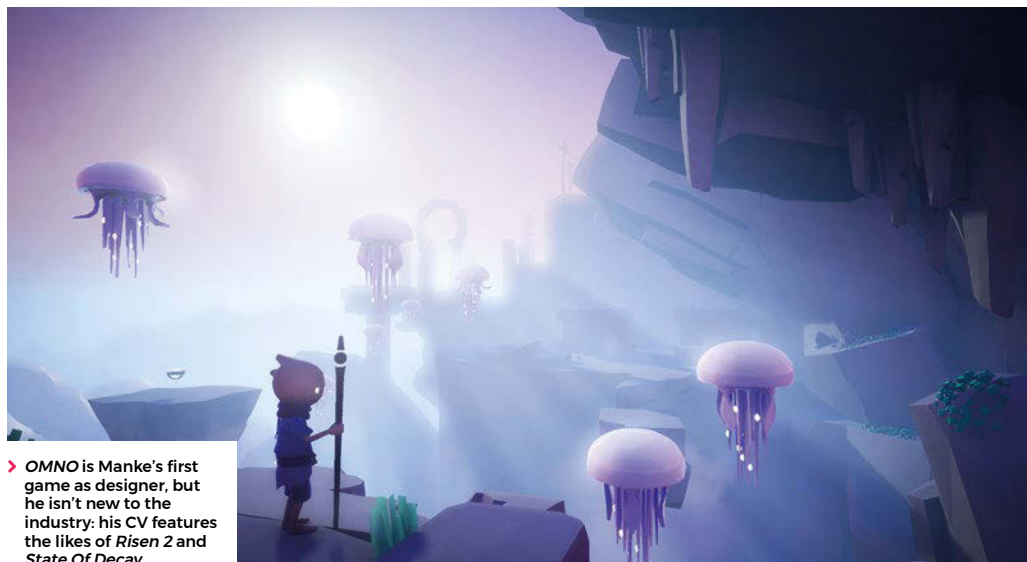
Just a few. I changed the details on his head a few times. Initially, he looked more Aztec-ish, the silhouette more like an ancient symbol of a sun god or something like that. I liked the design, but he felt too mighty. Then he had some stylised... *things* on the sides of his head which looked like ears and made him feel like a fantasy goblin-like character. The clothing, colours, proportions, and eyes haven't changed since the first version.

Similarly, did you decide on making a quite gentle game from the beginning? How long did it take to come up with the character's attacks and abilities?

The game evolved around his gentle personality. Initially, I had some resource gathering and crafting gameplay in mind and wanted him to cover distances quickly, so the first mechanic I had in place was that teleport – which looked totally different back then – but from there it pretty quickly changed towards what it is now. I always wanted it to be a game entirely free of the usual violence. The player's supposed to enjoy the peaceful atmosphere while curiously exploring new areas by using their movement-based abilities.

What was it like presenting it to the public for the first time? Were you encouraged by the response?

I never considered making *OMNO* a real game until I showed some material to



➤ *OMNO* is Manke's first game as designer, but he isn't new to the industry: his CV features the likes of *Risen 2* and *State Of Decay*.

“LIGHTING IS KEY TO CREATE ATMOSPHERE AND MOOD. THE CREDO FOR *OMNO*'S STYLE IS USING A LITTLE TO ACHIEVE A LOT”

other devs for the first time. Back then, I thought I was a total amateur (which I still feel like most of the time), and I was embarrassed to show things. A friend of mine convinced me to cut and edit a few gameplay moments into a trailer, and make it feel like it would be a commercial project to at least get some feedback from professionals. I posted that clip on a Facebook game developer group, preparing myself to be ripped apart immediately. The response was mind-blowing. Social media never played a big role for me personally, and my posts never got more than two to five likes. But suddenly my inbox was flooded, and the post received hundreds of comments

▼ To create *OMNO*, Manke's chosen Unreal Engine 4 as his platform.



and likes. I was shocked and didn't sleep a lot for the next three days.

I couldn't believe that my character, a few visuals, and those prototyped abilities had such an impact. I posted another clip with similar results. And another one after that. My family was always proud seeing my name in the credits of an animated movie. I've heard many nice words about my animation work and even won a prize or two, but never before in my life did I receive that kind of feedback about something that I was working on. I was working on it without any guidance, no supervisor, no studio above me – it was just... me. It meant so much to me, and I cannot express how grateful I am for the amazing, honest, and constructive feedback I've received along the way.

It really was a life-changer. It might sound cheesy, but it has been the community that made me do this. The response on the Kickstarter was even beyond that, but that's another story.

When making a large game like this as a solo developer, is it a case of deciding early on what your scope will be?

Finding the right scope is a constant struggle. Every indie dev can confirm that cutting features is a daily business for indies, especially for solo devs. At least knowing that your scope should be limited is an advantage over many people who start working on their first game, and plan to make the next *GTA* or *Skyrim*.



▲ Visual comparisons to *Journey* are inevitable, but *OMNO*'s pace and tone feel quite different when you're playing it.

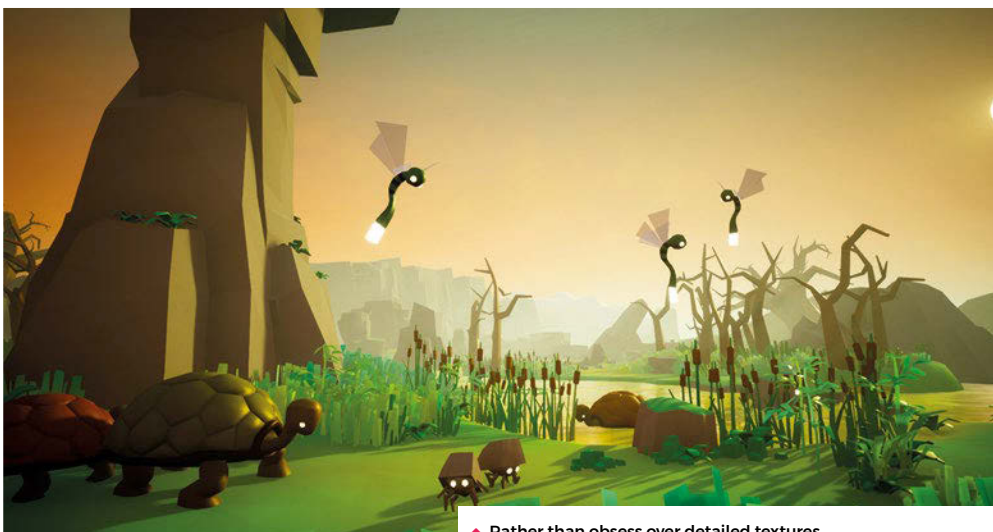
The minimalistic style was not only an artistic choice. As so often in life, the limitations fired up my creativity. The scope of *OMNO*, however – considering it's a full 3D adventure game – is still really huge, and for me, it's an exciting and motivating challenge to make this all on my own. And yes, it was initially planned as an entire open-world game – I'm happy to have learned that lesson early.

The lighting's terrific. Did you conclude early on that lighting is more important than detailed, time-consuming textures when it comes to generating atmosphere?

Absolutely. Lighting is key to creating atmosphere and mood. The credo for *OMNO*'s style is using a little to achieve a lot. That applies to the design of the shapes, but also to the colours, lighting, and textures. The melancholy feel was what I wanted to achieve early on. So I focused on what I could quickly achieve with a few tools to create the mood I wanted: the exponential height fog, use of camera blur effects (Gaussian depth of field), and shameless overuse of God rays and light shafts, along with some colour grading. Those are the pillars that make *OMNO* feel the way it does. Shaders and materials are areas I have little experience in, anyway, so reducing those to a minimum came in handy. Personally, I always prefer an interestingly lit environment without details over realistic-looking hi-res textures with a dull atmosphere.

Is it a little like music, designing maps and levels? Big, loud landscapes contrasted with small, intimate areas to navigate?

Yeah, I see many similarities to how music works, psychologically. The game has some rhythm; fast-paced action sequences are usually followed by more calm and relaxing moments. Finding the right



▲ Rather than obsess over detailed textures and meshes, Manke's concentrated on distinctive shapes and evocative lighting.

▼ Manke's background as an animator comes to the fore in his lead character's movements: his determined runs and jumps are full of personality.

mixture of different gameplay elements, the right rhythm of landscape design changes, a good tension line – it's all an exciting adventure for a dev, and all I can do is accept the challenge and make it as good as I possibly can with the tools and resources I have.

Is there a specific mood or feeling you want to leave players with once they've finished the game?

It's hard to answer without spoiling things. First and foremost, I want the player to be satisfied with the entire game experience and be fine about the money they spent on it. That's what even many triple-A titles with huge budgets fail to achieve, so that would be great. On a metalevel, I hope the player might change their view about their life a bit – in other words, the game might have a personal impact and influence their actions after they've finished playing. I hope that some values about life, some thoughts and experiences that I want to share through *OMNO*, will be clear to the player and slightly shift their focus and attention towards things in life that are good for them. But again, I don't want to spoil anything here, so I'd better leave it at that.

What do you have left to do before *OMNO* is finished?

My Trello is exploding. But I'm progressing – that's all that counts! 🤖

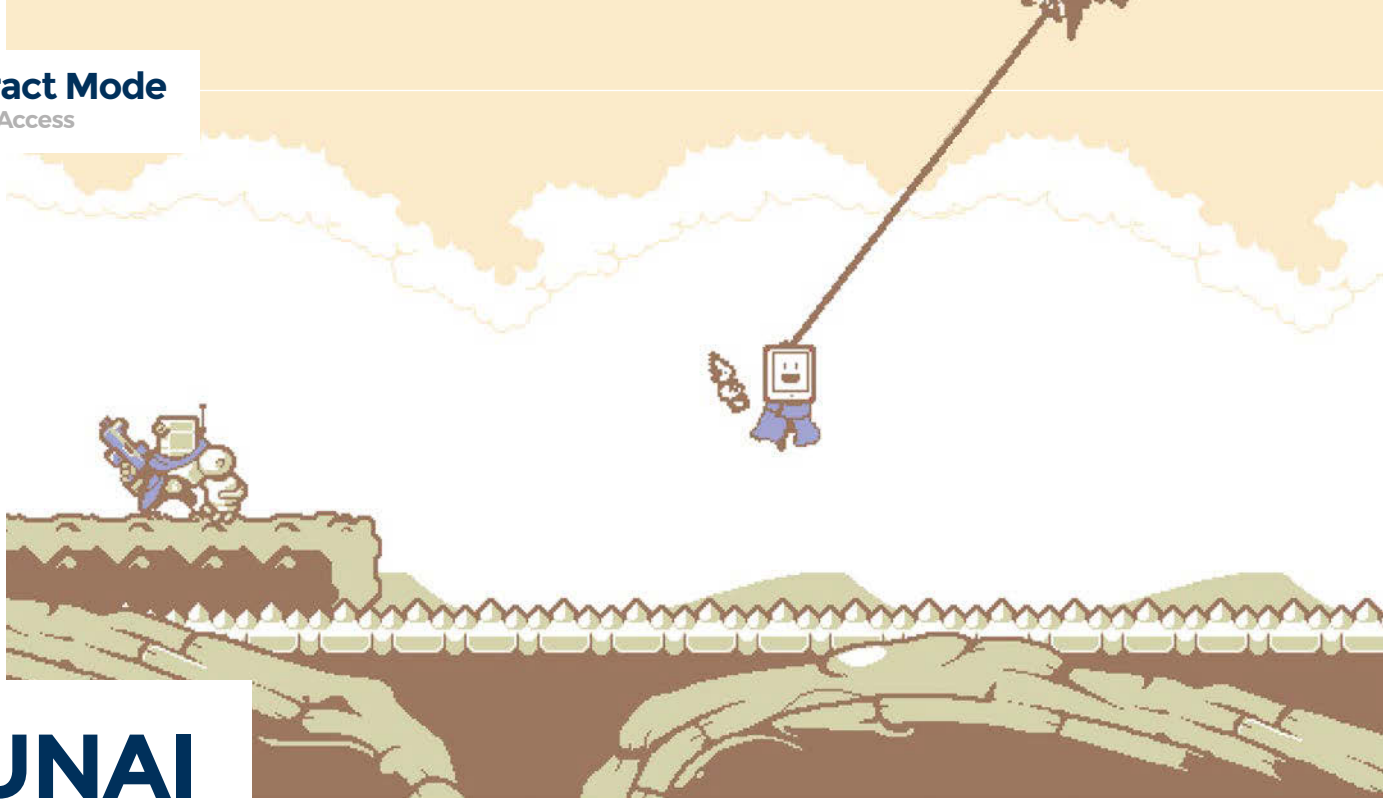
***OMNO* is due for release for PC in 2020.**



UNDER THE INFLUENCE

OMNO's lighting and melancholy tone recall the poetic minimalism of thatgamecompany's *Journey* – a game that Manke readily cites as one of several influences on his own adventure. "*Journey* was a milestone for games as pieces of art," he says. "I wouldn't even try to keep up with that, but it certainly influenced me a lot. So did many other animated movies that I studied over the years as an animator – there are too many to mention. Music and traditional arts play a role for me as well. The work of Caspar David Friedrich, for instance – that *Zelda* moment when you look into the distance while standing on a cliff. As many artists would probably agree, influences come from everywhere, and whatever inspires the artist might be subconsciously mixed up with something else to come up with something that appears to be original. It's the ugly truth about how creativity works, I guess."





KUNAI

The knives are out in TurtleBlaze's upcoming parkour platformer

Info

GENRE
Metroidvania

FORMAT
PC / Switch

DEVELOPER
TurtleBlaze

PUBLISHER
The Arcade Crew

RELEASE
Early 2020

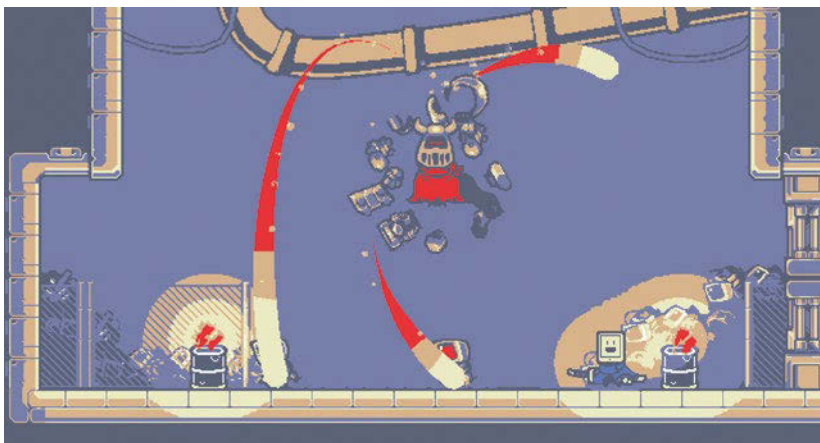
▼ There'll be plenty of challenging boss battles in *KUNAI*, but the weapons at your disposal should help level the playing field.

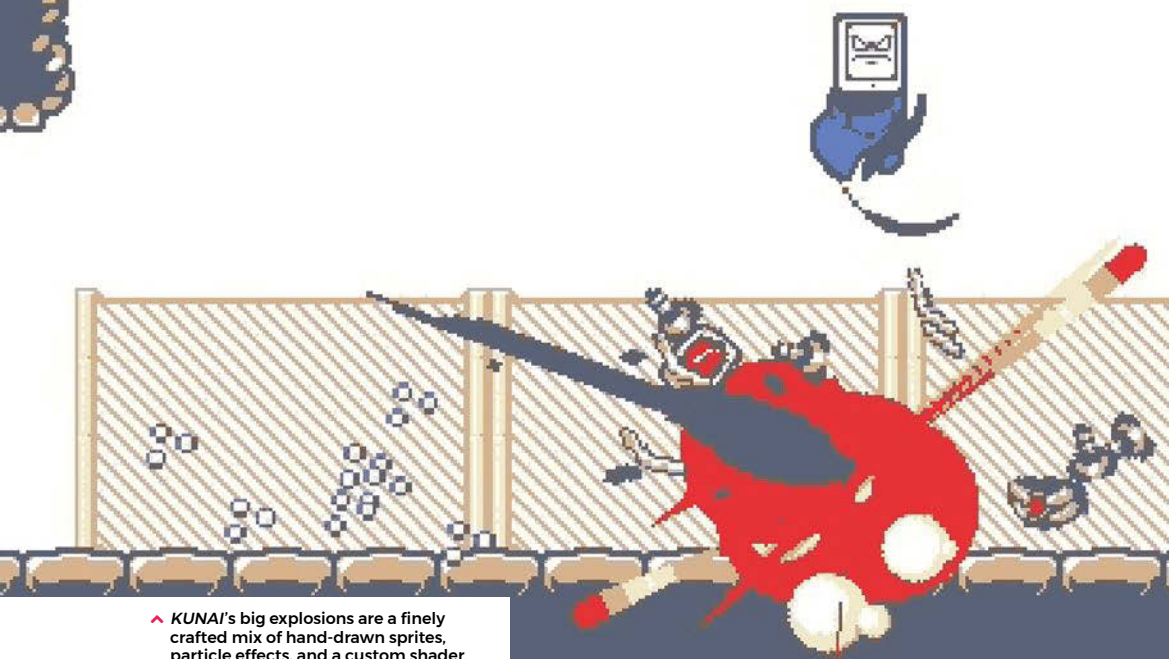
Aside from the novelty of playing a post-apocalyptic ninja robot, *KUNAI* feels at first like a fairly typical action-platformer: go here, open door, grab sword, bash enemies for trinkets to pick up. But then you get to the room with the titular weapon in it, and the game really starts to make sense. Essentially, a kunai works like a conventional grappling hook of the video game variety – fire it up in the air and it'll attach to a wall, and you can swing around like *Bionic Commando*. Then comes the really interesting bit: the game arms you with a second kunai, which you can shoot in the opposite direction; this way, you can scale a tunnel by firing the kunai at alternate walls, say, or cross complex networks of platforms by swinging first one way then the next.

Taking place across a 2D pixel landscape shaded like a Game Boy Color title, *KUNAI* unfolds as a light-hearted and fast-paced Metroidvania, with your trusty sword giving way to a satisfying blaster that despatches robot enemies with a similarly satisfying crunch. It's the feel of the kunai themselves that really make the game, though; perfecting those swings is a genuine thrill, with the physics and sense of weight feeling predictable and just right. The demo build we played in late 2019 included a boss battle which is cleverly designed around the kunai. You can use them to stick to the wall – all the better to avoid the robot baddie's attacks – and then launch yourself for a *Ninja Gaiden*-style slash across the body.

If it sounds as though I'm citing a lot of ancient games here, then that's partly because developer TurtleBlaze has made *KUNAI* with their own classic titles in mind. "There are a lot of video game and pop culture influences in there," producer Bram Stege tells me. "Of course, there's hints of *Metroid*, but also *Metal Slug*, *Super Mario Bros. 3*, and probably every game we played on our Game Boys. It boils down to one simple rule: if we think it's cool and we think it fits the theme, we put it in the game."

When work began on the game back in 2017, *KUNAI* looked very different: the ninja robot and post-apocalyptic theme were nowhere to be found, and in their place was, Stege reveals, a cyborg monkey. "*KUNAI* was initially a mobile game about a monkey that climbed vertically with his mechanical arms," he says. "That's where the grappling hooks came from."





▲ *KUNAI*'s big explosions are a finely crafted mix of hand-drawn sprites, particle effects, and a custom shader.



When we changed the main character from a cyborg monkey to a ninja-tablet, the arms became kunai, and we added more weapons to Tabby's arsenal. The kunai mechanics have been the core of the game since day one. We've been tweaking the swinging, the rope length, the momentum, the wall-hang mechanics of the kunai, but also the knockback of the katana since day one up until today. We basically never stopped tweaking the controls."

"We changed the main character from a cyborg monkey to a ninja-tablet"

Like the controls, the graphics and backstory have also been tweaked and changed over the past two or so years; *KUNAI* initially had a more typical 16-bit art style, before artist Richard Lems began experimenting with a more monochromatic, pared-back look of whites, reds, and blues. As for the post-human plot – well, even Stege's a bit hazy on that front.

"Erm, good question," Stege says. "I'm not quite sure how we ended up here, to be honest. It started out with a badass ninja which became a tablet, since we wanted a more lovable, likeable character. Then the story started flowing from there, with Tabby being a ninja-tablet waking up in a pod. What's the world like? Something bad probably happened, an apocalypse, for example, and since Tabby's a tablet, the world must consist of mechanical creatures – which is where the CRT monitor heads on enemies come from... The process was really fun and came pretty naturally once we established Tabby."

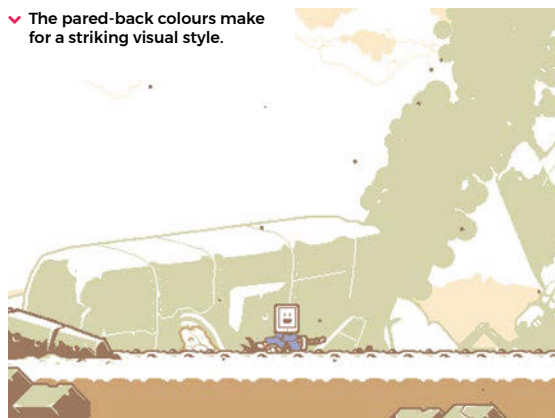
The likeable ninja-tablet fits hand-in-glove with the game's action: like *Shovel Knight* before it, *KUNAI* will pose a challenge, but you shouldn't

expect the punishing cruelty that faced players of, say, the original *Ninja Gaiden* back in the eighties. "The other big thing is making it hard enough for people not to blast through it on the first attempt, but not that hard that they'll rage-quit," says programmer Benjamin de Jager of battling the game's numerous bosses. "Ideally, the player gets a step further each attempt until the boss is beaten."

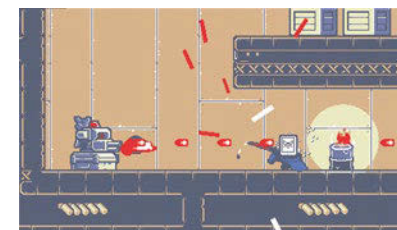
"We all strongly believe games should be about having fun," Stege agrees.

"And when you're making a game where you play a ninja, you should also be able to do awesome ninja stuff, right? I always thought it strange in games where you're a ninja, but still vulnerable... One of the core principles of *KUNAI* is that you feel awesome every step of the way. The game can be hard, but will always keep you feeling like you're a total badass." 🗨

▼ The pared-back colours make for a striking visual style.



▼ Weapons can be tailored with different upgrade combinations. "We've seen people do stuff in the game we didn't anticipate ourselves," Stege says.

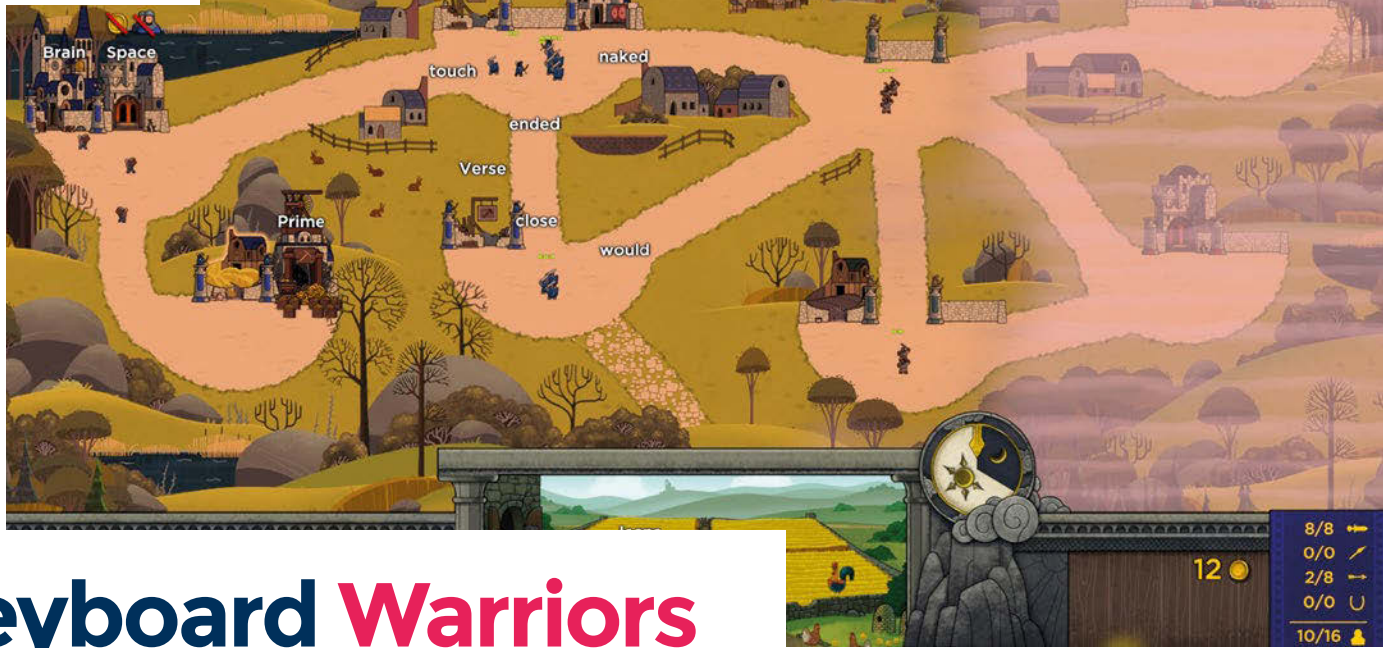


TOOLS OF THE TRADE

"We're using Unity for *KUNAI*," de Jager says, when we asked him about the tools used to create the game. "It's always a kind of love-hate relationship with that engine, but seeing the ease when porting it to a different platform rekindles my love for it a bit. Also, the ease with which you can extend the editor allowed us to build some custom tooling for editing enemies, to design levels, and even importing the localisation and balance values from Google Sheets. Other than that, [artist] Richard draws everything in Photoshop, and did the cinematics in After Effects."

- Capture All Enemy Waypoints
- Defeat All Enemy Units

Attract Mode Early Access



Keyboard Warriors

Combining strategy with nimble fingers in Touch Type Tale

Info

GENRE
Touch-typing RTS

FORMAT
PC

DEVELOPER
Pumpernickel Studio

PUBLISHER
Pumpernickel Studio

RELEASE
2020

▼ CTRL shortcuts allow for more nuance, such as combining or splitting up units, or grouping certain classes together.



Besides the instructional likes of *Mavis Beacon*, typing games that double down on playfulness are a rare delight; one of the strangest and most surprising examples is still *The Typing of the Dead*, originally released in Japanese arcades way back in 1999. It's this niche genre that developer Pumpernickel Studio hopes to break into, and which has fascinated founder and game designer Malte Hoffmann since he began learning to touch-type about seven years ago.

There have been a few other inspired examples in recent years, notably action RPG *Epistory* and bullet-hell shooter *The Textorcist*, but they're also notably fast-paced affairs, and after playing those games, Hoffmann felt there was potential for the genre to go into other, uncharted waters. "I thought of what I would like to play," he says. "And as I really like strategy games, that's what my mind came to."

The result is *Touch Type Tale*, which combines touch-typing with RTS elements. By typing randomly generated words tied to specific units and structures, you marshal units and gather resources to battle your enemies. Set in a medieval fantasy universe, the typewriter itself is introduced as a mystical machine that harnesses the power to command from afar. It just so happens that only the protagonist, a young boy called Paul, has nimble enough fingers to make use of it. It's a fairly typical hero's journey quest, with a king's assassination turning into a game of thrones between dukes and duchesses vying for control of the kingdom.

What I'm more intrigued by is whether it's possible to effectively translate the depth of an RTS with just a keyboard and no mouse. A look at the single-screen map shows some of the design constraints the team was up against. "The biggest challenge was unit movement," Hoffmann admits. "We had thought about having something like hexes, but it was too close together, so a visual fit was to have waypoints which you can move between."

Maps are essentially structured as lanes, which might have you thinking *Touch Type Tale* could have easily been a MOBA. Apparently, the game had been prototyped almost like a single-player take on that genre, where typing caused your units to switch lanes at different junctions.

Ultimately, Hoffmann explains, this felt too fiddly and lacking in the tactical range he wanted, such as accruing timing attacks or outflanking opponents. "In the end, we decided that words should appear around a waypoint

where the unit can move, and as soon as you type one of those words, units start moving in that direction, and you can't stop them until they get there."

With words all over the map, the choices at your fingertips can seem a bit overwhelming at first, though at least structures are differentiated from waypoints by using upper-case letters. What you won't find, however, are themed words, so you won't be typing 'crops' when farming, for example – after all, the emphasis is on training you to type, rather than inputting literal commands. The structures themselves do offer minigames, though, displayed on a mini-screen below the map, which requires further typing to perform actions like gathering crops or mining gold – or, amusingly, typing a single letter to keep a minecart in motion.

Nimbly typing away through its introductory mission feels satisfying, as you direct your units of infantry, spearmen, archers, and cavalry across the map to capture enemy waypoints and defeat bandits, all the while keeping your resources topped up so that you can deploy more units.

Admittedly, it does feel a tad on the simplistic side, perhaps because the build I played didn't penalise you for any typing errors – you can just use backspace if you start typing the wrong word. But Hoffmann assures me that one element the team plans to introduce is ink supply, which will function a bit like magic points in an RPG. This means that players will need to put a bit more thought into their actions instead of just typing away at any word that pops up, lest they find themselves unable to move their

"The choices at your fingertips can seem a bit overwhelming at first"

soldiers to counter an enemy raid on the other side of the map because they're waiting for their ink to regenerate. Likewise, you'll also be able to keep the ink supply topped up by building ink laboratories.

To get a feel of the mission variety the team are aiming for, I also tried out a level that plays like a tower defence game, as you fend off waves

of escalating enemy types, from horse-riding knights to ogres. For this mission, instead of just relying on infantry, your tower also happens to be

able to shoot powerful rays, which admittedly turns *Touch Type Tale* into something more like a reflex-first shooter. Nonetheless, it's a lot of fun, even more so once you ratchet up the difficulty and start scanning around the map for enemies and words to strike them down with. Having won the Indie Showcase at this year's Develop conference, signs are positive for *Touch Type Tale*: already, it's shaping to be a fun and innovative war of words. 🗨



➤ As well as different locales, the team is also working on different mission varieties.



➤ The game's art style was inspired by the animated film, *The Secret of Kells*.

LANGUAGE BARRIERS

Despite being made by a German developer, *Touch Type Tale* is currently only being made in English (and American English at that, judging by the appearance of 'color'). That's undoubtedly going to have an effect on the difficulty or accessibility of the game, especially when it comes to online multiplayer. Hoffmann mentions plans to localise into German or French, though this would also require taking into account different spelling conventions (for example, the use of umlauts and sharp S in German) that might be trickier to reach on a keyboard. Whatever the solution, the plan is to stick to randomly generating five-letter words rather than a direct translation.

Headlines

from the virtual front



01

02

03

01. NeXbox

The new Xbox has been revealed, captioned Series X, and confusing everyone by being named the Xbox and not the Xbox Series X as we all thought at first. It's an absolute tank of a console, looking in no subtle way like a gaming PC and promising to be 'great at games and that' (not a direct quote). With support for games running at 4K60 and the possibility (hmm) of 120fps and 8K resolution, it sounds like it's not going to be a slouch when launching in 'holiday' 2020.

An apparent leak of AMD's Navi GPU abilities on Github showed an idea of what to expect from the new Xbox, with performance seemingly aiming for the twelve teraflops region. To veer wildly from tech specs into another language, that means the Series X will likely be *quite expensive*, lending credence to the rumours of another, cheaper, lower-spec Xbox in the next-gen range. Gosh, new consoles are exciting.



02. NePlayStation

Sony is, at the time of writing, keeping schtum on the next PlayStation – but we have seen what the next-gen console's games will look like thanks to the reveal of *Godfall*. Coming from Counterplay Games – and published by Gearbox Software – it brings all the things you'd expect from a first-look next-gen title: shiny bits, particle effects, and more shiny bits.

The third-person 'looter-slasher' releases late in 2020, giving the feeling that the PS5 may *possibly* launch around the same time. Call it a hunch.

03. Roll the DICE

EA's DICE LA studio has a new boss, with Respawn's Vince Zampella jumping across to spearhead an image change at the studio, as well as heading up a brand new release from the team. The move sees Zampella retain his standing as CEO of Respawn, the studio he co-founded, juggling responsibilities with two of EA's big names.

"We will probably rebrand," Zampella told the LA Times. "We want to give it a new image. We want people to say, 'This is a destination you can go and make new content.' I think they've kind of gotten the branding that they are the support studio for DICE Stockholm. I think rebranding is important for showing people, 'Hey! Come work here. We're going to do some amazing things.'"



Sega hints at a new Sonic game – *Sonic Mania 2?* Maaaaybe

Untitled Goose Game sells over a million: expect unnamed copycats



04. Money tree

Star Citizen continues to make headlines approaching eight years after its reveal, and still for largely the same reasons: it's not finished yet, and it's earned more money than anything else has through crowdfunding. The figure when publishing this stood at £200 million, but it's very likely higher by the time you're reading. It just won't stop bringing in money.

Progress continues, though, showing this incredibly slow-moving project *probably* isn't vapourware – a new ship, the Ares Star Fighter, saw its (£187-plus) release, along with a new in-game demo shown off to fans. We'll check again in 2030, see if it looks like it'll be out any time soon then.

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



05. Bargain

The rarest of rare consoles – the Nintendo PlayStation – will be put up for auction, with bids expected to land in the range of a million dollars (£750k-plus). The only known surviving example of the ill-fated partnership between the Big N and Sony includes its cables, a controller, and a test cartridge – no CD-based software was made for the unit (that we know of).

The actual auction runs from 5–7 March, so if you do have a spare few quid lying around and want a bona fide piece of gaming history, have a look on the auction site: wfmag.cc/NPS



06. Özil removed from PES

Arsenal and Germany footballer Mesut Özil has been removed from Chinese versions of PES following social media comments on the treatment of Uighur Muslims – which the UN reports are being detained in 're-education' camps – in China.

The decision appears to have been one Konami has had no hand in, with NetEase, the operator of *PES Mobile* and the other *Pro Evo* titles in China, behind the removal. A post attributed to the company on Chinese social media platform Weibo said (via Google Translate): "The statement hurt the feelings of Chinese fans and violated the sports spirit of love and peace. We do not understand, accept, or forgive this!"

Google Stadia gobbles up *Journey to the Savage Planet* dev Typhoon Studios



(Customer) survey says: next Capcom remake could be *Dino Crisis*

2010-2019



Fresh meat

Right on cue, the start of the decade saw indie gaming get its own mascot in the shape of Meat Boy: a fleshy, cuboid hero fated to suffer from repeated and hideous deaths. The making of *Super Meat Boy* was captured for posterity in *Indie Game: The Movie*, and the game's runaway success on Xbox Live Arcade crystallised a new era of small, independently made games that could find a mass audience in the digital age. The product of just two developers – Tommy Refenes and Edmund McMillen – *Super Meat Boy's* intense and chaotically difficult platforming punched well above its weight, and sold over a million copies in less than two years. It's a game that set the tone of indie gaming for the years ahead.



Red or dead

Rockstar took its appetite for the cinematic from the urban malaise of the *Grand Theft Auto* series to the shifting technological landscape of the early 20th century for the western epic, *Red Dead Redemption*. It was this superbly drawn backdrop – of the old ways of the Wild West ceding reluctantly to the trains and automobiles of a new age – that stuck with us, almost as much as the beautifully rendered horses, clapboard houses, and dusty shootouts. Rockstar spent five years developing *Red Dead Redemption*, and the result was one of its most mature and complete experiences to date.



Lost in Limbo

The melancholy cousin to the bright, anarchic *Super Meat Boy*, *Limbo* offered a bravely minimalistic twist on the time-worn platform-puzzler genre. Less mechanically ingenious than *Braid* – Jonathan Blow's mind-bending platformer that helped pave the way for the indie renaissance in 2008 – *Limbo* nevertheless offered up some truly unforgettable moments. Its monochrome visuals, and repeated and grisly deaths, helped create an almost overwhelmingly downbeat atmosphere capable of seeping deep into the player's pores. There have been attempts to explain the meaning behind Danish developer Playdead's game, but it's *Limbo's* ambiguity that made it so powerful. Yes, *Limbo* was just a platformer under all that gorgeous design work, but the imagination on display was impossible to deny. Controlling a small boy, bound up in silk, attempting to escape the clutches of a giant spider? It's an image that's stuck with us ever since.

Microsoft launches Kinect; Sony counters with the less expensive Move

Alan Wake finally emerged from the shadows after years in development

PlatinumGames releases *Bayonetta*; obviously, it's brilliant

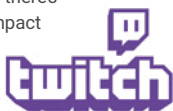
OnLive launches its cloud gaming console to a muted response

9 A DECADE IN REVIEW

It was a decade of new consoles and gigantic games, but also a time defined by creative indies. We take a look back

Twitch

Anybody who says they predicted Twitch, an offshoot of nascent streaming platform Justin.tv, would be one of the most dominant things in all of gaming a decade later is either lying or a time traveller. Why on earth would watching other people play games while nattering mindlessly in a little chat window ever be popular? And yet here we are: Twitch raised the profile of individual games and those playing them to the point it became impossible to ignore – and to the point Amazon stepped in with the big bucks and snapped it all up. Players of a certain age might still not get it, but there's no denying the impact and importance of Twitch this past decade.



Minecraft Mania

It had many years of development already behind it – and two years of being available to the public – but *Minecraft* made its full release debut on 18 November 2011. While tempted to say 'things changed that day', we can't – the fact is, *Minecraft* had already been turning heads for a while. Still, it's not like the impact of Mojang's game was lessened any, and in fact, its full release did lead to launches on other platforms and the eventual purchase of the studio (and game) by Microsoft in 2014. Has *Minecraft* earned back the £1.85 billion MS paid for it since? Well, given it's still one of the most popular games in the world and maintains – if not increases – its player base almost a decade after its full launch, we'd say yes, it probably has. Shame about Notch though, eh?

3DS

Nintendo's last pure handheld got off to a slow start, with the hardware initially relying rather too much on the 3D screen gimmick that – with the benefit of hindsight – we can say was a bit of a waste of time. Eventually settling into a nice rhythm, the 3DS amassed itself quite the array of classics from Nintendo and third parties, and while it never quite reached the heights of the original DS, the three-dimensional machine still has to go down as a success for the Big N. It was also a great learning experience for the company, leading it to a whole new design for its next hardware launch...



The year of the (other) indies

It was the decade of indie ascendance, but 2011 specifically was the year of the indie. Beyond just *Minecraft*, other developers continued to push the limits of what we might reasonably expect from our 'smaller', 'lesser' games. *Superbrothers: Sword and Sworcery EP* from Capybara Games set the stall out nicely: this was not a game the major devs would make. Bold, inventive, lo-fi, and – in the best way possible – not something with massive, wide-ranging appeal, it was a game that defined this first real push into the new era of indie. The likes of *To the Moon* showed how this bold new era of games could still tell a tale that could (and would) make you literally weep; the rise of the indie wasn't just for mindless experiences or vague art pieces. Meanwhile, *Bastion* showed how to bridge the gap – an independently made game, published by a huge name in the form of Warner Bros., it carried with it unique, inventive storytelling aspects and some genuinely gripping mechanics. The tide had turned in favour of the indies, much quicker than anyone expected.



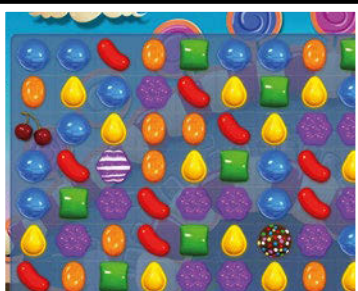
2011

An unknown quantity known as *Fortnite* is unveiled by Epic's Cliff Bleszinski

The Elder Scrolls V: Skyrim releases for the first time (of many)

Duke Nukem Forever finally launches; plenty wish it hadn't

The *Dark Souls* of *Dark Souls* games, *Dark Souls*, releases



One hand tapping

While games like *Far Cry 3*, *Dishonored*, and *Call of Duty: Black Ops II* stormed one end of the industry, the market for mobile games continued to grow at a startling rate. This was the year of *Candy Crush Saga*, a match-three puzzler precision-engineered to be as addictive as possible – for proof, just look at the profits: it reportedly made around \$86 million from in-app purchases in December 2017. *Puzzle & Dragons*, another mobile puzzler released in 2012, raked in similarly astronomical profits in Asia. Elsewhere in mobile gaming, Peter Molyneux's 22Cans studio released *Curiosity: What's Inside the Cube?* – a 'social experiment' that had players collectively chiselling away at a gigantic cube in the hope of winning the prize in the middle. A quick Google of the words 'Godus prize' will tell you that the chiselling wasn't worth it.



Fantastic Journey

Thatgamecompany's exploration game has, for our money, become one of the most quietly influential indie games of the last decade. You can see the after-image of *Journey's* beautifully hazy, low-poly landscapes, minimalistic character design, and visual storytelling in dozens of games released since, including *Rime*, *AER: Memories of Old*, and the upcoming *OMNO* (see page 6). That spreading influence has done little to diminish the emotional thump of director Jenova Chen's game: an inscrutable fable about a lone traveller's path towards a holy mountain – a trek that takes in deserts, flying monsters, snowdrifts, and Austin Wintory's downright brilliant soundtrack. *Journey's* challenge may have been slight – assuming you care about such things – but the sense of discovery, of being a stranger lost in a strange land, was unforgettable.



Points of view

In the long, long build-up to release – designer Phil Fish spent five years crafting the game – interest in *Fez* was largely focused on its ingenious, world-spinning mechanic. With it, an otherwise flat 2D world could be rotated to reveal new perspectives and hidden pathways. While this proved to be far from a gimmick, the perspective-spinning was far from *Fez's* only asset: there was also its charming world design, some exquisite sprite work, and a wealth of downright devious puzzles and hidden messages to decipher. The programming behind *Fez* was undoubtedly brilliant – we have Renaud Bédard to thank for that – while the warmth of Fish's world and character design turned what might have been a coldly mechanical collect-'em-up into one of the most captivating indie games of its generation.



Miami Vice

The kind of game that would've whipped Congress into a frenzy had it been released in the nineties, *Hotline Miami* arrived like a sleazy message from an alternate dimension in 2012. Even filtered through its retro, pixel-art filter, there was something disquieting about the mix of surrealist storytelling and ultra-violence in Dennaton Games' top-down shooter – possibly because, despite all the gore and battered skulls, *Hotline Miami* was also furiously addictive. A kind of hip, trendy cousin to the arcade classic *Smash TV*, the game's loop of barging into various grimy locations and murdering every mobster and goon lurking within quickly proved hypnotic. The gaudy colour palette, constant deaths, and pounding soundtrack only added to the sense of grindhouse psychedelia.

Sony launches the PS Vita; its indie scene's still going strong

Diablo III finally comes out; only took eleven years to develop

Nintendo launches the Wii U to indifferent sales

The haunting *Dear Esther*, first made in 2008, gets a commercial release



Consoles: TNG

A long console generation finally started winding down officially, as Sony and Microsoft released their new machines a week apart from one another. The PlayStation 4 hit on 15 November, while the Xbox One launched on 22 November. Each brought with it wild promises, a host of decent-but-ultimately underwhelming launch games, and new sharing/screen-capturing functions to get used to. For all the wailing about better graphics, bigger games, and everything else the hype machine churned up, it turned out the biggest innovation of the generation was indeed the screenshot button. Pure, perfect design.

Let's not forget the others, though, as Nvidia launched its Shield Portable – a controller with a screen capable of playing Android games natively, and PC games via streaming. Elsewhere, Kickstarter success, the OUYA... well, failed spectacularly, while Mad Catz's own take on the Android box – the M.O.J.O. – did so well we'd wager you forgot it existed 'til we mentioned it just now.



In a flap

It's fair to point out its explosion in popularity didn't actually come until the following year, but Dong Nguyen's *Flappy Bird* actually launched earlier on in 2013. Why it ended up as a genuine moment in gaming, we will likely never truly understand – rumours of bots being used to game *Flappy Bird*'s promotion, a shout-out from PewDiePie, runaway mainstream news coverage, and forced scarcity, with Nguyen removing the game from stores: there's a lot to unpack. But the popularity certainly wasn't down to *Flappy Bird* actually being any good (it wasn't), nor was it because the game was in any way original, bearing such a striking resemblance to one *Piou Piou* vs. *Cactus* as it did. The rise of the indies continued unabated, but there was the odd misstep along the way like this.

2019

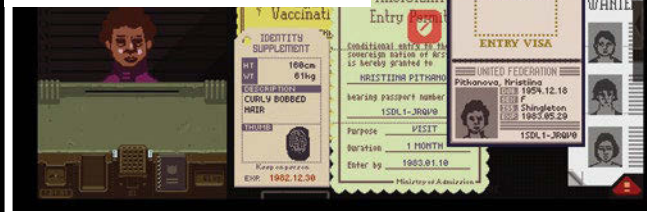


Rockstar's biggest heist

At no point in the unstoppable rise of the indies did the mainstream, triple-A market suffer – and this was no more true than in the performance of Rockstar North's *Grand Theft Auto V*. The game's September 2013 release generated more than £600 million in its first 24 hours. It's good to have that perspective check at times – *Minecraft* did well on release, but little else in the world can come close to *GTA*'s figures, with the fifth game in all its incarnations bringing in around £4.5 billion overall. Single-player was, of course, a laugh-riot – but it was Rockstar's (eventual) adoption of a service-based online mode that has kept *GTA* alive and well into the modern day.

Papiere, bitte

Lucas Pope's 'dystopian document thriller' *Papers, Please* honestly didn't sound like much on... well, paper. You took on the role of a border guard, checking the documentation from people crossing the border into fictional Eastern European nation, Arstotzka. Backing everything up was an ongoing metanarrative of unrest and political turmoil, and in your border guard booth came sob stories, spies, and bribes. Would you besmirch the glory of Arstotzka to be sure of a hot meal for your family tonight? *Papers, Please* didn't look to be much at first glance, but quickly proved itself to be a deeply affecting, satirical, and harsh commentary on humanity and its endless desire to separate, subjugate, and survive.



The Last Of Us and *BioShock Infinite* saw out a console generation

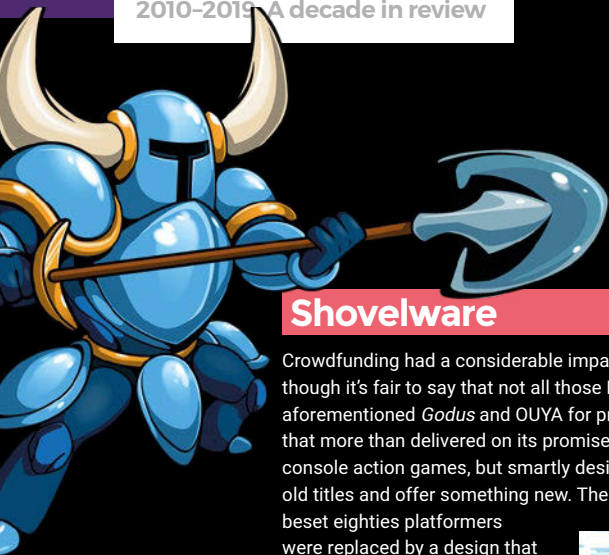
While *Depression Quest* and *Gone Home* carried the indie torch

As *Aliens: Colonial Marines* should have had a torch taken to it

And *Godus* showed us Kickstarter projects weren't a guarantee of success, or quality

Interface

2010-2019: A decade in review



Shovelware

Crowdfunding had a considerable impact on indie game development in the 2010s, though it's fair to say that not all those Kickstarter projects soared creatively – see the aforementioned *Godus* and OUYA for proof. *Shovel Knight*, on the other hand, was a game that more than delivered on its promise: an 8-bit style platformer steeped in nostalgia for console action games, but smartly designed enough to know when to deviate from those old titles and offer something new. The cheap deaths and frustrating difficulty that often beset eighties platformers were replaced by a design that rewarded you for your skill and patience rather than punishing you for your mistakes. Aside from delivering the main game, developer Yacht Club spent the rest of the decade adding to *Shovel Knight* – indeed, its third and final expansion, *King of Cards*, only came out in December 2019.



I, Robot

Croteam took a little time away from the *Serious Sam* series to make *The Talos Principle*, an unexpected and pleasingly smart first-person puzzler. Marrying a thought-provoking sci-fi plot to some head-scratching environmental conundrums – manipulating light beams to navigate mazes, and lots more besides – *The Talos Principle* was one of the most quietly effective games of 2014. The sequel, first announced in 2016, really can't come soon enough.

2014



Freddy's Dead

Here's an instance of an indie game that might have vanished without a trace had social media – or more specifically, the shrieking histrionics of PewDiePie and other YouTubers' personalities – not turned it into a cult phenomenon. *Five Nights At Freddy's* was, after all, a fairly simple point-and-click horror oddity created by just one developer – Scott Cawthon. Admittedly, though, the game's premise of manipulating security cameras and avoiding being scared to death by marauding animatronic animals was legitimately scary – and so effective, it spawned five sequels (and counting), assorted books and merchandise, and a forthcoming movie adaptation, due out this year.

Perfect organism

It's hardly an indie underdog like *Five Nights At Freddy's*, but it's worth pausing to admire just what Creative Assembly achieved with *Alien: Isolation*. Here was a licensed game that wasn't just a brilliant survival horror experience in its own right, but arguably better than any of the *Alien* movies have been since at least the 1990s. Yes, the British studio – previously known for its cerebral *Total War* strategy series – succeeded in making a game that captured the cosmic terror of *Alien* and *Aliens*, from the seventies-inspired spacecraft locations to the worryingly convincing movements of its title monster.



Gamergate happened. We'll just leave it at that, shall we?

Bungee's 'shared world' shooter *Destiny* launches

'Casual' games like *Clash of Clans* and *Candy Crush* make \$4bn worldwide

Architectural puzzler *Monument Valley* captivated us on mobile



Indie spirit?

This year may well have marked where the big publishers really started to pump money into this hitherto-upstart area of the industry. Square Enix, for example, pushed out *Lara Croft Go*, a decidedly indie-ish take on the usually more bombastic adventures of a certain raider of tombs. Activision, meanwhile, did what Activision does best by throwing a hell of a lot of money around. The mega-publisher picked up *Candy Crush* creator King for a cool £4.4 billion, proving once more that everybody has a price... and that a puzzle game made with a scientific approach backing up its addictive nature and riddled with microtransactions will appeal to a monolithic money-making machine.



Nintendo's hero

When Satoru Iwata passed away in July 2015, Nintendo lost a president, its employees lost a friend and ally, and gamers around the world lost a creative visionary, a man of understated empathy, and a true great of the industry. It wasn't just that Iwata spearheaded Nintendo's resurgence from the DS onwards, it was that his history was one of a deep, meaningful involvement in the games that made Nintendo – *Earthbound*, *Pokémon*, *Smash Bros.*: they all had Iwata's hand in their creation at one stage or another. He wasn't just a suit approving projects; he had made compression software, offered dev support, and ported code. He was a developer, and he was a gamer.

"On my business card, I am a corporate president," said Iwata. "In my mind, I am a game developer. But in my heart, I am a gamer."

Tactical espionage exit

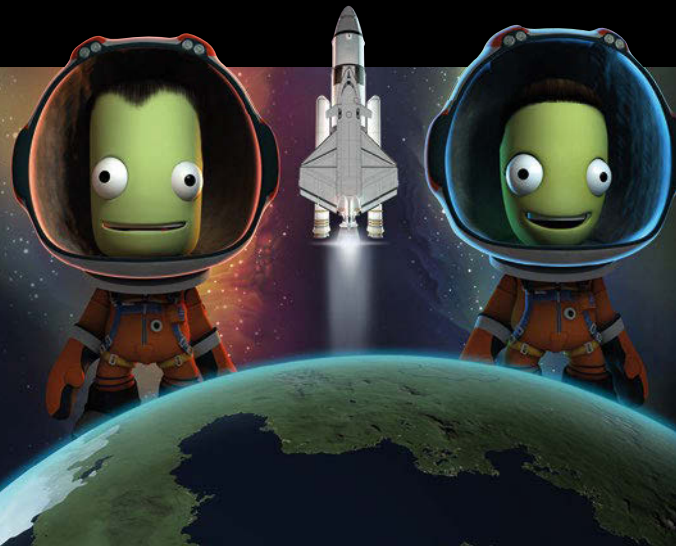


One of the biggest releases of 2015 – and one of the finest of the whole decade – finally arrived in the shape of *Metal Gear Solid V: The Phantom Pain*. Away from the game's endlessly responsive mechanics and incredible ability to let the player cut loose and muck about, though, a less fun picture was painted. Hideo Kojima, Konami loyalist of decades, soon made his way out from under the publisher's umbrella,

striking out with a newly independent Kojima Productions and taking plenty of his staff with him. Allegations of corporate mismanagement came to the fore both before and after Kojima's departure, and, really, the attitude towards the legendary house of *MGS*, *Contra*, and more hasn't been the same since.

The instant classics

Only halfway through the decade and we were already expecting it: indie titles would release, and some of them would be instant classics. 2015 spoiled us, though, throwing out not just the trope-defying, lo-fi RPG *Undertale*; not only the single-handed rebirth of the FMV game niche with *Her Story*; but also the genuinely scientific (and used by actual space scientists) *Kerbal Space Program*, which left Early Access that year. Oh, and there was this other thing that went on to sell tens of millions of copies and make plenty more pounds than that in the process, but you probably haven't heard of it: *Rocket League*? No? Yeah, us neither.



Legendary gaming publication Computer and Video Games closes doors for good

Chinese government's ban on sales of video game consoles entirely lifted

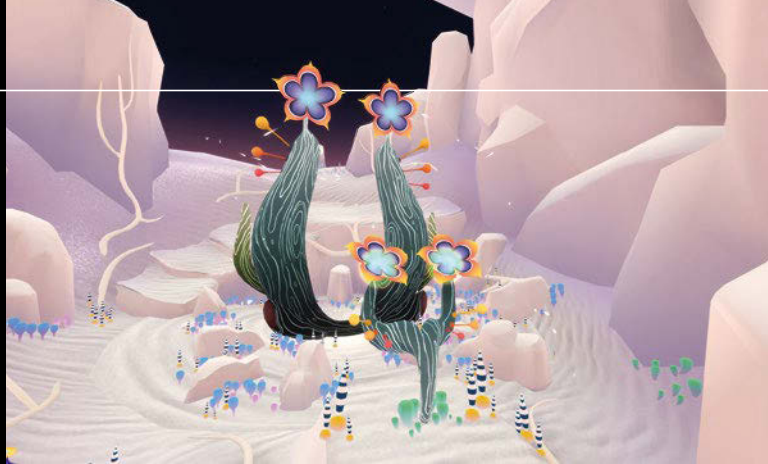
Now-ubiquitous chat platform Discord launches in May

Fallout 4 under-delivers, *The Witcher 3* more than makes up for it



Lost in Space

Given the scale of its ambition, it was perhaps inevitable that *No Man's Sky* floundered at launch. Players hankering to get started in Hello Games' space sim rightly complained about the missing features – where were the huge galactic battles, for one? – the bugs, and the repetition. And while we found much to admire in *No Man's Sky*, even on its first release (not least the sense of freedom and awe in the face of the unknown), what was most impressive was Hello Games' dedication to the game in the years afterwards. With *No Man's Sky NEXT*, released in 2018, and *Beyond*, launched a year later, the game finally began to live up to its promise. You're still a lone traveller scrambling for resources in a cold and unsympathetic universe, but today, that universe feels more busy, more alive with things to do, than it did back in 2016.



Virtual insanity

After years of announcements, prototypes, and general hype, 2016 was the year when the planet's big tech companies began launching their virtual reality headsets: Facebook's Oculus Rift came along in March, closely followed by Valve and HTC's Vive, and Sony's PlayStation VR following along in October. Whether you're particularly blown away by VR or not, there's no doubt that we've seen some terrific indie games make imaginative use of it; games like meditative walking sim *Fujii*, rhythm game *Beat Saber*, Owlchemy Labs' *Job Simulator*, and the VR iteration of *SUPERHOT*, all provide experiences you couldn't find anywhere else. At the other end of the scale, here's hoping Valve's *Half-Life: Alyx* can show us what a triple-A game can really do with VR.



Blow back

Rather than follow his indie darling *Braid* with another 2D platformer, designer Jonathan Blow spent eight years developing – with a much larger team behind him this time – a truly engrossing first-person puzzler, *The Witness*. In essence, it sees you explore an open-world island, solving 2D line puzzles to progress. What's so captivating (and, at times, infuriating) is how intricately interconnected all those puzzles are. Some are daisy-chained to other puzzles by networks of cables, or can only be solved by observing details in the surrounding environment; others are solved by listening to nearby sounds. *The Witness*' refusal to guide the player with clues or on-screen prompts can often lead to frustration, but the pay-off is that actually solving its mind-bending mazes-within-mazes is also extraordinarily satisfying.

Indie-geddon

Once again, 2016 was an extraordinary year for indie games. Our eyes bulged at the glorious sprite work in D-Pad Studio's *Owlboy*; we quietly wept at the deeply personal interactive drama, *That Dragon, Cancer*; we swooned to Disasterpeace's soundtrack to the super *Hyper Light Drifter*. Then there was Dodge Roll's absurdly frenetic *Enter the Gungeon*, eerie graphic adventure *Oxenfree*, the cool sci-fi of *Event[0]*, and the shadowy suspense of Playdead's *Limbo* follow-up, *Inside*. Meanwhile, *Stardew Valley* made us fall in love with virtual farming all over again. What a year it was.



Pokémon Go turns mobile phones into a monster-catching app

Titanfall 2, one of the best shooters of the decade, launches to low sales

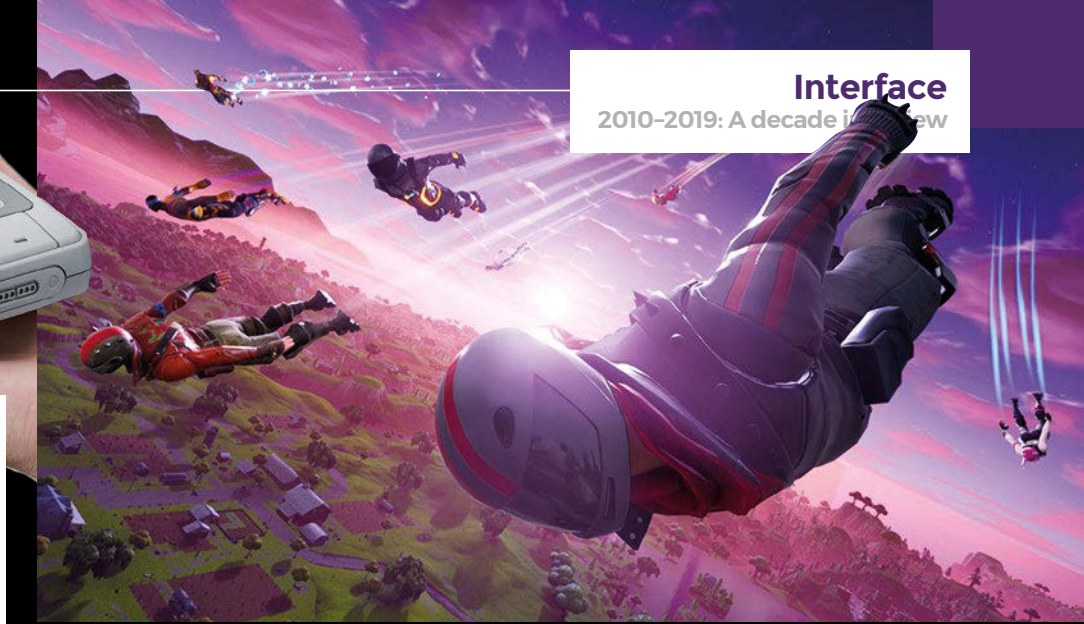
Fumito Ueda's *The Last Guardian* emerges; development took nine years

MOBAs reach their peak; *League of Legends* makes \$1.7bn in revenue



The maestro returns

Nintendo returned to the home console domain with something that is, arguably, more of a portable device. But hey, that's Nintendo for you. Continuing with Satoru Iwata's 'blue ocean' philosophy of business, the Nintendo Switch didn't seek direct competition with the PS4 and Xbox One, instead carving out its own niche by bringing together a decently specced games console, a fantastic handheld gaming machine, and a selection of instant classics like *The Legend of Zelda: Breath of the Wild* and *Super Mario Odyssey*. The Switch was an instant hit – rightly so – and continues to do well, with analysts predicting an extraordinarily long lifespan for Nintendo's hybrid machine and publishers queuing up to port their titles to it. Something that can play *Zelda*, *Mario*, *Skyrim*, and *The Witcher 3*, that you can easily take anywhere in the world. Also, you only need one set of controllers for two-player *Mario Kart* on the go, and the device has a kickstand built in. Seriously, the Switch is one of the best machines ever made.



With cheese

2017 will forever be known as the year of the battle royale: March saw the Early Access launch of *PlayerUnknown's Battlegrounds*, while *Fortnite*'s multiplayer arena mode arrived in September. By the end of the year, the games had sold millions of copies in total. A genuine phenomenon, no doubt, with *Fortnite*'s later dominance made even more impressive when you consider its battle royale component wasn't actually the first release for the game: instead, the *Save the World* horde mode-alike had hit back in July, with *Battle Royale* being developed in just *two months*, after the original part of *Fortnite* had released. All credit to *PUBG*, of course, which initially popularised the genre's core concepts – as well as the cry of 'chicken dinner' for victorious players. While seemingly everything has a battle royale mode in or around it these days, we shouldn't lose sight of the fact that, at its core, it's a really fun type of game to play.



Surprise mechanics

While plenty were content to play against 99 other people in the big two battle royales of 2017, there were many other far less content voices in the room, mainly focusing their ire on a specific, prevalent element in games: loot boxes. By no means a new thing, this was the year in which they went from harmless little extra, dishing out new in-game hats and suchlike that you could take or leave, to their game-breaking, money-grabbing extreme. Online pushback intensified, and publishers were made to answer tough questions about their intentions with loot boxes, leading to one particular incident when EA's Kerry Hopkins referred to them as 'surprise mechanics'. It wasn't too much of a surprise to see loot boxes fall by the wayside as players pushed back hard, and some governments did too, branding the mechanic a form of gambling.

2017



Bigguns

Another superb year for the indies saw the likes of *Yooka-Laylee* revisiting the *Banjo-Kazooie* playbook, *Night in the Woods* bringing some highly relatable narrative, and *Cuphead* being... well, absolutely gorgeous. *Hollow Knight* kept the ball rolling, *What Remains of Edith Finch* plugged the walking simulator gap, and *Detention* showed the indie hits weren't just to be the domain of western devs. But it was also a year that saw a number of relative big guns get their indie projects out of the door. Ron Gilbert, LucasArts alum, brought *Thimbleweed Park* – his first pure point-and-click adventure title in a long time – to the masses, while many of the *Planescape: Torment* team combined at inXile Entertainment to bring *Torment: Tides of Numenera* to fruition (thanks in no small part to the millions of pounds raised on Kickstarter). There was also the 'Is it an indie studio?' release of *Divinity: Original Sin 2* from Larian Studios, which – even if there is an argument about what actually constitutes an indie – we have to include purely because it's one of the best CRPGs ever made.



Another mid-generation upgrade, the Xbox One X, releases

Destiny 2 launches to a relatively subdued reaction, compared to the original

Nintendo also releases the SNES Classic Mini; it is brilliant

Still no *Star Citizen*; £131m-plus raised cumulatively



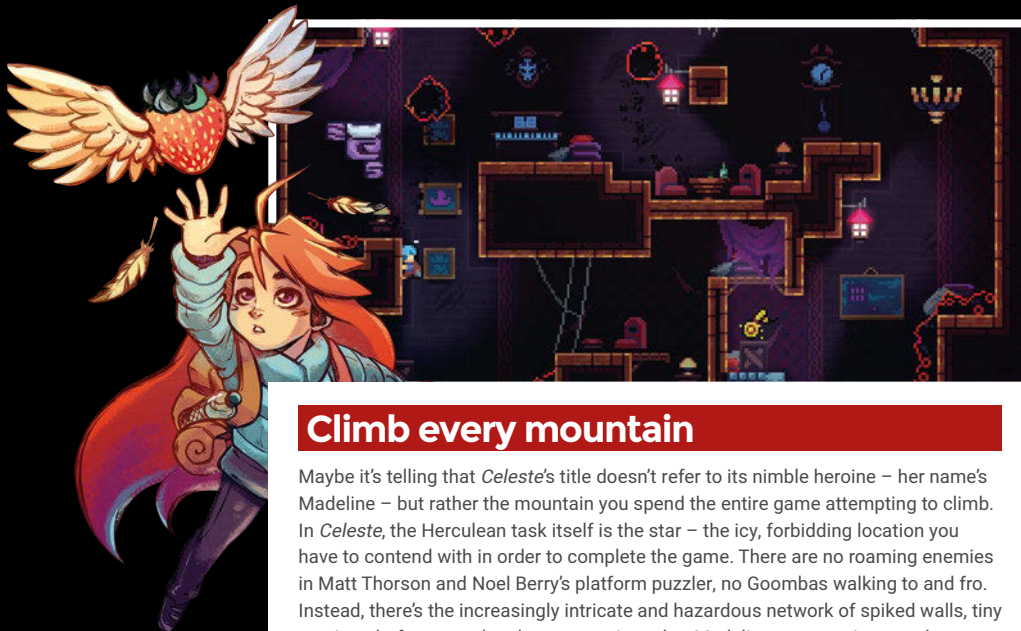
Closing time

The year also saw the sad departure of a couple of prominent studios: Telltale Games, despite being responsible for immensely popular episodic adventure games like *The Walking Dead* and *Minecraft: Story Mode*, closed its doors following reports of declining profits. Meanwhile, Cliff Bleszinski's studio, Boss Key Productions, was shuttered following the poor response to *LawBreakers* and *Radical Heights*. Then there was Visceral, creators of *Dead Space* and *Battlefield Hardline*, which was closed following the abrupt cancellation of its unnamed *Star Wars* game. The size of the games industry may have soared in the 2010s, but so too did the risks and challenges facing the developers that work in it.



All at sea

As Steven T. Wright explored in issue 13, the detective game has enjoyed a rebirth in recent years, and *Return of the Obra Dinn* was one of the titles leading the charge. A mystery set aboard a creaking ship in the 19th century, *Obra Dinn* was another piece of masterful work from *Papers, Please* developer Lucas Pope. Poking through the title ship and slowly uncovering the fates of the corpses that littered its decks proved endlessly engrossing from beginning to end.



Climb every mountain

Maybe it's telling that *Celeste*'s title doesn't refer to its nimble heroine – her name's Madeline – but rather the mountain you spend the entire game attempting to climb. In *Celeste*, the Herculean task itself is the star – the icy, forbidding location you have to contend with in order to complete the game. There are no roaming enemies in Matt Thorson and Noel Berry's platform puzzler, no Goombas walking to and fro. Instead, there's the increasingly intricate and hazardous network of spiked walls, tiny moving platforms, and rocky outcroppings that Madeline must navigate on her way to the summit. Brought to life with some tiny, gorgeous sprites, *Celeste* emerged as one of the best indie games of 2018: a challenging and unexpectedly moving fable about mental health, and conquering seemingly insurmountable challenges.



Great and small

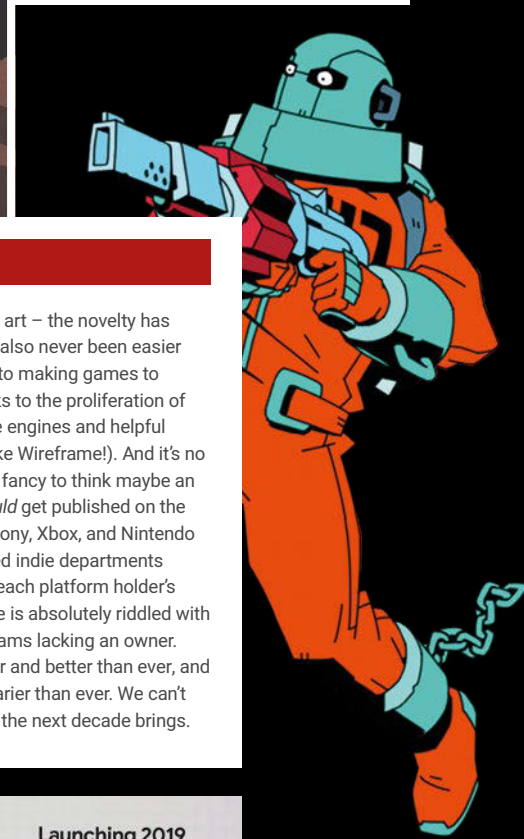
In retrospect, 2018 felt like a study in contrasts; on one hand, there were huge productions such as *God of War*, *Far Cry 5*, and *Red Dead Redemption 2*, with all their grandiose plots and sumptuous attention to detail; and there were competitive, open-ended experiences like *Tetris 99* and *Apex Legends* that could theoretically be played forever. Then, in between, smaller, bite-sized games cut through the mix: the manic kitchen simulator, *Overcooked! 2*; highly charming pinball-platformer, *Yoku's Island Express*; and borderline indescribable physics-based curio *Donut County*, to name just a few. We gamers really were spoiled for choice.

Fortnite becomes the top-grossing game in the world

Epic Games Store launches; for the first time ever, Steam has a true competitor

The release of *Fallout 76* is plagued by bugs and iffy special edition bags

A little magazine called *Wireframe* emerges



Peak indie?

As a decade of indie ascendance – sometimes indie dominance – comes to a close, there has been a change in the air. In 2019 alone, we were treated to more creative, inventive, and exciting indie releases like *Void Bastards*, *Mutazione*, and *Disco Elysium*, but after ten years the industry's caught up, and the big publishers are paying attention like never before. EA received a bloodied nose with *Anthem*, showing us that players won't just have hype thrown at them before gladly consuming anything thrown their way. Activision effectively gave up on 'sure thing' Bungie, allowing the studio to regain its independence, while at the same

time publishing distinctly non-Acti title *Sekiro: Shadows Die Twice*. Xbox Game Studios purchased Double Fine, an early flag-bearer for the indie cause, with DF head Tim Schafer stating the deal would give him and his team some breathing space, financially and creatively. In 2004, Microsoft dropped *Psychonauts* and plunged Double Fine into crisis – in 2019, Xbox Game Studios ended up buying the entire company. Times have changed. The exciting, bold state of indies has morphed into something else – not better, or worse, but a new state of being. It's no longer a surefire way to get attention for a game to be made by three people

and feature pixel art – the novelty has worn off. But it's also never been easier to actually get into making games to begin with, thanks to the proliferation of free-to-use game engines and helpful learning tools (like *Wireframe!*). And it's no longer a flight of fancy to think maybe an indie release *could* get published on the big consoles – Sony, Xbox, and Nintendo all have dedicated indie departments these days, and each platform holder's respective device is absolutely riddled with releases from teams lacking an owner. Things are bigger and better than ever, and choppy and scarier than ever. We can't wait to see what the next decade brings.



A new challenger

We began the decade with the plucky underdogs at OnLive trying to introduce a new way of playing games to the masses, and we ended it with Google doing pretty much exactly the same, but with billions of dollars behind it. Stadia was the result: a cloud streaming service ready to beam brand new games in spectacular quality straight to our TVs, with all the 4K, 60 frames per second trimmings you could ever hope for. Since the service's launch in November, there genuinely hasn't been too much to shout about. It works, if you have a good enough internet connection, but at the time of writing things are still being built and updated. It feels an awful lot like things did back in 2010 and 2011, when OnLive launched in the States and the UK – but this time, hopefully, things might be different. Google has the bank balance to pump serious time and effort into Stadia, and the core concept – being able to play games without requiring a dedicated piece of hardware – is a noble one. Time, as we shall see, will tell. 🎮

Elsewhere, in films

Movies based on video games: not a new thing. But in 2019, they returned to the fore with quite the vengeance, as properties from the youth of a couple of generations of gamers made their live-action debuts. Ryan Reynolds seemed an odd choice to play *Pokémon's* posterbeast, but that he did in the well-received *Detective Pikachu* – the first time the *Poké*-world has gone with real people in it (there are 22 animated *Poké*-films at the time of writing). But the real focus of 2019 fell on the long-romoured *Sonic the Hedgehog* live-action adaptation... and wow. Before the movie had even been released, it ended up costing the studio an additional £3.8 to £26 million, depending on who you listen to, thanks to the objectively terrible design of the titular hero needing to be completely redone after the public reacted spectacularly poorly to its unveiling. Whatever happens on the film's release, though, it'll be better than 1993's *Super Mario Bros*. Won't it?



Reggie Fils-Aimé retires as Nintendo boss, replaced by Doug... Bowser

Nope, still no *Star Citizen*. £201m-plus raised so far

Capcom re-raises its game with *Resident Evil 2* and *Devil May Cry 5*

The next generation of consoles is confirmed for 2020 by both Microsoft and Sony

The Top X Best Things In The Correct Order Ever



STEVE MCNEIL

Need to know which piece of art is objectively best? Steve's your guy.

“Gaming is far too broad a thing now for a simple ranked list to be of any value”

As you're aware, because this is page 26 and you've read all the ones before it, this issue is taking a look back at the decade which I still feel we should have all agreed to call 'The Tenties'. I've just got back from recording a round-up for BBC Radio 5 Live's *Let's Talk About Tech*. It was an honour to be included alongside Mike Bithell (creator of BAFTA-winning *Thomas Was Alone*, *John Wick Hex*, and more), Jess Wells (esports journalist), and Sam Loveridge (global editor-in-chief for GamesRadar), and it's testament to presenter/producer Adam Rosser that the conversation was as diversionary as it was.

The truth, as the guest list alone proves, is that gaming is far too broad a thing now for a simple ranked list to be of any value. Indie games, eSports, triple-As, casual phone titles etc etc. – a top ten games of the decade would make about as much sense as top ten foods. What's the use in ranking curry one place higher than fish and chips – what would it even mean*?

Furthermore, as the industry grows and widens, it's increasingly rare to find anyone who is fully across it. As the head of a small indie developer, Mike expressed his reservations about going anywhere near online multiplayer, due to the scale and complexity such an offering requires, and the team at The Loadout (the esports news site for which Jess is editor) would never attempt to cover the mainstream games sphere served by GamesRadar, or vice versa. They simply wouldn't have the staff needed to cover everything in a timely manner. Put simply: there are too many games.

The conversation drifted on to whether or not this year, and decade, could be considered 'vintage' years for gaming but, again, what does this mean? In 2019, I can play every single game that has ever been made, and the latest ones stand on the shoulders of everything that came

before them. There has always never been a better year to be a gamer. Of course, I haven't read this magazine because I was writing this while the rest of the gang were writing the other bits, so if it turns out they've declared 2019 the third best year of gaming ever, or ranked a bunch of stuff numerically, I'm sure they're right and I am wrong**.

Regardless, whatever Wireframe's position and approach, I'm still entitled to my own opinion. So, here's my Top Five of the decade because, deep down, everyone loves a list.

- 5: Consoles
- 4: Computers
- 3: Internet stuff
- 2: Cool Interactive Things that weren't really games but still sort of fit on the list
- 1: *Knack* 🍌

* This is a bad example, as curry is objectively better than fish and chips.

** Nice save – Ed.

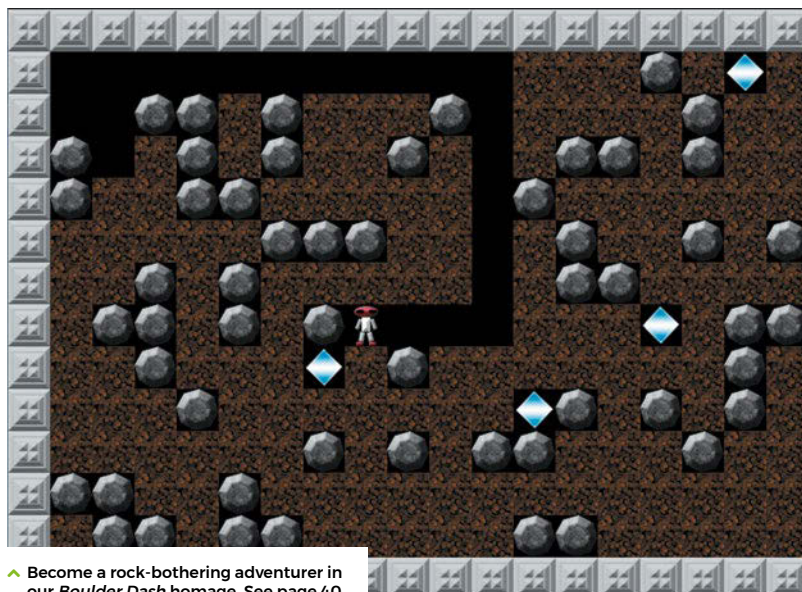


^ Top of the list, cream of the crop, risen to the top. You know it, you love it, it's *Knack*.

Toolbox

The art, theory, and production of video games

- 28. CityCraft**
Capturing a city's essence in a game
- 30. Playtesting**
Why player feedback is so vital
- 32. Latency**
What it is and how to minimise it
- 36. Design without inspiration**
Looking beyond games for new ideas
- 38. Solo dev to indie team**
Tips for building your first game studio
- 40. Source Code**
Code your own Boulder Dash homage
- 42. Directory**
Ukie Hub Crawl events near you in 2020



^ Become a rock-bothering adventurer in our *Boulder Dash* homage. See page 40.



✓ Great game ideas can often be found far outside the medium itself – find out more on page 36.

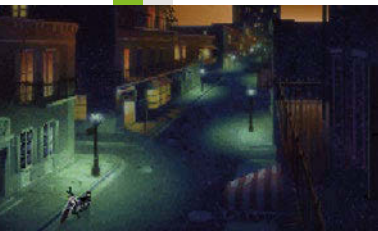
Capturing a city's essence in a game

How do we make video game cities as memorable as, say, Paris or London? Here are a few ideas



AUTHOR
KONSTANTINOS DIMOPOULOS

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^ *Gabriel Knight: Sins of the Fathers* brilliantly distilled and recreated the character of New Orleans. It even got the colours right.



^ Now demolished, Hong Kong's Kowloon Walled City was unique and immediately recognisable, due to its extreme density.



W

hen we visit a city for the first time, our impressions tend to be based on the way it sounds, feels, and looks.

Meanwhile, signs of history, culture, fashions, and a sense of importance or power also influence our perception of a place. Such objectivity implies the existence of underlying rules, which we should try to figure out as best we can and then implement in our own video game settlements. Rules can help us build cities and towns our players will want to visit, and then remember for a long time: unique places with distinct characters.

So how do we go about giving our game cities character? Here are a few thoughts...

CIVIC CHARACTER

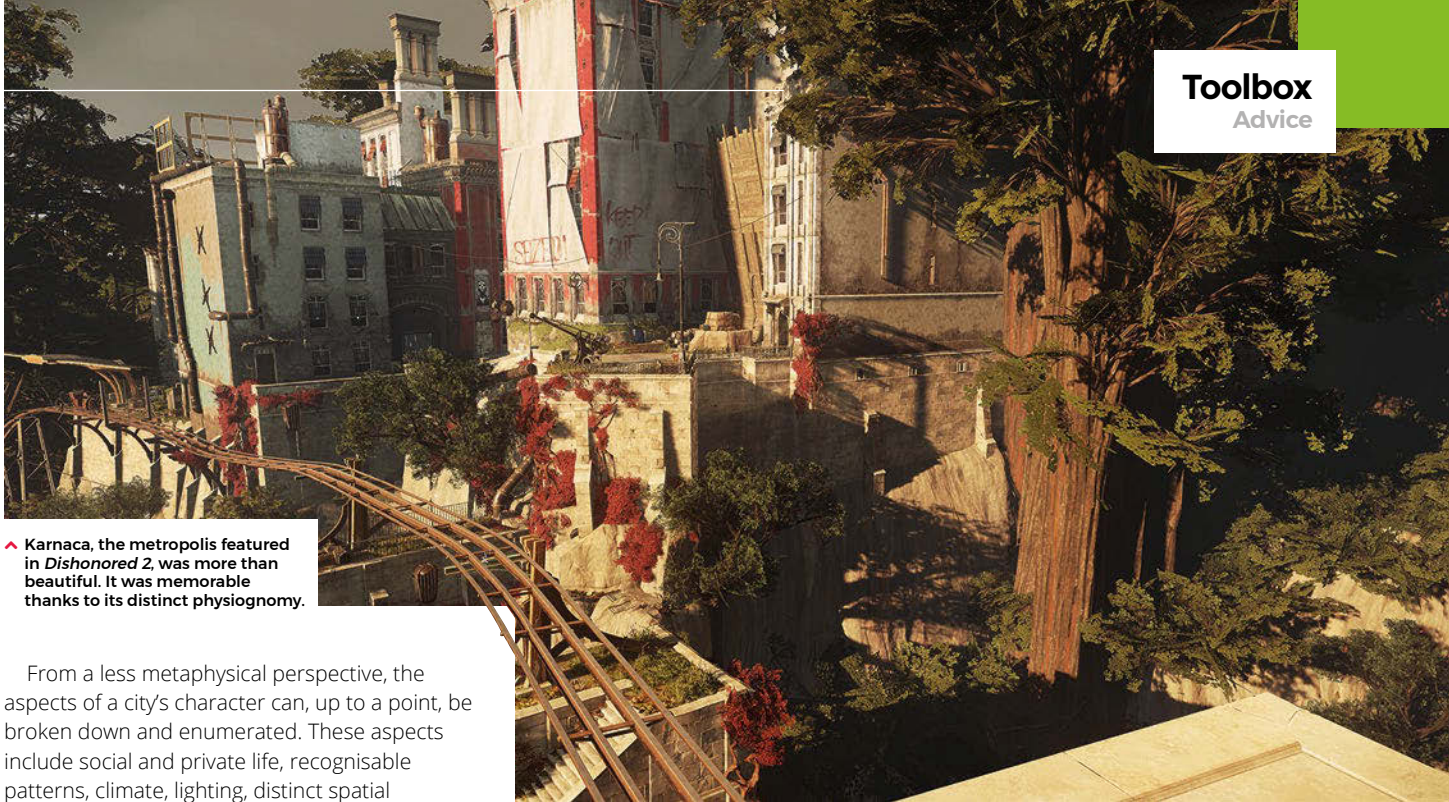
The first question is, what is civic character? What does it mean for a city to possess one? Well, not unlike a human's personality, the character of a city is defined by the sum of all the elements

that make it unique. Not every element has to be exceptional on its own, but it's this overall collection of traits that lends a city its singular character. Because cities are large, complex, and multi-faceted things, their characters are often built over long spans of time.

A city's character is its face and personality, and each one is distinct. Some faces will be beautiful or captivating, some dull or uninteresting, and some will conceal a flamboyant character.

All cities have their own identity, though: a set of spatial and societal features that can instantly be recognised as belonging to that particular place. Among those features, you'll find distinct shapes, urban forms and structures, recognisable skylines, distinct focal points, famous landmarks, and legible topologies. The character of any city reflects local virtues, and the collective, civic conscience is imprinted on its space. This character will shape urban psychologies, and help create the dichotomy of either being inside or outside the city.

Some city locations feel almost alive. They seem to transmit meaning, and possibly even intent through their spatial arrangements. A presence can be imagined, like a guardian spirit; in fact, the belief that spirits protected, guided, and helped build settlements is an ancient one – the Romans called it *genius loci*. In modern spatial theory, it's a term used for the spirit of a place, consisting of its dominant qualities and the emotional experience it offers. That spirit can define a city's theme and atmosphere – or, in *Silent Hill's* case, it can be a literal spirit that fills every building and alleyway with horror and dread.



▲ Karnaca, the metropolis featured in *Dishonored 2*, was more than beautiful. It was memorable thanks to its distinct physiognomy.

From a less metaphysical perspective, the aspects of a city's character can, up to a point, be broken down and enumerated. These aspects include social and private life, recognisable patterns, climate, lighting, distinct spatial organisations, planning decisions, architecture, densities, the shape of urban blocks, or even the average height of buildings. Details such as the characteristic shapes of doors or roofs can also create character, as can a city's location – especially if it's something memorably extreme like, say, an isolated island.

CHARACTER BUILDING

To create civic character, we have to examine what people consider characteristic – what they recognise and remember. In games, we can test whether our assumptions were correct via playtesting, but before we reach this point, an initial, at least modestly intriguing version of our settlements needs to be made.

To craft it, we can turn to real life and see what works; we can examine real-world urban environments in search of strong local character. The Pantheon and its environs in Rome, with its aeons of history and majestic yet human scale, is one such place. New York, with its skyscrapers, Central Park, Statue of Liberty, pastrami sandwich stalls, packed streets, and bridges, is another. Then there's New Orleans, whose identity is focused on the French Quarter with its French Colonial architecture, Mardi Gras celebrations, and excellent music. Deciding what precisely makes Paris memorable is more difficult, but everything from its fashion, museums, and cafés to the continuous façades, surviving medieval roads, cabarets, and Eiffel Tower all contribute to its character.

The Eiffel Tower, in particular, with its defining silhouette, acts as a kind of metropolitan trademark, not unlike New York's famous skyline. A characteristic silhouette can function as a city's

symbol, and it's well worth coming up with one for your city. As for the physical attributes that can set something apart, I'd suggest looking into archetypes, rhythms, styles, clear borders, and a clear spatial logic.

Constructing character for imaginary cities is a synthesis of all these elements, mixed with variety, coherence, complexity, and a sense of society and history. Furthermore, it really helps to make things easy to grasp and notice, by designing obvious hierarchies – think of the ringed kingdom of Gondor in J.R.R. Tolkien's work – or using recurring elements, such as the spires in *Bloodborne*. If your city is going to be presented

mostly from above (via a map, for example), emphasis should be placed on its overall plan, which could incorporate common yet interesting shapes. A circular, linear, or star-shaped town always looks distinctive.

To help show off our city's character, we should take great care when designing the player's paths through its streets, while also making sure to tie in its civic aspects to a central theme such as vibrancy, sorrow, and serenity. Games like *Thief* demanded that players paid close attention to their surroundings, whereas *Dark Souls* or *Bloodborne* forced them to revisit the same spaces after each death, which ensured that players noticed important details.

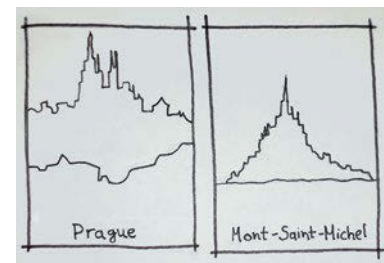
These are just a few ways video games can instil the sense of a city's character; by concentrating on a few themes, and retaining a sense of clarity and continuity, these ideas can be applied to games of almost any genre. ☺

“Rules can help us build cities our players will want to visit”

An Exercise

Make a list of your favourite video game cities. Pick the one you'd describe as the most memorable and unique; the one whose character left a lasting impression on you. Now revisit this city, carefully explore its environments, and make sure to write down the elements that you believe were crucial in crafting its character. Then do the same thing with your favourite real-world city: distil its spirit and character. Compare the two, and see what differences – and similarities – you can find.

▼ The easily distinguishable images of Prague's and Mont Saint-Michel's skyline silhouettes.



The power of external feedback

When it comes to game development, getting feedback from players is vital for success



AUTHOR
REID SCHNEIDER

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

With more and more people playing games, the quality bar continues to rise. This is a good thing, as competition makes us all better. But the challenge we all face is how we, as developers, can build products that delight and entertain rather than confuse and obfuscate. There have been countless examples of ideas that sound great on paper, or in a PowerPoint presentation, that when brought to life in a game just don't work at all. So how do we ensure that, once we do hit on that 'gem' of an idea, it actually resonates with people? There's only one real answer. It's simple, and yet it can be a painful process to actually go through: external testing, and getting critical feedback.

When I worked at Ubisoft a few years ago, I was in a meeting with CEO Yves Guillemot,

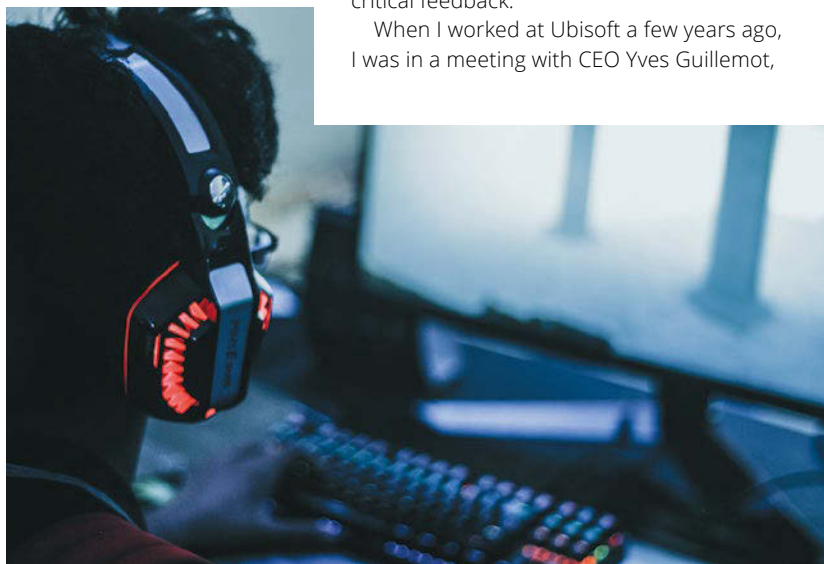
and he gave us some advice that has always stuck with me: "You will always love your game more than others do." There's a lot of wisdom in this statement. Guillemot recognised that as creators we're prone to 'fall in love' with our projects, and this often impairs our ability to absorb negative feedback. In short, we need to remember that what's clear to us may not be clear to the player. Or worse, things we think are cool actually don't resonate at all. I try to keep this in mind as our studio reaches the final stages of making *Journey to the Savage Planet*; we need to be vigilant about what's working, what's not working, and how we can fix it.

DIFFERENT TYPES OF FEEDBACK

In game development, we generally solicit three types of feedback: Kleenex testing, friends and family testing, and focus testing. Kleenex testing is aptly named after the tissues that you use once and throw away. This is typically done with other people on a development team: you show them a concept, feature, or an idea, get their immediate feedback, and then either implement it or don't. This is typically more useful as something is taking shape and you, as the developer, need to make sure that your idea isn't completely off-base. As an aside, I used to work with a design leader who had the motto, "I believe the idea is wrong until I'm proven otherwise." While this may sound a bit extreme, I do think it gets the right idea across.

Friends and family testing occurs when your game is a bit more 'fully cooked', and you can bring in non-developers to play for an extended

▼ Getting feedback from your target audience will help ensure you get responses that are pertinent to the game you're making.



period of time. This is really useful, as it can open your eyes to larger potential issues in your game, while still not costing that much. We've done this extensively at Typhoon, providing pizza and drinks for players, and putting their names in the credits as playtesters.

Something to keep in mind is that, since these people are friends and family, you may need to 'pull' data out of them more than you would expect. A trick I learned from listening to PayPal and LinkedIn co-founder Reid Hoffman is that you should ask testers what they don't like about your project, or what could be better. In short, you need to solicit that criticism, as people may not want to hurt your feelings.

The final type of feedback we use in games is focus testing, which is generally more clinical in nature. It's typically done at a 'playtest lab' where players will each have their own stations, and the developers will be required to lurk behind a two-way mirror where they can't 'tamper' with the group.

Typically, an external agency is contracted, and they'll bring in players who fill certain demographics, or play styles. For example, on *Journey to the Savage Planet*, we looked for players who were into adventure games like *Far Cry* or *Metroid*. In other words, you want to make sure you have potential customers as the type of people testing your game. A player who's only into competitive *Fortnite* or *Call of Duty* probably won't be buying *Savage Planet*. We used a company in Montreal called Player Research for this, and they did an awesome job. Their feedback was invaluable in bringing the game to where it is today.

A PERSONAL EXAMPLE

While we were developing the first *Army of Two*, we were asked by the CEO if we could pull the ship date forward by four to six months, so the game could hit stores in an optimal quarter for financials. We were all still new to EA, so we took on the challenge. In retrospect, this was the worst thing we could have done, for two reasons. First, you're only as good as your last game; and second, Hofstadter's law hit us squarely in the face. This is the law that says things *always* take longer than you expect, especially in programming.



▲ Tight deadlines left little time for focus testing on *Army of Two*, forcing some late changes ahead of its release.

As we were pushing hard towards a new, more aggressive ship date, one of the things that was quickly cut was external focus testing, and our ability to react (and make tangible changes) to the game. The ramifications of this were profound. As we started to finalise the game and send out review copies, we received external feedback that things we thought were clear were actually quite opaque. After some rapid (and late night) deliberations, we decided to hold the game and make some necessary tweaks and

improvements. Ultimately, this caused a lot of unnecessary stress, but fortunately, the game would go on to exceed sales expectations when it finally shipped. We were also fortunate to work on a

sequel, but after that second game, the core team disbanded. EA produced a final game in the series, but it had weak sales and even worse reviews.

BEST MEDICINE

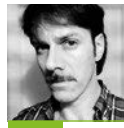
Video games, unlike film and TV, are a non-linear medium – once a player starts a game, we have no idea what he or she will do. Today's games offer more choice to players than ever before, and so the onus is on us as developers to find new ways to entertain and delight players. The goal is finding the right level of challenge for players without frustrating them – and the only way to find the answers we need is through external testing and feedback. There are no magic bullets – we just need to collectively take our medicine and grind through it. But keep in mind there's a light at the end of the tunnel. There's no better feeling than when someone is telling you about how much they enjoyed playing your game, and how it made them smile. 🙌



▲ Playtesting was a key part of Typhoon's development on its first game, *Journey to the Savage Planet*.

Latency: what it is, and how to minimise it

Understanding latency and optimising for it can make the difference between a great game and a disorienting one, David writes



AUTHOR
DAVID VENTURA

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Video games are built around feedback loops: the player observes the field, makes an informed judgement, and acts. The field changes directly and indirectly, based on the player's actions, and the loop begins again. For some games, like chess, this loop could be minutes or even days long, depending on how long the other player takes to make a move. But for a large majority of action, rhythm, and shooting games, the success or failure of this loop can come down to a handful

of milliseconds. For these types of games, minimising latency, the systematic delay within a system of signals, is crucial.

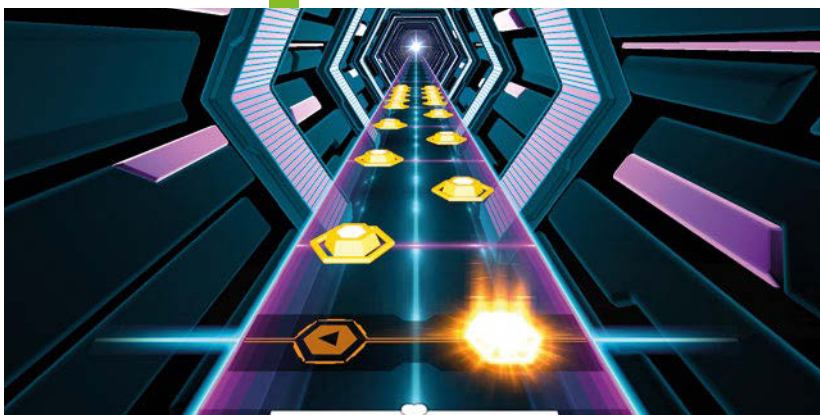
Let's nail down a few of the key terms before we tackle resolving latency.

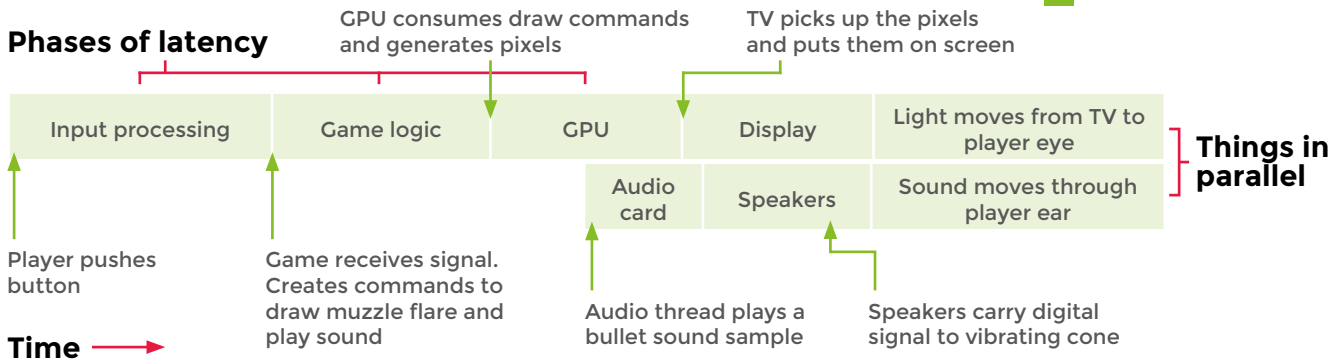
Frame rate is the frequency at which a signal is processed. In games, this is often directly tied to how many times a second the screen is updated (30, 60, or even more in performance-sensitive games). The frame rate is dependent on the display device and the processing speed of the application running. When we refer to a single frame, that represents one update of the game. This may be a single cycle of visual rendering, or a cycle of game logic processing (coincidentally, these two usually work in parallel on modern multi-threaded devices).

Visual latency is directly related to frame rate, and is the time it takes for a frame of graphics to make it onto the screen. Game engine performance and display types have a big impact on this.

Aural latency is the time it takes for audio to reach the player's ears via headphones or speakers. It may come from a hardware

▼ Some of the tapping minigames in *Hexagroove* require 115ms of precision to pull off – seven frames at 60fps!





buffer size, audio driver, AV receiver, or even something at the beginning of the chain: the path through various audio effects the application is running (such as delay or reverb). Sound through air itself is slow and can generate up to 3ms of latency per metre from speakers to sofa.

Input latency is the time it takes for a signal from the player to be processed. This could be a touchscreen tap or a button press on a controller. It is often a hardware and software kernel-level constraint.

A signal round trip is the path, and all the pieces of latency along the way, that fill out the technical side of the player feedback loop. The most common case is the user pressing a button, the game processing it and changing the graphics and sound in some way (for example, a muzzle flash when the player fires a weapon). The light of the flash and the sound of the gun must make their way to the screen and speakers, respectively, at what the user perceives as the same time, or the lack of realism causes the brain's disorientation sensors to kick in.

The key with all of these concepts is that they should be synchronised as much as possible to how humans perceive reality, or the entire experience degrades and feels 'laggy'.

DELAYS ALL DOWN THE LINE

Latency is present in both the hardware and software layers of the player experience. Each component of the player feedback loop bears some, and taken together, we have the worst-case scenario for maximum latency. In hardware, there is latency in the input device. In general, wireless input is slower than tethered controllers. Touchscreens can be

especially problematic, as each maker has a different approach to buffering and processing the input. The same goes for audio, as not only the hardware driver but the software driver may also have a substantially large buffer size. These complications have traditionally made developing performant applications for Android much more difficult than iOS. The refresh rate of the display device is also a factor. Beyond the hardware and kernel/OS layers, the game engine may be configured with several frames of buffering to smooth out visual hitches for graphically intense games.

Total system latency can adversely affect the game experience in a number of ways. Delayed processing of player input can mean the difference between winning and losing a fighting game. In immersive applications like VR, having a low frame rate can induce nausea, otherwise known as 'VR sickness', dramatically reducing the appeal for a large number of players. In rhythm games, when the latency between the graphics, input, and sound is not calibrated properly, players are removed

“The success or failure of this loop can come down to a handful of milliseconds”

^ All the pieces of latency building up in a signal round trip.

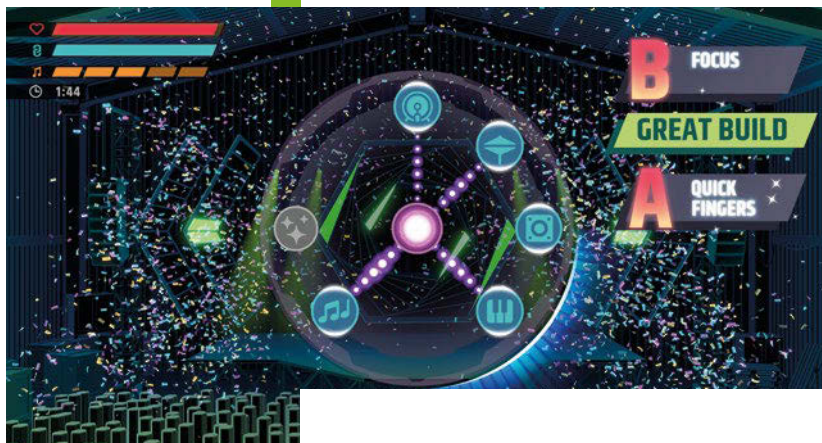


< Frame rates have been crucial in competition gaming for more than 25 years, whether it's the original Quake (left) or Quake III Arena (above).



Toolbox

Latency: what it is, and how to minimise it



^ All animations, game logic, and particle triggers are driven by a musical clock in *Hexagroove*.

TESTING LATENCY

To get a feel for what a player experiences on a low- versus high-latency game, try playing *Quake* with a frame rate cap of 15, 30, and 60fps respectively, and see how much better the higher frame rate setup feels (and if you play any better as a result).

from the experience of the music, and aside from making the game exceedingly difficult, it also leaves the game feeling sloppy, imprecise, and 'loose'. So now we know the myriad ways latency can ruin an entertainment experience, how can we combat it?

DOWN TO THE METAL

For hardware and OS designers, it's key that there's no more buffering than absolutely necessary, and also that threads are given appropriate priority to do their tasks. All modern devices have multiple cores for processing data, so it's important that one is given top priority, specifically for a task like audio processing, in what's known as a real-time thread. The audio thread should be guaranteed to not be interrupted by any other process, and have a fairly consistent interval in which it calls to the application requesting processed audio to send to the output hardware. This kind of priority requires that CPU throttling does not occur, which in turn may often result in poor battery performance for applications that do not need it, so aside from game consoles, few devices support this level of resource dedication.

Audio hardware buffer size should also be as small as possible – ideally 256 samples or less – so that changes to the audio in terms of effects and playback happen quickly. Similar requirements exist for input processing of touch-panel devices, though lower latency setups in this area also result in higher-cost components and increased energy consumption. For VR and other graphically immersive experiences, display refresh rates of twice the normal amount (often 90Hz or 120Hz), are critical, so each eye receives its own perspective at a smooth 45–60fps.

“We can begin by reducing audio-visual buffering to a minimum”

As software designers, there are even more opportunities for building a low-latency feedback loop, virtually all of which are independent of concerns like energy consumption. Starting with a low-latency design from the beginning can save a lot of pain later in your game project.

LEAN, MEAN, BUFFER-FREE

At the system level, we can begin with reducing audio-visual buffering to a minimum. Engines like Unity and Unreal have options for the number of frames that are queued up before rendering. You should ideally have a single frame setup where a software renderer thread composes the draw and render state commands on the first frame, and then the GPU processes them immediately, so they appear on the screen a single screen refresh later. If the game's running at 60fps, then this means there's only 16.7ms from the time the game draws the effect and the graphics driver presents it for display. Audio buffering should also be kept to a minimum, and any signal processing must take less than the amount of time it takes for a single

frame to be drawn, such that a continuous stream of sound can be sent to the speakers at the same time.

Unfortunately, display and audio hardware often has a unique amount of latency in each user's home gaming setup. To account for this, we must offer some sort of latency calibration and compensation that the user may run on a new setup. This shifts the graphics and audio in time, such that the two outputs are presented simultaneously, regardless of separate latencies in each layer. Unfortunately, some AV systems aren't built with gaming in mind, so even with latency compensation, there can be substantial lag that the system can't resolve. This is why handheld systems and pro gaming setups are preferred for reaction-critical games.

ONE CLOCK TO RULE THEM ALL

In addition to engine and game logic level considerations, we can use a number of features and modifications to create a tighter experience. A Nintendo Switch game I developed, *Hexagroove: Tactical DJ*, is a good example. It has you playing as a DJ and composing music for a virtual crowd, so it's important that sound

effects are played in time with the music, accentuating beats and transitions that drive the rhythm. So we pre-cue many of the sound effects and transitions in an audio sequencer, which runs in musical time. This sequencer is so important, in fact, that we use it to drive every aspect of the game: animations, game events, player scoring, and sound effects are all driven by a master music-based clock. This ensures that all the sounds come in exactly when they should, regardless of system latency. We measure the latency in both the sound to input and screen to input trips separately when the game begins.

This is then used to shift the music forward so it stays in sync with the graphics, while the time-sensitive minigame adjusts itself so the visual and musical state are as closely aligned as possible and the player can respond to the tapping events.

Even with this system in place, however, we found that having the Nintendo Switch docked and connected to a TV and hi-fi system produced so much output latency that calibration alone wasn't enough. In these cases, it may be necessary to loosen the temporal requirement on players, so that the challenge level on TV is comparable to the tighter feedback loop we get with the Switch and a pair of analogue headphones.

THE BEST EXPERIENCE

There are times, however, when all these adjustments still can't compensate for the parameters at hand.

A number of years ago, I worked on a mobile rhythm game, *Demons' Score*, and the sad reality was the Android devices just had too much system latency at the hardware and OS levels to make the game as tight and pleasurable as it was on iOS.

As a designer in these situations, you may need to ask yourself if the loss of quality is worth the platform, or maybe even consider a genre that doesn't require such stringent constraints, like a turn-based strategy or puzzle game.

The takeaway is to look at your core game and feedback loops and make sure you can deliver an experience of sufficient quality for the platforms you're targeting. It's better to know this in pre-production, before investing a lot of time and money in your baby.

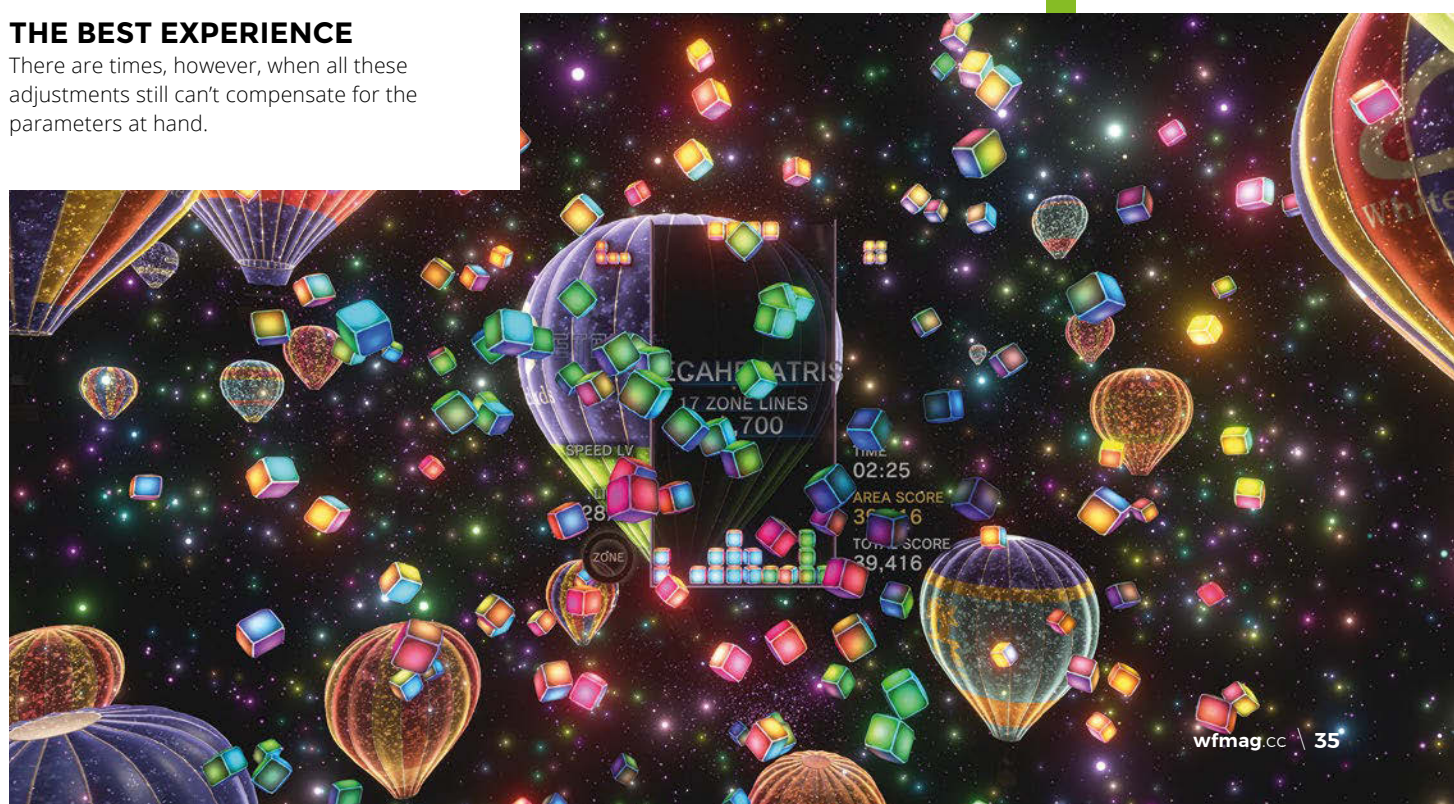
So there we have it: we've looked at the concept of latency in games, and specifically at what layers it works its way into in a game's player feedback loop. Some of the factors, like thread priority and hardware buffer sizes, are out of the game designer's hands.

Others, like engine choice, core game loop setup, and design considerations, can provide a lot of leeway. If they're approached early in the development, this can help ensure a tight experience that puts the challenge directly in the player's hands, eyes, and ears. 🎮



▲ *Demons' Score* was released for iOS and Android, though the high-performance touchscreen and short audio signal path made the iPhone version feel much crisper.

▼ *Tetris Effect* for PlayStation VR runs at 60fps to produce its amazing, particle-based visuals.





▲ Gaining inspiration from external sources allowed us to develop the concept of the diorama. This allowed us to blend the 2D and 3D space while also taking advantage of VR's interactivity.



AUTHOR
JACK BENNETT

Co-founder, producer, and designer at Odd Bug Studio. Previously worked on *The Lost Bear* for PSVR and Oculus Rift, currently working on *Tails of Iron*. @Jack_Bennett

Designing without direct inspiration

When it comes to creating new play experiences, it's useful to look beyond the realm of video games for ideas

As a developer, a lot of your inspiration comes from the experience you've had or the emotions you felt when playing other people's games. Inspiration doesn't mean duplicating whole scenes or mechanics, but rather taking elements you like and redesigning them to fit the core experience and emotions you want to create in your own game. This spark of inspiration is vital to innovation, and it's what keeps many older genres still relevant today. The problem is, what do you do when that direct inspiration isn't available to you?

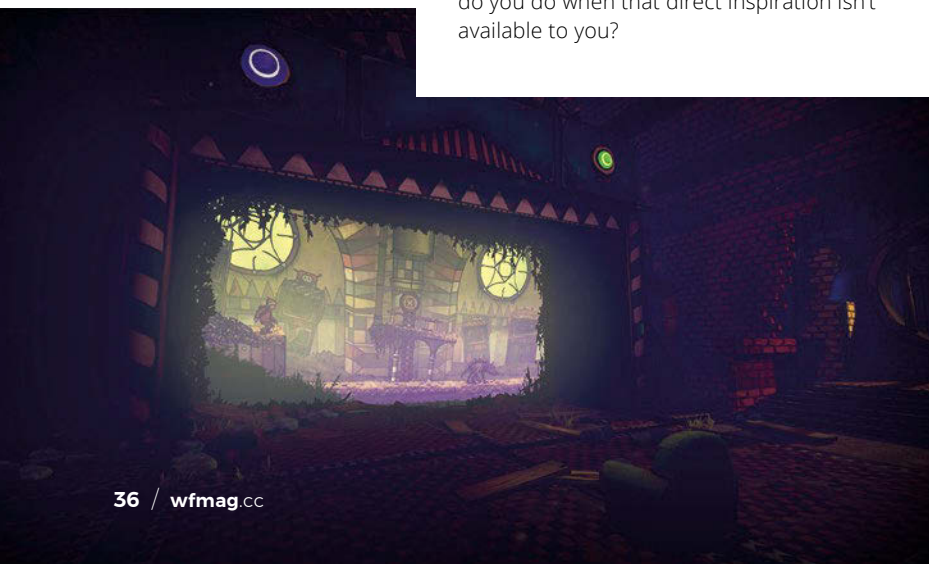
This was the problem our team faced when developing *The Lost Bear* for PSVR and Oculus Rift. At the time, VR was a fairly new platform, and combining it with any form of 2D gameplay – let alone a textless cinematic platformer – simply hadn't been done yet. This left the team in the unique position of knowing the core experience and emotion we wanted to create in the 2D side of the game, but with no idea of how to marry this to the unique interactivity that VR allows.

OUTSIDE OF GAMES

The obvious solution to a lack of direct inspiration is to look further afield than the medium of games. This was something the team had already been doing with the story-driven, 2D side of the game, so it made sense to look at different forms of interactivity in other art forms. Paintings, books, and movies all provided inspiration, but none of them contained – and could therefore provide us with examples of – the level of interactivity that VR allows. Widening our inspirational net did, however, send us down an enlightening path.

Theatrical plays – including Eastern European puppetry and Punch and Judy-style shows – taught us how a 'static scene' could tell a heartfelt

▼ The diorama allowed us to change the play space around the player as the 2D game progressed, which fed into the experience we wanted to create.



story while also allowing the audience to interact with the performance. It taught us how 'breaking the fourth wall' and audience interaction allowed viewers to become more immersed in the performance. In addition, this form of interaction with creepy dolls and unusual characters fed back into the fairytale-like, storybook experience we wanted to create. This was the key when looking for new sources of inspiration; they all had to feed back into the core emotions and experience we wanted to create. This research led directly to us creating our own 'theatre stage' in which the player is able to interact with the static scene, even though they're not actually playing a direct part in the unfolding story that unfurls on it.

TRY AND TRY AGAIN

Iterative design was another way we dealt with a lack of direct inspiration. The ability to quickly implement an idea and then iterate on it based on the team's feedback is the core of any successful studio. During the development of *The Lost Bear*, we used this process for the creation of the game's torch mechanic.

This started with the player controlling a torch to guide glow bugs around a 3D space.

While the designer spent a lot of time on it and the idea worked, it was a difficult mechanic to explain to players, and conflicted with our core principle of no in-game text.

On the other hand, we liked the childlike sense of exploration and also the fear of the unknown that shining a torch into the darkness created. By iterating on the original design – and combining it with our inspiration from Punch and Judy-style shows – we reworked the mechanic so that the torch could shine directly into the 2D scene. Iteration, based on discussions with the team as a whole, led to a mechanic that was much easier to explain, and that fed directly into our core emotions and experience we wanted to present.

GET TESTY

Another issue with our lack of direct inspiration was not knowing if a mechanic would translate well from designer to player, especially in a game with no text-based instructions. One specific issue we faced was explaining to the player that they needed to interact with two separate play spaces: one being the 2D scene on the stage, and the other the 3D space around them. It's not



a standard experience for the user – one they might have learned from years of playing similar games – so we couldn't rely on them just being able to pick it up without any guidance.

The solution we found was through the use of audio cues, which would grab the player's attention and move them from 2D to

3D spaces. This solution, however, required significant playtesting to make sure the audio was easily distinguishable and that the direction it came from

was especially clear. Through the combination of in-depth, continuous playtesting and iterative design, we were able to create a system that allowed us to teach the player how to smoothly transition between the two play spaces – and all without any on-screen text.

With so many amazing games being released on an almost daily basis, dealing with a lack of direct inspiration isn't something that occurs often. But when it does happen, and you're sat in front of your monitor trying to will something meaningful into existence, it's important to remember to go back to basics and to trust the process.

Start by knowing what type of experience you want to make, and the emotions you want your players to experience. If you stick to those core tenets throughout the development process, and as long as you seek inspiration from any source, iterate on the ideas that develop from those sources, and thoroughly test all of your developed ideas on a regular basis, your design is sure to be a winner – and you won't even need to look at any other games for inspiration. 🎮

▲ Using the DS4 as a laser pointer for the player's slingshot is a perfect example of how the iterative design process allowed us to create a simple mechanic that needed no text to explain it.

▼ Another source of inspiration for us was children's toys. This worked well with teasing the player into interacting with the different devices while also avoiding the use of text.



Going from solo dev to indie team

Tired of working alone? Oliver has some handy tips for finding collaborators



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OLIVER WILLIAMS

Oliver Williams is an AI researcher and founder of Tannhäuser Games.
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Being a solo developer means a long development process, especially if you have a day job. Making a game is a complex process, and when it's just you working by yourself, it can feel like a long and lonely journey. It can make sense, then, to get some help along the way, either as a partner for the entire project, or just some freelance support for a specific task.

With a full-time job and just a few hours a week to spare, this was the position that I found myself in. After working on a game for nearly a year with just one example level to show for it, I needed help to speed things up.

Unsure of the best way to get others involved in my project, I decided to get advice from people who'd already done it. I attended game events and spoke with experienced developers, and they helped me answer two important questions: what did I need help with, and where

could I find people to help me? Let's look at these in turn.

WHAT EXACTLY DO I NEED HELP WITH?

Being a solo developer means you have to be a bit of an all-rounder, but the advantage of working as a team is that you can focus on your strengths, and get help with the things you're not so experienced at (or don't enjoy as much). It's important to think about which aspects of game development you need help with, as these skills should determine the person you get to join your project. It will also help them understand what they'll be doing. Once you've decided on the skills you're looking for, you can start looking for someone who fits the description.

WHERE DO I FIND THE PEOPLE TO HELP ME?

Probably the most important factor determining the type of help you get is how much money you have available. If you have money to spend, you can hire people; if not, you may have to get creative. Here are some of your options:

- **Get your friends involved.** Friends could be a good starting point when building a team, as you already know and spend time with them. To work together successfully, it's important that everyone knows their role and is comfortable with it, and the share of any potential profits is agreed before you start. This option won't be practical for everyone, however, as your friends might not have the skills or free time required.

✓ Solo game production can mean a long (and often lonely) development process.





▲ *Shadowgun Legends* won the Most Beautiful Game at the 2019 Google Play Awards.

- **Find like-minded people at meet-ups and events.** There are events and places specifically aimed at indie game developers, where you can meet people who share your interests and might want to help your project. Meet-ups are a great place to mix with other indie developers. I attended a number of indie game meet-ups, some specifically for Unity developers (the game engine I'm using). There were lots of people eager to advise and help with my project, and others who told me they'd even founded studios with people they met at similar events. More formal events are games conferences and indie co-working studios (where game developers have a place to work and meet others). There are events all across the country, with details available on the web.

- **Hire freelancers.** There are a few ways you can do this, but the safest way is to use a freelancing platform like Upwork or Toptal. These usually have some form of quality check on the freelancers – for example, ratings from previous employers – and they have trusted payment systems. The advantage of freelancing platforms is that you can find someone to help you for just a specific task, such as designing sprites or a 3D model, or have them work on a longer-term basis, so the help can fit your budget.

After you've found the right people to join you, there are some important things to consider so that everything goes smoothly.

CONSIDERATIONS

- **Money.** Hiring people costs money, and the more work people do, the higher the cost. However, there are alternatives, such as profit sharing. This is where people work together for free in return for a percentage of the future profits the game will hopefully make. You will, of course, need to convince your potential co-workers that the game will make a profit.

- **Your intellectual property.** The game you're making is your creation, and your intellectual property. It's important that it's protected so that you can enjoy the rewards of all your effort and time. The law sets out the rights that protect your intellectual property – you can find out more about the subject at wfmag.cc/ip-clones.

- **Contracts.** A way to protect your intellectual property, and to shield you from possible disputes about money, is to have a contract with your co-workers. Example contracts specifically for game development can be found online. The UK Interactive Entertainment trade body has useful information and sample contracts – ukie.org.uk/contracts.

As I found out from speaking to other indie game developers, there are all kinds of ways you can get other people involved in the production of your game. MADFINGER Games co-founder Tomáš Nawar, for example, recently told me that he and four friends set the studio up to make their debut mobile game, *15 Blocks Puzzle*. They then went on to make twelve further releases,

including *Samurai: Way of the Warrior*, and survival horror shooter, *Dead Trigger*. MADFINGER's formation and growth was informal, Nawar told

me; for him, it was important to find like-minded people as he expanded his team; developers who were similarly interested in making hectic mobile action games. Above all, Nawar agrees that going to events is a great way to open other doors: one conference he went to a couple of years ago led to a meeting with Nvidia, which is now helping out with MADFINGER's latest game, *Shadowgun War Games*.

Building a team from scratch isn't an easy task – and there's certainly no one-size-fits-all solution – but by considering the needs of your fledgling studio, and the kinds of skills you need to make your game, you'll have the basis for finding the people you need. 🗣️

“After working on a game for nearly a year, I needed help to speed things up”

Meet-ups and events

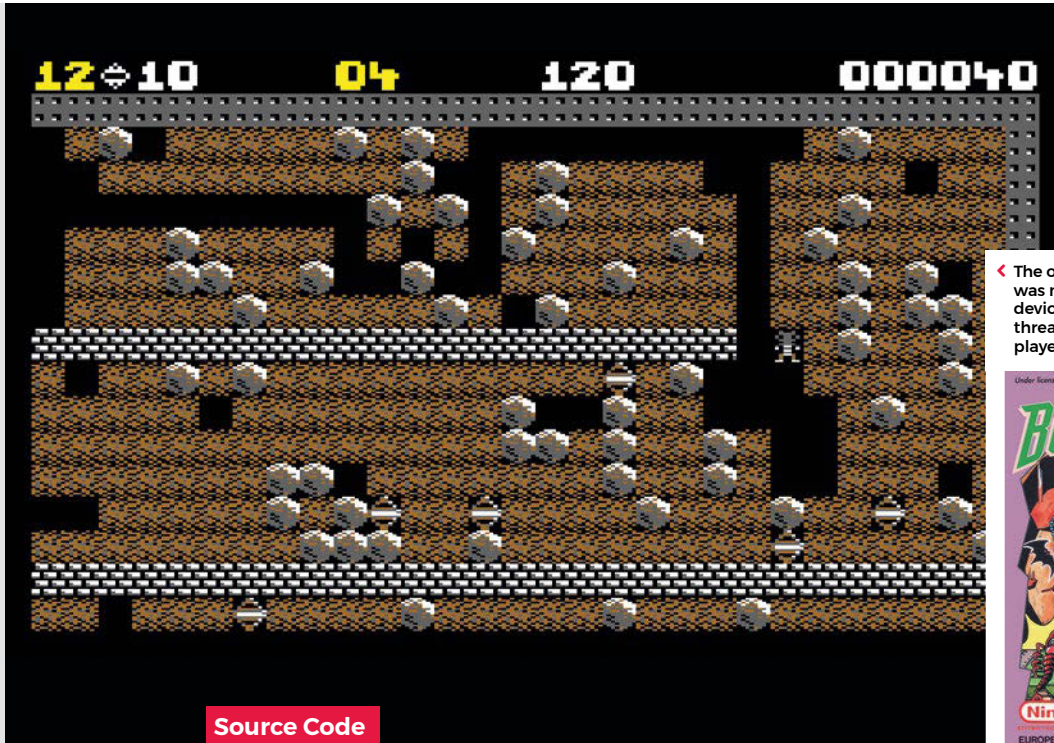
The UK Games Fund (ukgamesfund.com) holds events at certain times of the year, and is also a great source of government support and funding for indie game developers. Meanwhile, Ukie (ukie.org.uk) holds a regularly updated list of UK games industry events, and you can find out about development meet-ups in your area at meetup.com/topics/gamedev.



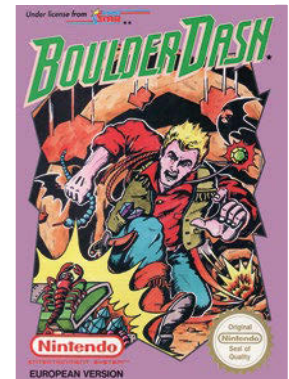
▲ Founded in 2008, the Czech Republic's MADFINGER Games was started by four friends, and now has over 100 staff.

▼ MADFINGER recently celebrated its anniversary, and another significant milestone: 250 million downloads worldwide.





< The original *Boulder Dash* was marked out by some devious level design, which threatened to squash the player at every turn.



Source Code

Code a **Boulder Dash** mining game



AUTHOR
MARK VANSTONE

Dig through the caves to find gems – but watch out for falling boulders

Boulder Dash first appeared in 1984 for the Commodore 64, Apple II, and the Atari 400/800. It featured an energetic gem collector called Rockford

who, thanks to some rather low-resolution graphics, looked a bit like an alien. His mission was to tunnel his way through a series of caves to find gems while avoiding falling rocks dislodged by his digging. Deadly creatures also inhabited the caves which, if destroyed by dropping rocks on them, turned into gems for Rockford to collect.

The ingenious level designs were what made *Boulder Dash* so addictive. Gems had to be collected within a time limit to unlock the exit, but some were positioned in places that would need planning to get to, often using the physics of falling boulders to block or clear areas. Of course, the puzzles got increasingly tough as the levels progressed.

Written by Peter Liepa and Chris Gray, *Boulder Dash* was published by First Star

Software, which still puts out new versions of the game to this day. Due to its original success, *Boulder Dash* was ported to all kinds of platforms, and the years since have seen no fewer than 20 new iterations of *Boulder Dash*, and a fair few clones, too.

We're going to have a look at the boulder physics aspect of the game, and make a simple level where Rockford can dig out some gems and hopefully not get flattened under an avalanche of rocks. Writing our code in Pygame Zero, we'll automatically create an 800 by 600-size window to work with. We can make our game screen by defining a two-dimensional list, which, in this case, we will fill with soil squares and randomly position the rocks and gems. Each location in the list matrix will have a name: either **wall** for the outside boundary, **soil** for the diggable stuff, **rock** for a round, moveable boulder, **gem** for a collectable item, and finally, **rockford** to symbolise our hero. We can also define an

Actor for Rockford, as this will make things like switching images and tracking other properties easier.

Our **draw()** function is just a nested loop to iterate through the list matrix and blit to the screen whatever is indicated in each square. The Rockford Actor is then drawn over the top. We can also keep a count of how many gems have been collected and provide a congratulatory message if all of them are found. In the **update()** function, there are only two things we really need to worry about: the first being to check for keypresses from the player and move Rockford accordingly, and the second to check rocks to see if they need to move.

Rockford is quite easy to test for movement, as he can only move onto an empty square – a soil square or a gem square. It's also possible for him to push a boulder if there's an empty space on the other side. For the boulders, we need to first test if there's an empty space below it, and



Tumbling rocks in Python

Here's Mark's code snippet, which creates some falling *Boulder Dash* rocks – and an intrepid explorer – 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

```
import random

rockford = Actor('rockford-1', center=(60, 100))
gameState = count = 0
items = [[] for _ in range(14)]
gems = collected = 0
for r in range(0, 14):
    for c in range(0, 20):
        itype = "soil"
        if(r == 0 or r == 13 or c == 0 or c == 19): itype = "wall"
        elif random.randint(0, 4) == 1: itype = "rock"
        elif random.randint(0, 20) == 1:
            itype = "gem"
            gems += 1
        items[r].append(itype)
items[1][1] = "rockford"

def draw():
    screen.fill((0,0,0))
    if gems == collected: infoText("YOU COLLECTED ALL THE GEMS!")
    else: infoText("GEMS : "+ str(collected))
    for r in range(0, 14):
        for c in range(0, 20):
            if items[r][c] != "" and items[r][c] != "rockford":
                screen.blit(items[r][c], ((c*40), 40+(r*40)))
    if gameState == 0 or (gameState == 1 and count%4 == 0):
        rockford.draw()

def update():
    global count
    mx = my = 0
    if count%10 == 0:
        for r in range(13, -1, -1):
            for c in range(19, -1, -1):
                if items[r][c] == "rockford":
                    if keyboard.left: mx = -1
                    if keyboard.right: mx = 1
```

```
        if keyboard.up: my = -1
        if keyboard.down: my = 1
        if items[r][c] == "rock": testRock(r,c)
        rockford.image = "rockford"+str(mx)
        if gameState == 0: moveRockford(mx,my)
        count += 1

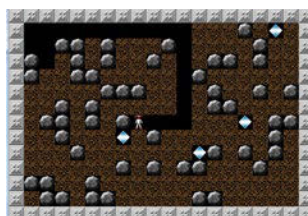
def infoText(t):
    screen.draw.text(t, center = (400, 20), owidth=0.5,
        ocolor=(255,255,255), color=(255,0,255), fontsize=40)

def moveRockford(x,y):
    global collected
    rx, ry = int((rockford.x-20)/40), int((rockford.y-40)/40)
    if items[ry+y][rx+x] != "rock" and items[ry+y][rx+x] != "wall":
        if items[ry+y][rx+x] == "gem": collected +=1
        items[ry][rx], items[ry+y][rx+x] = "", "rockford"
        rockford.pos = (rockford.x + (x*40), rockford.y + (y*40))
        if items[ry+y][rx+x] == "rock" and y == 0:
            if items[ry][rx+(x*2)] == "":
                items[ry][rx], items[ry][rx+(x*2)], items[ry+y][rx+x] = "", "rock", "rockford"
                rockford.x += x*40

def testRock(r,c):
    if items[r+1][c] == "":
        moveRock(r,c,r+1,c)
    elif items[r+1][c] == "rock" and items[r+1][c-1] == "" and items[r][c-1] == "":
        moveRock(r,c,r+1,c-1)
    elif items[r+1][c] == "rock" and items[r+1][c+1] == "" and items[r][c+1] == "":
        moveRock(r,c,r+1,c+1)

def moveRock(r1,c1,r2,c2):
    global gameState
    items[r1][c1], items[r2][c2] = "", items[r1][c1]
    if items[r2+1][c2] == "rockford": gameState = 1
```

if so, the boulder must move downwards. We also test to see if a boulder is on top of another boulder – if it is, the top boulder can roll off and down onto a space either to the left or the right of the one beneath. There's not much to add to this snippet of code to turn it into a playable game of *Boulder Dash*. See if you can add a timer, some monsters, and, of course, some puzzles for players to solve on each level. 🐹



^ Our homage to *Boulder Dash* running in Pygame Zero. Dig through the caves to find gems – while avoiding death from above.

BOTTOMS UP

An important thing to notice about the process of scanning through the list matrix to test for boulder movement is that we need to read the list from the bottom upwards; otherwise, because the boulders move downwards, we may end up testing a boulder multiple times if we test from the beginning to the end of the list. Similarly, if we read the list matrix from the top down, we may end up moving a boulder down and then when reading the next row, coming across the same one again, and moving it a second time.

Directory

Raise your profile with Ukie Hub Crawl

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GET INVOLVED

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

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 games 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 will focus on educating local businesses on how to raise the profile of their games business and games. This will consist 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 will feature a series of short, informative sessions from industry experts, and this will be followed by a games panel featuring companies from the local area. Content will change at each event, so make sure you check out all the events in your region.

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

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

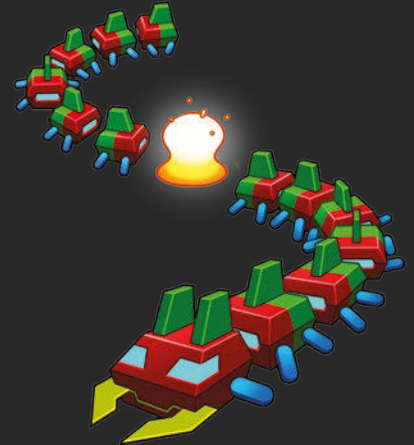
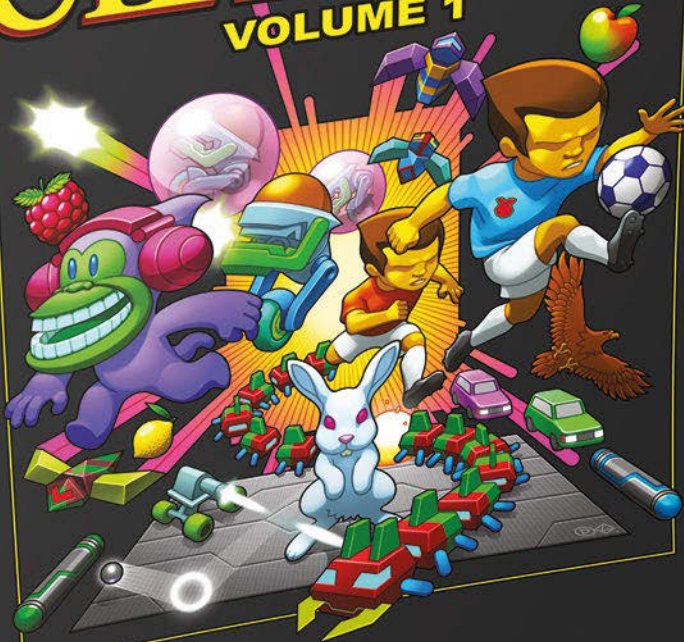
This is a free event open to anyone involved in the games industry. You'll find confirmed dates and locations in the table below, and more dates will be announced as the year progresses. You can keep up to date with Hub Crawl events in your area and more at ukie.org.uk/events-and-training.

Location	Date
Leamington Spa	31 January
Dundee	6 February
Brighton	12 February
Manchester	13 February
Cardiff	19 February
Bristol	27 February

► Raise your profile at this year's series of Ukie Hub Crawls, beginning in Leamington Spa on 31 January.



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GORRY DETAIL

LIFE AFTER CONKER'S BAD FUR DAY

Conker's Bad Fur Day designers **Christopher Seavor** and **Shawn Pile** talk about leaving Rare and the struggles of indie development

WRITTEN BY JACK YARWOOD

Conker's *Bad Fur Day* remains a bit of an oddity. A boozy, profanity-laden jog through gory parodies of *Saving Private Ryan* and *Bram Stoker's Dracula*, it's not exactly what you expect from the studio that made *Banjo-Kazooie*. It's no small wonder then, given its cult following, that fans have been clamouring for a sequel to the game for years. But, for Chris Seavor, the voice and brains of the foul-mouthed squirrel, those days are arguably in the past.

Having formed the independent studio Gory Detail with his friend and fellow Rare alumni Shawn Pile, he's now creating his own original games, such as the charming endless faller *Parashoot Stan* and the elaborate puzzle game, *The Unlikely Legend of Rusty Pup*. The studio is the culmination of a game development partnership that has lasted roughly 23 years, ever since Pile was placed into the same barn as Seavor and the *Killer Instinct* team at Rare. ▶





▲ Gory Detail in the flesh (left to right: Shawn Pile, Chris Seavor)

▼ Conker is less a reluctant hero, more just reluctant.



A CONKER SUCCESSOR

Seavor briefly teased the possibility of a *Conker* successor in the past and actually did some pre-production work on the project. However, pretty soon he realised the project's scope was much too large for the studio. He also worries about the expectations that people will place on the game, based on their nostalgia for the original *Conker*. He says: "The problem with a spiritual successor to *Conker* is a lot of people say they want it, but if we make it, they'll say, 'I thought you were doing *Conker 2*.' The biggest complaint about *Yooka-Laylee* was that it was a spiritual successor to *Banjo-Kazooie*. It's like, 'But that's what they set out to make!'"



▲ *Conker's Bad Fur Day* was published by THQ after Nintendo of Europe refused to publish the game in their region.

BAD FUR DAY

After completing work on the N64 fighting game *Killer Instinct Gold* in 1996, the *Killer Instinct* team moved onto a new project: a 3D platformer about a cute and adventurous squirrel named Conker. The project was developed under the name *Twelve Tales*, and was more of a 'run of the mill' mascot platformer, with cute characters and plenty of themed lands to explore. Part-way through *Twelve Tales*' development, however, the team grew disillusioned with its direction, feeling the project would play second fiddle to *Banjo-Kazooie*, which was being developed next door at the same time. That's when Seavor stepped in. It was his suggestion to transform the game from a platformer for children into a mature *South Park*-esque parody.

"We just tried to make the best game we could," says Seavor about the switch. "Rare was doing something similar with *Banjo-Kazooie*, and we wanted to separate ourselves from that. The idea that we were going to make something that 20 years later people are still talking about – that's incomprehensible."

Conker's Bad Fur Day caused a certain amount of controversy on its release for its sexual references, its frequent use of profanity, and excessive violence. One parent even told the

Los Angeles Times that Nintendo's decision to publish the game in North America was akin to "Disney releasing pornography." Nevertheless, it received extremely positive reviews from critics, and so, as a result, Rare gave Seavor free rein to develop his own ideas into potential prototypes. Some of these ideas included a story-driven racing game called *Arc Angel*, and an idea for a follow up to *Conker*, *Conker's Other Bad Day*.

**"RARE GAVE SEAVOR
FREE REIN TO
DEVELOP HIS
OWN IDEAS"**

"I didn't really take advantage of that [time]," says Seavor. "It's hindsight, isn't it? If I could go back and I knew what I know now, I would have gone, 'OK, let's do [*Conker 2*] and push for it.' I wanted to do something else. I had some other ideas I wanted to try. But now, from a business point of view, from a 'would-it-have-got-done' point of view, it would have definitely been the best bet."

LIVE AND RELOADED

None of Seavor's post-*Conker* projects made it far into development, however, and eventually, following Rare's acquisition by Microsoft, the idea surfaced to remake *Conker's Bad Fur Day* for the original Xbox. *Conker: Live and Reloaded* – or *Conker: Live and Uncut* as it was originally known – was pitched as a straight conversion,

but Seavor had bigger and more ambitious plans for the project than a simple port. "I knew exactly what I wanted to do with it," he says. "I just rebuilt the whole thing, and I used it as an opportunity

to do something I always wanted to do, which was to make a multiplayer combat game. It just seemed like the perfect opportunity."

"The original programmers all worked on the multiplayer," Pile adds. "So Chris Marlow and myself, who worked on *Conker's Bad Fur Day*, [both] worked on the multiplayer. We went in and smoothed out some of the rough edges and fixed some of the bugs that were introduced by





◀ *Conker: Live and Reloaded* boasted updated graphics and an online multiplayer mode that was available over Xbox Live. It still looks excellent.

▼ *Conker* underwent a bit of a redesign for *Live and Reloaded*, with a new hoodie and - finally - a pair of pants.



the conversion, but we didn't have an awful lot to do with it [beyond that]."

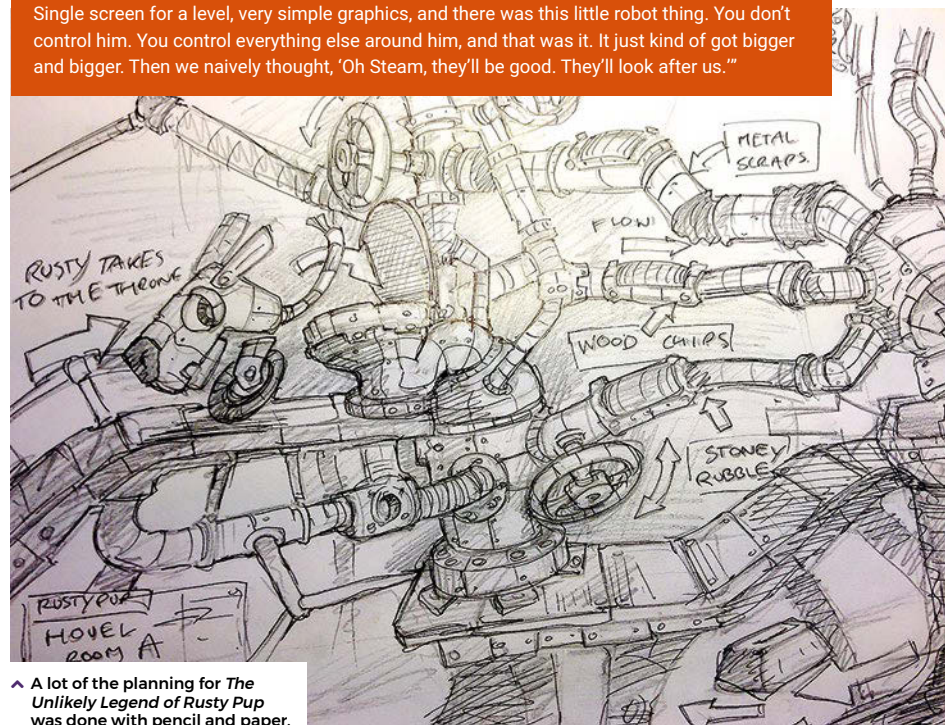
When it launched, *Conker: Live and Reloaded* received strong reviews, but fans of the original game were critical of a number of alterations made to the single-player campaign - not least the removal of certain swear words. Though Seavor and Pile understood these frustrations at the time, they still take exception to those who try to paint the remake as an unmitigated disaster. "They were looking for a reason to hate Microsoft," suggests Seavor. "There was this loyalty thing with Nintendo. Nothing good could happen with Microsoft. And the truth of the matter is, they got another *Conker* game, which I would say with pretty much 100% conviction would never have happened if we stayed with Nintendo. We couldn't win, could we?"

Following *Conker: Live and Reloaded*, Seavor started some preliminary work on a multiplayer *Conker* spin-off called *Conker: Gettin' Medieval*, before shifting focus again to start developing a potential *Perfect Dark* sequel called *Perfect Dark Core*. Work on the latter lasted for several months, but again, the project was shuttered, with Xbox's then-executive Peter Moore claiming it could be seen as a competitor to Microsoft's *Halo* series.

Seavor refers to the period that followed as the wilderness years. In that time, he grew increasingly frustrated with the direction Rare was taking as a company, and eventually decided to leave the studio in 2011. Says Pile: "Chris had enough and left, and then I was working on ➔

A LONG DEVELOPMENT

The Unlikely Legend of Rusty Pup is a real labour of love, with tons of attention to detail in both the art and level design. Originally, though, it was just going to be a simple puzzler for mobile, as Seavor recalls. "Rusty didn't have anywhere near the scope it ended up having. Originally, it was just a slightly more complicated version of what we did with *Stan*. Single screen for a level, very simple graphics, and there was this little robot thing. You don't control him. You control everything else around him, and that was it. It just kind of got bigger and bigger. Then we naively thought, 'Oh Steam, they'll be good. They'll look after us.'"



▲ A lot of the planning for *The Unlikely Legend of Rusty Pup* was done with pencil and paper.



▲ In *Parashoot Stan*, Stanley isn't alone in his battle against the Baron. He also has the help of a farting dog who will clear the screen of most obstacles.

▼ You can find brains on each level of *Rusty Pup*. They're found inside jars and need to be deposited in toilets before you reach the level's end.



sports games, which is about the furthest from what I wanted to work on. So, I did *Kinect Sports 1* and *2*, and then I had enough. Because at the time I was told we were going to churn out sports games for the next 50 years and it was just not something that I wanted to do."

GOING INDIE

After leaving Rare, Seavor immediately started up his own company, Gory Detail, in 2012. Pile joined not long after, and the two found themselves starting development on a small mobile project. That game was *Parashoot Stan*, about a young airship captain doing battle against an evil baron. Players controlled Stan by regulating his parachute with a tap of the finger, and tilting the screen in order to avoid deadly obstacles like floating mines and whirring propellers. *Parashoot Stan* released to largely average reviews from critics; for Seavor and Pile, though, it achieved what they needed it to: it established that they could both work remotely and finish the development of a game.

One of the major issues faced with *Parashoot Stan* was the problem of pricing. Seavor and Pile were unfamiliar with how the mobile market functioned, and found themselves competing

against the rise of free-to-play, which favoured more affluent and recognisable studios.

"We charged 69p for the game, and we had a system where you could basically buy all the upgrades that you would have to work for," Pile says. "What happened then was there was a big backlash against in-app purchases, so we took all that out. Then everything just turned to free-to-play, and we looked at that and thought, 'We can't make any money doing that.'"

"We're not that kind of business," Seavor adds. "[We're not interested in], 'Let's nickel and dime everything out of this,' or, 'Statistics say if you have this font or [that] font, you will make 0.1% more downloads.' It's like, 'What?' I'm a game designer and an artist, not a statistician and an accountant. It doesn't interest me. I'm still of the rather naive opinion that if you make a game and it's good enough, and there's somebody out there who wants to buy it, they'll buy it."

A DOG NAMED RUSTY

After *Parashoot Stan*, the studio's next project was *The Unlikely Legend of Rusty Pup*. The puzzler was initially planned to be similar in scope to Gory Detail's debut, with Seavor comparing early versions to the popular mobile game *Cut the Rope*. The original idea was that the game would be broken up into different stages, and each would give a star rating, depending on your success. The project grew and changed significantly over its development, however, and eventually shifted focus from iOS to PC. As a result, its scope also broadened, and development lasted much longer than anticipated.



◀ In *Rusty Pup*, you can place platforms down to cross chasms. Just don't expect them to last very long.



In *The Unlikely Legend of Rusty Pup*, players guide a wind-up dog (that'd be Rusty) through a treacherous sewer. Rather than directly controlling the character, though, players have to manipulate its surroundings, placing platforms to bridge gaps and pulling on light switches to attract Rusty's attention. The goal is to get Rusty to the end of the level, figuring out the correct path and how to overcome obstacles like dead ends, sheer drops, and perilous machinery.

"I'm a big fan of teaching people how to play by forcing them to make mistakes," says Seavor. "In *Rusty*, the first bit of any of the puzzles is usually a binary decision, and I'll try to make you do the wrong thing. But then, of course, the level splits and then it splits again."

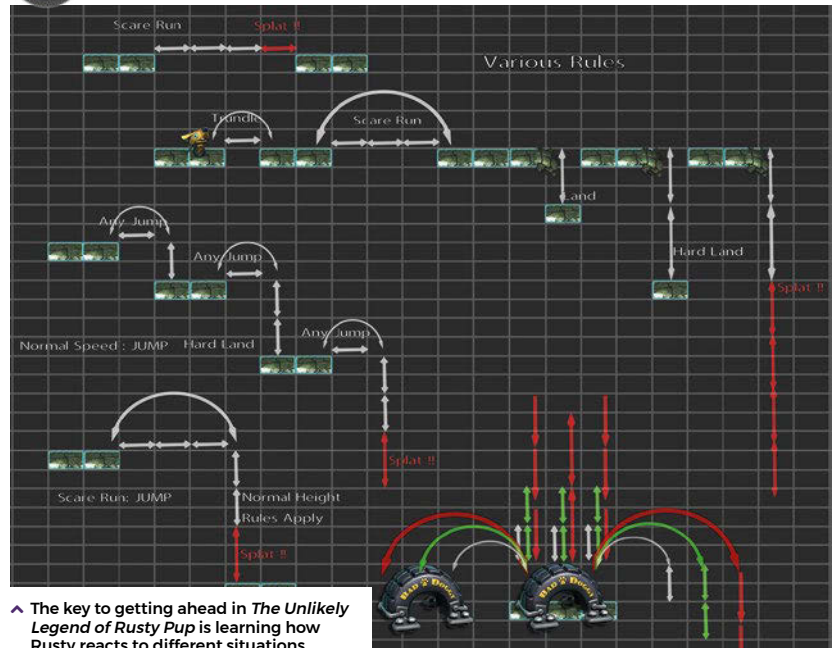
Completing a level in *Rusty Pup* is often a slow and involved process, but once you have a level figured out, the final run is a thing of beauty. It pulls together everything you've learned

"BECAUSE WE WORKED ON CONKER, WE KNOW HOW MUCH WORK IT IS... WE DID 1000 HOURS OVERTIME ON IT"

over the course of a level in a thrilling test of memory and dexterity. When *Rusty Pup* released on Steam back in 2018, press attention for the game was minimal. Pile estimates he sent over 200 codes to influencers and press, but received nothing in return, except a single remark from a publication telling him to get back in touch when a *Conker* successor was in the works.

One of the major issues was timing: the game released the same week as *Red Dead Redemption 2*, when most of the media attention was focused elsewhere. *Rusty Pup* was also a slow and methodical game, meaning it's possible some overworked journalists dismissed it before it had a chance to work its magic. "I'm trying to look for the angle to sell it," says Pile, "because at the end of the day, I look at what we've done and I think it's quite a special puzzle game, and it frustrates me that there's not enough people seeing it. I'm constantly looking for an angle on how you would get it out there."

Despite the lack of reviews, the response to the game was positive. The game garnered some dedicated fans, who've written lengthy emails



▲ The key to getting ahead in *The Unlikely Legend of Rusty Pup* is learning how Rusty reacts to different situations.

to Pile about their love for the plucky puzzler. The studio recently re-released the game on the App Store, too, which has since turned out to be the best-selling version yet.

As for what the studio's working on now, there are a few different options they're looking into – none of them *Conker*-related. They give a number of reasons for this, but the bottom line is the need to be realistic. A 3D platformer would require a huge financial investment and an expansion of the existing studio – something they're just not prepared to do at present.

"Because we worked on *Conker*, we know how much work it is," explains Pile. "People don't understand that people did 1000 hours overtime on *Conker*. We did three and a half years work in two and a half years. We know to make *Conker* again, we'd need more. You need more graphics. You'd need more programmers. You'd need more artists. You'd need more."

"We've had some significant offers of cash," Seavor adds. "But it's on their terms. And it's to make a specific game involving a certain squirrel. Immediately, I'm like 'Nope', because you lose all creative freedom at that point. And we know it's not going to work."

For now, Seavor and Pile seem content with making their own weird and wonderful creations together as Cory Detail – regardless of how difficult life as an indie can be. *The Unlikely Legend of Rusty Pup* is the latest example of that, showcasing a desire to subvert expectations, and make games that excite them above all else. 🐾

AGAINST THE CLOCK

In *The Unlikely Legend of Rusty Pup*, players are tasked with completing each level within a certain time limit. But Seavor maintains the game isn't something you necessarily have to speedrun. "Being aware of time is a false pressure," he says. "It's another trick you can do to get people to think they've got less time than they have. Because you can't judge time very well – you see 30 seconds and you say, 'Oh, I've got no time at all.'"





Developer Profile

Double Fine

Twenty years of pivoting potent positions

Double Fine wasn't a new studio by the time its first game, *Psychonauts*, actually released. The team had formed in 2000, headed up by Tim Schafer and other LucasArts alumni, with the psychic adventures of Raz slowly taking form from a discarded idea for a section focusing on a peyote trip from 1995's *Full Throttle*. Redrafted and reworked into a more family-friendly theme, the fully formed idea ended up in the lap of Ed Fries of Microsoft, who was looking

for games to establish the reputation of the company's new Xbox with. And the rest was history.

Convoluted, frustrating, and confusing history. *Psychonauts* was dropped from the Microsoft slate following Fries' departure from the company, and had to be saved from near-death by Majesco Entertainment. It can't have been the start Schafer and his team wanted, but the punches were rolled with dutifully and the game, removed of its exclusivity, was ported to other formats. After around four years of development, it released in 2005, and... promptly killed Majesco's enthusiasm for the video game market. Around 100,000 copies sold, the game reviewed well and was beloved by those who played it, but it was largely ignored for many years.

So five years in, one game out, and what could be called with no skimping on fairness 'a failure', Double Fine needed to do something else to survive. It needed to pivot.

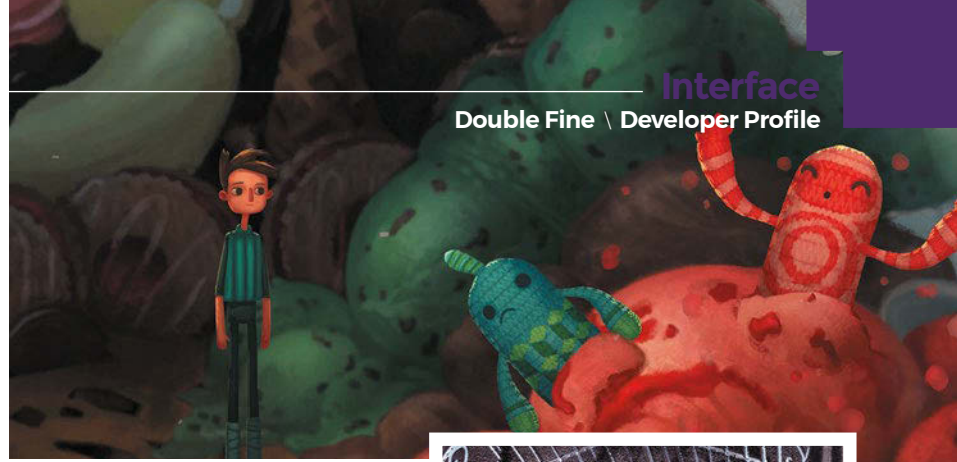
A safe bet would be a loud, violent action-adventure featuring an actual movie star in the main role and with the backing of a large publisher, right? Well, the world had other ideas for *Brütal Legend* and its nonsensical umlaut, as another shift in publisher priorities saw Double Fine again searching for a new home, again finding salvation, and again leaving said publisher (this time EA) feeling a bit miffed at the low initial sales figures. Not even Jack Black's fine cries of "Decapitatioooooon!" could have saved this one.



PIVOT FOR SUCCESS

Nine years, two major releases, two high-profile underwhelms, if that even is a word. Double Fine needed to pivot again to try and grab some success; to make something that would help the studio survive and – maybe – thrive. Fortunately, this time around, the industry itself underwent a shift in priorities that suited the San Franciscan studio better than it did many other established teams. The new generation of consoles had brought with them dedicated digital marketplaces and the opportunity to make smaller, more boutique titles that didn't require years and millions of dollars to make.

With a history of browser-based Flash titles made during the production of those bigger releases, as well as the setting up of an internal game jam process known as Amnesia Fortnight, Double Fine jumped on this opportunity. *Costume Quest*, *Stacking*, a licensed *Sesame Street* game, *Spacebase DF-9*,

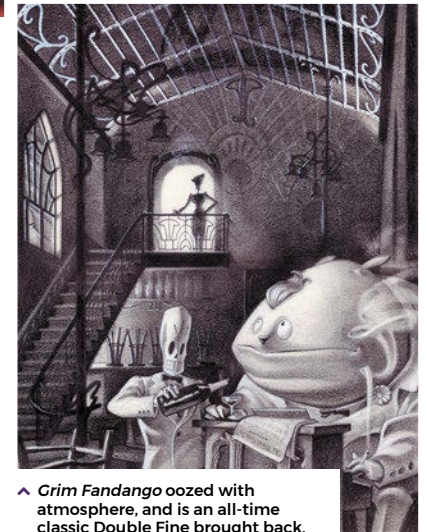


^ *Broken Age* revitalised the adventure genre, but also kickstarted the Kickstarter revolution.

Iron Brigade, and more all resulted from *Amnesia*, and all helped Double Fine steady its footing in an evolving industry. So much so, in fact, that Schafer bought the rights to *Psychonauts* and gave it the re-release it deserved (sales of over 1.5 million to date), as well as bringing back multiple legendary point-and-click titles from the LucasArts back catalogue.

POOLING RESOURCES

No laurels were rested on, though, and Double Fine's proclivity for the pivot led to its high-profile involvement with Kickstarter. The crowdfunding platform had existed before *Double Fine Adventure*



^ *Grim Fandango* oozed with atmosphere, and is an all-time classic Double Fine brought back.

“The impact DF had on crowdfunded games shouldn't be overlooked”

was posted there, but it might as well not have: the game raised millions of pounds and led to many millions more eyeballs on the site, helping to birth a boom in crowdfunded games the effects of which we're still feeling today. Even if *Broken Age* ended up being good-but-not-great, the impact Double Fine

had on this approach to development should never be overlooked.

With the ship relatively steadied, projects flowing, and money *okay*, Double Fine was able to give back: 2014 saw the launch of Double Fine Presents, a publishing wing for the hitherto development-only studio. A handful of curated titles, like *Mountain*, *Escape Goat 2*, and *Wireframe* cover star *Knights and Bikes* subsequently released from the publishing arm, and things were looking like this would be Double Fine's future... until Microsoft came knocking again.

Was it an apology for dropping *Psychonauts*? An admission that the Xbox brass had been in the wrong, and had seen how Schafer and co. had managed to stay afloat all by itself over the years? A delayed response to *Stacking* being really good? We might not know, but in 2019 it was announced Xbox Game Studios' latest acquisition was Double Fine.

Indie by definition no more, Schafer maintains the studio will continue with its indie mentality. Time will tell, but whatever happens, we can't help but crack a smile: the pivoting was worth it, in the long run. ☺



^ *Wireframe* cover star *Knights and Bikes* was one of Double Fine's published – not developed – releases.

Double Fine's finest

Ten fab finds from Fine

And this doesn't even include the point-and-click remasters



01

Psychonauts

Xbox / PC / PS2 – 2005

An imaginative 3D platformer, *Psychonauts* served as Double Fine's first release – and its first dalliance with the fickle nature of the industry. Originally a flagship Xbox title, *Psychonauts* was dropped by Microsoft and picked up by Majesco; post-release and an underwhelming 100,000 sales, the publisher shut up shop in its games publishing wing. It was a good game, though.

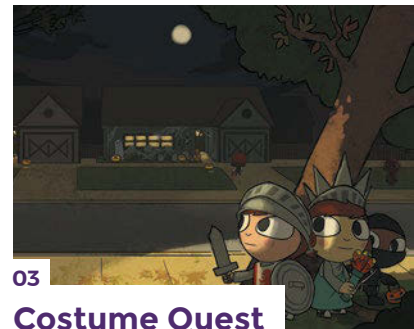


02

Brütal Legend

PS3 / X360 / PC – 2009

This time around it was a case of Vivendi agreeing to publish a game before its involvement in a merger with Activision, the latter then deciding to drop the Jack Black-starring metal-themed action-adventure/RTS from its card. EA picked up the pieces, and we were treated to another imaginative romp... that sold around 125,000 copies at launch. Again: it was a good game, though.



03

Costume Quest

PS3 / X360 / PC / multi – 2010

Costume Quest marked Double Fine's first release stemming from its 'Amnesia Fortnight' in-house game jam events, where ideas had been brainstormed and prototyped during development of *Brütal Legend*. Cutesy and simple, *Costume Quest*'s blend of Halloween and RPG struck a chord with the burgeoning audience for digital-only games, and helped reinvigorate the studio.

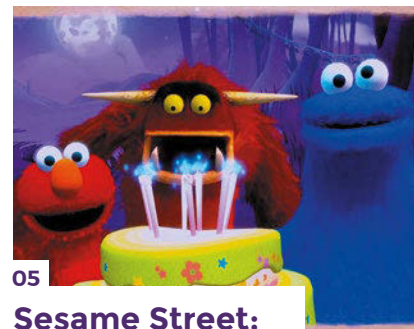


04

Stacking

PS3 / X360 / PC – 2011

The inevitable artsy-ish release of the Amnesia games, *Stacking* brought together a mix of puzzles and matryoshka stacking dolls in what we could call – not to sound too repetitive – 'imaginative'. Beautiful, atmospheric, and genuinely funny, it's still worth a go today. Also, *Stacking* was another necessary step for Double Fine to figure out what it was the industry wanted the studio to be.



05

Sesame Street: Once Upon a Monster

X360 – 2011

Digital releases weren't doing well enough by themselves: it was the turn of the licensed game. Rather than taking Warner Bros' money and churning out dross, *OUAM* came from another Amnesia Fortnight prototype. The result was an engaging and warm title based on Cookie Monster and co, easily one of the best ever for Kinect.



06
Middle Manager of Justice

iOS / Android – 2012

Part of a funding deal with Dracogen, *Middle Manager of Justice* saw players running a team of superheroes – focusing on concerns like housing and training rather than the actual smiting of wrongdoers. A fun F2P release, it showed that not only was Double Fine willing to try new things, it was also able to make almost anything fun.



07
The Cave

PS3 / X360 / PC / multi – 2013

With the studio firmly establishing itself as one where creators could make what they wanted – within reason – it wasn't much of a surprise to see Schafer's old colleague and *Monkey Island* alum Ron Gilbert join Double Fine. His work lasted just one game, the personal project *The Cave*, which mixed platforming and puzzling with the expected adventure game elements.



08
Spacebase DF-9

PC – 2014

An example of how things haven't always been warmly received, *Spacebase DF-9* was another title resulting from Amnesia, released into Early Access and with a lot of promise behind it. Instead of following through on this, though, the game was pushed out of Early Access unfinished and swiftly abandoned – though it was subsequently open-sourced, and fans continue work on it.



09
Broken Age

PC / PS4 / XBO / multi – 2014

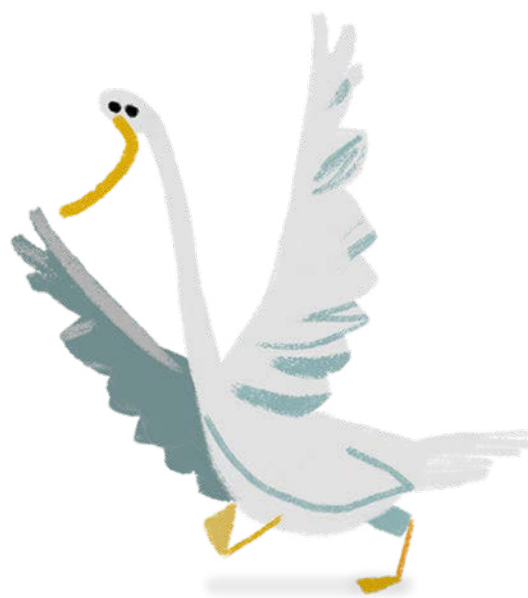
It took a while to arrive, but *Broken Age* marked the beginning of another new era for Double Fine: the crowdfunded... era. Helping to popularise Kickstarter and its ilk (raising over £2.6m on the platform), the release of this point-and-click adventure game showed there was a market for what Double Fine was selling, and helped put the studio on a firmer footing than it'd been in a while.



10
Psychonauts 2

PS4 / XBO / PC – 2020

Which leads us full circle: the sequel to Double Fine's first game. A title that struggled to even be released and was dropped by Microsoft is followed 15 years later with an eagerly anticipated game published by Double Fine's new owner... Xbox Game Studios. It's been a long road for Schafer and his team, so hopefully, *Psychonauts 2* will provide a fitting celebration.



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Death Stranding

Post apocalypse

Info

GENRE

Gig economy
sim

FORMAT

PS4 (tested) / PC

DEVELOPER

Kojima
Productions

PUBLISHER

Sony Interactive
Entertainment

PRICE

£54.99

RELEASE

Out now (PC:
late 2020)

REVIEWED BY

Ian Dransfield

HIGHLIGHT

BB, your little baby-in-a-pod companion, gives you the ability to track where the invisi-ghost BTs are. At the same time, the little babby gets stressed and upset when you're under threat from the apparitions, requiring you to comfort the child. As the game progresses, you develop quite the attachment to the post-apocalyptic tub of joy, being so closely linked to one another's survival as you are.

➤ Surprising nobody, *Death Stranding's* story is riddled with pretentious waffle, exposition, and moments of genuine emotional heft. It's a strange mix.

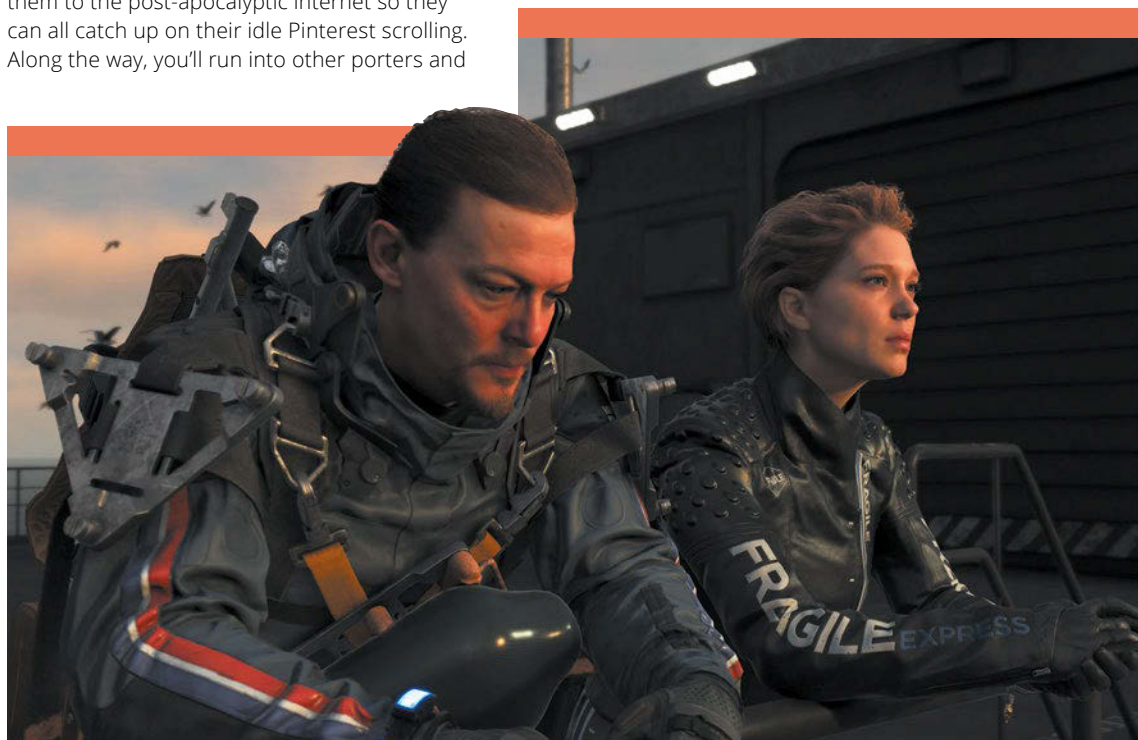
You're unlikely to ever see another blockbuster release, published by Sony and with many millions of dollars behind both its development and marketing, as thoroughly underwhelming, confusing, and self-indulgent as *Death Stranding*. At the same time, you're unlikely to ever see another blockbuster release with the big publisher and cash behind it that's as unique, overtly anti-aggression, and with an actual message (however ham-fisted it might be) behind it all. There's a lot to pick apart with *Death Stranding*, and that's without even trying to dive into the impenetrable, endless exposition.

Zoom out a bit, and it's not actually complex at all: you're post-apocalyptic delivery person Sam Porter Bridges, gruntingly played by Norman Reedus. Civilisation is all but ended, and you're tasked with reconnecting the few small enclaves that do still exist by visiting them, carrying out delivery missions for them, and reconnecting them to the post-apocalyptic internet so they can all catch up on their idle Pinterest scrolling. Along the way, you'll run into other porters and

preppers, as well as cargo pirates obsessed with stealing your packages, and the headline nefarious presence, BTs. See how I avoid making a joke about reconnecting a post-apocalyptic world and how BT would work against that? Maturity, right here.

Said nefarious presence – again, zoomed out and simplified – is basically a bunch of largely invisible ghosts you have to sneak past. Limited combat options open up as the game progresses, but the main approach is to sneak, stop, and hold your breath, like a playable *A Quiet Place*. Some cargo management, holding L2 and R2 while running to keep your balance, and putting up ladders to scale cliffs and cross streams is thrown into the mix, but that's the main thrust of the game. Around and above that, though, we get many a layer of complexity, obfuscation, and – frankly – pretension.

The former comes through the integration of online with *Death Stranding's* world. Taking





▲ There's a real lift in rounding a corner and spotting your target destination after a long, hard slog through the rain.

a leaf from the likes of *Dark Souls*, KojiPro's game operates in a sort of indirect co-operative world: players inhabit the same playspace as others and can leave signs for each other, drop equipment into storage for struggling players to pick up, and collect the dropped cargo of those who've struggled on a delivery route off the beaten path. What brings it all together – more of this in a minute – is how it's all geared towards helping each other. Everything functions on a currency of likes, with Sam levelling up his abilities through the number of digital approvals he manages to accrue. As such, you're pushed towards doing things that will be of genuine benefit to these other unseen players, because you working to help them will be of direct benefit to you. There's still trolling at play, of course – the game had to be patched so players couldn't block routes with abandoned vehicles – but the intended spirit is largely there when you play.

That positivity is everywhere in *Death Stranding* – while the storyline covers a world ended and seemingly futile attempts to rebuild it, the thrust is one of triumphing over adversity *by making those attempts anyway*. It's about forming and rebuilding connections that have been lost; bringing people together in ways that the majority of other triple-A titles don't even consider for a second, beyond a main character being mates with their sidekick. You just don't see big budget, mainstream games with the overarching goal being to reconnect the catastrophe-stricken United States, and it's thoroughly refreshing as a result.

What's also refreshing – though not unexpected from a Kojima-led title – is the inclusion of plenty of social commentary. Lacking in subtlety a lot of it might be, but I can't deny I have a serious soft spot for any mainstream production that takes on subjects like the incoming climate catastrophe, the gig economy, and the relative loss of humanity in the digital age. It's often dumb when it tries to

“It's striking, sometimes brave, and always unique”

be smart, goofy when it tries to offer up a bit of humour, and – again – thoroughly pretentious at other points, but it's still a welcome change of pace and attitude from the usual triple-A fare.

Death Stranding is a genuinely difficult one to offer a concrete opinion on. One day I couldn't force myself through half an hour of its prosaic, sometimes-dodgy navigation of the open world on yet another seemingly pointless delivery.

The very next day I put in a solid four-hour stint without a break, loving every relaxing second of those gorgeous vistas, and chuckling as Sam struggled to balance the 130 kilo load on his back. My opinion of it changed day by day, and it soon became obvious I would never settle on an 'I love it' or 'I hate it' – but at the same time it's impossible to say *Death Stranding* is mediocre. It's so much more than that.

It's not a great game. It plods, it's technically glitchy at times, what you actually *do* doesn't vary much as things progress, and it's hugely padded to make it stretch well beyond the ten or so hours it should have lasted. Narratively, it buries the lede behind endlessly high walls of elucidation. At times it's hard to figure out exactly what it wants to be as an experience, never mind as a game. But it's striking, sometimes brave, and always unique. *Death Stranding* won't go down as a classic, but it's an important title in many ways, and one we're likely to see influencing the direction of the mainstream gaming market for years to come. Oh, and Mads Mikkelsen is great in it. 🗿



▲ Soothing BB at first seems silly, but soon becomes a routine of centring not just the baby, but the player too.



▲ Human-made objects in the game are made using 'chiral printers' – basically a sci-fi 3D printer.

VERDICT

Clumsy, dull, and pretentious, *Death Stranding* is absolutely a game worth playing, even if it's not a great one.

62%



Rated
Review



HIGHLIGHT

The didactic anti-capitalist messages you receive from the aliens are concise, well-observed, and politically hopeful, focusing on the ability we have to create change. The game smartly insists on ideas as the dynamic behind political action, rather than an alien laser gun.

▼ If an alien light is going to shine through your window, you'd better hope they're good comrades.



Review

▲ Of the objects you have at your disposal, the Molotov cocktail is the most satisfying to use.

They Came From A Communist Planet

Bread, freedom, and flying saucers

Info

GENRE
Adventure

FORMAT
PC (tested)

DEVELOPER
Colestia

PUBLISHER
Colestia

PRICE
£3.99

RELEASE
Out now

REVIEWED BY
Paul Walker-Emig

VERDICT

A game with good ideas better-realised in the developer's previous work.

60%

You wake up in a small flat. Gaze out the windows, and you'll see a grey city whose architecture portrays an oppressive brutalism. Interacting with everyday items in the flat will trigger animations, used to add details to the atmosphere established by all the concrete outside: joblessness, unpaid bills, hopelessness. Then, a bright light shines through the window. Aliens are here and, as the game's title suggests, they've come from a communist planet.

From here until its end about 45 minutes later, the game takes the form of a riot simulator. Streets blocked by cops or water-cannon-spraying armoured vehicles can be opened up as you unlock new abilities. You start off kicking at barricades, graduate to lobbing bricks and bottles, then get the ability to spark up Molotovs. Bit by bit, you reclaim the streets and, by extension, begin the task of liberating yourself and your fellow citizens from capitalism, buoyed on by anti-capitalist messages beamed from the aliens that watch above.

The problem is that doing so isn't as fun as it should be. A health bar above police defences diminishes as you hit them, causing them to disperse when it's empty. Even when the frustrating projectile arc didn't have me throwing bricks far too short, the repetitive act of walking back and forth to get bricks to lob at the police

lines feels more like busywork than an act of revolutionary rage.

This isn't the only area where the game's appealing ideas fall short in execution. Fellow citizens will join you in rioting, but the game doesn't quite manage to create the sense that you're working together. This is frustrating, because developer Colestia is capable of this; its previous game, *A Bewitching Revolution*, also features citizens helping you during an uprising, but it manages to build a sense of collectivity and community in doing so – along with a sense of dynamism as more and more people join your cause – that's lacking here.

There are positives, though. The opening is a highlight, but what works there isn't developed further. What is maintained is an unflinching and well-considered anti-capitalist perspective that's rare in video games. Indeed, the whole point of the alien 'intervention' isn't to give us access to some otherworldly technology; rather, they offer something that's difficult for us to find in a world dominated by capital: an external perspective. This ability to shift our view on our political system is, I think, the most valuable thing about this developer's games.

But Colestia has already developed these ideas to greater effect elsewhere. You should check out their work, but *They Came From A Communist Planet* isn't the best place to start. 🗳️



HIGHLIGHT

The cast of *Skullgirls* is so well developed and defined. On top of their memorable visual styles, each character ties in to specific fighting game playstyles. Cerebella is a grappler, Peacock is good for zoning, Ms. Fortune can control the space effectively, and so on. It's obvious their mechanics were considered just as much as how they look.



▲ Four hits is only the beginning.

Review

Skullgirls 2nd Encore

A second encore for the 2nd Encore

To the uninitiated, 2D fighting games are terrifying. Their skill ceilings are stratospheric, but reward clever play with a tangible sense of development that feels more like learning an instrument than a game. Thousands of combos, high-infinite matchups, the mind games; it's a brutal genre to get into. That's where *Skullgirls 2nd Encore* comes in.

First launched in 2012, the main goal of *Skullgirls* was to make a title that had the mechanical depth needed for high-level play without skimping on aesthetic flair or accessibility. Combining *Marvel vs. Capcom 3*'s combo-heavy, tag-team action and *Street Fighter*'s slower, positioning-heavy duels, *Skullgirls* has lengthy combos to learn, like *MvC*, but the Infinite Protection System prevents inescapable loops and ensures comebacks are possible. The optional tag system allows for those more accustomed to a 1v1 style of game to take part too, letting you choose between one, high-HP character or spreading that health between two or three characters.

The *2nd Encore* update primarily focuses on the game's single-player: as well as a story mode, there are challenges with special match conditions, trials for learning more advanced combos, and the genre-staple survival mode. Many fighting games will teach you a few basics and then throw you right into the thick of it. *Skullgirls*' tutorial, on the other hand, is encyclopaedic, helping you learn the terminology behind, and application of, key 2D fighting game concepts that can be applied to any game in the

genre – *Street Fighter*, *Mortal Kombat*, all of them. Speaking of character, *Skullgirls* is by far the most aesthetically solid fighting game. Sure, Arc System Works' *Guilty Gear Xrd* or *Dragon Ball FighterZ* may be technologically impressive, but *Skullgirls* is an artistic triumph in different ways. Juggling art deco extravagance with Lovecraftian horror, it's a jazzy, colourful affair full of engaging characters and wonderful music. Stages burst with detail; I so wish *Skullgirls* had reached out beyond its own game and become a full franchise, because this is a world most definitely worth exploring.

Skullgirls 2nd Encore has been available on PC, PlayStation 4, and Vita for a while, but sadly the Switch version puts a real dampener on the whole experience. Skybound Games' port is plagued with bugs, particularly in the sound department. They range from the annoying – multiple sound clips playing at the same time to become a cacophony of noise – to advertised features like story mode voice-overs missing from the game. Matchmaking is ludicrously slow, too, with finding other players often taking 15 minutes or more.

Regardless, *Skullgirls* is an overlooked masterpiece. Its world is like no other, its art style cohesive, and its fighting ludicrously complex. That's not even considering the extensive new single-player options and training modes. Whether you know your QCF-MK from your SRK-LP, or just like to watch the cartoons do punching, *Skullgirls 2nd Encore* is one of the best fighting games you can buy... except on the Switch. 🗨

Info

- GENRE**
Fighting
- FORMAT**
Switch (tested) / PS Vita / PS4
- DEVELOPER**
Lab Zero Games
- PUBLISHER**
Autumn Games, Skybound Games
- PRICE**
£19.99
- RELEASE**
Out now

REVIEWED BY
Joe Parlock

VERDICT

A sublime fighting game let down by a buggy port. Stay away from the Switch version; definitely play it elsewhere.

60%

Rated
Review

HIGHLIGHT

Despite its intense focus on menu minutiae, *Planet Zoo* boasts a genuinely delightful, warm atmosphere. I loved listening to the poppy acoustic instrumentals as I soared around my parks, and Bernard and Nancy — the zoo franchise's owner and manager, respectively — are lovely teachers.

✓ Enrichment items, like these wooden platforms, help critters feel like they have a fun place to play.

Review

▲ Micromanagement often gets in the way, but there are nice-looking animals, while multiple camera options provide opportunities to go "ooh" and "ahh" at their cuteness.

Planet Zoo

Menus will gobble the lion's share of your time

Info

GENRE
Simulation
FORMAT
PC (tested)
DEVELOPER
Frontier
Developments
PUBLISHER
Frontier
Developments
PRICE
£34.99
RELEASE
Out now

REVIEWED BY
Andrew King

VERDICT

A deep *Zoo Tycoon* successor that might put some players off with its prickly, fiddly approach to park management.

60%

I got my training for *Planet Zoo* in early — I was, after all, just nine years old when I was made manager of SeaWorld.

What I remember most about *SeaWorld Adventure Parks Tycoon* is that, shortly after I started playing, I felt confident peppering my park's 2D plane with souvenir shops, rollercoasters, and big killer whale tanks. My park was more like a Jackson Pollock painting than anything Imagineers would get paid to produce, but the elements were there. My nine-year-old self lacked technique, sure, but I grasped the basics of building a park in minutes.

I was surprised, then, by the difficulty I had approaching Frontier Developments' spiritual successor to *Zoo Tycoon* as an adult. Thanks to the game's exhausting, menu-heavy interface, needy animals, and fiddly 3D building controls, this likely won't be a good introduction for anyone looking to get into the genre for the first time.

It starts off simply enough, though. Career Mode begins with you as an apprentice zoo manager learning the ropes via a trio of tutorial levels. These were hand-holding in a way that I welcomed, as my in-game bosses warmly guided me through the basics of zoo management. Then the tutorials suddenly gave way to a level where I was expected to build a park from scratch with little guidance.

I started that zoo over and over again. My animals, each with dozens of wellness sliders, kept dying. In my quest to bring in a small number

of guests, I quickly ran out of money. *Planet Zoo*, for me, has been less an escapist power fantasy where I effectively build an impressive park and manage cute virtual animals, and more a pretty accurate representation of what it would look like to be suddenly tasked with running a real zoo.

Not everything is frustrating. The animals look great, and the game provides some neat camera options that let you see their gorgeously rendered fur up close. It's obviously robust, and will give the park sim faithful plenty of boxes to check and dials to twiddle. But, as someone who enjoyed this genre as a kid, *Planet Zoo* isn't as welcoming as I'd hoped. Building is difficult. Each animal bristles with needs that constantly call for your attention.

I enjoyed *Planet Zoo* most when I got into the groove of building, soaring up for a bird's eye view, constructing bridges and walkways, and spinning up interesting architecture. I was constantly put off, however, by the creation tools and the level of obsessive care that each animal required. I wanted to get creative, build a killer zoo, and fill it with fierce or friendly beasts. Instead, *Planet Zoo* had me playing animal psychiatrist.

A pop-up would occasionally appear at the left side of my screen to inform me that one of my animals was stressed — just one of the dozens of ways that each creature can be harmed by their habitat. Stressed, giant desert hairy scorpion? You and me both. 🐼

"My animals, each with dozens of sliders, kept dying"

HIGHLIGHT

Where a lot of retro games fall flat when it comes to bosses, *Witcheye* manages to make each one unique, challenging, and entertaining. Sure, there are patterns to learn, but those patterns morph and change – there's no such thing as a guaranteed win here, which makes victory even sweeter.

< The water doesn't just change your movement speed; it messes around with your buoyancy too.

> Figuring out the weak points on massive enemies is a good chunk of the fun.

Review

Witcheye

A mobile platformer that'll have someone's eye out

There's a moment in *Witcheye* that almost perfectly encapsulates the game. At the start of a level, you'll see a block at the bottom of the screen, and by this time you know smashing blocks gets you goodies. So, you'll swipe down to hit it and find out what's inside; it's at that point a new enemy that you thought was just part of the scenery will shoot you. Inside the block? A heart that will replenish the health you just lost.

That brief section doesn't just introduce you to something new; it adds a layer of worry to everything you'll do afterwards. It reshuffles the game's deck, letting you know that safety is something that can be taken and given at will. *Witcheye* isn't just a reimagining of the retro platformer for touchscreen devices; it's a confident action experience that's never afraid to throw a spanner in the works it's just explained to you.

You play as the titular Witcheye, and bounce around the screen by swiping. Move a finger, and you'll rush off in that direction; tap the screen, and you'll stop exactly where you are. It's a decidedly simple core mechanic, echoing the single-finger experiences that have taken over the App Store recently. But there's so much more here than accessibility – there might not be any complex controls to learn, but the environment you're navigating through is in constant flux, hurling new challenges at you on a regular basis. To begin with, you're avoiding podgy little critters

that throw fireballs in your direction; a single hit is all you need to take them out, though.

As you play, the enemies you're facing evolve. They have shields, they fly, they have moments when they're exposed and moments when they're invulnerable, and they require multiple hits to take them down. Spikes cover walls; wind blows you back; giant bosses don't just try and kill you, they smash the scenery you're trying to hide behind.

Moments of frantic action become just that – facing a tough boss, your swipes will speed up, translating what's happening on the screen into physical moves more satisfyingly than mashing buttons ever could. *Witcheye* thrives on that internal and external energy, and it's paced brilliantly, with tight little levels you can finish in a handful of seconds.

'Finish' is probably the wrong word: gems and secrets are in each of the mazes, and it's unlikely you'll find them on your first go. It offers a reason to go back to the challenges and play them in a different way. Being conservative might get you through to the end, but putting in the time, and the risk, rewards you even more.

If *Flappy Bird* was the one-touch genre's *Pong*, *Witcheye* is the birth of its 16-bit era. It's bright and vibrant, and it flows with a poise that few others on the App Store can match.

Immaculately designed, smart, and massively entertaining, *Witcheye* is exactly the sort of game that might just convert mobile naysayers to the cause. 🐾

“Tight little levels you can finish in a handful of seconds”

Info

GENRE
Action / Platform

FORMAT
iOS (tested) / Android

DEVELOPER
Moon Kid

PUBLISHER
Devolver Digital

PRICE
£2.99

RELEASE
Out now

REVIEWED BY
Harry Slater

VERDICT

A slick and wonderfully well-designed mobile experience that, quite simply, wouldn't work half as well on anything else.

86%

HIGHLIGHT

Some of the best details in *Moons of Madness* involve the small ways that the encroaching horror impacts the way Shane interacts with the world. Watching him fumble to refill his air supply or struggle to open a hatch after witnessing something particularly chilling goes a long way to selling his experience of terror.

Review

Moons of Madness

Moons of Badness? More just Moons of Boredom

▲ *Moons of Madness* is undoubtedly pretty. Barren, but pretty.

Info

GENRE
First-person
horror

FORMAT
PC (tested) /
PS4

DEVELOPER
Rock Pocket
Games

PUBLISHER
Funcom

PRICE
£21.99

RELEASE
Out now

REVIEWED BY
Andrew King

VERDICT

If you've ever played a first-person horror game before, you'll likely forget about *Moons of Madness* the second you hit the credits.

40%

M

oons of Madness drops the tentacle horror of H.P. Lovecraft on the dusty surface of a haunted Mars. It also somehow manages to make that

setup uninteresting.

Rock Pocket Games' walking simulator casts players as Shane Newhart, one member of a scientific expedition to the red planet. Like Zoetrope Interactive's *Conarium* before it, *Moons* draws inspiration from Lovecraft's novella *At the Mountains of Madness* – the tale of an Antarctic expedition that goes sideways when the team encounters darkly powerful ancient beings buried beneath the continent's ice. Here, the snow-capped peaks, dog sleds, and aeroplanes of the original have been replaced by orange rock, moon rovers, and the sterile halls of the Trailblazer Alpha station.

That cosmic migration brings with it a pretty but boring environment and a half-baked oxygen management mechanic. Mars, the space station it plays home to, and the secret places you'll uncover as you explore, are uniformly gorgeously rendered, but lack any sense of personality. Oxygen management, while a logical addition, given the setting, is never actually challenging or interesting and mostly serves as a reminder to turn back in the rare instances you're permitted to wander.

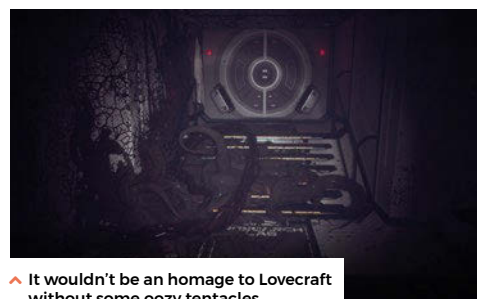
Moons of Madness does smartly avoid the full-on descent into psychedelic madness that has hampered other first-person horror games.

Instead, it weaves these dreamlike vignettes throughout a story with a concrete beginning, middle, and end. Other horror games, like the mostly great *Observer*, have established strong settings in their first halves, only to abandon the physical particulars for blurry design that's meant to gesture at the hazily nightmarish. *Moons of Madness* doesn't make this mistake.

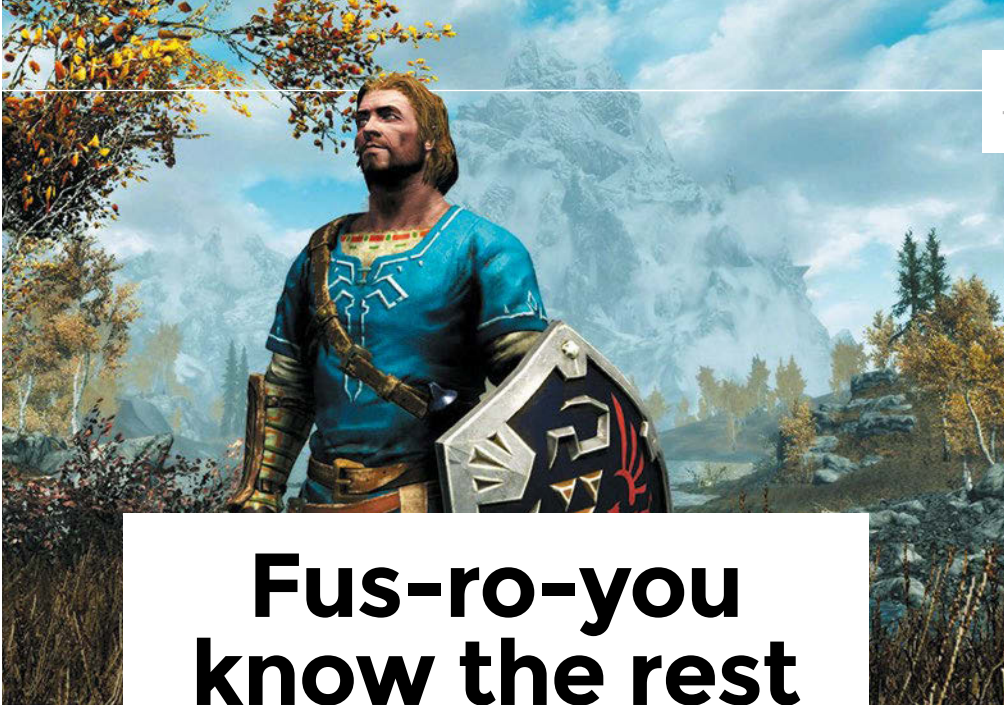
That isn't enough to save it, though, and there's little in this game that you haven't seen before. Its story is familiar, and hangs its twists on revelations that don't even get set up until the final third, coming out of nowhere and landing with a thud. I enjoyed some of the documents I found around Trailblazer Alpha, but just as often they were interminably dry. And the requisite chase sequences here are at best dull and at worst frustrating.

Moons of Madness wants to terrify you, but this haunted Mars feels too familiar to summon the horror of the unknown. **W**

“The requisite chase sequences are at best dull and at worst frustrating”



▲ It wouldn't be an homage to Lovecraft without some oozy tentacles.



Fus-ro-you know the rest

New decade? Might as well carry on with Skyrim

Later this year, *Skyrim* turns nine, and by crikey does it feel its age. Creaking and surprisingly old-fashioned on release, Bethesda's fifth *Elder Scrolls* title wasn't ever quite the new generation of role-playing games we expected it to be – at least not from a technical perspective. The endless clunk and myriad bugs; the staggering lack of finesse to combat; conversations flowing worse than those we were having with bot programs back in the day; not to mention the issues with the core design, like its thoroughly uninspiring quest design and general sense of meandering nothingness that permeated the entire game. So it should come as no great surprise to hear that I adored *Skyrim* on release, and am still playing it – and finding it as fresh as in 2011 – to this day. Nothing makes sense in this brave new world.

I can't argue against *Skyrim*'s critics in any real, strong sense when they hit the fundamentals. While plenty of bugs have been fixed over the years, it doesn't change the fact the combat is garbage, and the vast majority of quests

are forgettable to the point that they drift out of memory *while you're doing them*. Updates, tweaks, and plenty of time also doesn't modify the behaviour of the game's characters, who amble around like mannequins hit with a spell to give them life (that only half-worked). People who slate *Skyrim* tend to be right on a lot of points, basically.

It leads to an eight-and-a-bit year 'but', though: *Skyrim*'s sense of scope, scale, and atmosphere is up there with the very best. Sure,

I might not actually follow the entire story, even after putting in over a thousand hours across numerous releases and re-releases of the game, and yes, there are elements I've still never actually bothered with – the illusion school of

magic eludes me, for one, and I've never even bothered becoming a vampire in the Dawnguard DLC. But it's still a truly special experience. Frankly, that's ridiculous, but then everything about *Skyrim*'s enduring popularity is ridiculous when I actually think about it. Especially how I'm still playing it to this day.

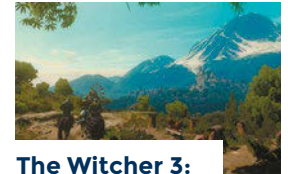
There is some benefit to Bethesda re-releasing *Skyrim* on every format known to humanity, both for the publisher and for the public. Bethesda gets to make even more money off a project that few would have expected to still be pulling in fresh money almost a decade later, while we players get portable *Skyrim*, thanks to the Switch version. Seriously, Switch on *Skyrim* is the best thing that's ever happened this side of *Stardew Valley*, and it will keep me playing this (incredibly rough) diamond for a long time to come. 🎮

“Skyrim wasn't ever quite the new generation of RPG we expected”



▲ My current 20-plus hour playthrough hasn't even seen dragons activated yet.

Wireframe Recommends



The Witcher 3: Wild Hunt

SWITCH, MULTI

Another massive RPG that shouldn't have been possible on Nintendo's handheld, *The Witcher 3* at least backs up its countless plaudits with a game that's tightly designed, smart, and well-written. I still love you, *Skyrim*.



The Legend of Zelda: Breath of the Wild

SWITCH, WII U

Aka 'when Nintendo made *Skyrim*' – the best *Zelda* game (to me) is the one that lifted elements from Bethesda's shouldn't-be classic. Obviously, it has plenty of its own making, but that's the link I'm going with.



Divinity: Original Sin 2 - Definitive Edition

SWITCH, MULTI

I might shut up about this one at some point, but it's still recommended here. Nothing like as open as *Skyrim*, it instead provides a superbly written, carefully designed CRPG.

Backwards compatible



The state of play(ing retro)

Welcome, one and all, to Backwards Compatible – Wireframe’s furtive first step into the world of retro gaming and all the delights that come with it. We’ve waited a bit before introducing this to the mag, but there was only so long a team of old stuff-obsessed writers could hold out, to be honest – plus, as the following words will explain, there really hasn’t been a better time to go all retro. Modern retro has fewer barriers to entry than it’s ever had, and you should think about dipping your own toe in if you haven’t already.

As a starting point, picking up a Mega Drive or SNES mini console is... well, it’s also an end-point for a lot of people, because quite frankly, these machines are brilliant. A curated cross-section of each console’s finest titles, housed in a cute little box, and playable on modern displays without any more effort than plugging the cables in and switching it on. You’re limited to what’s on there (unless you’re a *dirty* hacker), and they’re never going to be the purist’s choice, but the minis are wonderful, all the same.

Sans mini-hardware, Nintendo’s ever-growing selection of NES and SNES games on Switch is a stunning retro bonus for those picking up a Nintendo Online subscription, while Sega, SNK, and others all have their finest titles (and some others)

available through digital storefronts. *Sega Mega Drive Classics*, for example, gives you 50-plus

games in one collection – compilations like these are another easy way in.

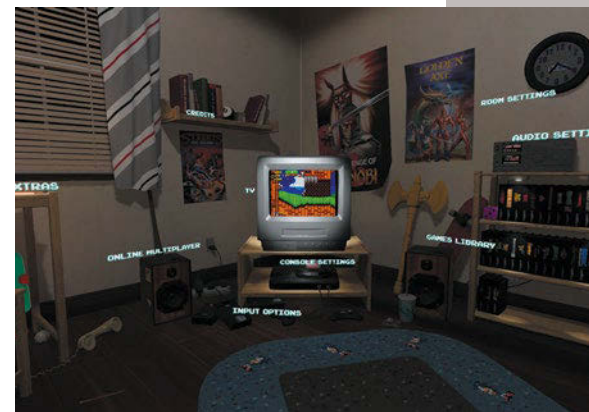
Looking for something more authentic? Well, there’s something called ‘the original consoles’. Most modern TVs won’t accept your old cables, mind, but those who can afford to pump in cash can pick up the Open Source Scan Converter (OSSC) or RetroTINK to convert signals to something a tellybox can handle. There’s an increasing number of HDMI converter solutions for old consoles, too, like the Dreamcast’s incredible DCHDMI.

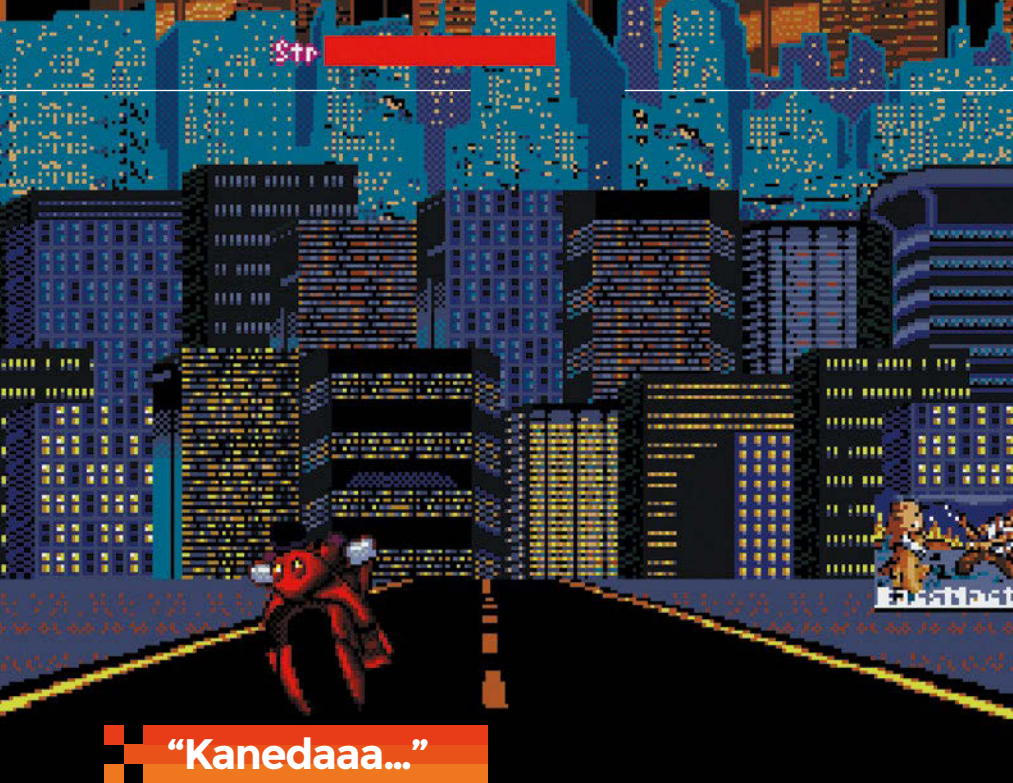
The tinkerer’s choice, though, comes in the form of FPGA-based projects like MiSTer and Analogue’s clone consoles. This is where the enthusiast market gets stuck in, with owners able to tweak settings to make their perfect emulation even more than that, along with full compatibility with both modern displays and a whole range of games. It’s an expensive rabbit hole to jump down, but it’s an intoxicating one, all the same – the Mega Sg and Super Nt are things of genuine beauty.

Oh, and there’s straightforward emulation for everything else you can’t

get elsewhere, with the likes of MAME still knocking it out of the park decades after it first started, and platforms like Raspberry Pi. After all, you’re unlikely to be able to find *Alien 3: The Gun* in any official re-release anytime soon.

So that’s the state of retro play – better than it’s ever been, more wide open, full of more opportunities to tinker as well as play, and with an increasing number of enthusiasts putting stuff together so we can keep on using our original machines well beyond their twilight years. What’s old is new again, and we’re happy to celebrate that fact on these pages in future issues.





“Kanedaaa...”

Cyberpunk, psychic kids, teenage motorbike gangs, and acres of mass destruction. Katsuhiro Otomo's *Akira* – first a long-running manga, then a mesmerising 1988 animated feature film – could have made a great video game. Instead, the adaptations we got were pretty mediocre; the NES got a ropery, Japan-only adventure title, while the less said about the Amiga edition – a side-scrolling action game released by ICE Software in 1994 – the better. Over Christmas 2019, meanwhile, a long-lost Sega Mega Drive adaptation of *Akira* surfaced on the web. Developed by Black Pearl Software, it was originally shown off at CES 1994 and pegged for release the following year, before publisher THQ

pulled the plug and the game vanished from view – seemingly for good.

Like the Amiga adaptation, the Mega Drive version would've told the film's story across a series of varied stages. One would've seen you hurtling around Neo-Tokyo on a bike, another navigating sewers in a 2D platform section. The weirdest of the lot was a first-person segment, in which you played troubled teen Tetsuo, plodding through a military facility, blowing people up with his telekinetic powers. Did the world miss out on a classic? Probably not, but some of the sprite work – including a nice pixel art rendition of Kaneda's motorbike – at least looked the part. Check out the prototype at wfmag.cc/akira.

A long time ago

On the subject of cancelled Mega Drive games, the long-lost Sega adaptation of *Super Star Wars* also resurfaced a couple of weeks ago.

Super Star Wars was a much-loved game on the SNES (even though we'd argue it hasn't aged all that well), and developer Sega Interactive's port was intended to replicate its mix of platforming action and *Star Wars* lore. Abruptly cancelled in 1993, a prototype Mega Drive version of *Super Star Wars* has finally landed on the web, courtesy of hiddenpalace.org. Expect warbly renditions of John Williams' *Cantina Band* music, Luke Skywalker slicing away at great legions of scorpions on Tatooine (not something we remember from the movie), and, because this is an unfinished game, an awful lot of rough edges. wfmag.cc/star-wars



The perils of retro collecting

If you're into collecting original cartridges and discs, then you'll know that getting hold of decent copies can be a hit-and-miss business. I've purchased games from Japanese eBay sellers and received an elegantly-wrapped box with a handwritten 'thank you' letter and a picture of the seller's dog; on other occasions, I've bought games described as being in 'very good condition' and received a battered box wrapped in newspaper and stinking of cigarettes. Only a couple of weeks ago, I bought a copy of *The Super Shinobi* on the Sega Mega Drive, also described by the seller

as 'good condition'. Noticing the telltale signs of ballpoint pen marks on the box, however, I took out the sleeve and discovered the following scrawled on the inside, dated 5 May 1993:

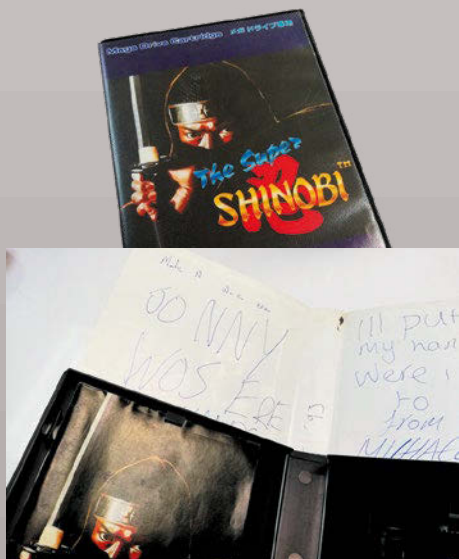
"Mark N woz ere"

"Jonny woz ere so hands off"

"I'll put my hand were [sic] I want to, from Michael"

"Norman woz ere so f*** **f" [yes, with asterisks]

I've no idea what kind of family drama I've stumbled on here, but needless to say, I've written in "Wireframe woz ere", to be discovered by future generations. 🐾





GoldenEye 007

In Rare's seminal shooter, remote mines left us shaken *and* stirred

RARE / 1997 / NINTENDO 64

Ah, the satisfaction of having a level layout so precisely memorised, you can blitz through it to your heart's content. Take the Facility stage in 1997's *GoldenEye 007*, for example: if you crawl just far enough to the edge of a ventilation duct without dropping down into the toilet cubicle below, you can get a bead on the soldier loitering in the next stall, and shoot them in the top of the head with two taps from your silencer-equipped PP7 pistol. That leaves you free to take out another soldier standing obliviously in front of a urinal, before quickly taking down the last two soldiers hiding in the other toilet cubicles.

There was a lot to like about Rare's hugely successful (and fondly remembered) adaptation of the 1995 *Bond* film, but it was the game's capacity for mischief that captivated us the most. It was generally a wise idea to tackle the Facility stage with the silenced pistol, but you could charge in, Rambo-style, with a purloined machine gun if you were feeling particularly bold. Or, if you really wanted to mess around, you could use the remote mines. As the name suggested, these explosives could be placed just about anywhere, and then detonated by either using the remote

“Wait for your opponent to wander into range, then hit the detonator for a satisfyingly fiery death”

charger, or by holding down the A and B buttons. You could throw one and watch as it stuck to the floor beneath a soldier's feet, detonate it, and watch them fly six feet up into the air; you could quietly throw one into a room, close the door, and blow up everyone within. The soldier you see standing at a urinal at the start of the stage? You can throw one directly at the wall in front of him, hit the detonator, and watch as he's thrown back by an absurdly large orange fireball.

It was all completely pointless tomfoolery, of course, but it

was an enormous amount of fun – the kind of thing Rare didn't have to put in the game, but did in a moment of creative abandon. Just to up the fun factor even further, you could turn on Donkey Kong mode, and watch as soldiers with gigantic heads flailed about

as you blasted them to oblivion. Remote mines offered even more absurd fun in multiplayer mode, where they were an optional extra you could select in the four-player free-for-all. Stick an explosive to a wall around a blind corner; wait for your opponent to wander into range, then hit the detonator for a satisfyingly fiery death. Perfection.

Remote mines weren't big, and they certainly weren't clever, but they're a killer feature we'll never forget. 🗨

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