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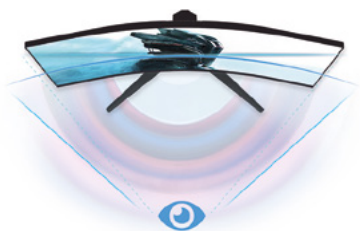
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Critical reception

It's a daunting time for a critic when the reviews for a big game go live. You've spent maybe an entire week playing something, often in near-total isolation; you've gathered your thoughts, arranged them into words you're hopefully proud of, and you're sitting there watching the minutes tick down until people can read them. I always look forward to reading other people's takes on a game, too, scanning through the early reviews in search of the writers whose opinions I particularly respect. I vividly remember sitting in a hotel room in Tokyo in the middle of the night waiting for my review of *Grand Theft Auto V* to go live (a game I loved). It was so exciting that I couldn't sleep.

Sometimes, however, there are nagging doubts. Did I get this game completely wrong? Is everyone else going to like it much more (or much less) than I did? And of course, the worry that's especially intrusive if you're a woman, or a person of colour, or trans, or there's anything else about you that might pique the attention of the online trollverse: am I going to get weeks of abuse from strangers over this review?

Every critic gets heckled in the comments. Sometimes it can even be fun if people get creative with it and you have a sense of humour about yourself. But where the commenters can occasionally be funny and arch, the anonymous social media types that have sadly come to dominate the discourse around big games are more nasty. They can brigade you, they can trawl your internet presence for ammunition to use against you, they can mobilise in seemingly no time, and they hang around in your mentions for months, occasionally derailing your day when you check Twitter and find some egg avatar telling you to kill yourself because you didn't particularly enjoy a video game.



**KEZA
MACDONALD**

Keza MacDonald has been a video games journalist and critic for more than 15 years, and is currently video games editor at The Guardian. She has two small kids and is very tired.

#47



Absolutely nobody wants to be on the receiving end of a big-game defence mob. If they figure out that you're female, though, the insults take on a particular misogynist flavour that ranges from violent to patronising. One chap once decided to send me graphic screenshots of a bunch of female NPCs he'd killed in a game, along with a charming note along the lines of "this is what's coming for you if you don't change the score". I was once publicly referred to on Twitter, by a quite famous developer, as "a little girl who can't play games". I have *many* more examples, but sadly after so many years as a Woman On The Internet, I've got so used to this that they barely make an impact any more.

It's exactly this that puts off a lot of women and minorities from becoming prominent voices on big games – which is exactly what the trolls want, as the hegemony of opinion reflects their own innate biases. When people say online abuse is best ignored, this is what they're missing: even if you can manage to ignore it yourself, other people still see what's happening, and if any of those people had anything interesting to say about, say, *Cyberpunk 2077*'s portrayal of women, they're certainly going to feel less inclined to express them publicly after watching a reviewer get harassed.

I'm always mystified by why some care so very much about someone else's opinion of a video game, and particularly about the score at the end. There's a lot of knotty psychology to unpack there, and it's hardly unique to gamers. Games criticism has come a long way, but if you've ever wondered why so many reviews are still so boring and read so much more like product evaluations than cultural criticism, or why there doesn't seem to be much diversity in review scores, think about how willing you'd be to endure the kind of backlash that sometimes results from having braver opinions. 🙏

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CLOTHING!
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WELCOME

In a rare idle moment the other day, I found myself watching *Jobs* – the 2013 movie about Apple co-founder and tech impresario Steve Jobs, played here by a twinkly-eyed Ashton Kutcher. This shouldn't be confused with Danny Boyle's 2015 film *Steve Jobs*, in which Michael Fassbender played a more stern version of Steve Jobs. This got me thinking: why are there so few movies about the making of video games? If Steve Jobs got two films, and Facebook's Mark Zuckerberg got a movie made about him (*The Social Network*), then where are the stories about our favourite games?

Off the top of my head, the only one I can think of is *The Gamechangers*, a made-for-BBC docu-drama about Rockstar and their post-*Grand Theft Auto III* development antics. First aired in 2015, it starred Daniel Radcliffe as Rockstar co-founder and game design Svengali Sam Houser, and tried to take in everything from the media controversy surrounding the studio's violent output to the fallout that greeted the discovery of the infamous *Hot Coffee* minigame in *GTA: San Andreas*. It wasn't a great film, but its heart was in the right place, and I can't help wishing we could have more like it. I for one would happily pay to see a movie about the wild days of Japanese developer Toaplan – a team of developers who, when they weren't making chaotic shoot-'em-ups, were out on drinking expeditions or riding and crashing motorcycles. If you're reading this, David Fincher, do give me a call...

Enjoy the new issue, readers.

Ryan Lambie
 Editor





SHADOW WARRIOR

Game director David León tells us about the challenges of making the stealth sequel, **Aragami 2**

Having your debut game launch to solid reviews and encouraging sales is surely the dream of any indie developer. But once that dream's come true, the inevitable question that follows is, "What next?" For Barcelona-based studio Lince Works, this is what happened in the wake of *Aragami*, its 2016 ninja-stealth-'em-up. "Honestly," game director David León tells us, "*Aragami*'s success caught us by surprise. During all the development, we were obsessed about finishing the project the best way possible. It being our first game and done with little resources, we actually didn't think about the future or what we'd do after the release. Of course, we were scared because we knew that if the game didn't go well, we'd probably have to shut down the studio. Therefore, when the game came out and had such a good reception, we then asked ourselves 'OK, what do we do now?'"

Understandably, Lince Works has opted to make a sequel: a follow-up that expands on the pared-back principles of the first *Aragami* – which, at its core,

was about nimbly leaping from shadow to shadow, either taking out or avoiding enemies – and building on its promise. Where the first game's chapters were comparatively linear, *Aragami 2*'s will feature more open areas with multiple paths. Where your central character was somewhat limited in terms of movement in the original, *Aragami 2* will provide more freedom on this front, too, with your shadowy assassin now blessed with greater agility and a broader range of killer moves. What's really piqued our interest in *Aragami 2*, however, is its newly beefed-up co-op mode, where players will be able to form miniature clans of ninja assassins. Done right, the process of teaming up with our friends and clearing out stages of unsuspecting enemies using a variety of sneaky, deadly skills could be an absolute riot.

Here, David León tells us all about the process of planning and developing *Aragami 2*, from the challenges of building on the original's mechanics to overhauling enemy AI – plus, the hidden debt Lince Works' games owe to *Dragon Ball Z*... ➔

How quickly did you start thinking about making the sequel?

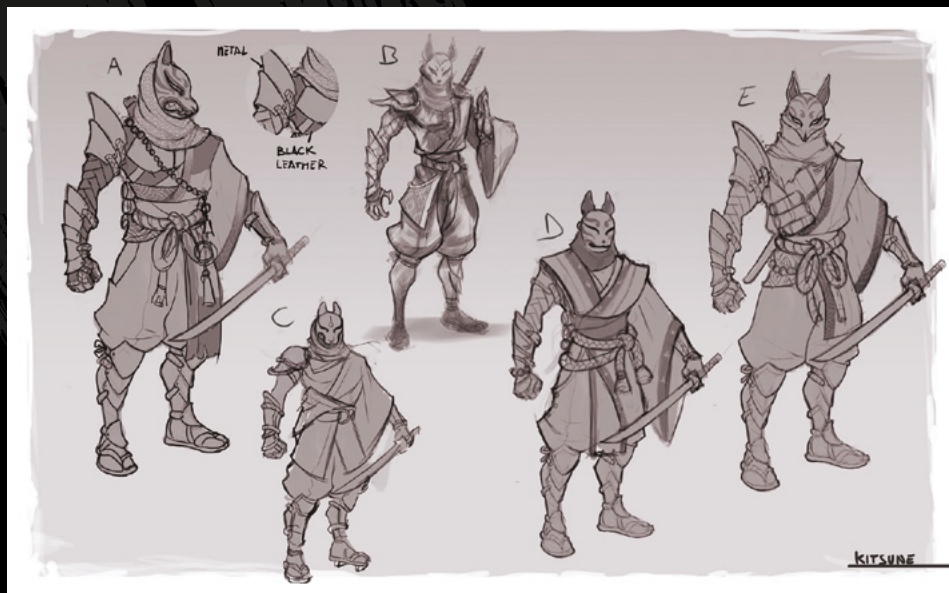
We saw that what we had in our hands [with the first *Aragami*] was something good and that players liked it, so we thought that the most coherent thing to do was to go one step beyond and make it something bigger and better. What we want to achieve with *Aragami 2* is to expand the universe of *Aragami*, to settle it as a franchise, and to apply everything we learned from the first title in order to make the most ambitious game we could.

How has Lince Works itself changed since the first game? Has the team grown to take on the challenge of making the sequel?

Most of *Aragami*'s development was done just by seven people. For *Aragami 2*, we had to grow the team; currently sitting at 20 people. This meant an evolution for the company, which has matured from being a studio focused only on development to a studio that thinks more about a long-term IP trajectory.

The internal structure of the team changed as well in order to be able to tackle larger and more complex projects. In addition, we used part of the funding to invest in areas that at first did not have much support, such as art or animation; and others that did not exist at all, like marketing and communications.

✓ Although lurking in shadows is still key in *Aragami 2*, the sequel will provide other means of staying hidden.



Aragami 2 is set a century later. Is there a narrative/stylistic reason behind the time shift?

Aragami was a self-concluding story with a linear narrative. We thought the best thing was to pick up the story many years after the events of the first game, thereby creating some distance between the two. This would allow us to have creative freedom in terms of characters and environment, and let us explore new narrative and gameplay forms. Ultimately, we wanted to expand the universe of *Aragami*'s IP. In addition, the multiplayer component has much more weight in *Aragami 2* than it did in the first game. There is no single main character in *Aragami 2*, but instead, we approached the concept of a 'clan' which takes more

importance, and that inherently meant breaking with the narrative of the first title.

The game looks quite different visually, too – can you talk about some of the advancements on this front? Will you be taking advantage of the new generation of consoles' processing power?

In the original *Aragami*, we opted for the cel-shading style because we were limited on a number of fronts, especially on the technical and production side of things. Cel-shading is a technique that offers very attractive visuals and doesn't require as many resources. Obviously, we learned a lot from our first project, and for *Aragami 2*, we wanted to be more ambitious and raise the bar considerably. The cel-shading technique was limiting us, so we decided to take the step towards a more realistic 3D aesthetic but without losing the cartoonish look, as seen in other titles such as *Overwatch*. We're working with more polygons and detailed models, increasingly complex scenarios, and an advanced lighting system that makes the game look more realistic.

As for the new generation of consoles, of course there are direct advantages, such as faster level loading and higher visual quality. *Aragami 2* is a cross-generation title, so our priority is to have the highest quality on all platforms. We're



focused on releasing a game that will look beautiful and run smoothly on all devices, so players can expect to have an amazing experience with the game regardless of the platform of choice.

How will the 'Shadow Essence' mechanic change from the original? Was there a certain caution around changing something that worked so well the first time around?

Aragami 2 is a disruptive sequel in many ways; it will transform many mechanics we saw in the first title, yet it will maintain the core elements that made

In *Aragami 2*, one of our priorities was to boost player freedom of movement and make the player feel extremely agile. In order to achieve this, we turned the Shadow Essence mechanic into a Stamina System that doesn't rely on staying in the shadows to recover.

Another interesting element in *Aragami 2* is that there are several other ways to remain hidden besides using the shadows. In the first game, you practically always depended on shadows to stay away from enemies, but in *Aragami 2*, you can hide in tall grass or bushes, hang from elevated spots, or

"ONE OF OUR PRIORITIES WAS TO BOOST PLAYER FREEDOM OF MOVEMENT"

Aragami special the first time. Shadow Essence was one of the toughest features to adapt and improve for this sequel so that it made sense from a design standpoint. In the first game, Shadow Essence was used by players to move around the map using Shadow Leap – a teleportation mechanic – and to create shadows. Shadow Essence was gained by sticking to the shadows, which forced the player to linger in certain parts of the environment, limiting its mobility.

stalk from corners and make contextual kills and KOs – offering a wide variety of stealth options and tactical choices.

Can you talk a bit about how co-op will impact the game? How will we form ninja clans, for example, and how will we be able to co-operate in missions?

The introduction of the co-op mode was a success in *Aragami*, and so we couldn't conceive the sequel without it being one of the main pillars of the game. It's still a →

JAPANESE EXPORTS

Although *Aragami* isn't based on any specific far-eastern myths, Japanese culture and design run deep through both games. The reason? The amount of anime on Spanish television in the 1990s, León explains. "The reason why we ended up making a game with such a Japanese influence is both curious and funny," he says. "A large part of the team is from Catalonia, and the local television network was one of the first channels in Europe to broadcast anime in the nineties. That marked our generation a lot with series like *Oliver y Benji* [also known as *Campeones*] *Dr. Slump*, or *Dragon Ball*. That's why many people in our country feel a kind of devotion to that branch of Japanese pop culture – it was something we grew up with since we were little kids."



◀ Look out for more varied - and often aggressive - enemy types in *Aragami 2*.

CALL FOR UNITY

Like its predecessor, *Aragami 2* is built in Unity – albeit heavily modified by Lince Works, León tells us. “We’re still using Unity but with an upgraded rendering pipeline and engine version.

When we were working on *Aragami*, we were also asked a lot if it was made in Unreal Engine 4, and I think this is because we are always trying to push Unity to the limit, to go beyond the default features that the engine provides. We try to adapt the engine to our needs so that the game takes on its own identity. That is why people will not see it as a game made in Unity, because it is a Unity that has mutated a lot!”



game that you can play in single mode, of course, but we wanted the co-op to be more complex and stimulating than in the first game.

The Kakurega Village acts as a single-player and online hub. Here, you can create your online squad and invite other players to take on missions together and advance in the story. The co-op system is drop-in/drop-out, so you can join and leave a game at any time and at any point in the story.

Moreover, what makes the co-op significantly engaging and fun is that clans will want to take into account what their strengths are when they play together as a team. Since players can customise their characters with different Shadow Powers and abilities, each will develop its own playstyle. There will be players with a more aggressive and direct style who are interested in developing combat; others who like to be deadly and stealthy at the same time; and those who prefer hardcore stealth and deception. In this way, we have different profiles of players who can join and contribute with their own playstyle to the team.

Will we see any changes/advancements in things like enemy AI?

Yes, absolutely. In fact, this is one of the features that we enhanced the most in *Aragami 2*. AI, in general, has received a significant boost, so now the enemies are also able to co-ordinate,

they can chase you across the map, go through obstacles, climb rooftops, and fight with you in melee and in a group. They can also investigate disturbances, such as a light that has gone out or bird movements, and communicate with each other to investigate areas as a team.

In the first game, we had a small variety of enemies, while in *Aragami 2*, we have a number of different types of enemies, each one with its own behaviour. We designed an enemy system based on classes so the player will have to adapt their playstyle accordingly. For example, a Keeper won't leave their post or patrol unless they have to combat the player, and they will be more defensive than offensive. But a Fanatic will have a more aggressive behaviour and will attack automatically when he spots you, using heavy attacks and won't give up. Players are definitely in for a real challenge now.

On that note, what are the challenges of getting enemy AI right in a stealth game, since enemy behaviours are so critical to the challenge and immersion in the genre?

The important thing is that the player understands how their actions affect the behaviour of the enemy. Hence, the feedback given to players every time something modifies the behaviour of the AI must be greatly refined, such that the player can learn from it and use it in

their favour. That has a direct effect on the difficulty. We also have to make sure that the player is aware exactly when and how they're discovered by the enemy AI, and to keep the game 'fair' in that regard. There are small tricks that we do, such as penalising the sense or vision of the enemies that are out of the player's field of vision, limiting the number of enemies that can go to investigate a disturbance, or cutting the enemy's vision when the player is in a higher ground.

among other stuff, will change depending on your progress in the story.

More generally, what kind of research goes into making these games? Did you visit Japan, for example? How deep into traditional folklore and history did you go for the plots?

Even though we'd love to visit Japan one day, that wasn't part of the research scope for the game. In fact, the world of *Aragami* is not and does not pretend to be

of the gameplay, without some taking more protagonism than others. We want the player to try and use all these skills and items as they play the game. In *Aragami*, the use of powers and abilities was constrained by the Shadow Essence, so the player was conservative when using them. In *Aragami 2*, we wanted to change that, and now the most powerful powers work by cooldown. In this way, we encourage the player to use them more, which translates into a more rewarding experience.

"IN ARAGAMI, THE USE OF POWERS AND ABILITIES WAS CONSTRAINED BY THE SHADOW ESSENCE"

Level/environment design is also key, of course. What's your process for creating these? Do you draw them out or go straight to grey-boxing on the computer? To begin the process, we draw the maps and define the different areas and observation points or safe points for the player. When all the important elements are established, then we create the grey box and do a playtest run, with enemies and interactive elements present. If the result is satisfactory and we approve the design of the level, we dress it with final art.

a realistic view of the folklore and history of Asian cultures, especially Japanese. *Aragami*, for us, is more a tribute to different influences that we have had from Japanese culture throughout our lives, adapting them to a fictional world, and that largely includes pop culture, anime, Asian cinema, or ninja mythology.

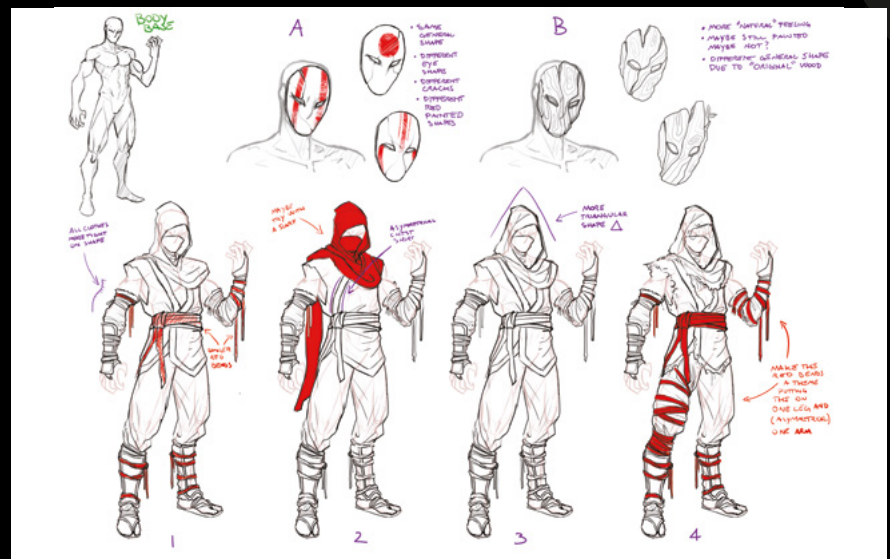
What goes into designing and balancing things like the skills and upgrades?

What we want in *Aragami 2* is for the different abilities and powers to be interesting and useful in different aspects

What's been the biggest challenge of making *Aragami 2* so far?

Without a doubt, the general scope of the project. The evolution from our first game to this one is monumental, this being the most ambitious project for Lince Works to date. Sometimes it's difficult to find a balance between how ambitious and creative you can be with what you're capable of doing, within the time frame and resources you have. *Aragami 2* has a lot of new mechanics and features, and it's extremely difficult to fit everything into the game. In addition, making a title with a strong multiplayer component, using a player hub, and managing the narrative of different online players who may be at different points in the story have all been really tough challenges. 🎮

Levels in *Aragami 2* are fundamentally different from the ones in the first game. Instead of linear levels, *Aragami 2* features large open locations, with different spawn points, multiple paths and points of interest, and more verticality overall. Although the environments will all have a similar style throughout different runs, enemy patrols, items and objective locations, light sources, and obstacles,



Forming our own clan of ninja assassins: one of the things we're most looking forward to sampling in the sequel.





Roguebook

Build a deck, battle a deck, do the decking

Info

GENRE
Deckbuilder

FORMAT
PC / Mac / Linux

DEVELOPER
Abrakam Entertainment

PUBLISHER
Nacon

RELEASE
May 2021

✓ The world map is randomised in each playthrough, which Abrakam hopes will add significant replay value to the game.

A deckbuilder might well pass many of us by these days – plenty have popped up in recent months and years, so it’s easy to let it all wash over you as you continually play...

GWENT, I guess? But Abrakam Entertainment headed to Kickstarter nonetheless, pitching *Roguebook* to the world and managing to get it successfully funded. How? By doing it once before in 2017 with *Faeria* – another strategy card game, and one that was well-received across the board. One particular fan of Abrakam’s last game was Richard Garfield, creator of *Magic: The Gathering*, *Netrunner*, *KeyForge*, and many more. They’re all superb card games – collectable and other – in case you’re wondering. So it makes sense for Garfield to be involved in *Roguebook*, and he has brought a chunk more oomph to the project, helping it to

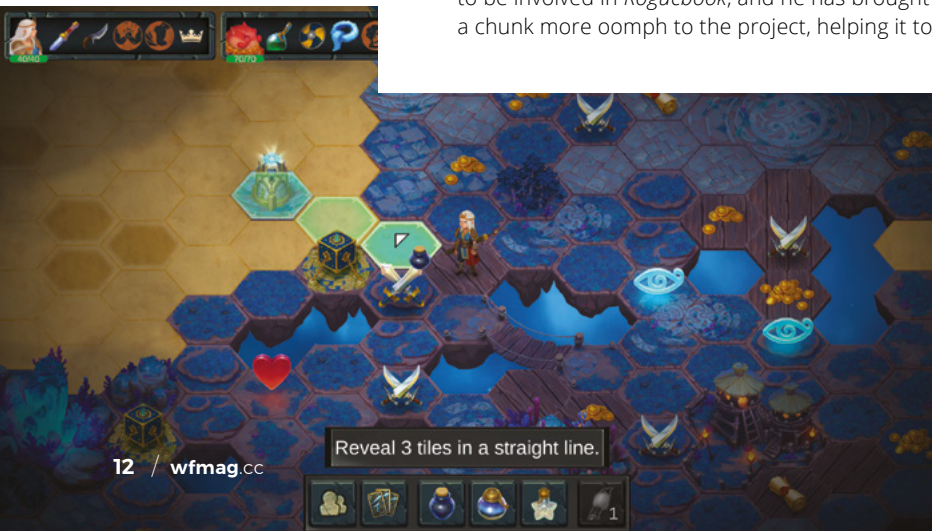
stand out in this crowded field that does indeed wash over us a lot of the time.

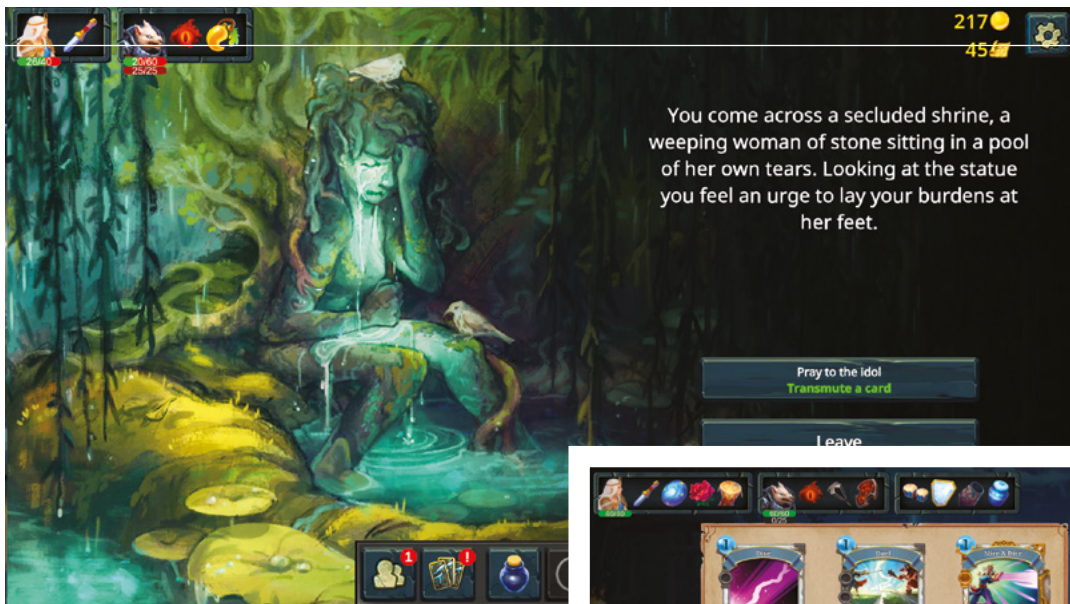
“Richard’s been a great help and mentor,” explains Jean-Michel Vilain, CEO and co-founder of Abrakam. “He’s been involved in designing board-games and deckbuilders for a long time, and he agreed to give us a hand since he really liked our previous game, *Faeria*.”

From testing early versions of *Roguebook* and offering up feedback, Garfield’s role in the game has changed to become something of a consultant. “Sometimes he gives us a small feature idea,” Vilain continues. “I think he taught us to realise the true flaw of any deckbuilder system: if you let players pick cards only when it’s going to make their deck stronger, and if you give them the opportunity to trim their decks very often, players end up with a very thin deck. [That’s] not great, since every match they will play with their deck will feel the same.

“Richard convinced us that we could do something more fun by giving reasons for players to end up with larger decks. So we’ve introduced a talent system which rewards you with a new passive ability for every five cards in your deck, while also looking at designing cards and treasures which benefit from larger decks. It’s a very interesting design space to explore.”

The game proper is generally straightforward in how it plays out – you battle against AI-controlled units using a couple of heroes and





◀ Between battles, there's a randomised world to explore, with decisions to be made (and decks to be built).

their drafted decks, attacks, buffs, debuffs, all that good stuff. It's not something aiming to break the mould, rather something that wants to get things *right*. All the same, Abrakam does have a couple of tricks up its sleeve, mainly via *Roguebook's* procedurally generated game world and through a focus on sheer depth in the combinations players can build for themselves and take advantage of.

"There are a few digital deckbuilders around now," Vilain says, "and we thought it'd be interesting to have the gameplay phases occurring between battles be more of an interesting game in itself. Our hope is to have players want to finish a battle because they want to advance the exploration of our randomly generated worlds, and not just be motivated by the reward of adding one more card to their decks."

Depth, meanwhile, has been a goal throughout the game's development – with playthroughs of *Roguebook* clocking in at around two hours and players only facing AI opponents (there's no multiplayer), that left the floor open to some more extravagant options when it came to what the player can wield in their deck.

As Vilain says: "For us card gamers this is an opportunity we've dreamed about: to let the

player access incredibly powerful synergies and combinations of cards, gems, treasures, talents – we want players to break the game in explosive and different ways."

That encouragement to break stuff just wouldn't fly in a *Hearthstone*, say, as pure, refined balance is key. *Roguebook*, meanwhile, relies both on the fact you're not playing against another person and the short-run, randomised roguelike elements to help it lean on this sometimes explosive randomness. "The main reason we enjoy making a single-player game is

"We want players to break the game in explosive and different ways"

because it lifts a big weight off our shoulders," Vilain explains. "Every card which feels great to play to you might feel negative to your opponent." A technique that might feel good for the player might be one that, on balance, just ends up feeling worse for the opponent – and that's something that needs to be avoided in multiplayer titles where possible, as it leads to negative feeling. "On our previous title, *Faeria*, we had to discard an incredible amount of card designs because of that," Vilain says. "With *Roguebook*, it's the opposite: we can design the game to let players do wild things without having to care how the opponent would feel about it."

With around 20 people working on bringing *Roguebook* to life – plus those contributions

from Garfield – Abrakam is hopeful it will have put together a compelling offering for those craving a more power-mad approach to an otherwise largely typical deckbuilding title. With the expertise both of the team and Garfield, the uncertainty of a run that comes with randomised generation of the game world each playthrough, and a focus on just cutting loose and letting players have fun with the cards they're dealt, there could be something here even for those who haven't been paying the genre much heed in recent times. 🎮



▲ Numbers, lovely numbers. Don't just aim for the big ones, though, there's more strategy than that.

Attract Mode

Early Access



Okinawa Rush

Steven Miller tells us about the long process of making a throwback to nineties combat games

Info

GENRE

Brawler

FORMAT

Switch / PC /
XBO / PS4

DEVELOPER

Sokaikan

PUBLISHER

PixelHeart

RELEASE

Spring 2021

✓ *Okinawa Rush* draws on some arcade and computer greats: *Street Fighter* and *Ninja Spirit*, and also *First Samurai* and *Full Contact* on the Amiga.

f our cover star, *Aragami 2*, represents a more modern example of an eastern-infused action game, then *Okinawa Rush* harks back to the sub-genre's 2D roots.

Headed up by British developer Steven

Miller, it's a side-scrolling brawler that recalls such titles as *Ninja Spirit* and *Dragon Ninja*, but replaces their simplistic run-and-strike combat with more detailed combat mechanics. *Okinawa Rush*'s brawny warriors can pull off a variety of punches and kicks, while an immensely satisfying parry system means an accurately timed hit will send a deadly ninja star pinging straight back at whoever threw it.

For Miller, *Okinawa Rush* began several years ago as a part-time project – a game he could work on after finishing his day's work as a carer. As the game took shape, however, Miller's brother David stepped in as co-designer and artist, and even took the bold step of moving from London to Steven's neck of the woods in the Medway area so they could work more closely together. "We were both avid gamers as children and loved the Amiga especially," Steven Miller tells us. "That was the golden age for us. I've always had an intense interest in game design, from an early age – drawing mazes or stages on paper and so on."

With the Commodore Amiga being such an important computer in Miller's formative years, it's perhaps unsurprising that *Okinawa Rush*'s resolution, colour palette, and sprite designs recall some of the system's finest action games. "I don't think we had a particular style in mind – it was more about what felt right in terms of the playfield," Miller tells us, "I'm sure, subconsciously, we went for an Amiga look but in a widescreen ratio. The palette evolved from 256 [colours] to 16 million while still trying to keep to the rules of working within a smaller palette. Dithering is used in a few places as a chosen aesthetic rather than a necessity – the Bitmap Brothers' games like *Gods*, *Speedball 2*, and *The Chaos Engine* were big inspirations for the pixel art."

Behind those colourful sprites, however, lies a technically impressive game that simply wouldn't have fitted on a handful of Amiga floppy disks;



there are three characters to choose from, each with their own moveset inspired by real-world martial arts; a local co-op mode where players can team up to pull off unique combos; and a lengthy campaign that unfolds over five stages. Many of these features were gradually added as *Okinawa Rush* evolved from a single-player game with the handful of modes first shown off in an early demo joined by more ambitious, fleshed-out ideas. "The project evolved over time, and it didn't have clear boundaries in place, in some respects," Miller says. "For example, it originally only had one playable character – and only one player – but it now has three characters, nine endings to unlock, and two-player co-op as well. So yes, it's changed massively since its conception. It still has those survival and boss-battle modes, but there are more moves now and more dynamic features such as using the environment to your advantage."

In 2017, *Okinawa Rush* was successfully greenlit on Steam, and also found enough backers on Kickstarter to help it cross its £10,000 minimum

goal. It was at this point, Miller says, that he and his brother decided to start working on the game full-time. "The Kickstarter was quite rough, really. Hard work. This was the point we realised we couldn't do our day jobs any longer, and the pressure from the backers is intense sometimes. Although they have, overwhelmingly, been very supportive and understanding regarding deadlines being missed."

"I've always had an intense interest in game design, from an early age"



▲ Steven Miller and his team use Fusion2 for programming and sprite editing, while sound and music employ the likes of Audacity and MadTracker2.

As the project has grown, so too has the team surrounding it – the Millers are now joined by Gary Angelone, who's handling the console ports, French programmer Julien Magnin, and Mike 'Brassica' Wright, who's providing the soundtrack. Thanks to the support of publisher PixelHeart, there's a physical, special edition of *Okinawa Rush* on the way for Switch, Xbox One, and PS4, as well as PC. It's been a challenging couple of years for the project, with the game hitting several delays – getting it running at a smooth 60 frames per second was, Miller says, a particular hurdle. Thankfully, however, the end is in sight, with *Okinawa Rush's* release planned for around Easter. "Having backed games myself, I always hated it when they were delayed, but now I know first-hand how it feels behind the scenes," he tells us. "If the game isn't ready then it simply can't be released. The struggle has been unreal at times, but we're approaching the finish line now." 🗨



▼ An online high-score table adds to the retro-modern feel: the better you score, the more in-game currency you'll earn to buy equipment for your dojo.

BASH AND PARRY

One of *Okinawa Rush's* most unique aspects is its combat, which owes more of a debt to the *Street Fighter* series than your typical side-scrolling platformer. "I've always been fascinated by what makes a good fighting or brawler game," Miller says. "[*Okinawa Rush*] is a combination of the two genres – a brawler with some fighting-game mechanics. We decided to make the bosses have two sets of animations, regular and 'damaged'. It's a bit like the *Monster Hunter* series, where you visibly see that you're winning the battle. Some bosses will behave differently when injured – and may even become more deadly in some instances, lashing out with one-hit death moves against the player."

As for the game's nifty 'parry anything' mechanic, that was one of the earliest concepts Miller came up with. "Right at the beginning of development, I thought it would be amazing to have a *Street Fighter III*-style parry, except in an adventure game setting. It can be used on anything – including spike traps, falling boulders, or whatever the danger is. Our parry is much more lenient, however, the input isn't that demanding. The main danger comes from enemy numbers and being overwhelmed in some situations."

Critter crunch

Heading back to the woods for an update on Super Animal Royale

Info

GENRE
Critter blaster

FORMAT
PC / Mac

DEVELOPER
Pixile Studios

PUBLISHER
Modus Games

RELEASE
Later in 2021

✓ The action is still an engaging mix of cute crossed with violent, though you're not exactly seeing fox guts splattering everywhere.

W

ay back in our third-ever issue, we took a look at a little animal-themed battle royale game that was imminently releasing in Early Access. Known as *Super*

Animal Royale, it drew us in with its juxtaposition of cutesy visuals and, as you'd expect from the genre, multiplayer violence... and we weren't the only ones. So here we are now, about two years later, revisiting the fortunes of a game that's almost at v1.0 and going to exit Early Access in the near future – as well as one that's seen a committed community build organically around it over the years.

When it comes to the bullet points of changes since we last spoke to Pixile Studios, things are pretty straightforward: top of the list is the move to free-to-play in November 2020, which opened up the ability to unlock all super animal breeds, cosmetics, and achievements for anyone playing the game. Unsurprisingly this saw the player base jump up significantly. More animal breeds to play have been introduced too, rising from 50 at the start of Early Access to more than 300 at the time of writing and, you'd assume, more to come in future. New weapons, new map locations, giant emus to ride into battle – all those sorts of things you'd expect – but what has been a constant

source of surprise and delight is the game's embracing of its storyline elements.

"We're approaching storytelling like an epic fantasy novel," says Michael Silverwood, co-founder of Pixile Studios. "So we've written a deep backstory for our absurd world and characters, and we use it to develop everything – new characters, new points of interest, biomes on the map, and our YouTube animated series." Said animated series, *Super Animal Royale Tonight*, involves a mix of this storytelling, crafted by the dev team, mixed in with highlights – the best clips of skilful plays, or funniest moments, or what have you, as submitted by the community. It's proving a useful and unique way to keep players engaged *and* entertained, with the bulletins helping to keep things fresh and growing that organic player base.

As for the team itself, Pixile has grown to eleven strong with two new hires coming directly from the community – an artist and a software developer. "It continues to be a fully virtual team," Silverwood explains, "spread out across North America, Europe, and Asia. Community feedback plays an integral role in game development across all our channels, but especially in Discord, where we're able to chat directly with players. The team also actively





◀ The game is backed up by a surprisingly in-depth storyline, telling the tale of rebellions and the attempted quashing of said rebellions.

plays the game with the community so we can experience things first-hand and imagine together where we can take the game next.”

The update process has changed thanks to this first-hand experience, as well as how *Super Animal Royale* has been received so far: “We began Early Access releasing updates every one or two weeks so that there was a consistent flow of new content for players, as we were building the foundations of the game,” Silverwood says. “In the second year of Early Access, once we had most of the foundations in place, we shifted to releasing updates every three to four weeks, which proved to be more sustainable and also allowed us to make each update bigger... Over the summer in 2020 we began working on our biggest update yet, overhauling the game’s progression systems and menus and transitioning the base version of the game to be free. Fortunately, the long-term planning was worth it, and when the Major Update was finally released, we experienced a 10x jump in concurrent player count and a ton of excitement from players.”

What’s surprising is how relatively stable the whole thing has been. *Super Animal Royale* has seen many updates, of course, but the core mechanics – like the line-of-sight – haven’t been tweaked hugely, or overhauled in any major way. “The line-of-sight mechanic has

been foundational to the game design, so it hasn’t been tweaked much and has proved to be integral to the game’s success,” Silverwood says – but there have been attempts to build on it: “This past Halloween we debuted a night mode where we experimented with each player having a flashlight-style cone of vision to make gameplay more suspenseful, which is one of the few experiments we’ve run with the line-of-sight mechanic. Night mode now randomly activates 9% of the time to mix things up in matches.”

The updates will continue in the run-up to v1.0 and beyond, but for now, Pixile finds itself in the enviable position of having a popular

battle royale game with a decent player base established before it’s even *properly* out. It’s something that’s not lost on Silverwood. “We’re extremely proud of how far the game has come and the community that has grown around it,” he says. “The community of players is one of the most special aspects of the game, and is uniquely positive and sporting for a competitive game. It helps that it’s harder to get upset when your death results in your cute animal exploding into spaghetti and meatballs or balloons and you’re served up an animal pun, but it’s also thanks to our exceptional community moderators who actively engage with players both in-game and in Discord.”

As for that v1.0 release? Silverwood is very positive: “Rather than being an end, we see v1.0 as a new beginning. Much of our work through 2020 was laying the groundwork for the next chapter of *Super Animal Royale*, including regular seasonal content synced with new episodes of our YouTube series, new game modes and weapons, and expanded storytelling.”

And, because you’re clearly curious, here’s season one of *Super Animal Royale Tonight*:

wfmag.cc/SARTON. 🐹

“We’re approaching storytelling like an epic fantasy novel”



▲ *Super Animal Royale Tonight* is a lovely touch, keeping players engaged with the game with its regular episodes.

FEATURE DROP

As well as an apparently stable process behind updates and tweaks, *Super Animal Royale*’s development also gets a boon from the fact it isn’t over-promising: “We haven’t had to permanently drop any ideas in the past two years,” Silverwood explains. “But sometimes ideas do need to be pushed into the backlog either for more time to plan/design/test them to get them ready for release, or just to carve out enough time to build them if they’re very large features. As a small team, we always need to be good at prioritising what is most important.” Rideable emus, of course, were very important to get in there.



✔ But why, pray, would anyone ever want to exit the hamster ball?

That was the month that was



01

01. In the zone

Payload Studios has partnered with industry partners to launch Tentacle Zone – a four-month virtual incubator aimed at helping early-stage indie developers through advice, mentorship, and straightforward assistance. The initiative is focused on folks from typically under-represented backgrounds “including, but not limited to: POC, lower socio-economic backgrounds, LGBTQ+, under-represented genders, disabilities, and neurodiversity”. Applications have already begun when you’re reading this, but they remain open until 24 February, so unless you’re a late reader there should still be time to get in on the action (and advice). Interested? Have a look: wfmag.cc/tenta



02. Raw help

Raw Fury, publisher behind the likes of *Call of the Sea* and *Star Renegades*, has made various developer-friendly resources available to any and all. Anyone with an interest can head to the company’s site and take a look at template and example documents for things like pitch decks, PR and marketing plans, even Raw Fury’s generic publishing agreement is up there to pore over, download, and edit to your heart’s content. It’s a fantastic initiative by the publisher and is sure to be a huge help to those who need to do the things you need to do when releasing a game, but aren’t quite sure how to do them. Visit: wfmag.cc/Raw

03. DirectX creator passes away

The creator of DirectX, Eric Engstrom, has died aged 55 following complications from an injury. Engstrom – along with Alex St. John and Craig Eisler – made Microsoft’s Windows-based gaming API in the mid-1990s, around the time the company was on the verge of giving up on gaming altogether. Thanks to the efforts of Engstrom and co, the first DirectX-powered release, *DOOM* on Windows 95, helped pave the way both for the company to retain its focus on gaming, and for the eventual birth of the Xbox. It’s an incredibly sad loss, and one for which we extend our deepest sympathies to Eric’s family and friends.



03



Cyberpunk 2077 mural could land marketing firm with £300k fine

Riot Games and Bungie taking GatorCheats to court for... cheating



04

04. Oh crap(com)

Capcom announced it had suffered a security breach back in November of last year, but the consequences of the huge leak of data and personal information weren't quite apparent back then. Now we know at least 16,406 people have seen their info compromised in the hack, with up to 390,000 people potentially impacted overall. Initially, Capcom stated nine people – current and former employees – had seen their data accessed, so it's *a bit of a rise* there. So far, those impacted are all linked to Capcom professionally, with nothing at the time of writing pointing towards consumer information being leaked. All the same: bad times at Capcom High.

06



05



05. Alphabetising

Employees of Alphabet – parent company of Google – announced in early January the formation of the Alphabet Workers Union, a... union... of Alphabet workers. It's pretty self-explanatory, though still largely surprising given Silicon Valley companies aren't exactly too comfortable with their workers pitching in together with things like collective bargaining et al. Of course, Google has a significant stake in the world of gaming, not just via Stadia, so it will be enlightening to see how things progress with the union in the coming months and years.

06. Classactionpunk

Cyberpunk 2077 continues to pile up the woes on developer/publisher CD Projekt Red, as Rosen Law Firm confirmed at the end of 2020 it had filed a class-action lawsuit alleging company executives lied about the RPG's state on last-gen consoles, the PS4, and Xbox One. Rosen is canvassing for plaintiffs to join the legal action on its site, so folks in the US who feel aggrieved enough by *Cyberpunk's* lacklustre performance on consoles can head on over and sign up – though we're not linking it here, as we're a UK-based magazine, so there's not much point. Regardless, a statement from CD Projekt Red said the company would "undertake vigorous action to defend itself against any such claims".

Xbox 360 *Halo* servers to be shut off around December 2021



Jonas Neubauer, seven-time *Tetris* world champion, passes away aged 39



09

07



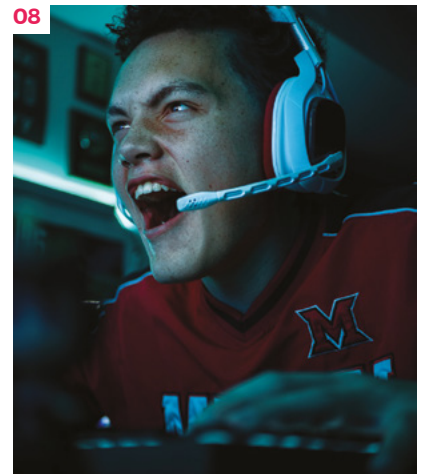
07. Lucasfilm Games returns

Stepping back beyond the LucasArts years, Disney has announced the relaunch/rebrand of Lucasfilm Games. The excitement pretty much ends there, though, as the brand is purely to act as a licensor of Lucas-related projects. But then the excitement picks up again, because Machine Games announced it is handling an *Indiana Jones* tie-in, to be published by Bethesda. The game has zero detail right now beyond the fact that it exists (in some form) and won't be out for quite a while, but here's something else: Ubisoft Massive has been confirmed to be working on a *Star Wars* project under the Lucasfilm Games banner too. So... they're not being stingy.



Another special edition Switch to release in support of *Super Mario 3D World*. LOOK AT IT

08



08. Primal rage

Last month we reported on a study claiming video games are, actually, good for mental health – this month it's a study claiming that, actually, video games don't have a link to increased levels of violence and aggression. The snappily titled *Growing Up with Grand Theft Auto: A 10-Year Study of Longitudinal Growth of Violent Video Game Play in Adolescents*, by Sarah M. Coyne and Laura Stockdale, shows no real increase in aggressive behaviour across a decade-long study. The actual paper has a lot more words than we could fit here, so give it a look and draw your own conclusions: wfmag.cc/violence

09. CONSUME

57.3% of games were bought digitally in the UK in 2020, with 24.5 million of the 42.7 million games sold last year going the non-physical route. The data, analysed by Gamesindustry.biz and not including Bethesda or Nintendo's digital figures, shows sales of video games rose a whopping 34% over 2019 as people found themselves needing things to stave off boredom and worry in a year where everything went to pot. *FIFA 21* was the UK's winner in game sales, while Nintendo won the console war with the Switch being the top-selling bit of hardware eleven out of twelve months. A big year for games, though not for the best of reasons.

LG TVs to get native Stadia app, no Chromecast required



10

WORDS OF WISDOM
FROM SATORU IWATA
NINTENDO'S LEGENDARY CEO

ASK IWATA



10. One more Ask

Just under a decade's worth of *Iwata Asks* – Nintendo's series of interviews with former boss-man Satoru Iwata that ran from 2006 through to his death in 2015 – were collated and released in a book for the Japanese market; fantastic for those who speak the langu- oh wait, we don't have to be polite anymore! That's because an English translation is coming on 13 April, titled *Ask Iwata* and published by Viz Media (not that one). *Iwata Asks* was always an enlightening and transparent look into the machinery behind Nintendo's façade, so this is guaranteed to be a wonderful coffee-table book to have around.

11



11. SuperKwalee-fragilistic

UK-based mobile games publisher Kwalee committed to donating 100% of the proceeds from its game *Teacher Simulator* to FareShare, the charity backed by footballer/all-round top guy Marcus Rashford, in the week after school kids were sent back to classrooms for a day before having to return to home-schooling in the UK's third national lockdown. The campaign ran for the week ending 10 January and was able to raise around £2900 for the charity, which aims to help reduce both hunger and food waste across the nation. So like Chartwells, but better.

12. Microsoft Switch

300,000 years ago, Microsoft launched the original Xbox. But before that fateful day in 2001, the company attempted to purchase a few established gaming giants in order to ease its entry into the console gaming market. According to a piece on the birth of the Xbox in Bloomberg, Microsoft approached EA to receive a 'no', while attempts to purchase Square went quite far before things ended, with Square's money-people saying there wasn't enough of it (money) on the table. Best of all, though, is the bit where former Microsoft employees admit the company attempted to *buy Nintendo* ("They just laughed their asses off"). You can find the whole excellent piece through here: wfmag.cc/Bloomberg

Epic Games bags Cary Towne Center as its new office. That's a shopping mall

Brian Cooper, founder of Nintendo Japan website, passed away in November, it was announced

Post Apocalypse

Retro revivals, bygone games mags, and the folly of pre-orders: it's this month's letters



Issue #46

Do-overs

In issue 46, you asked us to choose which old gaming franchise we'd like to see resurrected for some kind of modern do-over. As much as I mop up every retro game repackaging, no matter how many times I've bought the titles concerned across every format I've owned, maybe we knock this on the head?

Genuinely: how many times has one of these modern-day reworkings actually given us a really good game? The only

one that flickers to the top of my head is the *XCOM* revival. I still shudder at the updating of *Syndicate* that came out a while back though, and how it managed to savagely miss the point of what made the first two games (and the brutally hard expansion pack) so great.

Let other developers take ideas forward. *Two Point Hospital* had enough of the DNA of *Theme Hospital* – and some of the original developers, of course – but by

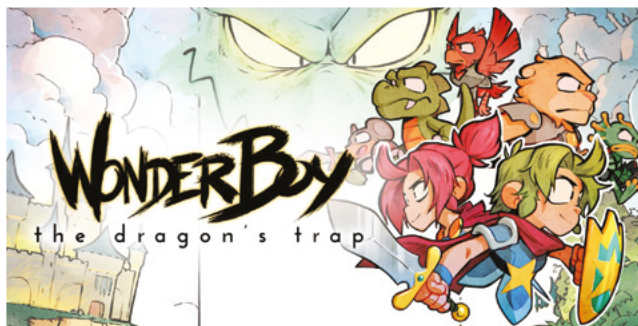
necessity cutting themselves loose of the name and the expectations that came with it, didn't they come up with a better game?

I'll go back in my cave now to play a bit more *PaRappa The Rapper*, if it's all the same with you.

Stu Acton

Ryan writes:

I'd counter this by saying some recent revivals have been incredible. Lizardcube's *Wonder Boy: The Dragon's Trap* and *Streets of Rage* sequel were both made with real passion. But then we got that *XIII* remake last year, which missed the point entirely. Basically what I'm saying is we should give all these projects to Lizardcube.



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



Day none

I found myself nodding along to the column by Steve McNeil in Wireframe issue 46, and the idea of resisting lining up a list of pre-orders of games. I've long failed to see the advantage of pre-ordering: we're in an era where a big release will require at least a gigabyte or two of updates, where the price will be at its highest, and as *Cyberpunk 2077* has shown us, it might not even be finished. And don't get me started on 'Day One' editions: a posh box and being fleeced of more money.

I have no problem with paying full price for a game. If I pay £60 for something like *Cyberpunk 2077* and it keeps me entertained for months, I think that's fabulous value. But I'm not a beta tester. I'm a customer. Steve, I'm with you. One single game, enjoy the hell out of that, and by the time you get to the end, maybe they'll have fixed the next one.

AJ Foster

Ryan writes:

It does feel like the biggest fans of a particular game or franchise pay the highest price for their affection: they put their money down once to pre-order the fancy collector's edition that comes with an art book, soundtrack CD, and branded crash helmet. Then they effectively pay again by sitting through the yet-to-be-patched launch version of the game. Still, I'm currently typing this in a room absolutely stuffed with game-related tat, so I'm as much of a sucker for this sort of thing as anybody. Sigh.



Featured copy

As much as I enjoy the features in your magazine examining the making of games, I do wonder at least once if you could turn your gaze a little more inwards. Lots of us cherish memories of gaming magazines from days of old, and I'd dearly love 'behind the scenes' stories of those. I remember when Micro Mart published its final issue a few years ago – it gave over some ten pages to the stuff the staff there could never tell us

before. I loved it, and would love to read more stuff like that.

Although I suspect in the days of remote working and pandemics, most magazines are Zoom calls and Dropboxes?

Lloyd Elliott

Ryan writes:

Absolutely not – we're all Skype, Slack, and gallons of cheap coffee here. But seriously, a look back at the inner workings of bygone mags is a good shout.

Shortcuts

With news that Ubisoft is set to make an open-world sandbox set in a galaxy far, far away, we asked Twitter: what's your favourite *Star Wars* video game ever?

X-Wing vs TIE Fighter – maybe not as good story-wise as *TIE Fighter* but I loved it all the same. @RobThez

Star Wars Galaxies was the only MMO that made me feel like I was living another life. @DarthLordi

Rebel Assault on the PC. I played it using a mercury tilt-switch joystick I'd made. @femtasonic

Knights of the Old Republic, for sure! I just need to finish the second game after all these years :(@RealEvilUnicorn

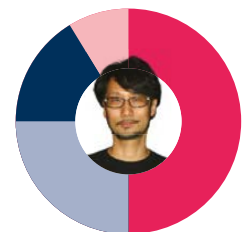
Death Star Interceptor (ZX Spectrum, System 3, 1985). It's not the best #StarWars game, but it may be the cheekiest... strictly non-canon. @zx_spectrum_30

I remember seeing the *Star Wars* sit-down cabinet and being utterly mesmerised by it. It felt ludicrously ahead of the curve for 1983. @lucyhattersley

Mainstream I know, but [*Knights of the Old Republic*]... I can be evil, learn evil force powers, and have a purple lightsaber... yes, yes, and more yes. @nickjordan19

The burning question

On the subject of licensed games and esteemed studios, we also asked: which of these dream pairings would you most like to see? Hideo Kojima doing a *Logan's Run* game it is, then...



Kojima Productions:
Logan's Run - 50%

Capcom: 50 Shades
of Grey - 26%

Insomniac: *Little Women* - 15%

Slightly Mad: *The A-Team* - 9%

Preview

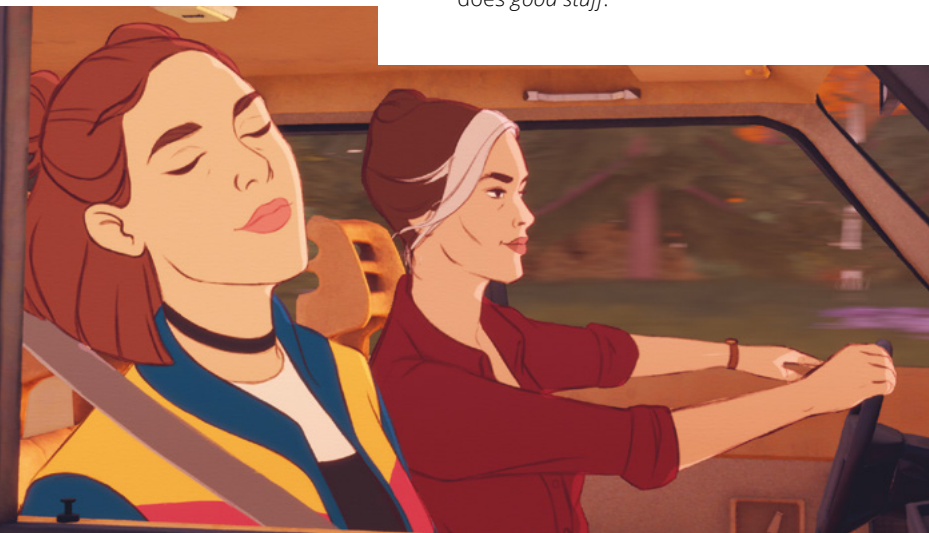


Hood: Outlaws & Legends ↗

Multiplayer heists are brilliant, as seen in GTA Online, so *Hood: Outlaws & Legends* is immediately on the right track as you put together a team of players to take on both other players and AI-guarded treasures. It's dark and bloody, showing a real gritty character to things that will surely help in its effort to appeal to... people who like dark and bloody things. As long as it's open to players making it up as they go along, this could be a fun one.

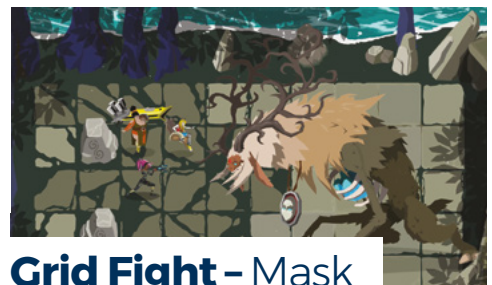
Open Roads ↘

Fullbright is back, and that's reason to give a damn: *Open Roads* is the next narrative 'walking sim' (though it's a road trip) from the studio behind *Gone Home* and *Tacoma*. Sixteen-year-old Tess Devine and her mother Opal are exploring old family properties, figuring out the past, life, their relationship, and whatever else along the way. It might not sound like much, but Fullbright does *good stuff*.



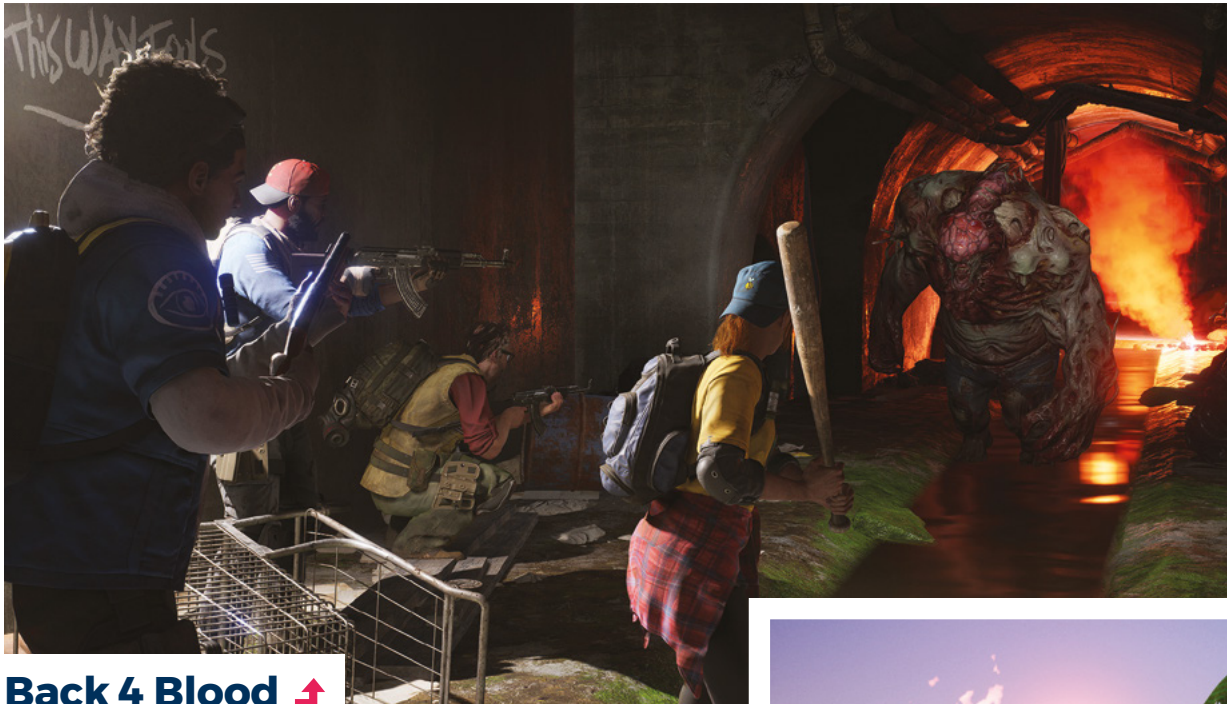
Ark 2 ↗

There's not much to be said here – not much we even want to bother saying here – beyond the fact that, yes, that is Vin Diesel, and yes, he is in another game. *Ark 2* is the sequel to the dino-riding survival game that's been so popular in recent years, but will the added star power of the surprisingly experienced video game publisher once known as Mark Sinclair knock the series up a notch?



Grid Fight - Mask of the Goddess ↗

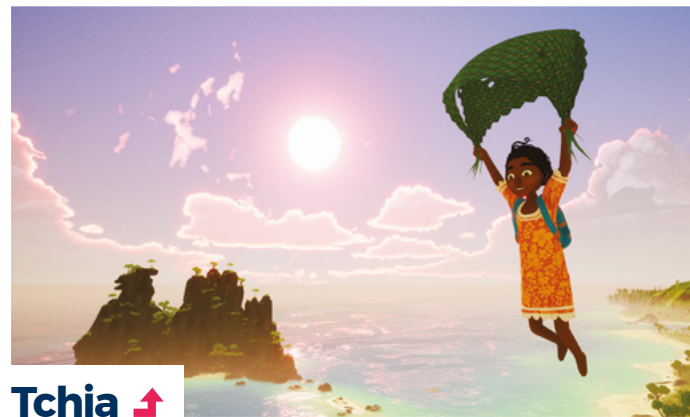
Opting for the ol' simple mechanics with all the depth that can arise from such a setup, *Grid Fight* sees players bringing together a team to battle nine goddesses, via the route of strategic real-time combat with mild RPG sprinklings on top. It's mainly hedged on its battle system, which is – of course – grid-based, but the storyline behind things and options open to players (you can recruit many of your would-be enemies, for example) means there's a lot going on under the surface here.



Back 4 Blood ↗

If you think it looks like *Left 4 Dead* – even with the number four in the title – then you’ve cracked the code. Alright, Enigma-level it might not be, but Turtle Rock is being very clear while making things legally distinct that this is the spiritual successor to the team-based zombie blasters that came out under Valve’s watch. But, really, *Back 4 Blood* is *Left 4 Dead 3*. Wow, that’s a lot of numbers.

So, what to expect? Honed, surprisingly deep and teamwork-heavy multiplayer with masses of enemies that range from mild irritants to living (virtual, undead) nightmares. Early footage shows a game that looks like it ticks all the boxes – well-paced, open to adaptation, different playstyles support – but it also *sounds* like a game that needs an option to turn the ‘witty’ quips off. That’s a whole other kind of horror. All the same, Turtle Rock has the chops – *Left 4 Dead* is a legend, and *Evolve* was a good game that just didn’t stick the landing – so barring a gargantuan cock-up, *Back 4 Blood* should be a solid multiplayer jaunt.



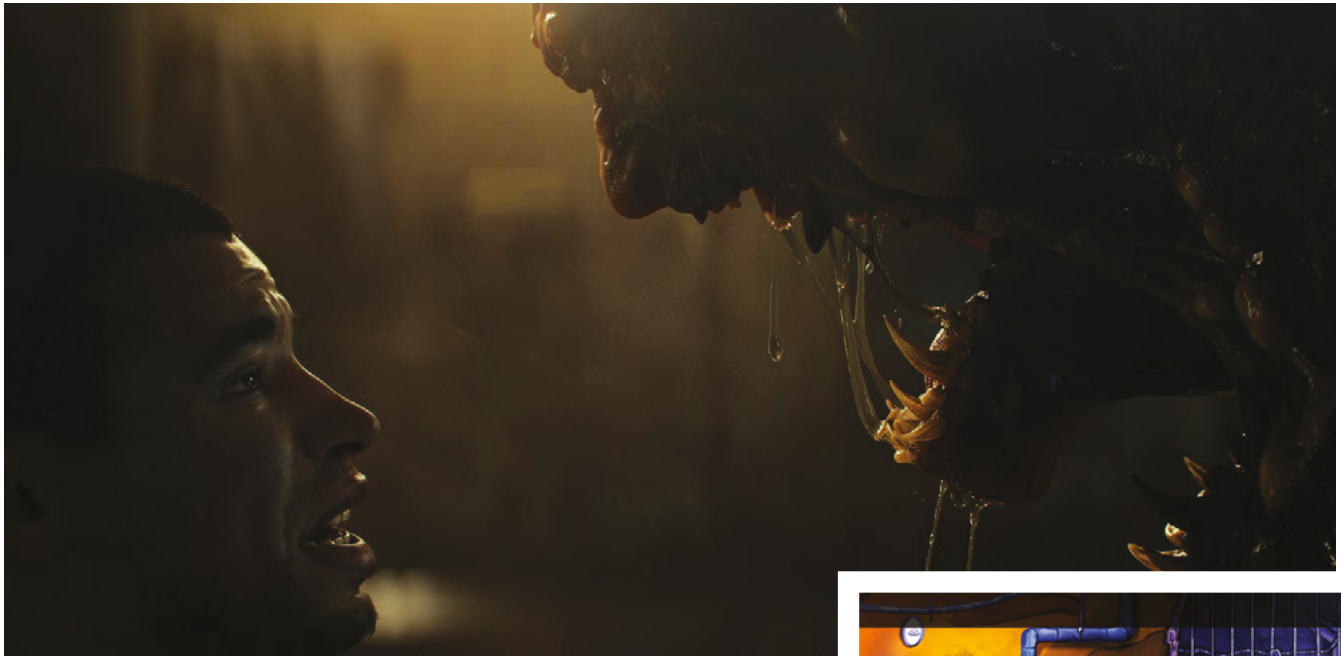
Tchia ↗

A colourful open-world adventure with an intriguing USP: our protagonist Tchia is able to take control of any animal or object you encounter. That’s around 30 animals and plenty more objects, basically. *Tchia* has a real *Wind Waker* vibe to things, and that, coupled with the fact that *you can be a dog* makes it one that’s very much on our radar.



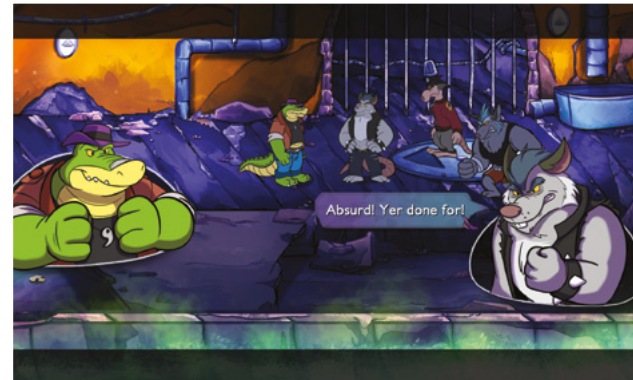
Happy Game ↖

We’ve a longer look at the whys and hows of Amanita Design from page 28, but nothing can stop us from really hammering home and highlighting just how incredible – and intriguing – *Happy Game* looks. Set up with the simple, creepy line of: ‘A little boy falls asleep to a horrible nightmare. Can you make him happy again?’, *Happy Game* sees you playing through three distinct nightmares of the child in a psychedelic horror show that’s sure to leave players, at the very least, a wee bit uneasy. It’s comical and cute at the same time, too, so there’s going to be some serious head-wonkiness going on in this one.



The Callisto Protocol ↗

Dead Space is back! Sort of. Creative forces behind the classic horror series, including Glen Schofield and Steve Papoutsis, have reunited at a new team named Striking Distance Studios, to work on this single-player survival horror-'em-up. Info is thin on the ground right now but the potential to return to the roots of what made Visceral's series so great in its early days has us very excited indeed – expect more on *The Callisto Protocol* in coming months.



BROK the InvestiGator ↗

Yes, this was chosen to sit here because of the pun title – but it could be more than just that, all things considered. A mix of adventure/narrative and straight forward beat-'em-up, *BROK the InvestiGator* (he's an alligator) does offer a flourish by blending together two apparently disparate genre styles. It can be played as a point-and-click game on easier difficulties, skipping fights, or you can open yourself up to choosing to either investigate or punch your way through.



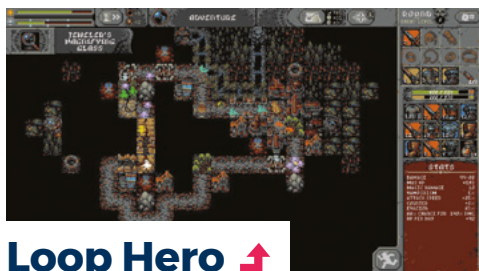
Fisti-Fluffs ↖

Up to four players face-off in a battle to see who will emerge as the supreme warrior; the mightiest of the mighty. Also: you're all cats, and it involves a lot of smashing up living rooms. Physics-based games tend to work best when they're this silly, so there's every chance *Fisti-Fluffs* will be a hoot, especially on Switch.



Perfect Dark ↗

No pressure, folks: you've just got to make a long-awaited sequel (well, reboot) to a much-loved N64 game while both navigating the still-lingering fallout of *Perfect Dark Zero* and the massive expectations placed on the shoulders of developer, The Initiative. If this one is even half as good as people hope it will be, it'll be an absolute banger. If not... *well*.



Loop Hero ↗

Devolver Digital's on publishing duty for this Four Quarters-developed deckbuilder of sorts, so you know from that it's going to have *something* going for it. You place enemy units, buildings, and terrain using different cards, setting up the obstacles on a route your hero has to take – do you want to make it more difficult, thus getting better loot but risking death, or go the other way and end up relatively empty-handed but alive? It's a neat concept.

Disco Elysium: The Final Cut ↗

We're not usually big on going over re-releases and remasters, but sometimes it's worth raising a hand and saying 'Hey, this is worth paying attention to' – *Disco Elysium*, one of the best games of the past few years, one of the best RPGs ever made, is coming to consoles in its *Final Cut* form. In March, those with a PS4, PS5, or Stadia can get involved in the smart, deep, and genuinely intriguing world of noirish detective-ing – with extras like a fully voiced cast, a new area to explore, and improved control options for those using a pad. Evolution not revolution, sure, but very welcome – *everyone* should get the chance to play *Disco Elysium*: it's just that good. Existing owners (i.e. on PC and Mac) will get a free upgrade to the *Final Cut*, of course, and the Xbox and Switch releases of the game will follow later in 2021.

Season ↘

One of those games that just makes you pause a second and take stock, *Season* comes our way via Scavengers Studio and puts players in the shoes of a young woman from a secluded community, as she ventures out into the world by bicycle, seeing it all for the first time. It's 'a third-person atmospheric adventure bicycle road trip game', according to the devs, and involves a lot of documenting what there is around you – photographing, drawing, recording the world and what's in it. It sounds *lovely*, and exactly the sort of thing to let wash over you when you want to de-stress.





Paint & click

Amanita Design makes whimsical adventures set in organic, handmade worlds. Founder Jakub Dvorský tells us all about the studio's 17-year history and artist-led approach



WRITTEN BY
David Crookes

> *Happy Game* is a psychedelic horror that will have players escaping from three unforgettable nightmares.





◀ *Botanicula* tells the whimsical tale of five tiny tree creatures on a journey to rescue the last seed from their parasite-infested home.

With its spires, turrets, and steeples, Prague is among the most romantic and beautiful cities in Europe. But while the Czech Republic's capital might be picturesque,

Jakub Dvorský, Prague resident and founder of Amanita Design, sees beauty elsewhere. He's as fascinated by rusty old machines and abandoned industrial buildings as he is by classical architecture, and spends a great amount of time in the surrounding forests with his family. "A sense of freedom is vital to me," he tells us, taking a break from working on *Happy Game*, his studio's forthcoming title. And it's a sense of creative freedom that has underpinned the success of his studio for more than 17 years.

From *Samorost* to *Machinarium* and from *Botanicula* to *Chuchel*, Amanita's games are carefully engineered mixtures of the natural, the industrial, and the downright surreal. The studio's passion is such that its games aren't released until they're deemed as perfect as they

can be. Amanita's games are mostly point-and-click adventures and share an enchanting style, both in their art and sound. But their games also defy a number of genre conventions, taking players on wordless journeys that let their worlds and the thoughts of their tiny characters speak for themselves.

Happy Game, on the other hand, will take the studio into slightly less family-friendly territory. Announced at Nintendo's Indie World Showcase in mid-December last year, *Happy Game* is far less jolly than its title implies. "It's going to be Jára Plachý's latest game," says Dvorský of the developer he's worked with for over a decade. "This time he's created something much darker – we really don't know what's going on in his crazy head. Jára doesn't plan and mull over things too much; he just creates. We encourage him to do so and help him to realise his vision, no matter if it's happy and playful or scary and disturbing."

WILD TIMES

Happy Game is due for release in the spring, and it's demanding the studio's full attention – "I'm quite busy these days," Dvorský says – but then, these are exciting times for Amanita. *Phonopolis* is also in the works: a puzzle game designed by a three-person team which makes use of handmade paper models, which are then photographed and turned into animated 3D objects. "*Phonopolis* is being developed by a new team who've brought yet another art style to our studio," says Dvorský. "But it's too early to talk further about this game. It still needs a lot of work, and we haven't even announced it officially yet." ➔



GONE IN A FLASH

Amanita Design was a fan of Flash, and used the platform for all its games until 2018. *Chuchel* was the last title to use the technology – just as well, because Adobe's support for it ended on 31 December 2020, meaning it's now all but dead. As you may expect, this has caused some problems for Amanita. "Our web-only games, such as *Samorost*, *Questionaut*, and *Osada*, won't work now, but we're trying to find a way to let them live with a Flash Player emulator," says Dvorský. But the studio was certainly prepared. "The end of Flash was inevitable, and we knew it for a long time," Dvorský adds. "This technology used to be fantastic and helped us a lot in the beginning, but now it's obsolete, and we're developing everything in Unity."





Chuchel took six years to make, with developer Jára Plachý taking an organic approach to its design.



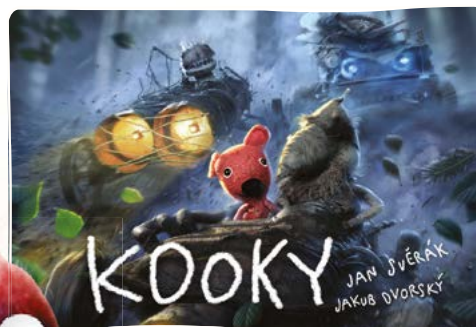
A KOOKY TALE

Jakub Dvorský's time at the Academy of Arts, Architecture and Design in Prague was well-spent. Aside from creating *Samorost*, he was introduced to puppetry, which led to him working on the 2010 Czech action comedy film, *Kooky*. Directed by Jan Šverák and combining stop-motion, live action, and puppet animation, it tells the story of a six-year-old boy whose teddy bear has been thrown away, leaving him to wonder what his toy was doing and how it might get home. Dvorský designed the puppets and props and worked on the visual effects, and also illustrated an accompanying book. You can watch the film for free at wfmag.cc/kooky.

These games are part of an ongoing artistic evolution where little is planned in advance. If an idea sounds great, or if Dvorský encounters a team producing something special, he'll give the go-ahead or make an approach. Where that path takes them all is part of the excitement.

This artist-led way of working is partly thanks to Dvorský's mother, who was a film director, and father, who was an illustrator. "My parents taught me a lot, but not directly," Dvorský says. "They never taught me any artistic skills and never pushed me in any direction. I was free to do what I felt like doing."

Dvorský grew up in an unconventional household, at least by old Czech standards.



"They were freelancers, even in communist Czechoslovakia when the state employed 99% of working people and it was very uncommon," the 42-year-old says. "I felt that was my way as well; I knew I was unemployable."

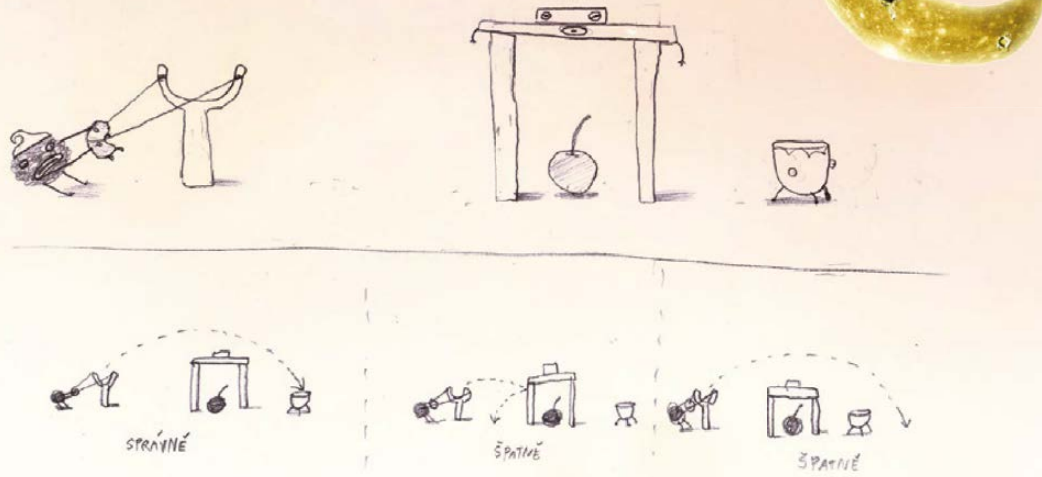
MAKING SENSE

Dvorský's game-making career began when he was 15 years old. "At first I worked as an animator, helping my friends with their point-and-click adventure game," he says referring to his time at the indie studio, NoSense. "A year or two later, I was already a game designer working on my own project, a combination of a dungeon crawler and adventure game with half hand-drawn graphics and half pre-rendered 3D."

That game was *Asmodeus: Tajemný kraj Ruthaniolu*, which Dvorský designed with Marek Floryán. He'd combined genres and styles that he liked at that time, "and, surprisingly, it kind of worked," he says. Even so, it took three years to get the game ready for release in 1997 because the pair couldn't settle on a genre. Still, that free-form thinking would soon define Dvorský's approach to his art.

"I was a gamer as a kid but never a hardcore one," he says. "I started with 8-bit games but got seriously hooked later with early PCs, adventure





◀ Concept art for *Chuchel* showing the protagonist seeking to retrieve a cherry, together with the finished result in-game.

games, and dungeon crawlers. I also read many science-fiction books, listened to death metal records, drew maps and bizarre castles, and spent time camping in the wilderness. I was a fairly typical dark-romantic kid, I guess."

FLASH OF INSPIRATION

When Dvorský began creating games, he did so in an environment that was very different from his parents, and he admits to being lucky in this regard. The non-violent Velvet Revolution returned Czechoslovakia to a liberal democracy in 1989, ending 41 years of Communist one-party rule. Four years later, the country peacefully split into the Czech Republic and Slovakia.

"It was a very euphoric and hopeful era, and I'm glad I could experience

it myself and be part of it," Dvorský says.

"The mood is so much darker today; our current prime minister is a former Communist state security agent and the society is torn, hateful, and divided. It was an excellent time to grow and create, that's for sure."

In 1997, Dvorský studied Animation Film at the Academy of Arts, Architecture and Design in Prague. He began work on a game called *Samorost* for his thesis project. "I wanted to create an experimental interactive project or a website using Photoshop collages from my photos and simple animations made in Flash," he recalls. "I worked quite intuitively, and it was only at the end of the development when I realised I'd created a game. I launched it on the web to make it easily playable for professors and a bunch of my friends. Then it went viral and exploded."

Samorost was short and quirky, gaining Dvorský a grade B. Released for free, it allowed players to control a space gnome who lived on a moss-covered asteroid that resembled a lump of dead wood ('samorost' being a Czech word

for items made from such material). By clicking around, gamers could follow a story in which the gnome would visit planets in a rusty old spaceship, solving puzzles. The unusual art style and dreamlike music created an experimental, near meditative experience, which offered no guidance, kept players guessing, yet felt richly rewarding to play. As one of only a handful of people on the course to use computers for animation, Dvorský sparked much discussion about games as an artistic medium. "Flash was a perfect tool for the creation of *Samorost*, because it allowed me to do three essential things in just one piece of software," Dvorský

explains. "I could make both vector-based, hand-drawn animations and cut-out animations, implement interactivity

that required only basic programming skills, and publish the result on the web where it was directly playable without any downloads and installations. Utter magic!"

Samorost's success prompted Dvorský to found Amanita Design in 2003 and start work on a sequel. He earned some money in the meantime by developing browser games for Nike and American rock band The Polyphonic Spree – side projects that provided a financial lifeline and space to experiment. ➔

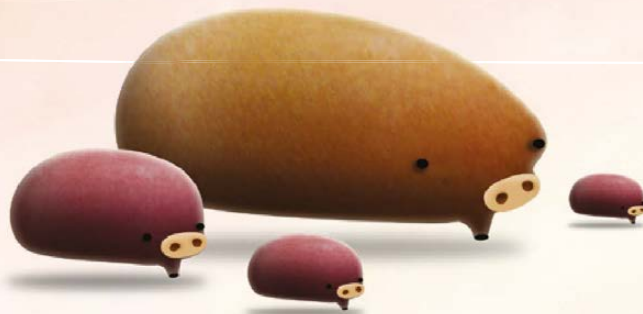


LISTEN UP

With its *Monty Python*-esque styling, psychedelic music game *Osada* was an offbeat release, even by Amanita's standards. Free to play in a browser, the 2011 game was an experiment by animator Václav Blín and composer Šimon Ornest that encouraged players to click items to trigger a range of sounds and bizarre animations. Not that Amanita has been a stranger to music. Blín, Dvorský, and Plachý have also produced music videos for the likes of Kamil Jasmín, Danish band Under Byen, and Czech alt-rockers DVA, who are providing songs and screeches for *Happy Game*.



◀ An early title for Apple Arcade, *Pilgrims* was born from a minigame developed for *Samorost 3*.



MUSHROOM FOR MORE?

Fun(gi) fact: the white-speckled, red toadstool, *Amanita muscaria*, is a common sight in woodlands across the world, and many will know of its hallucinogenic properties from reading *Alice's Adventures in Wonderland*. It forms part of Amanita Design's logo, not only symbolising the studio's connection to nature, but also its trippy approach to game design.



✓ With *Machinarium*, think Pixar's *WALL-E*, but with a distinctly off-kilter approach to its design and humour.

As before, Dvorský created the backgrounds for *Samorost 2* by taking photos of moss and mushrooms. The gameplay and premise were largely the same too, and the sequel retained the organic, rusty look of the original. This time, however, Dvorský enlisted some help. Tomáš Dvořák, who worked with Dvorský at NoSense, produced the music, while another Tomáš Dvořák worked on the sounds. Václav Blín, who Dvorský met at university, helped with the design and animation.

"*Samorost 2* was our first attempt to create an independent project and make some money out of it so that we wouldn't need to do commissions like *Rocketman* for Nike. Luckily it worked, so we were able to continue in that direction and make *Machinarium*."

By now, the studio was beginning to evolve: it was becoming less dominated by Dvorský and more of a collective. "I like to work with people who are talented and who are also nice people, not only to work with but to be friends with," Dvorský says of recruiting and building the studio. "I was naturally picking up people from my social bubble to work on the games at Amanita Design."

Machinarium took three years to develop, and it was the studio's first full game. Players took on the role of a tin can droid called Josef – named after Josef Čapek, who first coined the word 'robot' – and attempted to solve a series of puzzles which later became massively layered to the point of mind-bending agony. "Honestly, I can barely remember that we made

the game, it's been so long," laughs Dvorský. "I recollect that we made several mistakes during the development, though – we didn't make any prototypes, and we barely did any playtesting with early builds."

"Generally we just hoped the initial design was good enough. We went ahead and created all the elaborate graphic assets and made them functional, but this intuitive and naive approach worked out surprisingly well in the end."

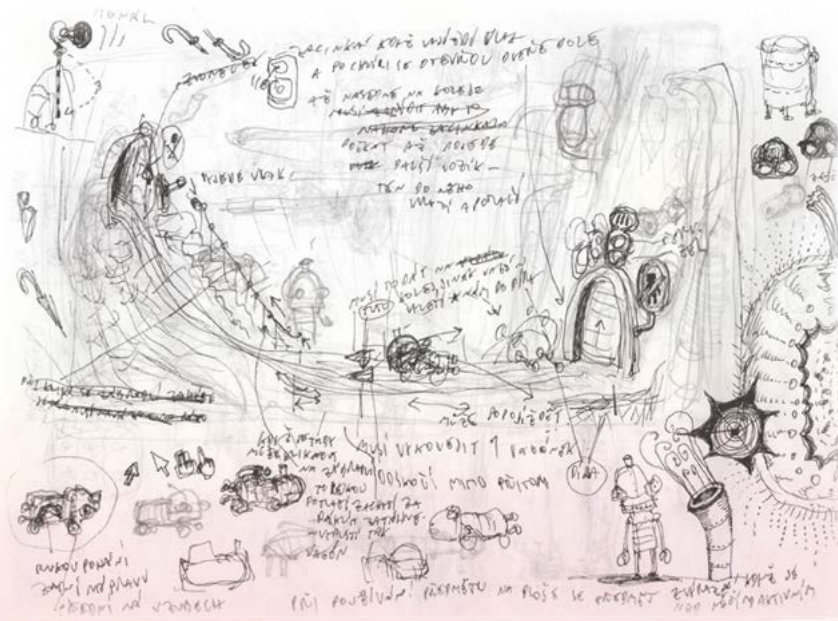
Those who worked on *Machinarium* received little remuneration.

"We spent very little back then because everyone was trying to make some money on other jobs," Dvorský recalls, adding that the team mostly worked from home and only met up occasionally at a tiny Prague apartment. "The studio only supported a few people, with little money. The whole team believed in future success and felt they could earn it back with their revenue share."

"We didn't make any prototypes, and we barely did any playtesting with early builds"

BACK TO NATURE

Machinarium went down a storm, winning the Excellence in Visual Art Award at IGF 2009, and selling over four million copies. There had, however, been an issue with piracy. Amanita said as few as five percent of gamers had paid to play *Machinarium* by August 2010, which could have impacted on future projects. Instead, the studio got on with their next title, *Botanicula*, in 2012. This game was entrusted to Plachý, who had a background in animated movies. He originally





^ *Creaks* was initially designed independently of *Amanita*, but Dvorský was impressed and brought its creators, Radim Jurda and Jan Chlup, on board.

wanted players to be able to choose between one of two paths to determine how the game would progress, but Dvorský encouraged him to evolve the title into a point-and-click adventure. Unlike the far trickier *Machinarium*, the plan was to make a more accessible game that was nonetheless full of odd characters, collectables, and humorous animation that would encourage gamers to continue exploring. “We were still learning, especially when it came to game design and polishing the gameplay,” Dvorský says.

TO BE A PILGRIM

Where most studios grow as their games make money and then hire more staff, *Amanita* has gone in the opposite direction. *Samorost 3*, a game five years in the making, was made by just six people; it also used the antiquated Flash platform for its animations, albeit modified for external processing using scripts and other tools.

In *Samorost 3* and the games that followed, *Amanita*’s aim was to produce living, breathing worlds that players would want to continue interacting with over and over again. In this respect, it became just as important that gamers would finish what they started, so when Plachý developed the playful comedy-adventure *Chuchel*, the aim was to incentivise players to press on to the game’s conclusion; unlike *Machinarium*’s complex puzzles, later games took a more accessible approach.

“In *Chuchel* and *Pilgrims*, the design was such that anybody should be able to finish the game and enjoy it,” Dvorský says. “That’s why we reward players, even for ‘bad’ decisions and ‘wrong solutions’. We came to care more about the flow of the playthrough, the learning curve and all these things.”

More recently, *Amanita* has also sought to look beyond the point-and-click genre; *Creaks*, released in July 2020, was the developer’s first platform-puzzler. Designed by Radim Jurda and Jan Chlup, it has players explore a vast



^ Concept art for *Creaks*, in which monsters are rendered harmless by shining a light on them.

subterranean mansion with enemies that come to life in the dark, yet change into harmless furniture when light is shone on them. Those enemies – the *Creaks* of the title – resemble everything from robot canines to jellyfish, and are impeccably animated in a manner typical of *Amanita*. The hand-painted backgrounds are similarly delightful – these were rendered in acrylic paints and scanned into the computer.

Initially, *Creaks* flourished independently of *Amanita*, with Dvorský bringing its creators on board, giving them autonomy, and helping them see the game through to release. “Both the art and gameplay style come from Radim. He’s a talented game designer who can invent strictly logical yet elegant and creative puzzles,” says Dvorský. “His art style is similar to our older works, and it’s strongly influenced by Czech and Eastern European films, art, and book illustration.

“Like *Machinarium*, we also wanted to emphasise the hand-crafted feeling and make it look like an illustration from an old adventure book. That’s why the drawings are created with ink on paper and shaded with watercolour. I believe it creates a certain timeless quality that isn’t present in 3D or vector-based 2D graphics.”

By bringing in other teams and projects, *Amanita* has widened its scope, and become more prolific in the process: games are being delivered faster with gaps between releases far smaller than in the studio’s earlier years. Yet *Amanita*’s creativity and unique style remain undimmed, and for Dvorský, there are exciting times ahead. “I’m lucky to live in a cool bubble of diverse, intelligent, and generally nice people,” he says. “And I’m happy at how things have been working out.”



^ *Amanita* Design founder, Jakub Dvorský.

Here's Looking At You, Kid



LOTTIE BEVAN

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

Nostalgia used to be a disease. A military doctor devised it in the 17th century to account for frequently miserable Swiss mercenaries with fever, stomach pains, and fainting fits who yearned for the mountains of home. He thought nostalgia was caused by brain and ear damage from the relentless clang of Switzerland's cow-bells. Sadly, it wasn't. Nostalgia's a common, healthy human emotion: remembering the golden days of childhood and good things now past.

Games remind me of those Swiss soldiers. From the enduring popularity of pixel graphics to chiptune, it's an art form obsessed with its past. Reddit is full of PC gamers opining about teenaged LAN parties. There's serious hype about 'Playdate', a black and white wind-up Game Boy-looking console. Roguelikes are an entire genre of games defined by their similarity to a title that's older than I am. You know what else is older than me? Syphilis. The past isn't all great, people.

“Recreating the emotions of a child in the cynical heart of an adult is hard”

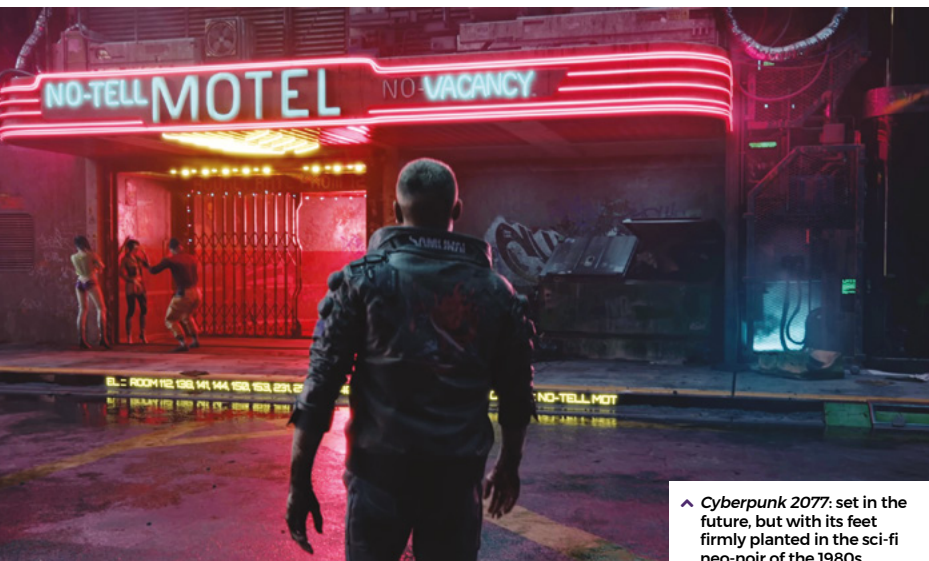
Nostalgia's why we love a sequel. Games are particularly prone to them because we keep improving our graphical and technical capabilities, meaning games made even a decade ago can feel antiquated and drab. The classic titles everyone's heard of but no one under 30 has played – *Silent Hill*, *Tomb Raider*, *DOOM*, *Deus Ex* – are still creatively brilliant but no longer meet the basic specs required in 2021. And it's no coincidence that all of those

games are the first in a long line of sequels. But sequels set themselves a difficult task. It's not just a return to Pallet Town we want, it's

the feeling we had when we were eight and chose our first-ever starter *Pokémon*. The beautiful *Final Fantasy VII* remake is heralded as one of the best *Final Fantasy* games in recent memory, but Square Enix updated the original turn-based combat, disappointing many who remember the old system. And games are all about the feels. Recreating the emotions of a child in the cold, cynical heart of an adult is hard. *Toy Story 3* manages it, but it's a Pixar film with a \$200 million budget about saying goodbye to childhood.

We've seen a classic nostalgic trip recently in *Cyberpunk 2077*. *Cyberpunk*'s a fun genre, but it isn't woke. It's James Bond fan fiction written by nerds, all sex and chrome and male heroes and Uzis. It's also a lot of other interesting things – American fear of Asian success, socio-political commentary, the future of AI and humanity – but you can't separate that from the neon-drenched man with a gun. A lot of people expected *Cyberpunk 2077* to give them the same thrill they had when they read *Neuromancer* in 1984. For many, it did. For others, it challenged their politics in uncomfortable ways. You can revisit the 1980s. You can't stop living in the 2020s.

Sid Meier said a game is a series of interesting choices. The problem with gaming nostalgia is we've made those choices already. You can make new ones this time around, but you'll never feel quite like before. 🎮



^ *Cyberpunk 2077*: set in the future, but with its feet firmly planted in the sci-fi neo-noir of the 1980s.

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Competition closes on Monday, 1 March 2021. Prize is offered to participants worldwide aged 13 or over, except employees of the Raspberry Pi Foundation, the prize supplier, their families or friends. Winners will be notified by email no more than 30 days after the competition closes. By entering the competition, the winner consents to any publicity generated from the competition, in print and online. Participants agree to receive occasional newsletters from Wireframe magazine. We don't like spam: participants' details will remain strictly confidential and won't be shared with third parties. Prizes are non-negotiable and no cash alternative will be offered. Winners will be contacted by email to arrange delivery. Any winners who have not responded 60 days after the initial email is sent will have their prize revoked.



Super Animal Royale

Super Animal Royale is a battle royale game, sure, so it's going to be overlooked by both those not drawn to the genre, and those who already have their favourites. But how many other battle royale games offer a vista like this, to be taken in while you're sitting atop your battle-emu? *Exactly*.

"*Super Animal Royale's* bright, colourful art style contrasts against the surprisingly viscous personalities of its *Super Animal* protagonists," says Michael Silverwood, co-founder of Pixile Studios. "Its flat, clean 2D art also stands out in a genre mostly dominated by 3D games. On closer inspection, the game has surprising depth in its characters and world, thanks to meshes that deform the characters in pseudo 3D during their animations, and a shadow system that gives environments the illusion of 3D depth. Overall, the game has minimalist sensibilities, but only adheres to those roots loosely to allow for stylish flourishes, often inspired by classic cartoons."

**READ
MORE**
turn to
page 16

GAME
Super Animal Royale

ARTIST
Kyle Doyle

RELEASE
Out now (Early Access)

WEBSITE
wfmag.cc/SAR



Interface

The death and rebirth of video game genres



^ The numerous playable characters in *Thimbleweed Park*. Solving puzzles requires repeated switching between characters.

THE DEATH AND REBIRTH OF VIDEO GAME GENRES

Major studios may have turned their backs on 2D platformers and point-and-click adventures, but for indie devs, they're a playground of creativity

WRITTEN BY MOLLY SOMERSCALES

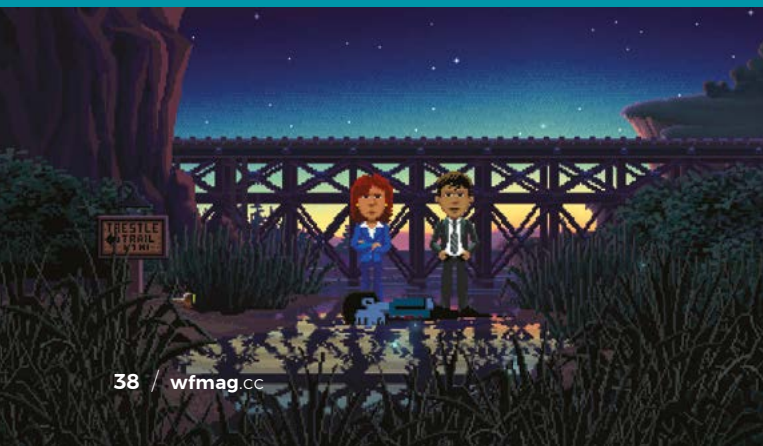
Popular culture shifts with trends and technology; video game genres are no different. Since the medium's birth, innovations in technology and hardware have

driven game development, and game genres have adapted to reflect these improvements: you only have to look at the earliest text-based

RPGs and something like *The Witcher 3* to see how far that genre's come over the course of three decades.

As video games have evolved, however, some genres have quietly fallen by the wayside: other than the evergreen *Super Mario* series and its various spin-offs, platformers have all but disappeared from the mainstream since the 2000s – largely replaced by more modern genres, like first-person shooters and ever-more ambitious open-world action-RPGs. Point-and-click adventures have similarly been confined to the past. But with the death of older genres came their rebirth at the hands of indie developers. Searching for platformers, point-and-click adventures, and 2D shooters on Steam or the Nintendo eShop unlocks a treasure-chest of affordable and charming games.

^ *Thimbleweed Park* revived the LucasArts-style point-and-click adventure in fine style.





▲ 'Cute and creepy' is the brand of Killmonday Games. The poster for their game, *Little Misfortune*, gets this across perfectly.



▲ In *Little Misfortune*, sprinkling glitter on unsettling objects is a key game mechanic.

Thanks to indie developers, then, genres long abandoned by triple-A studios still thrive. But why? We spoke to the minds behind a few popular retro-style indie games to find out.

PLAYING IT SAFE?

One reason why older genres might appeal to indie developers is their comparatively small scale; where major developers might feel duty-bound to make ever-larger games with additional modes and content, their smaller counterparts are free to make more focused, intimate experiences.

That's the opinion of Danelle and Oliver, admins for Indie Game Lover. "With a triple-A game, ideas and content can be stretched thin to pad out a twelve-hour experience," Oliver suggests. "Features like multiplayer are included simply to justify that game's full price." Danelle adds that large studios can sometimes feel removed from the gaming community itself, with developers driven by "big bosses' breathing down their necks to make 'money-only choices'".

Retro genre indie games are occasionally backed by firms with deep pockets, as with *Ori and the Blind Forest* and its successor, *Ori and the Will of the Wisps*, both supported by Microsoft. But for the most part, larger studios have left the traditional 2D platformer

alone. For those studios, surrounded as they are by huge investments, external shareholders, and massive sales targets, taking the time to reinvent an older genre is simply too risky: why experiment when huge franchises such as *Call of Duty* continue

to pull in the big bucks year after year? Indie studios, by contrast, rely on other things to stand out: innovative gameplay

mechanics, unique art styles, and engaging, offbeat storytelling. Where better to start than with older genres that aren't dominating the current gaming landscape?

ADVENTURE TIME

Rem Michalski has created a number of point-and-click adventures under his Harvester Games banner: *The Cat Lady*, *Downfall*, and *Lorelai* were all created from Michalski home during his spare time. For Michalski, it's the freedom to take creative risks that distinguishes the typical indie game from its triple-A ➤

"With the death of older genres came their rebirth"

Switched On

Since its launch in 2017, the Nintendo Switch has provided a platform for indie developers, and indeed, many of the people we spoke to for this article said their games sold the most copies on this system. Others spoke of constant fan requests for a port of their game to Switch. As more and more indie games have appeared on the eShop, however, discoverability has become an issue: how do you sort the best games on the store from the worst? "Hundreds of games of varying quality are given the same store presence," Indie Game Lover's Oliver says. "It's a visibility problem that plagues other digital stores. I hope that Nintendo is able to deliver a solution while the number of games on the eShop is still relatively low compared to Steam so that browsers are able to find 'the good stuff' and aren't put off by a slew of low-quality games."



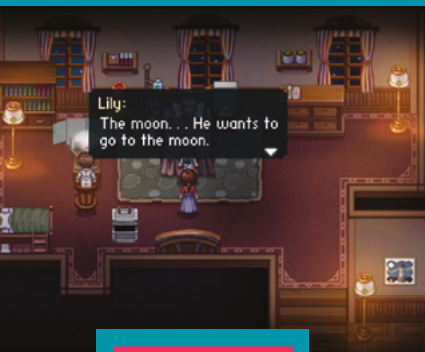
Interface

The death and rebirth of video game genres



▶ Rextro Sixtyfourus from *Yooka-Laylee* offering players a chance to experience his 2D arcade games.

▶ Freebird Games' top-down adventure, *To the Moon*: a heart-wrenching story of love, death, and regret.



RETRO REVIVED:

Tamarin

Like *Yooka-Laylee*, developer Chameleon Games' *Tamarin* is a throwback to the cartoon-like 3D platformers of the nineties. Brought to life with some gloriously detailed character models and environments, *Tamarin* has plenty of triple-A polish – partly because some of the creative talent behind the game formerly worked at *Banjo-Kazooie* studio, Rare. As *Tamarin*'s creative director Omar Sawi told us back in *Wireframe* issue 15, the game was an opportunity to revisit a genre neglected by the modern industry. "There are so many games nowadays that start by exploring DLC or games-as-service, or they don't focus on giving you a good, traditional experience," he said. "I think a lot of big companies just want to get the money, and games these days are all about grinding. I hope there'll be more games like *Tamarin* and that the genre won't go away. We need single-player or story-based games where it's possible to finish them, and there's satisfaction from concluding them."

▶ Cutesy 3D platformer *Tamarin* not only revives a genre from Rare's past, but also features some of its creative talent behind the scenes.

counterpart. "The best thing about being indie is not having to 'play it safe' [and] not trying to cater to everyone's tastes but staying true to your vision," he tells us. "And people dig that. There's this feeling of not knowing what to expect when they get a game that's not your usual 'colour by numbers' title, but a twisted child of a crazy artist's imagination.

The role of indie games is to stretch boundaries, to experiment and show players what's on the other side."

Michalski also adds: "I don't know what it's like to have people breathing down your neck, questioning everything you do."

"They enjoy my weird spin on what some call a dead genre"

combination of nostalgia along with the new riches of material and its delivery lends to a surge in interest levels".

Top-down adventure *To the Moon* is primarily a narratively driven experience, where the beautiful pixel artwork and heart-wrenching story of love, death, and regret are allowed to take centre-stage. *Fran Bow* follows a similar path in exploring the dark

EXPERIMENTATION

For some of the developers we spoke to, that creative freedom is something money simply can't buy. Killmonday Games' Natalia Martinsson, for example, says that she wouldn't compromise her studio's integrity even if a major publisher dangled a huge sum of money in front of her; the studio wouldn't "go into a deal with a company that would tell us we need to change something", Martinsson says, because that wouldn't feel "honest". Instead, she and her studio are happy to keep on making handcrafted games like *Little Misfortune* and *Fran Bow*, with their exquisite animation and offbeat narratives.

Developer Kan Gao, director of such titles as *To the Moon* and *Finding Paradise* at his studio Freebird Games, agrees that older, established genres are ripe for unusual or unorthodox storytelling. Gao describes this as "treading new territories" and suggests "the





sides of mental illness. These are subjects that larger studios seldom explore – certainly not to the level of intimacy displayed here. Similarly, Martinsson says she wants her games to “connect with those things that are personal, but in a way that allows players to feel comfortable and reassured that there are other people – or other characters – that also go through these problems.”

“I love how games can connect to you so personally,” she adds. “You can release something [through playing] that helps you.”

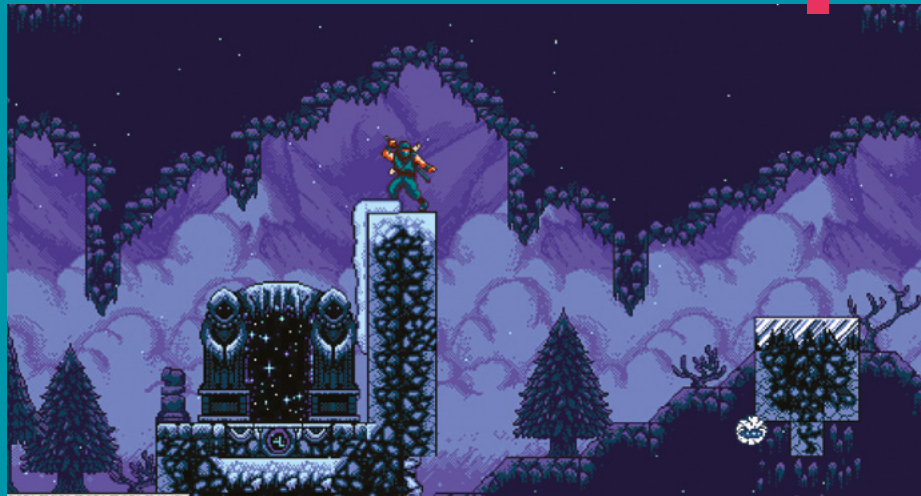
Harvester Games’ creations are of a similar ilk. Rem Michalski feels the “dark/adult layer” of his games appeals to both him and his fans. The discussion of peripheral and taboo issues such as grief and pain may not appeal to everyone, but they leave a strong impression with those who relate. Such games may never achieve the large sales numbers of a colourful Nintendo platformer, but they can create a loyal fan base who feel the games ‘spoke to them’ personally. “They enjoy my own weird spin on what some call a ‘dead’ genre,” Michalski says.

For David Fox, the veteran adventure game developer who worked on such classics as *Maniac Mansion* and *Zak McKracken and the Alien Mindbenders* at LucasArts, the promise of a return to the past was central to the point-and-click adventure game, *Thimbleweed Park*. The game is filled with references →

RETRO REVIVED:

The Messenger

Released in 2018, *The Messenger* brought back the fast-paced, intense action of Tecmo’s classic *Ninja Gaiden* games from the late eighties. For developer Sabotage Studio, however, making a 2D action platformer wasn’t simply about copying what came before; rather, it was a process of deconstructing the original *Ninja Gaiden* games, and sorting the good from the bad. “It’s kind of like curating,” creative director Thierry Boulanger told us in issue 43. “You’re taking an experience, recording it, and then analysing it in terms of game design and experience. How can we shape this [classic game] into just giving you the good stuff, and giving you more of it?” Sabotage Studio is attempting a similar trick with the 2D JRPG genre with its upcoming *Sea of Stars*, a modernised homage to such SNES-era gems as *Chrono Trigger* and *Illusion of Gaia*.



➤ Sabotage Studio’s *The Messenger* didn’t just pay tribute to the original *Ninja Gaiden* games – it also introduced plenty of humour, and some neat plot twists.

➤ Rem Michalski’s *The Cat Lady* dealt with taboo themes rarely touched on by point-and-click adventures of the past.



Interface

The death and rebirth of video game genres



➤ *Rigid Force Alpha* brought back the long-neglected horizontally-scrolling shoot-'em-up in fine style.



RETRO REVIVED:

Rigid Force Alpha

Japanese firms Konami and Irem may have long since abandoned their once-popular shoot-'em-up titles – *Gradius* and *R-Type* respectively – but indie developers are still working hard to keep their spirit alive. *Rigid Force Alpha*, created by solo developer Marcel Rebenstorf, is a sci-fi blaster firmly in the vein of those eighties games. But because Rebenstorf is a former level designer behind such games as *Anno 1701* and *Might & Magic Heroes Online*, he brings a modern flourish to an ageing genre. For him, there's plenty of untapped potential in the humble shoot-'em-up, as he told us in *Wireframe* #15. "With modern technology, there's a lot of potential for completely new ideas," Rebenstorf said. "Just imagine a battle royale shoot-'em-up. A totally wild idea! And let's not forget, there are already some interesting efforts in terms of creating genre mixes such as *Starr Mazer* or *Drifting Lands*. In short, the genre isn't dead."

and call-backs to LucasArts' heyday, delivering on its Kickstarter promise of "opening a dusty old desk drawer and finding an undiscovered LucasArts adventure game you've never played before". But despite maintaining the same basic controls, innovations were necessary to ensure accessibility and evolution.

"[We] added a lot of features [such as] a built-in hint line," Fox says, and most importantly, he adds, there are "no dead ends" – which addresses a problem several early adventure games presented, where players found themselves in an "unwinnable situation" if they forgot to pick up a quest item earlier in the game. Newer point-and-click adventures, such as *Thimbleweed Park* or Amanita Design's output (see page 28) do more than hark back to an earlier era of gaming, then: they take existing genres and mechanics and improve on them.

That 'new, but improved' approach can also be seen in such games as *Yacht Club Games'* delightful platformer *Shovel Knight*, Thomas Happ's eerie *Metroidvania*, *Axiom Verge*, and Sabotage Studio's pacy *Ninja Gaiden*

homage, *The Messenger*. They're all games that, according to Indie Game Lover's Oliver, combine "pixel art, low resolutions, or low polygon counts but with modernised controls and unique twists on gameplay that may not have been possible to deliver with decades-old hardware".

"They're games that are reminiscent of older games in look and progression," he adds, "but bring their own modernised sensibilities to the table." Danelle agrees, and cites the likes of *Stardew Valley* and *Starbound* as examples of superior modern takes on bygone genres. "I understand the incredible amount of work and passion it can take to create indie games," she says. "They require aspects from every creative realm rolled into one. The countless hours and dedication indie developers put in are well worth a second glance."

IN VOGUE

Genres can drift out of fashion, but it's not uncommon to see them come back into vogue, either. The 3D platformer, epitomised by the likes of *Spyro*, *Banjo-Kazooie*, and *Crash Bandicoot*, was a popular one in the late nineties, but mainstream interest in it palled as the new millennium dawned. In more recent years, however, the genre's seen something of a miniature renaissance, with new entries in the *Spyro* and *Crash Bandicoot* series emerging in 2018 and 2020 respectively. On the indie front, Playtonic Games introduced *Yooka-Laylee* in 2017 – both a modern 3D platformer and a spiritual successor to those games of old. For developer Gavin Price, who worked on *Yooka-Laylee* at Playtonic Games, the project



▲ Dotemu and Lizardcube revived the scrolling beat-'em-up in brassy, punchy style with *Streets of Rage 4*.

RETRO REVIVED:

Streets of Rage 4

Sega's brawler series quietly drew to a close in the Mega Drive era – until indie developers Dotemu and Lizardcube brought it kicking, punching, and stomping back into the 21st century. The studio's scrolling beat-'em-up not only sensitively brought the series up to date, with bold hand-drawn characters and precise controls, but it also improved on the originals in subtle ways. "One line of thought we have is to identify frustrations from old games," lead game designer Jordi Asensio told us in *Wireframe #26*. "For example, enemies going outside the screen is very annoying, so we tried to fix that with screen boundaries."

"We want to add moves to the characters, new ways to use them, new possibilities," concurred fellow developer Cyrille Lagarigue, "but we don't want a game that has a feeling that is too different from the originals. So we're always adjusting to find the right balance."

"I understand the incredible amount of work and passion it can take to create indie games"

was a chance to revisit an established genre from a contemporary angle. "[There's a lot still] to experiment with," Price says, "and combining new ideas with 3D platforming action captures the classic tone whilst also appealing to modern gamers who expect certain features but have not been able to try them in 3D platforming".

REVIVAL

Indie developers breathe life into dead genres, and their passion, authenticity, and innovative ideas can't be faked. Mediatonic, the British studio behind *Fall Guys: Ultimate Knockout* managed to update the classic 3D platformer by fusing it with the hugely popular battle royale genre. Indie darling *Among Us* took a retro-looking, top-down format and made it into an immensely successful multiplayer social game, with over 176,000 concurrent players at its peak in 2020.

While it's unlikely that we'll see a triple-A studio like Naughty Dog tackle a 2D platformer or a point-and-click adventure anytime soon, there's evidence everywhere that those abandoned genres can find a new home – and appreciative audiences – in the indie sphere. 🎮



▲ Like *To the Moon*, Freebird Games' *Finding Paradise* is a charming, story-driven adventure built in RPG Maker XP.

Toolbox

The art, theory, and production of video games

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Using procedural generation to make your metropolis

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Howard Scott Warshaw meets director Steven Spielberg

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How to improve your game design with military thinking

56. Narrative Design

The indie game that holds the key to better exposition

58. Menus in Unreal Engine 4

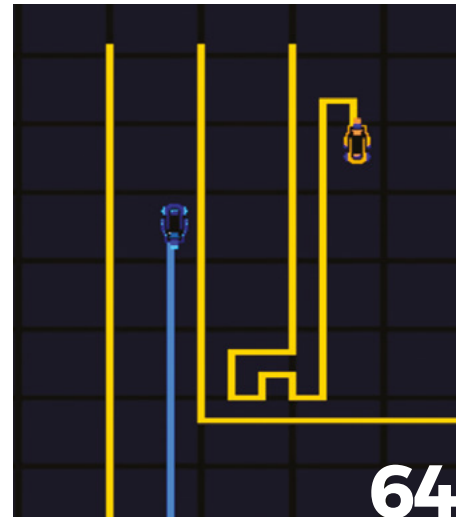
Get your game off to the best start with our handy guide

64. Source Code

Recreate the Light Cycle minigame from TRON

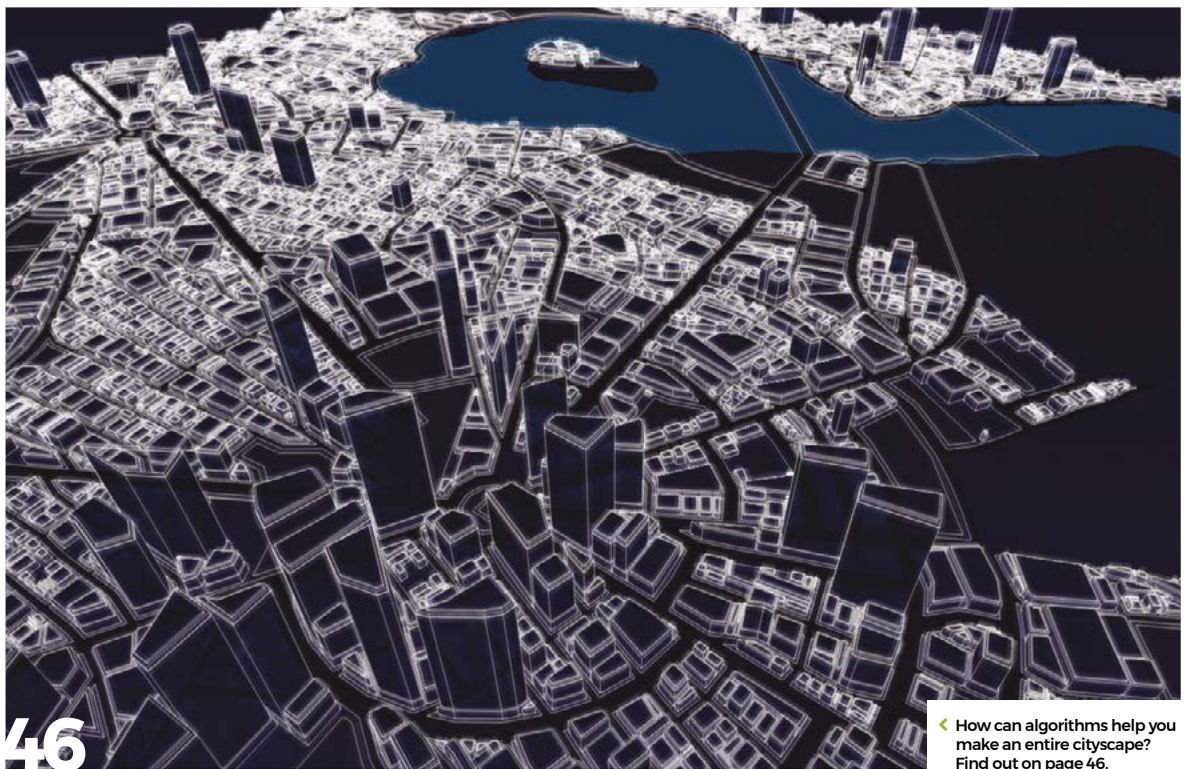
66. Making Anew #15

Pre-production, and using it as a foundation for your game



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^ Cyber cyclists create deadly light trails in our homage to *TRON*. Make it yourself with this month's Source Code - see page 64.



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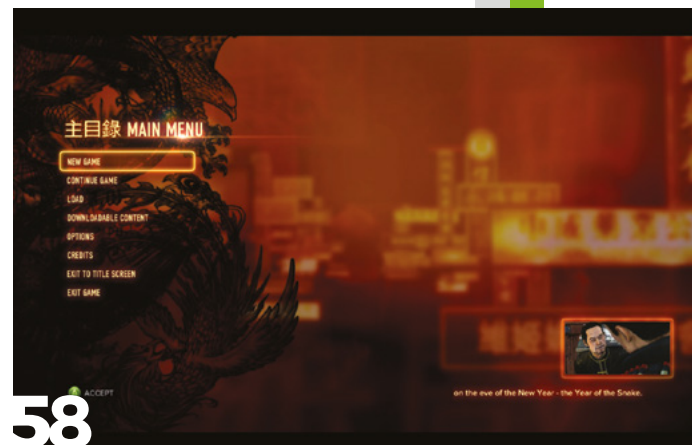
< How can algorithms help you make an entire cityscape? Find out on page 46.

✓ Studying war games can help you improve your own development projects. Find out more on page 50.



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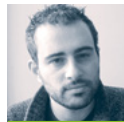
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✓ Make a main menu worthy of a triple-A game with our Unreal Engine 4 guide on page 58.

✦ What can *The Red Strings Club* teach us about exposition and storytelling? Antony de Fault explains on page 56.

Making cities with procedural generation

Algorithms can help us recreate some of the complexity and scale of real cities – without breaking the bank



AUTHOR
KONSTANTINOS DIMOPOULOS

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

Take a moment to think about the staggering amount of stuff you'll find in the average apartment. Now take another moment to consider just how different apartments are from each other, that there's a practically infinite variety of them, and that they're but one type of residence in a contemporary city. Now remember that, residence aside, cities also contain buildings focused on production, consumption, leisure, administration, and education. Add in major landmark buildings, infrastructure, parks, hospitals, stadiums, networks, actual people, the groups they form or the activities they engage in, and you have an initial sense of the sheer scale and complexity of the average urban centre.

Modelling a city in its exhausting entirety is all but impossible when it comes to video games, and both abstractions and size reductions are vital. Even when employing large teams, making modular assets, and reducing fidelity, cutting corners is still unavoidable. Sometimes, reducing scope isn't enough, either. A small team attempting

to tackle even a modestly realistic open city will face a Herculean, if not impossible, task. But it's a task that could be helped massively via procedural generation – why create everything by hand, after all, when you can have a clever algorithm design your assets and spaces automatically?

THE BASICS

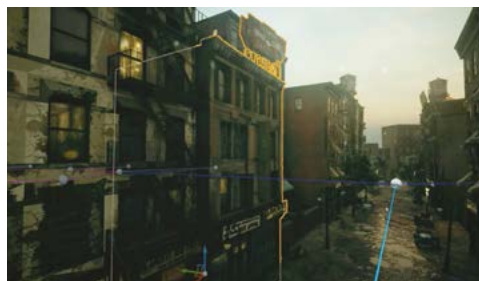
Procedural generation is the automated, semi-random, and rules-guided automated creation of content by a program. Infinite unique possibilities can be generated, as well as assets and content of all types. Models, textures, street names, or NPCs can all be produced quickly and cheaply – though not always to the required standard. Procedural generation is still technically demanding and also a design challenge, but, despite the method's limitations and difficulties, when it comes to the creation of urban space, its possibilities are still exciting and worth exploring.

Procedural generation is the only way a single developer can conceivably hope to produce a large open-world city; it is, of course, what allowed a handful of programmers and designers to craft a universe for *No Man's Sky*. But despite offering an infinite and often stunning game world, there was something missing from *No Man's Sky*: the sense of authorship; that things had been consciously designed and placed. The intent of a human author was only evident in its systems, and thus its wondrous digital creation sometimes felt a bit too random.

On the other hand, games like *Diablo* combined procedural elements with substantial sections designed by hand, that made the overall experience coherent and convincing. A few well-

ANALOGUE GENERATION

Semi-random generation doesn't have to be digital to work wonders. A well-thought-out system based on a combination of dice rolls, tables, and card-draws can provide on-the-fly concepts for cities, and ideas on fleshing them out. What's more, analogue systems leave room for the author of each place to express themselves, and thoroughly reshape generated configurations without breaking any rules.



▲ *The Sinking City's* town of Oakmont procedurally combined modular elements to boost its size and complexity.



▲ The medieval fantasy city generator by watabou is a wonderful example of what proc gen can achieve. You can try it at wfmag.cc/fantasy-gen.

HOUDINI

One of the few professional art tools built around procedural generation is the impressive Houdini by SideFX. I haven't tried it out for myself yet, but have only heard good things about it, and, as it comes with an option for a free trial, I can't help but suggest people interested in procedurally generated assets and game spaces give it a go: wfmag.cc/houdini.

placed handcrafted elements lent a believable quality to an otherwise procedural world, which in turn placed them inside a vast space which satisfied both our desire to be surprised and our appreciation of the creator's touch.

Similarly, when it comes to procedural cities, a few careful, obviously authored touches can help paint a more convincing world; a specific landmark, a factory, a ceremonial axis, a set of posters, or a distinctive neighbourhood can all be placed in a randomly generated urban fabric to make it more intriguing.

The rest of the city needn't follow complex rules to look good. Imagine, for instance, that we've already generated a relatively straightforward city on a grid. To populate each of its blocks, we could determine height ranges depending on location (10–24 floors for downtown, 0–2 floors for suburbs, and 3–8 for everything in between), randomly divide each block into 6–14 street-facing lots, and generate buildings of the appropriate height in each lot. Extra rules could include merging adjacent buildings of the same size or adding gardens around every building sporting more than 18 floors or less than 2.

Procedural generation can effectively be applied to any scale and most situations, from the architectural all the way to the metropolitan scale, and from the creation of physical environments to their combination with semi-random systems simulating life.

The latter, at their simplest, could be as rudimentary as turning window lights on and off

at night – making certain, for example, that one in every six windows always remains dark.

MORE IDEAS

One simple way to hide your buildings' simplicity and randomness is to ensure they can't be interacted with or explored in detail. Creating impressive views is something procedural generation can successfully handle; it's a solid illusion, and a way to create a sense of scale.

Another option is to use procedural generation during early development. That is, to algorithmically create a city following appropriate rules and based on predesigned, authored structures, and then using them as canvases to

be corrected, fleshed out, and polished by hand. On such a canvas, iconic landmarks could be individually designed for a further

sense of authenticity, but what really matters is that this approach allows small teams to create detailed and large urban worlds. Frogwares did this when developing Oakmont for *The Sinking City* (disclaimer: I worked on the game's pre-production); its City Generator tool developed to create its town can be seen at wfmag.cc/sinking.

Finally, every city needs to follow its own spatial logic. Generating medieval cities without knowing, say, what the role of the cathedral is, and how it affects space, is doomed to failure. Similarly, a modern metropolis simply has to feature a central business district, and architectural styles have to fit their era, meaning that research is – as always – an absolute must. 🗺️

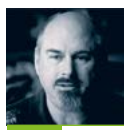
“It's the only way a single developer can hope to produce a large open city”

▼ Introversion's sadly suspended indie game *Subversion* was to have a clever city generation tool at its core. Have a look at what it would look like at: wfmag.cc/subversion.



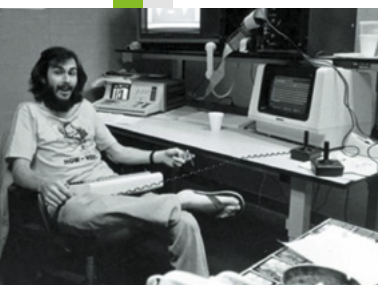
The principles of game design

In the final excerpt from his new book, Howard recalls a heart-stopping meeting with director Steven Spielberg



AUTHOR
HOWARD SCOTT WARSHAW

Howard is a video game pioneer who authored several of Atari's most famous and infamous titles. This is the first chapter from his upcoming book, *Once Upon Atari: How I Made History by Killing an Industry*. onceuponatari.com



▲ Howard Scott Warshaw in full Atari demonstration mode.

▼ Steven Spielberg (left) meets Howard (right) circa 1982. Atari's *E.T.* is just around the corner.

The last time I presented something to Spielberg was early June, about a month and a half ago. We met at the Consumer Electronics Show in Chicago, and I had *the tape*. I was nearing completion on the *Raiders of the Lost Ark* game, my second project for Atari and my first for Spielberg. Atari needed a way to demonstrate the game for Spielberg in Chicago. I could have simply played it for him, but I thought it would be better to make a demo tape that could serve other promotional purposes as well. The execs agreed and sent me to a video recording studio to make the demo.

Have you ever done something absolutely perfectly? At exactly the right time? I did. Just once. At that studio.

They sat me down, put a mic on me, hooked up the console to a recorder, and I played and narrated the entire game flawlessly. That had never happened in any of my demos, before or since. It was a magical moment. A one-take wonder. We added a few special effects, created a master, and that was it. By the way, the total running time was 12 minutes and 27 seconds. If it takes you longer than this to play all the way through *Raiders*, you probably didn't make the game.

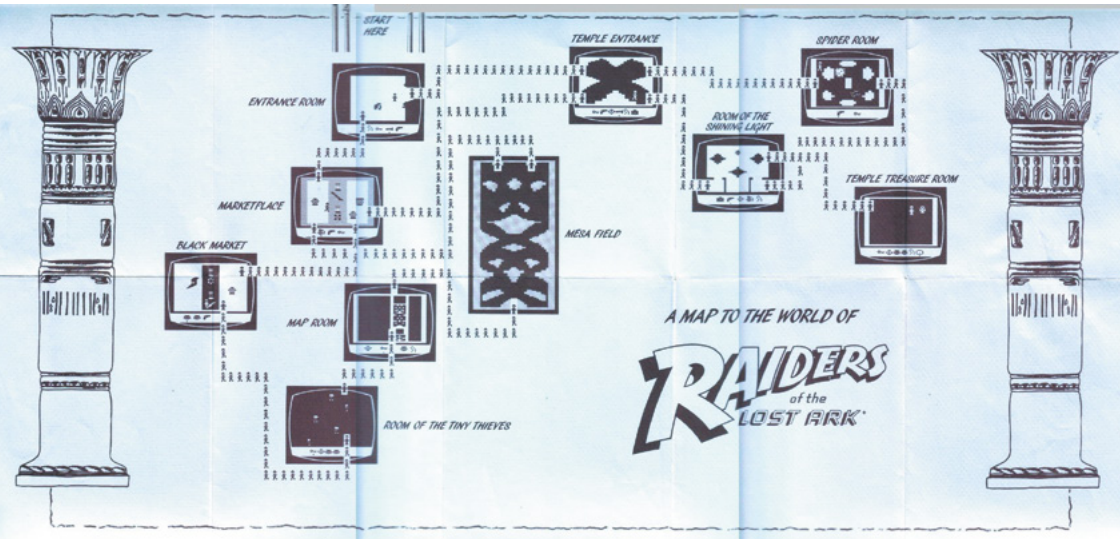
From the time I left that studio in Sunnyvale until this meeting in Chicago, the tape never left my side. There was *no way* I was going to miss seeing Spielberg's reaction.

Full disclosure: I'm a huge film buff, and Steven Spielberg is a hero of mine. I love his work, from *Duel* on. I think *Raiders of the Lost Ark* is a masterwork, and I was honoured to be a part of it in this way. But I'm not just meeting my hero, I'm working with/for him. It's one thing to meet your idol, it's another to have them evaluate your work. It's another still when they evaluate your work which is a derivative of their work. This is huge for me... as long as he likes it.

For a serious creative person, a lot of self-image (and mental well-being) is on the line at a time like this. I was confident but very nervous. I'm one of the top video game creators of my time, but what I really want to be is a film director.

Finally, the moment came. There I was, up in the crow's nest of the enormous Atari show booth with a TV and a tape deck and Steven Spielberg. I inserted the tape and hit play. Spielberg watched it thoroughly and intently. He didn't move at all for the entire 12 minutes and 27 seconds. I know because I watched him





◀ Can you complete *Raiders of the Lost Ark* in just over 12 minutes? If so, you're probably Howard Scott Warshaw.

thoroughly and intently for the entire 12 minutes and 27 seconds. At the end he thought for a bit, soaking it in. Then he looked up at me and said, "That's really great, Howard. It feels just like a movie!" My inner world exploded with joy. Steven Spielberg thinks the demo tape of my game for his movie feels like a movie. Yeah, baby!

That was one of the greatest moments of my life... but that was then, and this is now. I finish laying out the design for the *E.T.* game and Spielberg thinks for a bit, soaking it in. Then he looks up at me and says, "Couldn't you do something more like *Pac-Man*?"

My inner world collapses. Something more like *Pac-Man*? One of the most innovative film directors of all time wants me to make a knock-off? My impulse is to say: "Gee Steven, couldn't you do something more like *The Day the Earth Stood Still*?"

Fortunately, my brain kicks in microseconds before my mouth engages. Get a grip, Howard. This is Steven Spielberg, and he obviously likes *Pac-Man*. All this takes a fraction of a second in my head. Then I regroup and take another tack entirely. "Steven, *E.T.* is amazing, and we need something special to go with it. This is an innovative game for an innovative movie." I believe this is true, but I'm also aware of another fundamental truth: the game I'm proposing is one I might possibly finish in five weeks, which is a critical component of success in the overall delivery process.

That's why I need to defend this design with everything I've got. I'd rather not fall back on this explanation because I'd rather not come off as desperate, but I will if I must. It harkens back to one of the great linguistic contributions of computer science: doability (noun, the quality of being able to be done. From the modern English; Do + Ability). Ask any software engineer about the

prospect for a task or design, and the answer will invariably revolve around the word 'doable'. I'm confident this design has sufficient doability to be worth pursuing. This is distinct from another contribution: bogosity (noun, the quality of being bogus, a mangle-isation of bogus). Bogosity and doability are independent properties. In other words, creating a game in five weeks can have significant doability and still represent a high level of bogosity on the face of it. In other other words, the possibility of doing something doesn't make it a good idea. This paragraph is proof of that.

After a few moments of breath-holding, Steven relents on the *Pac-Man* proffer and accepts my assertion that the design is appropriate to the task at hand (the punishment fits the crime). As he does, I realise my design is now approved. The first major milestone is achieved, my

inner world is resurrected, and (though I'm not 100% sure about this) there seems to be a faint emanation coming from Steven's chest, a sort of reddish glow. I have a theory about this... but this is no time for theory. There are hard facts to face:

- An accepted design only opens the door to begin continuous crunch mode. It is truly the gift that keeps on taking.
- Tomorrow is day four of the 35.5 days allotted for the task; 10% of my schedule is already gone.
- I still have to make it through a Learjet ride home before I'm anywhere near dinner! (OK, not all the facts are hard.)

The design is now set and approved. It's implementation time. There's nothing to it but to do it. And as the golden light of late afternoon kisses the flats and backlots of Warner studios, the Atari delegation boards the waiting limousine and sets off for the airport. ☺

"There was no way I was going to miss Spielberg's reaction"

Word nerd

Many people don't consider nerds to be facile linguists or communicators. Be advised: new-word construction and deployment is an essential part of the nerd repertoire. To be clear, I'm talking specifically about techie nerds or geeks. Word nerds and/or grammar police are beyond the scope of this text.

✓ One of the very earliest licensed games, *Raiders of the Lost Ark* got a big marketing push from Atari.



Beyond war games: military thinking and game design

Lessons from military planning can be applied to any game involving some form of conflict, making strategy and tactical knowledge useful tools for designers



AUTHOR
STUART MAINE

Stuart Maine has been a designer for 23 years, across PC, console, and mobile. He helped set up Well Played Games, and is currently working on an unannounced title.

Imagine everyone's read one of the many quotes attributed to the military strategist Sun Tzu, author of *The Art of War* and no doubt total nightmare to play *Civilization VI* against. Here's one: "All men can see these tactics whereby I conquer, but what none can see is the strategy out of which victory is evolved."

What he's referring to is that his opponents see the immediate, second-to-second decisions of his tactics, but there's another layer below that

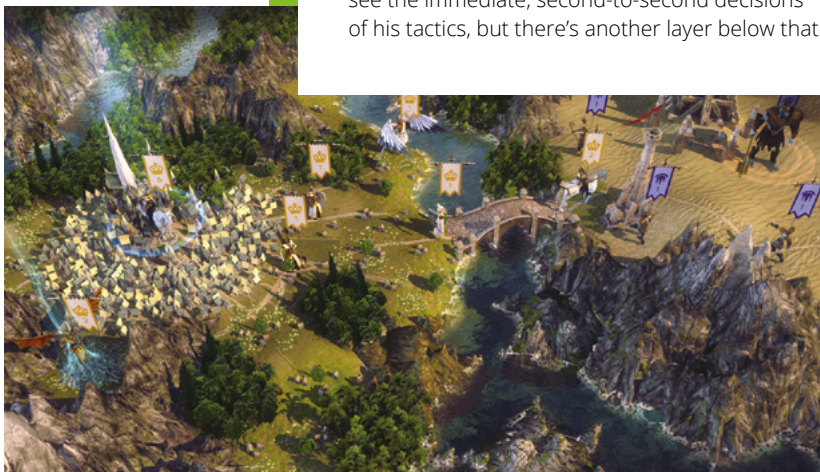
– the longer-term strategic thinking. The same applies to game design; that while players see and interact with the immediate 'surface' of your game, there's a deeper layer – the states and systems that govern how the game works behind the scenes. As a designer, you decide which approaches your game rewards or punishes.

Hopefully we all agree that real wars are a terrible waste of lives, but there's a huge amount of thinking related to military tactics and strategy which can be applied to game design. And if you're thinking: 'But I'm not working on a war game', I believe these topics apply to any game involving conflict. In *Diablo*, you use strategy to work towards a combination of equipment and abilities, then apply tactics in each fight. In *Escape from Tarkov* you use strategy to decide on your long-term objectives, then tactics when fighting players and Scavs. *Signs of the Sojourner* even turns conversations into a form of conflict!

FORCE MULTIPLICATION

Let's look at force multiplication first. This is a military term for making $1+1 = 3$, and it can be applied to any game where players have 'units'

Force multiplication can be powerful in *Age of Wonders*, but grouping your units limits your ability to explore the map.





◀ Players that co-ordinate in team-based shooters can use force multiplication to quickly take lone opponents down.

deployed to a specific area (e.g. sending tanks into battle in *Command & Conquer*, or fighting beside a friend in *Fortnite*).

Let's assume you and I have two combat units each – mine are A and B, and yours are 1 and 2. If we send A to fight 1 and B to fight 2, assuming their strength is equal, all of the units will be wiped out. But if I can manage to get both A and B fighting 1, they will easily destroy it without even taking a casualty. I can then send them both against 2 and wipe that out too.

“As a designer, you decide which approaches your game rewards or punishes”

This is force multiplication – that two units fighting a single enemy are more than twice as powerful because their combined firepower easily wipes that enemy out before either of them are destroyed. This effect becomes exponentially more powerful if you can get three, four, or more units to attack a single enemy, meaning a single large ‘blob’ can move around an area wiping out the same number of enemy units that are spread out.

The problem comes when this tactic is so effective that it's pointless using anything else, leading to repetition and boredom as everyone adopts it. Games can counter the power of force multiplication by limiting the size of unit ‘stacks’ or imposing penalties such as a lower speed on such stacks. Another way around it is to make victory about claiming locations and not

just smashing the enemy, so now players must weigh up spreading out versus having a single powerful force.

FORCE MULTIPLICATION CASE STUDY

I'm going to use one of my own games, *Warhammer Combat Cards*, as an example, because I specifically made force multiplication part of the gameplay (hopefully demonstrating that, like most of the topics covered in this article, it can be useful in the right circumstances).

The game's battles take place on three ‘lanes’ with cards placed to the left, centre, or right, each attacking the card opposite them. However, if there's no card opposite, they attack →

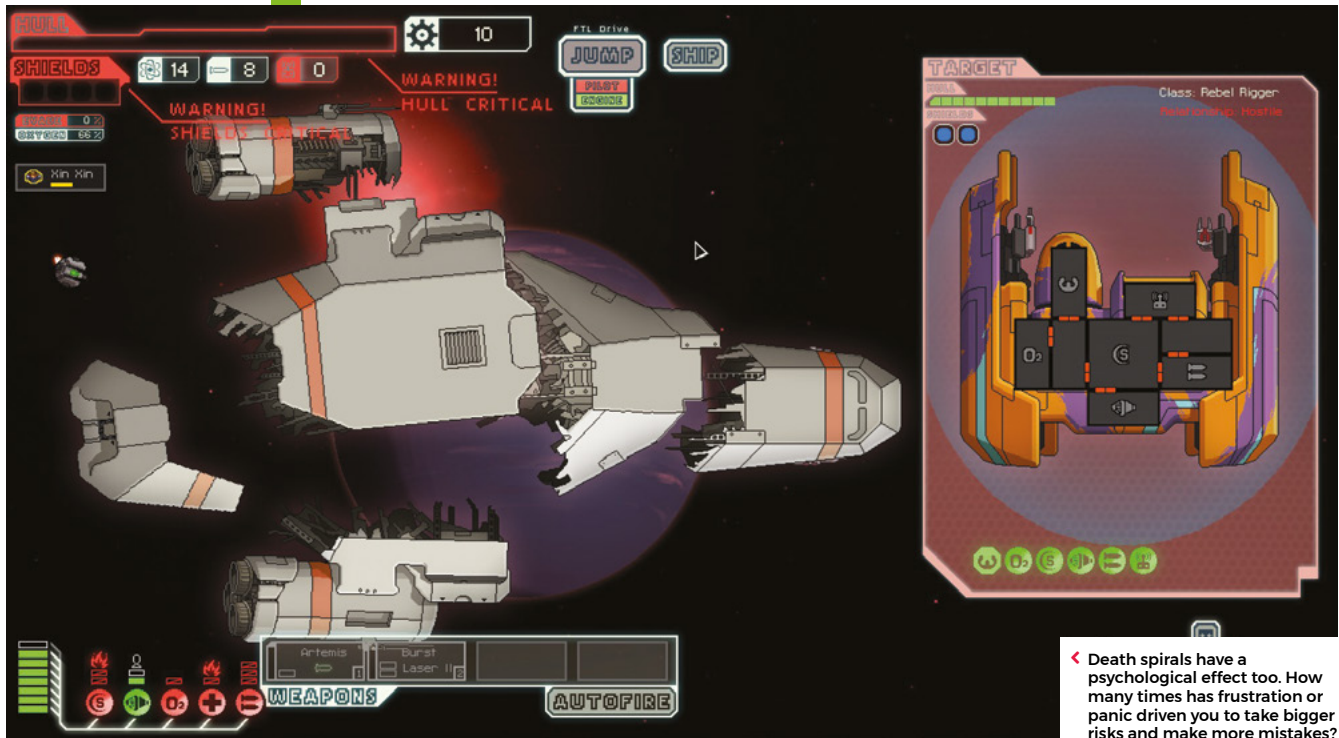
LONE WOLVES

Ironically, while force multiplication can be a major factor in team games, it's often balanced by players being poor teammates. Despite explicit goals centred purely on the team as a whole (such as capture this point, or destroy this objective), some players will always default to wanting the most kills or simply whichever activity they find the most fun.

Of course, you set your game's rules and can reward or punish whichever behaviour you like, but it's worth balancing forcing players to ‘play properly’ with just letting them have fun, even if it's at the expense of their team.



◀ Games that work best if players function as a team need to consider tools to make co-operation easy. For example, *Apex Legends*' ‘ping’ system.



◀ Death spirals have a psychological effect too. How many times has frustration or panic driven you to take bigger risks and make more mistakes?

TIMELINE-BASED COMBAT

Role-playing games like *Grandia* introduced providing short bursts of perfect information during battles by showing the order that your characters and the enemies will act in. This lets players see which actions they can take before an enemy attacks, or even interrupt and push them back up the timeline. Solving this sort of puzzle can be made into an interesting mental exercise or a challenging test depending on whether the player can take their time or has to choose in real time.

the centre lane, giving force multiplication – two or potentially three cards all attacking one card. But because it’s deliberately built into the gameplay, it’s now something that players need to consider when they’re building their decks (strategy) and during the battles (tactics). Should they take tough cards to block the side lanes, or fragile but dangerous cards to take advantage of empty lanes?

DEATH SPIRALS

Death spirals is a term for when a player who is losing finds it harder and harder to claw back a win. Imagine we both have ten units to fight with. We meet in a skirmish and I lose a unit but you don’t. You now have more units than I do, making it easier for you to achieve force multiplication and destroy more of my units. Unless I can regain my units, I’m likely to spiral into defeat. Worse, I might realise this has happened and that I’m going to struggle to win, meaning now I’m deciding whether to just quit.

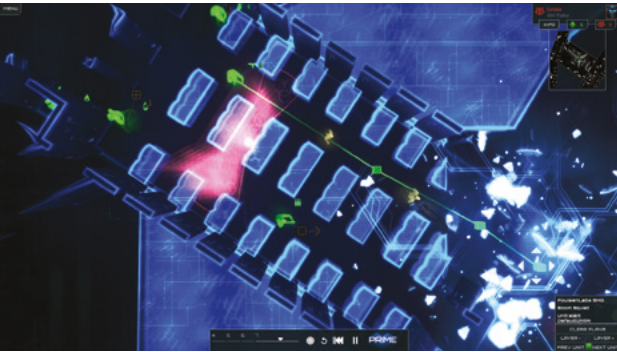
You often see death spirals in turn-based war games, where the first player to act destroys some of their opponent’s forces, so the retaliation which comes back at them is reduced in effectiveness. As a result, the first player’s units suffer less damage, leaving them more powerful than their opponent going into the second round, and repeat.

Games can lessen the impact of death spirals by not making it clear who’s winning (so the losing player keeps fighting and maybe snatches a victory) or with asynchronous goals, of which more in a moment. Alternatively, you can introduce mechanics to let players recover their lost ‘power’, though there should, of course, be a downside to this. For example, you can get back your dead units, but an ‘auto-lose’ countdown begins, which means you need to hurry. Or maybe a ‘risk-and-reward’ system like the super moves which build up in fighting games as you take damage, so the closer you are to defeat the greater the chance you can pull off a last-second turnaround.

DEATH SPIRAL CASE STUDY

One game that turned death spirals into a key aspect of its combat was the obscure 2002 pen-and-paper RPG, *The Riddle of Steel*. Players had a pool of combat dice which they had to secretly split between attacking and defending, but as they took damage, they lost dice from that pool.

This meant that as players got closer to death, they would take increasingly bigger gambles to defeat their opponent in a single go before their death spiral got too bad. With just a few simple rules this system cleanly simulated combats that could range from ‘pecking’ an opponent to death, to fighters suddenly delivering a killing



▲ Using line of sight in your game automatically adds an element of risk, so care needs to be taken with layering on other randomisation factors.

blow. More than that, having both combatants reveal how many dice they'd assigned to attack and defence simultaneously gave fights a theatrical flair often missing from RPG battles (which are meant to be exciting but are often just a bit slow).

PERFECT INFORMATION

A game is said to have perfect information when its players know every single thing about the state of the game at that point. Nothing is being hidden behind fog of war, they know what their

“Games can lessen the impact of death spirals by not making it clear who’s winning”

opponent is trying to do to win, and there are no dice rolls that will determine how successful an attack is. Chess is the classic example, whereas, for *Tetris* to have perfect information, it would need to show you the exact sequence of pieces it will be dropping for the entire game.

The idea is that if players know everything about the game's state, then they're free to focus on their strategy and, more importantly, to think about what their opponent is planning

to do. Because victory in these games is 100% down to outplaying your opponent; they suit competitive gamers looking for the rush of victory through pure skill and cunning. The downside is that these games are extremely intimidating for more casual players who don't enjoy knowing that a loss is entirely down to them just not being as good at the game as their opponent.

There are two ways to mitigate perfect information – chance or subterfuge. Introducing chance allows players to feel that they lost because an attack missed or their opponent found a better power-up, removing some of the sting of defeat. I'm going to skip over chance because I covered how to employ it in your games way back in *Wireframe* issue 25 (wfmag.cc/25). The other approach is subterfuge – allowing players to keep information hidden from each other – opening gameplay avenues like bluffing, spies, and scouts. Just be sure players have *most* of the information they need, otherwise the game might as well be random. You're looking to hide as little as possible; just that key piece of information that players really wish they knew about their opponent's forces.

PERFECT INFORMATION CASE STUDY

Rather than use a single game as an example, let's look at the relationship turn-based tactics games have with player information. These games revolve around players planning their turns in exacting detail to deliver the most damage to their opponent, while offsetting the retaliation that will come in their opponent's →



RECON VERSUS STEALTH

At the opposite end of perfect information is deliberately limiting what the player can see at any time. Games where you embody a character do this by making you walk somewhere to see it, while 'god's eye' games use fog of war. This can lead to military tactics revolving around reconnaissance and ambushes. Perhaps the ultimate example is *Frozen Synapse*, where both players have to plan out the next turn simultaneously, meaning everything comes down to what you can see right now and what you think your opponent is going to do next.

◀ It's possible to get any game with an economic model into a death spiral - mistakes forcing you into a loss leading to further losses.

turn. In effect, they work like puzzle games in that players are trying to solve the current situation in the most effective way possible.

However, these games almost never have perfect information, so no matter how carefully you plan, there's always a chance that something unexpected will mess up what you thought was going to happen. Examples include a 99% likely shot in *XCOM* missing, rolling a 1 in *Blood Bowl*, or your *Advance Wars* CO being 'lucky'. *Into the Breach* is pretty much the only example of a turn-based game I can think of which lays everything out with almost nothing left to chance.

But then you need to ask if players really do want perfect information in their games, or does that small element of chance give combat more spice?

ASYNCHRONOUS GOALS

Sounds fancy, but it basically means that each player wins in their own way, as opposed to a single 'first to achieve X wins' goal. For example, one player might win if they conquer a certain amount of the map, while another player needs to collect enough resources to complete a piece of research.

You use asynchronous goals to force players to think about what the other player might be doing and how they can counter it (in addition to what they need to do to win). For example, if both players are simply trying to capture the centre of the map, then

“You want a range of equally effective tactics that players can adopt”



▲ Board games often include multiple routes to victory, forcing players to consider which goal their opponents are working towards.

there aren't a huge number of tactics they can use besides sending as large a force as possible at it. I guess they could try sending forces round to attack each other's HQ directly too, but that's unlikely to succeed due to the force multiplication problems we've already covered.

But what if one player needs to search the map to find something and bring it back to win, while the other needs to build enough non-combat buildings across the map? Now players have to balance gathering resources to build stuff, slowing their opponent by destroying their units and/or base (while protecting themselves against the same), whether to spread out or commit to holding certain areas and so on. Much more interesting!

Asynchronous goals can also be applied outside of direct warfare, such as being able to win by achieving science, culture, religion, or other goals in *Civilization*, or the separate 'survive for long enough' or 'track the vampire down' goals in *Fury of Dracula*.

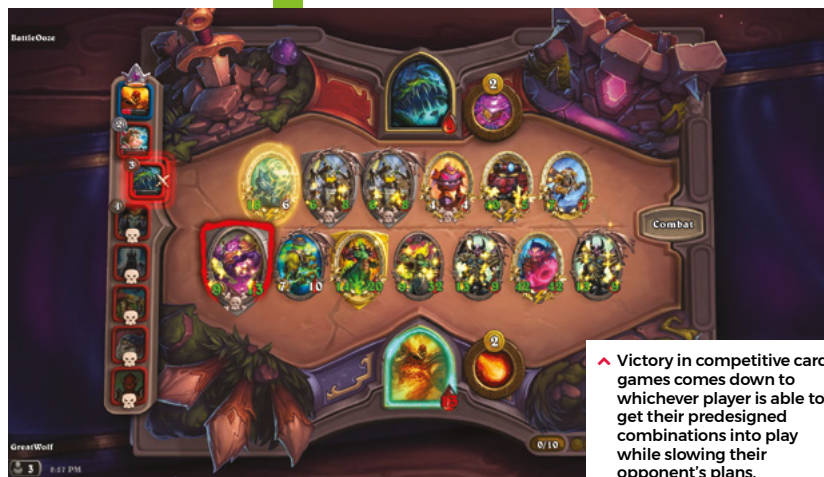
ASYNCHRONOUS GOALS CASE STUDY

As mentioned earlier, not every game that employs conflict needs to revolve around combat. Case in point, some of the games that use asynchronous goals best simply feature players talking about who among them is a traitor. Examples include *Among Us*, *Werewolf*, *Secret Hitler*, *Avalon*, *Battlestar Galactica*, and *Shadows over Camelot*.

In all these games, players are ostensibly working together to achieve some goal, except everyone knows that there are traitors in the

SAME GAME BUT DIFFERENT

Strictly speaking, competitive card games like *Hearthstone* or *Magic: The Gathering* have a shared goal of reducing your opponent to zero health before they do the same to you. But I think you can argue that their gameplay revolves around asynchronous goals because each player builds a deck to achieve victory in a certain way, and every action is about countering their opponent for long enough to win using that particular method. The competitive meta is simply players working out the current most efficient deck to do this.



▲ Victory in competitive card games comes down to whichever player is able to get their pre-designed combinations into play while slowing their opponent's plans.



▲ The more money involved in its high-level play (usually through eSports), the more important balancing out a game's dominant strategies becomes.

group (or for added comedy, sometimes in *Werewolf* there really are no traitors but nobody knows that). The loyal/traitor players have to each work towards their own goals, which are usually pretty easy to achieve if only you could convince your allies that you're really on their side. For these games to work best, they need some way for players to work towards figuring out the facts, otherwise they can devolve into endless arguments and who can lie best.

DOMINANT STRATEGIES

Ultimately, the point of applying military thinking is to try to ensure that your game has a range of equally valid approaches to achieving victory. If one option is clearly the most effective, then why would players bother to use the rest of the content you've carefully created?

In the past, this wasn't as big an issue because as long as it took your player most of the length of the campaign to figure out the dominant strategy then at least they'd already enjoyed the game. But nowadays it's far too easy for players to go online, read about the best way to win, and then be forced to adopt it or feel that they're somehow 'playing the game wrong'.

One caveat: 'live service' games that are continually updated and patched – such as competitive card games – actually welcome players figuring out a dominant strategy. This is

because players all rush to collect the cards which allow for the dominant approach, driving purchases which include them. After a while, the developer then degrades the performance of those critical cards or boosts other cards to counteract them, encouraging players onto the new 'meta', and the cycle repeats.

Still, unless you're planning to continually update your game, I'd look to avoid creating dominant strategies. You want a range of equally effective tactics that players can adopt in the moment, all driven by clear strategies that players can foresee being successful. Conflict is a central mechanic in many games, so I think it makes sense to consider the many solutions developed in the real world to attempt to master it. A final quote from Sun Tzu: "Victorious warriors win first and then go to war, while defeated warriors go to war first and then seek to win". 🧘



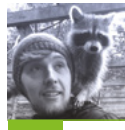
STRATEGIC THINKING AS A DEVELOPER

You can apply strategic thinking to the development process itself by considering goals for the game you're making. For example, if you're looking to create a demo for your portfolio, then you should focus on a small, highly polished experience. Other options include experimenting with a new technique or genre, making a game focused on a topic you're passionate about, or simply aiming to make as much money as possible. In any case, having a strategy for why you're making this game will help you come up with the right tactics to reach that goal.

◀ Valve's Robin Walker has talked about each character class's weaknesses in *Team Fortress 2* being deliberately considered to avoid a dominant best choice.

Better exposition with **The Red Strings Club**

Games are often bad at exposition, but a little indie title contains the key to doing it well – by mixing cocktails



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Exposition, in which we expose or explain a bunch of facts that are important to where the story is going, is *inherently boring*. Games have a particular problem with exposition since the user expects to be able to interact with the story. This expectation often leads to genuine frustration when we're denied interaction for even a short stretch of time.

So, what do we currently do when the player needs to be told a whole heap of backstory? We do the simplest interaction possible: break the exposition down into a few 'topics', then either A) allow the player to select those chopped-up chunks of exposition from a dialogue

menu (*Skyrim*), or B) distribute each topic to a different character or object in a space and allow the player to burn shoe leather walking from one to the next (*Batman: Arkham*). The player pressed some buttons during exposition, so job done! Problem is, once we've seen this a few times, most players recognise these situations as flat chunks of exposition and listen to them one at a time, in order. We're almost back at square one.

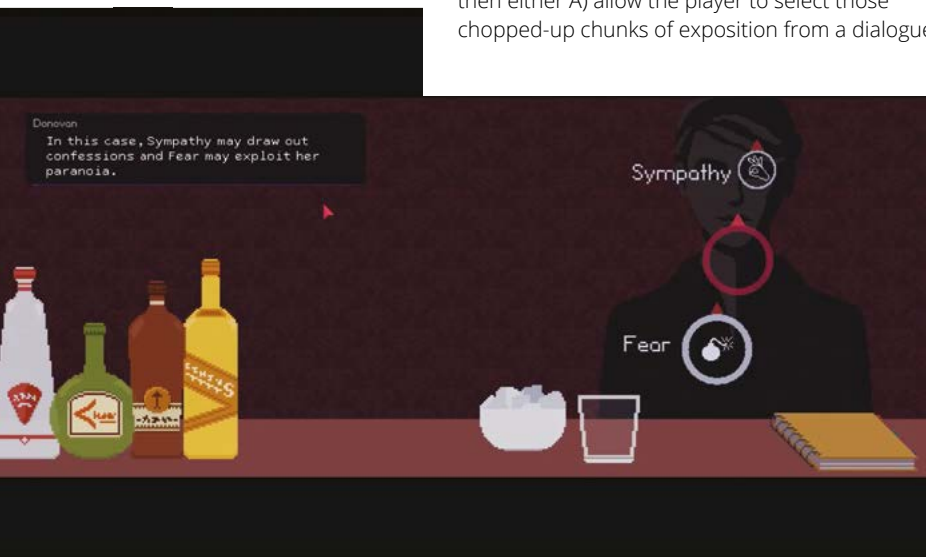
Much of *The Red Strings Club's* cyberpunk story happens off-screen or prior to the game's events, and is reported to the player through discussion with characters. It's an efficient conceit which allows the game to tell a broad story about an entire society for four hours without the budget to actually show all that.

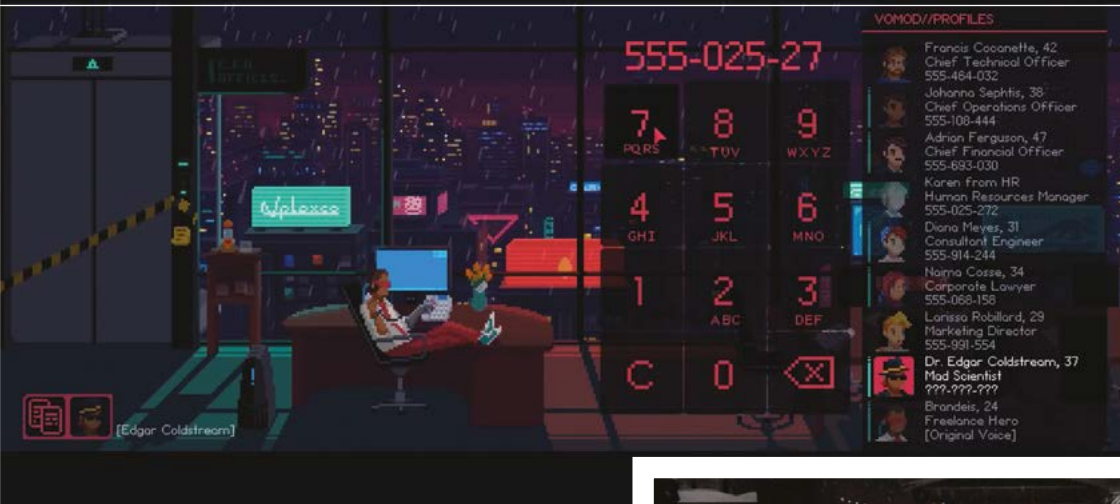
To solve the 'canned' exposition problem, writer Jordi de Paco first takes delivery back to basics: each character has a moderate number of topics you can discuss with them exactly once, and this looks a lot like any other game's menu of discussion topics. I could ask the whereabouts of an important person in danger, or about the character's reason for choosing their line of work.

THE NEW THINKING

But crucially, inspired by the manga *Bartender*, this game also allows me to mix the character a supernatural drink which can change the character's state of mind. If I serve the person a drink that puts them in an egotistical mood, their response to the 'line of work' topic is likely to include lots of juicy details; egotists love to

▼ *Red Strings*: The nature of the mixology metachoice minigame is mostly irrelevant, like plumb-hacking in *BioShock*. What matters is novelty and thematic relevance.





◀ **Red Strings:** Choosing the correct voice can be challenging, but most choices will result in enough partial success to advance the plot.

talk about themselves. But if I ask them the ‘important person’ question in this state, they’re likely to fruitlessly steer the conversation back to themselves. For that, I should put them in a compassionate mood, and in each state, their language changes markedly to assure me that my choice has had an effect.

This is revolutionary for two reasons. Firstly, the introduction of a *metachoice* (like emotional state: a choice whose purpose is to modify other choice results) branches the outcomes of what would otherwise be fixed, linear content. This could equally apply in 3D spaces. For example, *Dark Souls*’ item descriptions could yield different text if you killed the previous owner for it or were given it willingly. Secondly, how much I learn from the topics depends on my ability to successfully pair a metachoice with a topic, and the exposition is therefore *gamified*. Now, when I look at the menu of topics, I no longer need to get through them one at a time, I’m thinking about whether the pairing is correct. The choice is interesting rather than banal, despite being sort of an illusion.

I asked de Paco about this, and he told me he uses “a ‘failing forward’ narrative design philosophy”. He explains that “the player is rarely punished

by choosing an inadequate option, it mostly affects the flavour of the content, and I tried to always provide something [...] stimulating no matter your approach”, but that the “anticipation of matching topics and emotions is exciting enough”.

If we think about what exposition is, you can see why this is such a radical improvement. Exposition is a bunch of facts which lay out context for understanding upcoming story events. In attempting to maximise my performance at metachoice-to-topic combination, I’m thinking deeply about the other exposition I’ve learned for context, and I’m paying close attention to the result to see how successful I was. My absorption of the expositional information will be better.

“The choice is interesting rather than banal, despite being sort of an illusion”



▲ **Classic triple-A shoe leather exposition in the latest Spider-Man.** To figure out what’s going on, I must walk to highlighted people in an enclosed area.

Red Strings gives us the blueprint for copying its success, too. Later in the game, you play as a hacker, rather than the bartender. You’re presented with a new mechanic wherein you have access to a phone and must socially engineer your way through several people to steal corporate secrets. Again, each person has a menu of topics you can ask them, but this time, the metachoice has a new flavour: you have

the ability to mimic the voices of anyone you get decent vocal samples of, and you choose whose voice you’re speaking with. Naturally, people will

discuss the same topics differently depending on who they think they’re speaking to. It feels new, but the structure of ‘metachoice + topic’ is the same as before.

So, if you’re telling a story which leans on exposition, consider introducing a metachoice which both personalises the texture of the writing and varies the amount or quality of information yielded. The nature of that metachoice is up to you, and should feel relevant to your story. A character or system could respond to you differently based on your outfit in a fashion game, or what sort of weapon you hold in a shooter, or simply based on where or when you speak to them in an open-world game. 🌐

What about lore?

One of the hottest game writing trends of the past ten years was the *Dark Souls*-ification of exposition, primarily telling the story through item descriptions (or collectables, in the case of *Destiny*). The vague and puzzle-like nature of the lore in *Dark Souls* helps it feel like a treasure hunt, but at its core, attaching exposition to items is a whole-game-wide form of the shoe leather burn method, spreading chopped-up exposition across physical space. In my opinion, gating lore detail behind a metachoice could have made it more engaging.

Creating main menus in Unreal Engine 4

Learn the basics of bringing a main menu to life – and how to add visual flair to make it stand out



AUTHOR
RYAN SHAH

An avid developer at The Multiplayer Guys with a strong passion for education, Ryan Shah moonlights as KITATUS – an education content creator for all things game development.

If you fire up any game on any device, you'll see a main menu. This is the central hub that connects the player to the world of the game contained within. There are many ways to make a good main menu, but there are even more instances where developers get so carried away with aesthetics that the user experience (UX) is affected.

A main menu is an example of a user interface (or UI). There's a common misconception that UI and UX are the same things. This isn't technically true, but there's merit to the claim. UX is a part of the design philosophy behind UI. As UI refers to how a user interacts with the software, the UX

is their experience within the software. Having a good UX with your main menu is essential, as you don't want to annoy your players before they've even played your game.

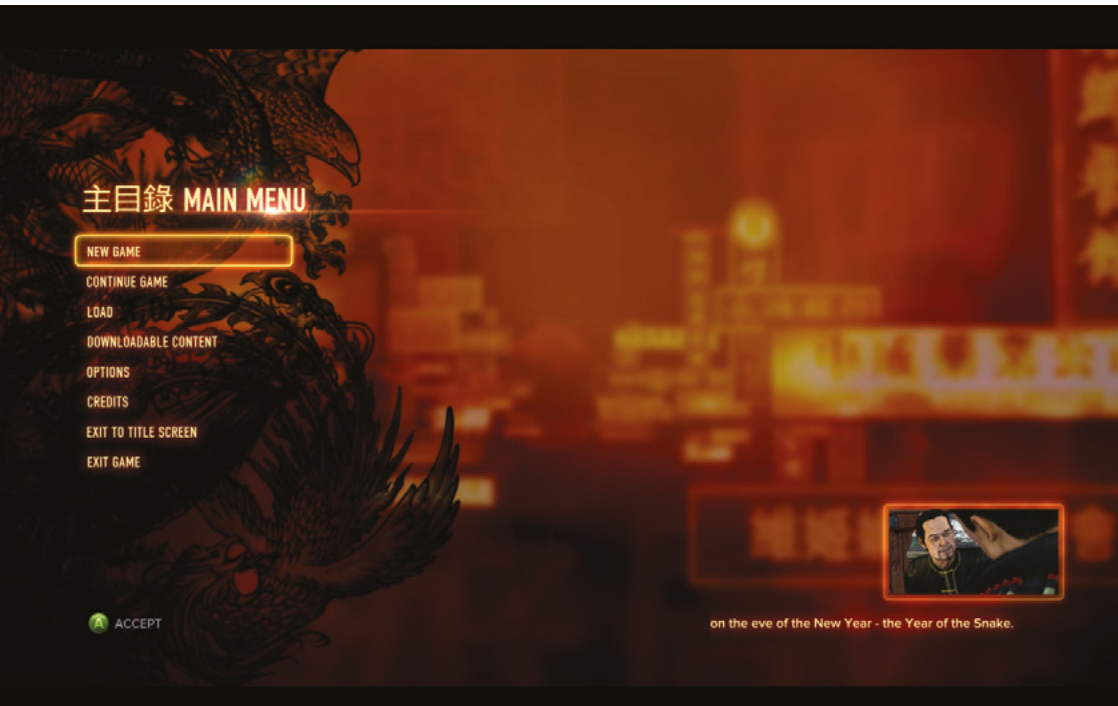
Before we put together our main menu, we need to understand what we need. An important part of the UX is to not include too many bells and whistles in our menu – they are there to allow the player to start a new game, load a previous save, or change settings.

Main menus have evolved over the years. Where once a simple 'Press Start to begin' was enough, we now have a lot of functionality that needs to be covered, including changing language, logging into game servers, toggling subtitles, and so on. What you'll need in your main menu will change from project to project. An example of this would be to look at the main menu of *Rocket League* versus the menu of *Dark Souls*. *Rocket League* needs to allow players to join each other in parties, and allow users to find matches, view stats, and change their cars. *Dark Souls*, on the other hand, needs only to let the player know which version of the game they're playing, what DLC is installed, and give them a place to read the latest news, change their settings, and make adjustments to their save data.

Because they can be so vast and project-specific, we're going to be as project-agnostic as possible with the design of our main menu.

➤ Main menus constantly evolve to suit the functionality that needs to be presented to the player.





The idea is you'll take what you learn here and customise the end result until you achieve something that works for your project.

GETTING STARTED

The most common features in a modern-day main menu are:

- Allow the player to load a previous save game
- Start a new game
- A place to make alterations to the settings of the game

These features are usually represented by 'New Game', 'Load Game', and 'Settings'. It's common to also include a 'Continue Game' option, which loads the last saved state in one button press.

To make a UI within Unreal Engine 4, we'll need to use the Unreal Motion Graphics (UMG) feature – UMG is a visual designer for user interfaces. To create a UMG widget, all you have to do is either right-click in the content browser or click the green 'Add New' button on the top left-hand side of the content browser.

Within the context menu that pops up, select User Interface > Widget Blueprint, then name this new widget **UMG_MainMenu**. Once this is

created, just double-click the new asset to open up the UMG editor.

There are two main areas to UMG: 'Designer' and 'Graph'. You can tell which section you're in by looking at the top right-hand side of the window. Designer is where you can lay out your UI, and Graph is where you can add functionality (via Blueprints) to your UI. Let's put together a simple main menu so that we can have a brief overview of what UMG can offer us.

Make sure you're in the Designer section as we want to piece together our UI visually before adding some code. Within the Designer section, there are five main areas of interest. On the top left-hand side, we have the palette – this is a collection of various widgets that you can add to

your UI such as buttons, images, and sliders. Below the palette is the hierarchy; this is the 'scene outline' of your UMG, showing which

widgets are paired, and is a good way to quickly select widgets within the UI for editing.

At the bottom of your screen, you have the animation area. You can use these to add life and movement to your widgets: making them move around the screen, fade in and out, and so on. At the centre of the screen, you have the UI area, which lets you see what your UI looks like. Finally, on the right-hand side, we have the ▶

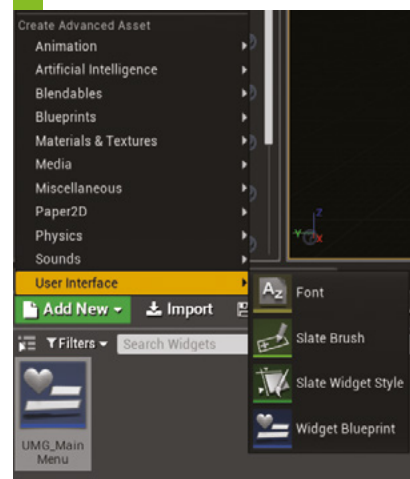
“Having a good UI with your main menu is essential”

DON'T QUIT

An interesting point to note is that modern main menus tend to leave out the previously popular option, 'Quit Game'. As technology and design principles have advanced, most devices allow players to quit a game with a couple of button presses of the controller – much faster than scrolling down to the 'Quit Game' option in a main menu.

◀ *Sleeping Dogs* received criticism for placing 'New Game' above 'Continue Game', an example of poor user experience.

✓ **Widget Blueprints are your window into the powerful UMG tool in Unreal Engine 4.**



CLEAN SLATE

Another solution in Unreal Engine 4 to create UIs is Slate. Powered mainly through C++ macros, critical user feedback led to the creation of the simpler, designer-focused tool, which later became UMG.

✓ **Top:** By using a mixture of different panel widget types alongside a border, you can easily lay out your UI in a way that looks great at every resolution.

Bottom: This is how your widget should be laid out.

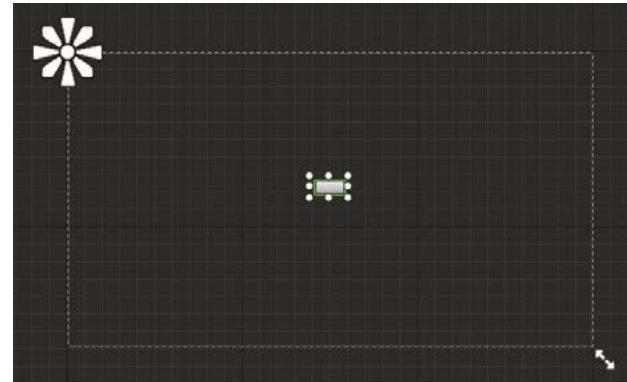
Details panel. This comes alive when you select a widget within the scene, and allows you to alter properties of said widget, such as its colour, size, or position on screen.

Everything in your UMG widget has to be a child of a parent widget – a common theme in Unreal. This is why a canvas panel is automatically added to every widget you create with UMG. A canvas panel is a widget that allows the children connected to it to be placed wherever you want. You then anchor these children to specific positions so that when viewed on different screens (or at different screen sizes), the child widget in question will remain in the relative location to their anchor. An easy way to visualise this is to look for a button widget within the palette window. Once you've found the button, simply click and drag it onto the centre of your screen.

You'll now have the button selected and can see the 'Details' on the right-hand side of your screen. You'll also notice the sun-shaped icon, which is telling you where the anchor for the child widget is. The problem with this

approach is that your child widgets won't stay in the same place if the screen size changes. For example, UMG widgets default to a 1280x720 resolution. If this widget were displayed on a 4:3 screen, you might find your child widget

“Everything in your UMG widget has to be a child of the parent widget”



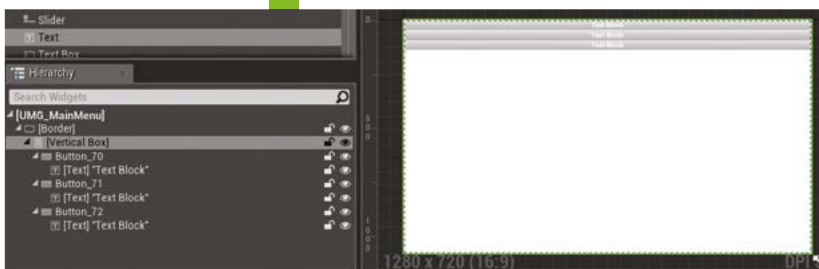
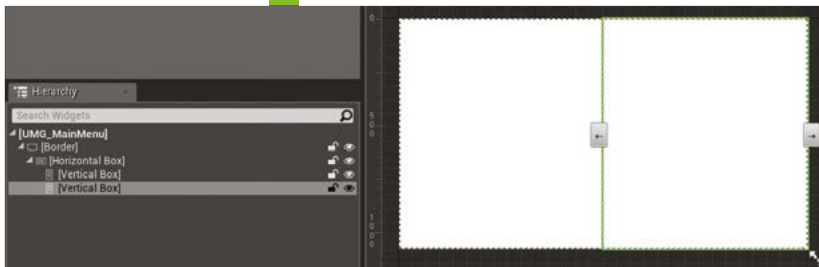
▲ The sun-shaped icon exists only for children of canvas panel widgets. The closer the child widget is to the anchor, the more static the child widget will remain when the screen size is altered.

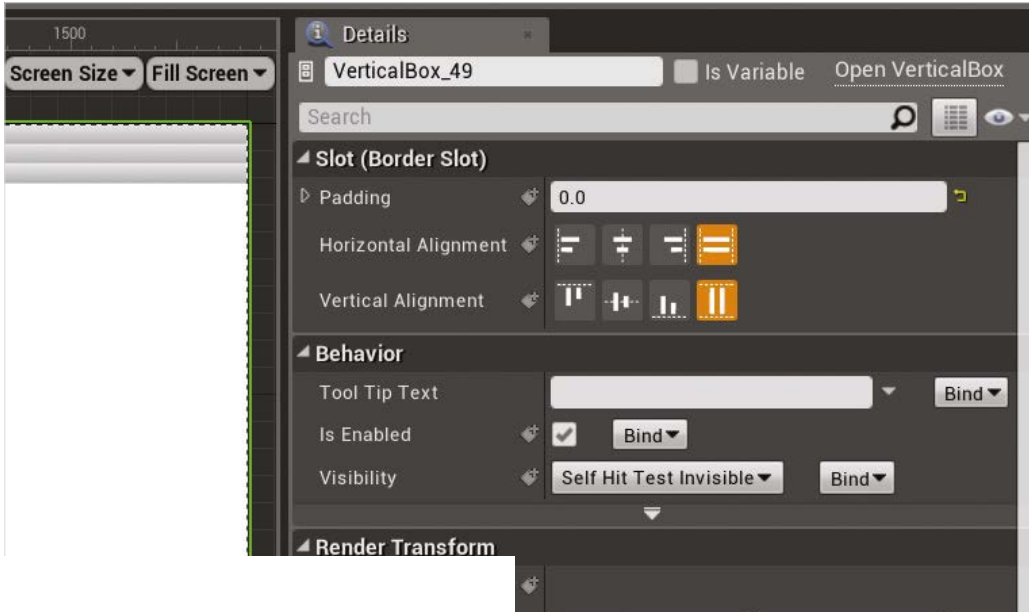
is sitting in a different place from where you left it. This is because a canvas panel and the anchor system aims to keep everything relative to the anchors instead of looking exactly how you design it in UMG.

Naturally, this isn't what most people want when designing their UI. They want their UI to be resolution-independent whilst looking as close to how they design the UI as possible. There's nothing worse than putting hours into a UI, only to realise you've been working at the wrong resolution and that cool button you've spent all that time designing disappears off the screen at the wrong resolution. Fortunately enough, for those who would rather design without the anchor system, there's a solution.

To see the benefits of the alternative approach, we need to delete the canvas panel within our UMG scene. To do this, you can either select anywhere inside the canvas within the scene view or you can select it within the hierarchy. With the canvas panel selected (you'll notice the green outline showing where the canvas panel is currently sitting), either right-click and press 'Delete' or just press the **DELETE** key on your keyboard.

We now have a blank UMG. Within the palette, go ahead and drag a border anywhere into your scene view. This will automatically become the parent of everything moving forward within our UMG. Unlike canvas panels, which can have multiple child widgets, borders can only have a single widget as their child. Fret not – you can use a mixture of spacer widgets (these are essentially used to make blank spaces for when you need gaps within your UIs) and horizontal





◀ The Details panel contains several settings for each widget. Here, you can change the widget's transforms, behaviour, rotation, and so on.

boxes or vertical boxes (these widgets allow you to align child widgets horizontally or vertically). Even though borders can only have one child, panel widgets (such as vertical box, horizontal box, and uniform grid) can have multiple children, which is a handy way to circumvent the border widget's limitations.

The best way to understand how this all fits together is to learn by practically putting a UI together. From what you've learnt so far, put together a UI with the following hierarchy:

- **Border**
- **Vertical Box**
- **Button**
- Text**
- **Button**
- Text**
- **Button**
- Text**

I recommend looking at the sample content available via the Unreal Engine launcher, to see other UIs and how they're put together. Everyone has their own style of how they put together UIs with UMG, and some workflows may feel more natural to you than others.

You may notice that the UI doesn't currently look all that 'normal'. If you did everything correctly, you'll have three buttons squashed at the top of your UMG. We're going to fix this by editing the options within the Details panel. As with the widgets themselves, there are many options within this section, so we're only going to give you a brief insight into how you'd use this Details section.

GET PADDING

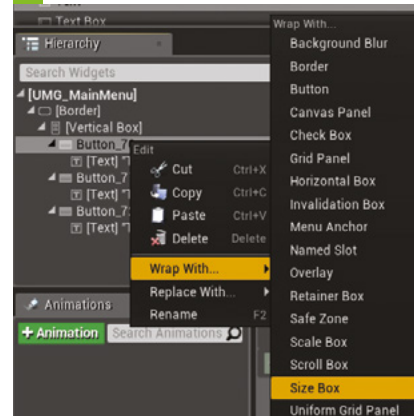
Let's start with the vertical box. Find the vertical box you placed in the scene by clicking on it in the hierarchy. Once clicked, head to the Details panel on the right-hand side of your screen. You can confirm if you've got the right object selected as you'll see the name of the vertical box as well as the base class on the top of the Details panel.

At the top of the Details panel, you'll see settings that let you change the padding and the alignment. Padding is an invisible border that surrounds the widget that can shift the widget inside its bounds. You can press the arrow to the left of the padding text to show all the options available. Try putting in different values to gain a better understanding of what padding does to your widget. Once you're comfortable and ready to proceed, set your padding to 0.0 on all values (as we don't want padding for our example widget).

Now turn your attention to the horizontal and vertical alignment tools. These shift your widget based on your chosen alignment. For horizontal alignment, your choices are Left, Centre, Right, and Stretched to Fill the X-Axis. For vertical alignment, you can choose between Top, Centre, Bottom, and Stretched to the Y-Axis. For our example, we want our buttons in the centre of the screen. Go ahead and select 'centre' on both the horizontal and vertical alignment. You'll notice your buttons are now a lot smaller. Let's change that.

Sometimes you have a specific hierarchy but need to insert a widget in-between a parent ➔

▼ There are a several widgets you can wrap around existing widgets, giving you more control over your existing hierarchy.



and a child. For example, we want our buttons to be a little bigger. What we can do is select the button in the hierarchy and right-click. Select 'Wrap With >' and then 'Size Box'. As you'll be able to see, this takes the widget you've selected and inserts a parent between it and its original parent, giving you a lot more potential for changing your hierarchy without having to remove things to slot in your change.

Select the newly created size box within the hierarchy and head to the Details panel. You can either set absolute sizes (Width/Height override) or a general idea of size (Min/Max Desired Width/Height).

To activate the mode you want, press the tick to the left of the option you require. For now, set Width Override to 600.0 and Height override to 100.0. You'll see that your button has been resized. Head back to your hierarchy and wrap the remaining two buttons with size boxes and make sure they're all the same size.

Using what you've learned so far, change the padding of all these size boxes so that their 'bottom' is set to a padding value of 0.25.

OVERRIDE

Another thing we can do in the Details panel is override functions. Most widgets in UMG come with functionality that can be changed. For example, buttons have code that fires when they're clicked, hovered over, and various other interaction functions.

What we can do is tell them: "Hey, if X happens, do Y". To do this, select a button (select the top-most button for our example),

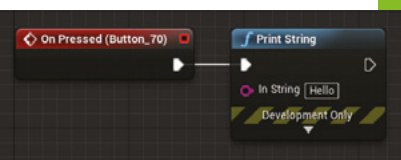
head over to the Details panel and scroll to the bottom. You'll see a section marked 'Events' with a number of green buttons

contained within. Press the green button next to 'OnPressed'.

You'll be taken to the Graph view, and a new node will be created. If you gave your button a name, you'll see that written on this event. If you didn't, then a default name will be supplied to this event. To prove this button works, add a Print String node to add some text to the screen when this button is pressed.

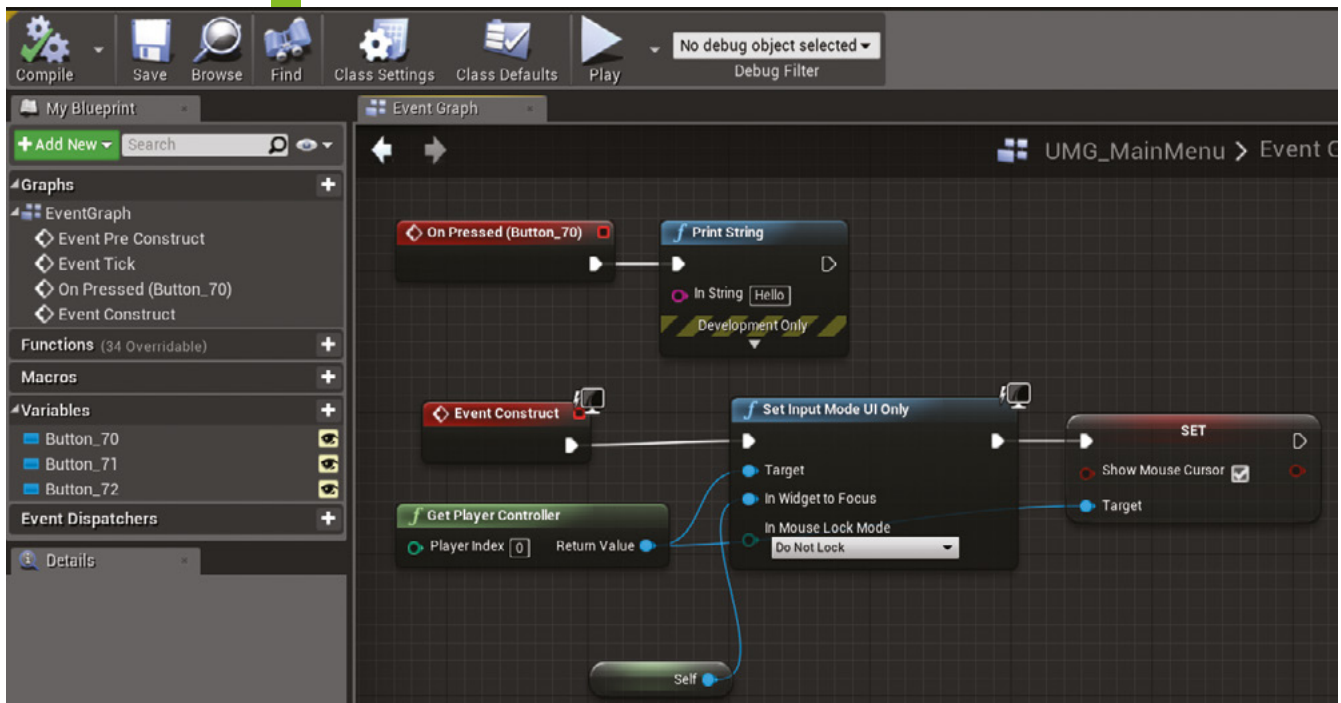
Right-click anywhere and within the context-sensitive menu, search for 'print' and select

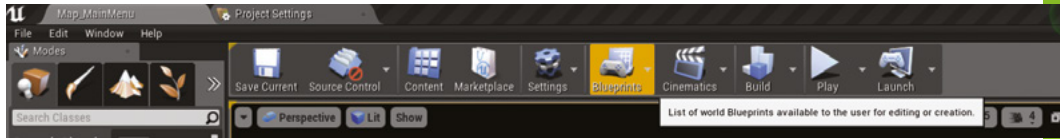
“From here, you should have the tools to put together a UI”



^ Only events connected to each other will fire. Note that nodes fire in a linear fashion, left to right - events supply power to whatever is connected to the right of them.

✓ If done correctly, your Blueprint will look like this.





◀ The Blueprints button is found at the top-centre of your Unreal window, just above the in-game viewport.

'Print String'. Press **ENTER** to create the node. Remember, only connected nodes will fire. Grab the output pin of the OnPressed event and connect this to the left-most execution pin on the Print String node.

We're almost ready to test the button, but there are two things we have to do first. First, we have to tell Unreal Engine 4 that we want this widget to accept our mouse clicks, and then we have to draw our widget to the screen.

Create an 'Event Construct' by right-clicking anywhere and typing 'Construct'. Now do the same for 'Get Player Controller'. As its name implies, the Player Controller controls all input related to the player. With 'Get Player Controller' created, click its output pin. Drag the output pin to tell the Context Sensitive node tool we're looking for events based on this Player Controller.

Type in 'Set Input Mode' and select 'Set Input Mode UI Only'. Connect this node to the Construct node. You'll notice that 'In Widget To Focus' is looking for an input. Click the input pin and drag out, just like you did with the Player Controller. When the browser pops up, type in 'Self' and select 'Get a Reference To Self'. Head back to the 'Get Player Controller' and drag out the output pin again.

This time, search for 'Show Mouse' and select 'Set Show Mouse Cursor'. Press the empty box inside the SET node to set this node to TRUE. Now, connect all the nodes up and press the 'Compile' button on the top left-hand side of your screen.

You can now close your UI, but you can open it again later by double-clicking the asset

within the content browser. Back in the main view, head up to the Blueprints button, which sits above the centre of the viewport. Click the Blueprints button and select 'Open Level Blueprint'. From what you've learned so far, create an Event BeginPlay node and two other nodes: Create Widget and Add To Viewport (note: To get Add To Viewport, you'll have to drag out from the blue output pin of Create Widget). Hook all of these nodes up. We're almost done!

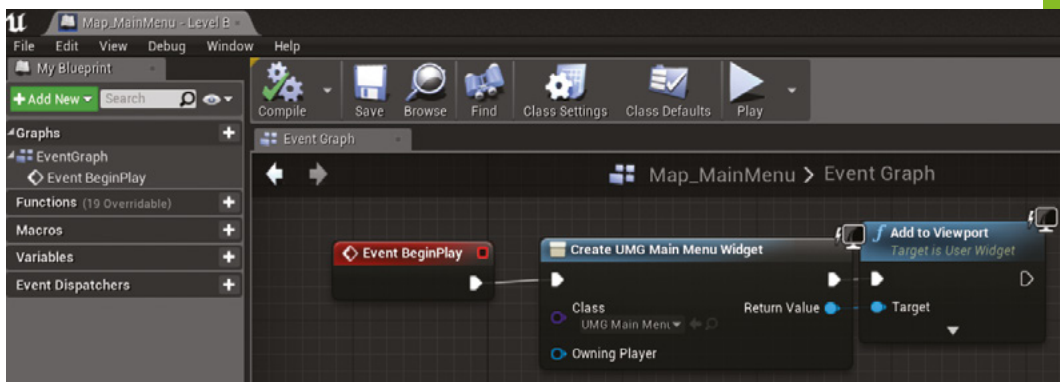
You'll notice that the Create Widget node isn't actually creating anything yet, as the class input is empty. Instead of clicking and dragging, click the 'Dropdown' button to view a list of the classes that can be used with this Blueprint node. From the options, select your UI. Finally, press Compile and close this Blueprint.

Now comes the fun part: testing our UI. Head back to where we pressed the Blueprints button and either press the big Play button or click the dropbox beside it and select 'New Editor Window'. If you followed everything correctly, you'll now see your UI on the screen. More importantly, you can click the buttons. Click the button you added the 'OnPressed' value for. You should see a message appear on the top left-hand side of the UI saying "Hello". You've put together your first widget!

From here, you should have the tools needed to put together a UI. As for next steps, I recommend experimenting with the different features of UMG to gain a deeper understanding of the system, and also checking the Unreal samples on the Epic Games Launcher to learn more tips and tricks. ☺

SIZE BOXES

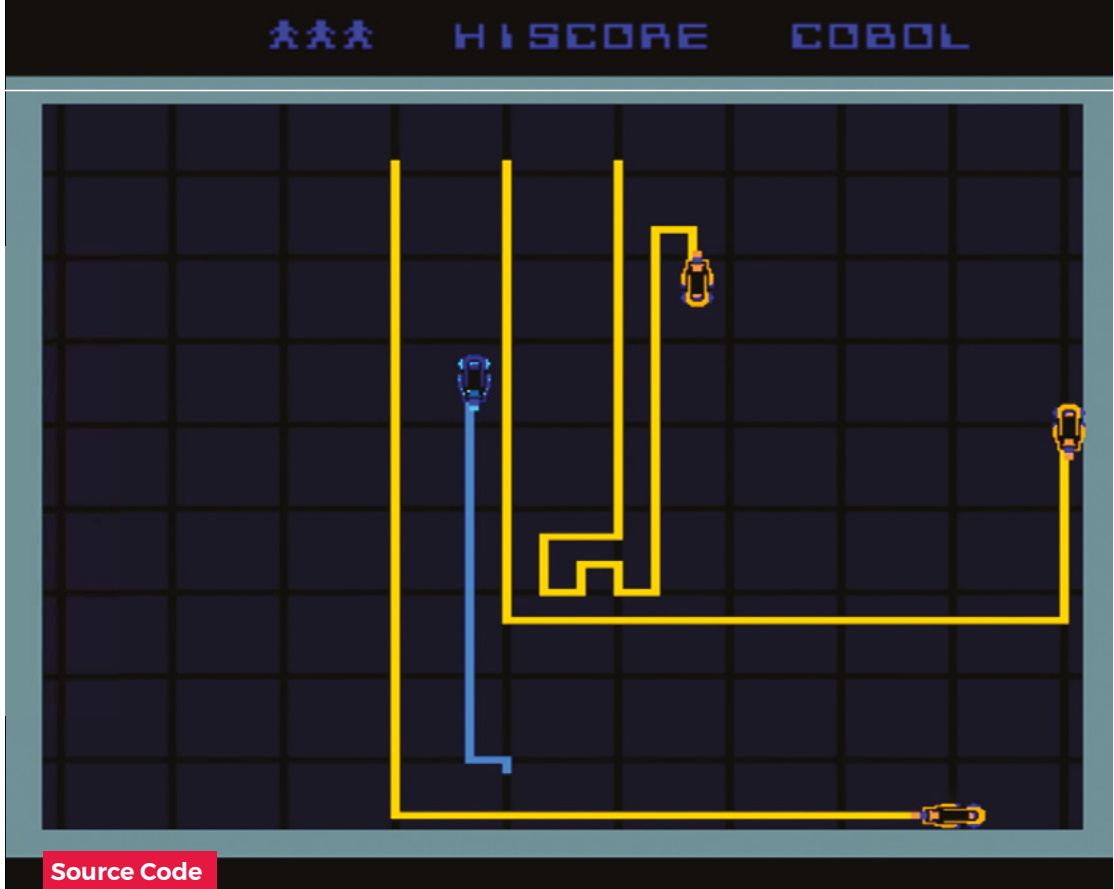
If you'd like to edit multiple size boxes (or any widget within UMG), you can press **CTRL** and then click multiple assets within the Hierarchy. Note that your options are limited if you choose different types of widgets, so only doing this for widgets of the same type is recommended.



◀ This is how your Level Blueprint should look.



- ^ The *TRON* cab had two game controllers: a rotary wheel and a joystick.
- > Battle against AI enemies in the original arcade classic.



Source Code



AUTHOR
MARK VANSTONE

Code a Light Cycle arcade minigame

Speed around an arena, avoiding walls and deadly trails

At the beginning of the 1980s, Disney made plans for an entirely new kind of animated movie that used cutting-edge computer graphics. The resulting film was 1982's *TRON*, and it inevitably sparked one of the earliest tie-in arcade machines. The game featured several minigames, including one based on

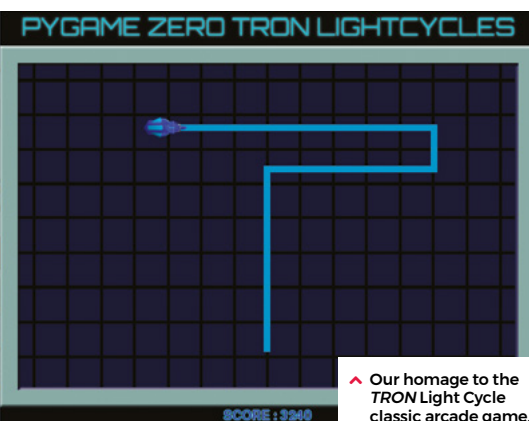
the Light Cycle section of the movie, where players speed around an arena on high-tech motorbikes, which leave a deadly trail of light in their wake. If competitors hit any walls or cross the path of any trails, then it's game over. Players progress through the twelve levels which were all named after programming languages. In the Light Cycle game, the players compete against AI players who drive yellow Light Cycles around the arena. As the levels progress, more AI Players are added.

The *TRON* game, distributed by Bally Midway, was well-received in arcades, and even won Electronic Games Magazine's (presumably) coveted Coin-operated Game of the Year gong. Although the arcade game wasn't ported to home computers at the time, several similar games – and outright clones – emerged, such as the unsubtly named *Light Cycle* for the BBC Micro, Oric, and ZX Spectrum.

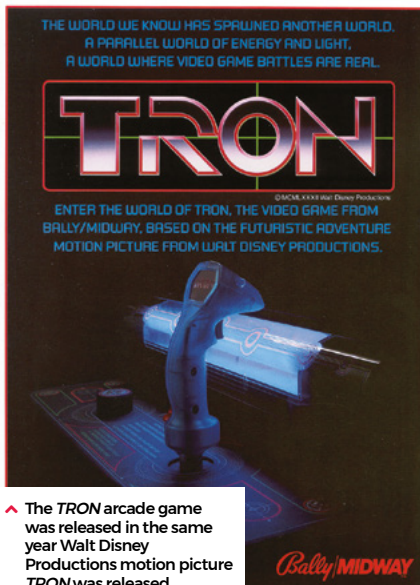
The *Light Cycle* minigame is essentially a variation on *Snake*, with the player leaving a trail behind them as they move around the

screen. There are various ways to code this with Pygame Zero. In this sample, we'll focus on the movement of the player Light Cycle and creating the trails that are left behind as it moves around the screen. We could use line drawing functions for the trail behind the bike, or go for a system like *Snake*, where blocks are added to the trail as the player moves. In this example, though, we're going to use a two-dimensional list as a matrix of positions on the screen. This means that wherever the player moves on the screen, we can set the position as visited or check to see if it's been visited before and, if so, trigger an end-game event.

For the main `draw()` function, we first blit our background image which is the cross-hatched arena, then we iterate through our two-dimensional list of screen positions (each 10 pixels square) displaying a square anywhere the Cycle has been. The Cycle is then drawn and we can add a display of the score. The `update()` function contains code to move the Cycle and check for collisions. We use a list of directions in degrees to control



^ Our homage to the *TRON* Light Cycle classic arcade game.

Download
the code
from GitHub:
[wfmag.cc/
wfmag47](https://wfmag.cc/wfmag47)

^ The TRON arcade game was released in the same year Walt Disney Productions motion picture TRON was released.

the angle the player is pointing, and another list of x and y increments for each direction. Each update we add x and y coordinates to the Cycle actor to move it in the direction that it's pointing multiplied by our speed variable. We have an `on_key_down()` function defined to handle changing the direction of the Cycle actor with the arrow keys.

We need to wait a while before checking for collisions on the current position, as the Cycle won't have moved away for several updates, so each screen position in the matrix is actually a counter of how many updates it's been there for. We can then test to see if 15 updates have happened before testing the square for collisions, which gives our Cycle enough time to clear the area. If we do detect a collision, then we can start the game-end sequence. We set the `gamestate` variable to 1, which then means the `update()` function uses that variable as a counter to run through the frames of animation for the Cycle's explosion. Once it reaches the end of the sequence, the game stops. We have a key press defined (the `SPACE` bar) in the `on_key_down()` function to call our `init()` function, which will not only set up variables when the game starts but sets things back to their starting state.

So that's the fundamentals of the player Light Cycle movement and collision checking. To make it more like the original arcade game, why not try experimenting with the code and adding a few computer-controlled rivals? 🤖

Light Cycles in Python

Here's Mark's code for a Light Cycle minigame straight out of TRON. To get it working on your system, you'll need to install Pygame Zero – full instructions are available at wfmag.cc/pgzero.

```
# TRON

speed = 3
dirs = [0,90,180,270]
moves = [(0,-1),(-1,0),(0,1),(1,0)]

def draw():
    screen.blit("background", (0, 0))
    for x in range(0, 79):
        for y in range(0, 59):
            if matrix[x][y] > 0:
                matrix[x][y] += 1
                screen.blit("dot",((x*10)-5,(y*10)-5))
    bike.draw()
    screen.draw.text("SCORE : "+ str(score), center=(400, 588), owidth=0.5,
ocolor=(0,255,255), color=(0,0,255) , fontsize=28)

def update():
    global matrix,gamestate,score
    if gamestate == 0:
        bike.angle = dirs[bike.direction]
        bike.x += moves[bike.direction][0]*speed
        bike.y += moves[bike.direction][1]*speed
        score += 10
        if matrix[int(bike.x/10)][int(bike.y/10)] < 15 :
            matrix[int(bike.x/10)][int(bike.y/10)] += 1
        else:
            gamestate = 1
            if bike.x < 60 or bike.x > 750 or bike.y < 110 or bike.y > 525:
                gamestate = 1
    else:
        if gamestate < 18:
            bike.image = "bike"+str(int(gamestate/2))
            bike.angle = dirs[bike.direction]
            gamestate += 1

def on_key_down(key):
    if key == keys.LEFT:
        bike.direction += 1
        snapBike()
        if bike.direction == 4 : bike.direction = 0
    if key == keys.RIGHT:
        bike.direction -= 1
        snapBike()
        if bike.direction == -1 : bike.direction = 3
    if key == keys.SPACE and gamestate == 18:
        init()

def snapBike():
    bike.x = int(bike.x/10)*10
    bike.y = int(bike.y/10)*10

def init():
    global bike,matrix,gamestate,score
    bike = Actor('bike1', center=(400, 500))
    bike.direction = 0
    matrix = [[0 for y in range(60)] for x in range(80)]
    gamestate = score = 0

init()
```



AUTHOR
JEFF SPOONHOWER

Jeff Spoonhower is a game developer, artist, and university professor who has been working on triple-A and indie games for over 18 years. anewthegame.com

Indie reflections: Making Anew Part 15

How do you build a solid foundation for an indie game? Jeff has a few tips

A question we're often asked about *Anew: The Distant Light* is, "How did you get started?" Here, I'll share some perspectives on the early phases of development that helped us build a solid foundation for the rest of our game: conceptualisation and pre-production.

BUILDING THE FOUNDATION

The first decision we made was to make an action-exploration (or Metroidvania) game. It's a genre we loved, and we thought it would be a fun challenge to work on a more open-ended style of game. We conducted a research phase during which we played as many Metroidvanias as we could, taking notes on gameplay mechanics, enemy

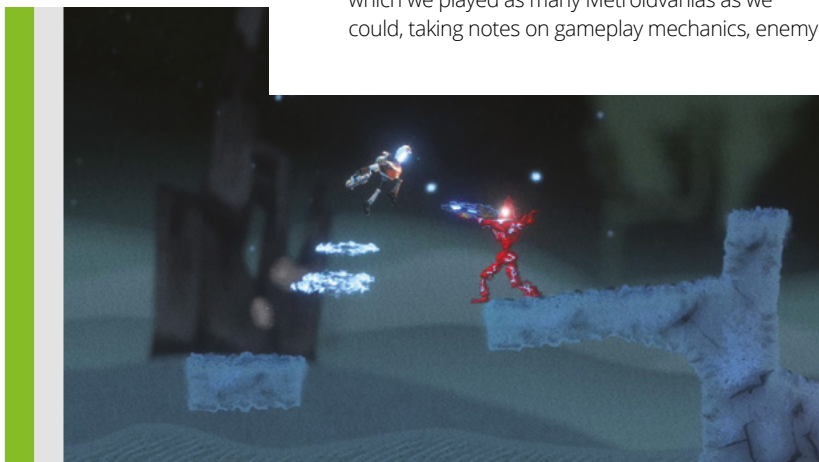
types, story delivery systems, and more, with the hope of answering the following questions: which elements should we incorporate into *Anew*? In what ways could we innovate and try something new? What creative risks would make our game stand out in a crowded marketplace? This phase established a solid foundation for planning some of the important high-level design decisions for our game.

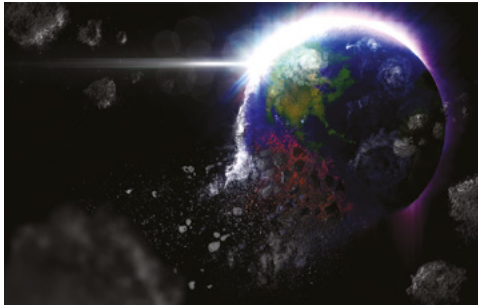
Next, we began conceptualising the story and art direction, developing tools and processes, prototyping gameplay systems and player controls, and planning the gameplay flow. We had no formal experience in Unity, so we learned how to use it during this phase as well. It took several years to gain a sense of mastery over Unity – it truly is a deep and powerful program.

My first creative challenge as art director was to devise an engaging sci-fi premise that would work within the rules of the action-exploration genre. The delivery mechanisms and scope of the story needed to function in tandem with the design goals. Since the game world was going to be expansive and diverse, the story needed to contain multiple plot points, characters, and mysteries to entice the player to finish the game.

Meeting each of these narrative criteria was a challenge and required several revisions. For example, early versions of the story allowed the player to control multiple characters, thus

- ▲ Early concept art helped to define the overall visual tone for the game.
- ▼ A lot of time was spent working on AI and animation systems in the first year of development.





^ "Our brains felt like this as we worked through endless design challenges when we started working on *Anew*."

experiencing the narrative from different perspectives. It was interesting, but proved too complex to implement. I also experimented with dialogue, but vocal performances of the characters' thoughts and emotions were too 'on-the-nose' for the type of storytelling we were trying to achieve.

Video game narratives are intricately linked to gameplay. To work out the story's finer details, we first developed the architecture, objectives, and rules of the game; designed the world map and a player's progression through it; and created many of the systems and pipelines from scratch. In fact, it's not uncommon for the story to be finalised near the end of production, after all the critical design and gameplay elements have been proven out in the context of play. Having the narrative laid out at the beginning, though, was essential to moving forward in the development process

While working on the story, I developed the overall artistic direction, and designed the systems and pipelines for the creation of art, animation, visual effects, textures, and sound design elements in Unity. The look and feel of our game's organically shaped terrain, architecture, characters, props, and backgrounds needed to seamlessly converge in order for the world to feel consistent.

Due to time constraints, I was only able to create a handful of concept art pieces. Figuring all this out was frustrating and time-consuming, but also an ultimately rewarding process that took many 'runs up the hill' to figure out. Nothing is ever easy in game development.

Steve Copeland, my development partner and game director of *Anew*, planned and prototyped game systems, pipelines, and tools that would allow us to start building the game world. This included the player control and animation

systems, a dynamic night-and-day system, enemy AI, player weapons and abilities, visual effects and lighting tools, and systems to manage the loading, streaming, and saving of game world data seamlessly during live play. Each of these systems were complex and would require testing and reworking to function properly.

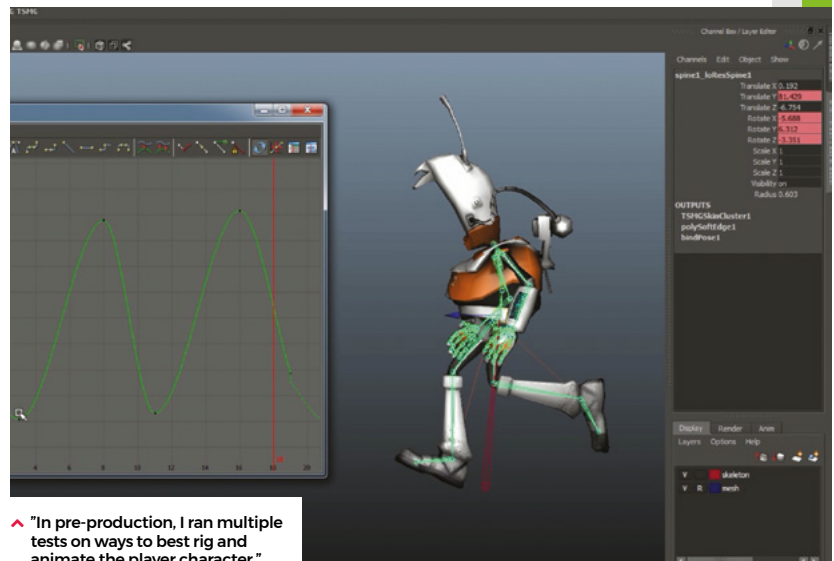
We began to design the world map, which included concept sketches of each zone, points of connection, and the player's path. We began with paper and pencil designs, then updated them digitally using an online whiteboard application.

To understand and troubleshoot our gameplay, narrative scene ordering, and placement of items critical to the player's progression, we translated our whiteboard drawings into text in a Google spreadsheet. This document became the 'script' for our game and was updated throughout production.

These early phases took over a year to complete. Each design task and mental exercise required hours of planning and meetings to solve. We were already exhausted, and we'd just started off

on the long journey of production! After working on many triple-A games, we knew the road to completion would be difficult, but setting up a strong foundation early in development has enabled us to build an even better game, so the time spent in conceptualisation and pre-production was well worth it. 🗨

"We were already exhausted, and we'd just started off"



^ "In pre-production, I ran multiple tests on ways to best rig and animate the player character."

READING UP

If you're working on your first game, you probably feel overwhelmed by the amount of information you need to absorb. Not only must you figure out the type of game you're going to make, its scope, features, and unique identifiers, but you also likely need to learn a host of new game development and content creation tools and processes. Sometimes it's helpful to step back and read a few good books on game development. Here are a few that I found helpful and inspirational in the early phases of production on *Anew*: *Chris Crawford on Interactive Storytelling* (Chris Crawford), *Level Up!* (Scott Rogers), *Challenges for Game Designers* (Brenda Brathwaite and Ian Schreiber), and *100 Principles of Game Design* (Wendy Despain).

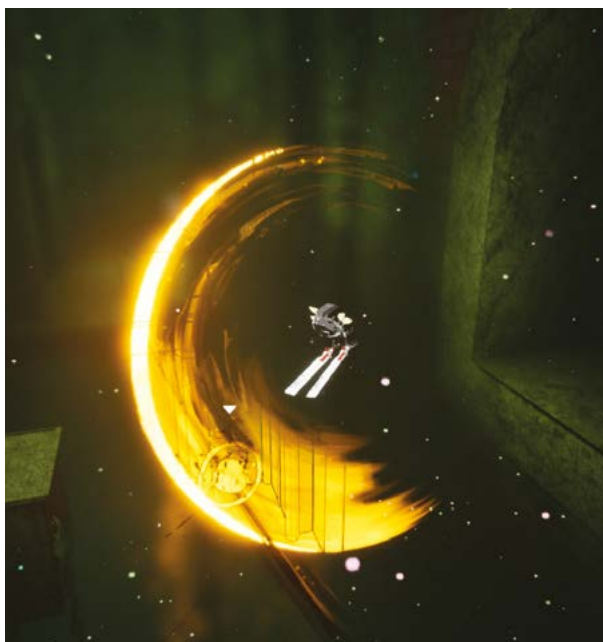


GAME
Blue Fire

RELEASE
Out now

STUDIO
Robi Studios

WEBSITE
robistudios.com



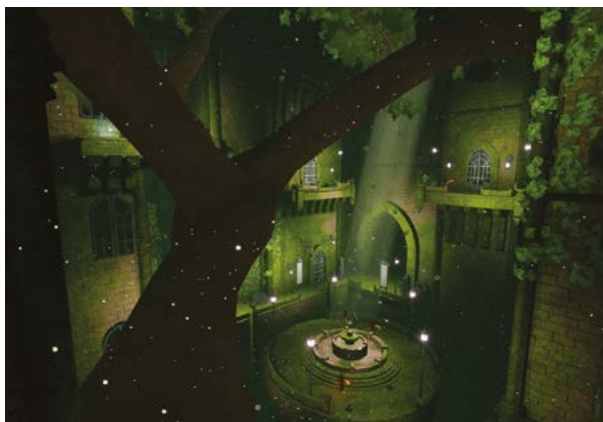
Blue Fire

Although colourful N64-era games like *Super Mario 64* and *Donkey Kong Country* were at the forefront of Argentine developer Robi Studios when it started work on *Blue Fire*, the game's aesthetic is altogether darker and more sinister. According to developer Gabriel Rosa, the team looked to the exquisitely animated films of Studio Ghibli for their 3D action-platformer's tone. "I believe we've drawn from [Studio Ghibli] in trying to create a perished world but with a glimpse of hope," he tells us, "resulting in characters, lore, and locations that felt as if they expanded beyond the game itself."

Robi Studios' fantasy Metroidvania was built in Unreal Engine 4, and with a team of just eight, a stylised, low-poly look was conceived to keep the project manageable. Still, building a large-scale world for the player to explore provided a major challenge towards the end of development, Rosa says. "We went through a critical moment in development when we thought we wouldn't have enough time to finish the art for the game. For several days, we analysed our options on how to compromise the visuals, since we only had a few months left to finish *Blue Fire*. I'd wanted to start working procedurally for some time, and at that moment we decided to give it a try, knowing it was a huge risk since we weren't familiar with procedural workflows. Luckily, we had positive results very quickly, and it completely changed our game visually and our studio's scope.

"The other big challenge was keeping it together emotionally," Rosa adds. "There were times when we would look at all the things we still had to do against our time and budget, or see things that still needed so much work... Yet we had no alternative than to show them off to third parties and explain that this or that would be better later on. All these issues in the context of a young company like us – where many problems would appear and stack up from one minute to the next – at times can be pretty heavy emotionally."

***Blue Fire* is available now on PC and Nintendo Switch.**



THERE'S NO SPACE LIKE HOME

From the Ebon Hawk to the Unreliable, we take a look at the evolution of the spaceship as a game hub and RPG refuge

WRITTEN BY
CHRIS FARNELL

From their earliest beginnings, video games have realised a specific human fantasy: to go into space. *Spacewar!* led to *Space Invaders* led to *Elite* led to... you get the picture.

But something was missing from those early gaming experiences – the quiet moments depicted in TV shows and movies set in space. Think of R2-D2 and Chewbacca playing Dejarik on board the Millennium Falcon; Shepherd Book and Jayne being workout buddies on *Serenity*; trying to figure out how the turbolifts worked in *Star Trek: The Next Generation*.

These parts of the sci-fi experience always seemed a little out of reach when replicated in games. *Star Trek: Voyager – Elite Force* and its sequel had downtime sessions aboard your ship between missions, *Wing Commander* had you clumsily navigating the Tiger's Claw (and spending a lot of time in the bar), and the Ragnarok of *Final Fantasy VIII* acted pretty much as a reskinned

airship. Those games made an effort, but they seldom felt like spacefaring homes shared between you and your crewmates or friends.

That all changed, though, with *Star Wars: Knights of the Old Republic*. *KOTOR* saw your missions – and most of your in-game experiences – starting from one place, the good ship Ebon Hawk. This progenitor of the Millennium Falcon acted as canonical transport, an in-game hub, a place to figuratively put up your feet and get to know your rag-tag band of Carths and HK-47s. It managed to feel, somehow, like a home – and the game was all the better for it.

The Ebon Hawk also served a practical purpose. In a way that echoed sci-fi TV shows' use of 'bottle episodes' to keep production costs down, using the ship as the backdrop for cutscenes meant the same environment and props could be used multiple times throughout the game. ➔





SHIPS OF THE LINE

Since the *Knights of the Old Republic* games, the spaceship hub model has been imitated and developed further. After codifying the concept in *KOTOR*, BioWare went on to refine it with the Normandy SR-1, SR-2, and the Tempest in the *Mass Effect* franchise. After working with the Ebon Hawk in *KOTOR II*, Obsidian introduced players to the good ship Unreliable in *The Outer Worlds*. Possibly the largest ship in the genre is the expansive Sanctuary III for *Borderlands 3*, which features an expansive bridge as well as its own bar, gun shop, and individual quarters for all four player characters and several NPCs. Even *Call of Duty* got in on the act with the Retribution in *Infinite Warfare*, demonstrating that the appeal of having your own spaceship home isn't restricted to RPGs.

"At the start of *Borderlands 3*, we knew that one of our biggest goals was to expand our universe and leave Pandora," says Graeme Timmins, creative director at Gearbox. "To help sell that promise, to go to new planets and explore more of the Borderlands, we just



naturally needed a ship to do that." The ship is more than just a form of transport, however, he adds. "From a gameplay perspective, Sanctuary speaks directly to the RPG side of our looter shooter. It's the place where players manage the inventories, begin and turn in missions, reflect on their accomplishments, and plan out their activities. When it comes to storytelling, it's where a lot of important story moments happen [as it] ferries players through our expanded universe of planets and locations."

The role of the Sanctuary III expanded as the story and world of *Borderlands 3* grew: "As the story developed, we also recognised we were going to have a lot of characters that we were going to need to interact with, and instead of travelling between planets, it just made more sense to have those characters close by," Timmins says. "It's also convenient to have a hub like Sanctuary III where so many game mechanics are always a single teleport away. Things like the Crew Challenges, Hunts, Targets of Opportunity, as well as vending machines and slot machines. Finally, we want every part of our game to exude character, and the ship was another great opportunity to do that."

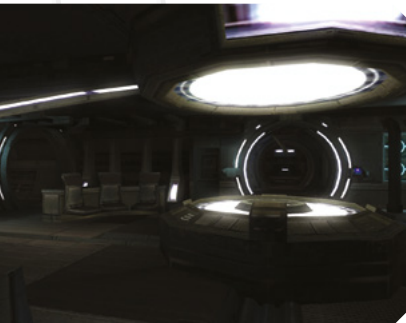
LEAF ON THE WIND

There's obvious cross-pollination between these ships, with a couple of developers even repeating their most successful tricks, but the similarities between spaceships are also due to the common pool of influences they draw from.

"Going into the Unreliable's design, I began researching a number of ships from film and television," says Scott Hafner, a designer on *The Outer Worlds*. "Which was great for me, because it gave me an excuse to dive into three of my favourite films and shows."


For Hafner, the three biggest influences on the Unreliable were the *Serenity* from *Firefly*, the

▼ Spaceship hubs offer players a home away from home.



▲ *The Outer Worlds'* concept artist Bobby Hernandez designed the Unreliable's crew quarters to reflect the personality of your companions.





^ Whether it's *The Outer Worlds* (left) or *Mass Effect: Andromeda* (above), every ship exterior has to reflect the look and personality of the interior.

Nostramo from *Alien*, and the Millennium Falcon from *Star Wars*. It's a list Timmins is familiar with as well.

"When it came to inspiration for Sanctuary III, I drew a lot from the Nostromo in the *Alien* movie," he says. "That iconic ship, and entire film, really, established such an approachable view of how the future of space travel might look, by keeping it grounded and relatable. We also drew inspiration from ship designs in *Star Wars* and *Firefly* as well."

"For the *Serenity*, the level of technology closely matched our desired look for the *Unreliable*, the bridge for example aboard the *Serenity* is beat up, it has lots of exposed wiring and cables, and a mass of switches and flashing lights that really scratches that sci-fi itch for me," Hafner adds. "Being a huge fan of the *Alien* film, naturally I researched the Nostromo's layout as well."

While the Nostromo's layout differs from the *Unreliable* quite a bit, there are common design touches such as the kitchen being a central area for the crew and there being one long central corridor that stretches the length of the ship.

"With the Millennium Falcon, it was more about where the crew's bunks were in relation to their social space," Hafner says. "And of course the famous holographic board-game gave me some ideas [about] littering the *Unreliable* with playing cards and board-games of our own."

This 'lived-in' quality, heavily inspired by *Star Wars*, is a common theme throughout these ships.

"We really wanted to make sure that while we were in a spaceship, which is inherently high-tech, it still matched the worn-down world that we've built *Borderlands* around," Timmins says.

"Being a huge fan of *Alien*, naturally I researched the Nostromo's layout as well"

"That meant making sure the space looked functionally correct, but also had those personal touches and details that make you believe people lived there. In the centre of the ship, we have the high-tech engine, but you also have the bunk beds and makeshift NPC quarters nearby."

Explore the *Tempest* in *Mass Effect: Andromeda* and you'll find empty glasses, or see tools and lab equipment left out. The spaceship hub has recently emerged in the *Star Wars* franchise

again, with the *Stinger Mantis* in *Star Wars Jedi: Fallen Order*. With an interior very reminiscent of the Falcon, the *Mantis* also has bowls

of fruit, musical instruments, and potted plants scattered across the ship, again to give that 'lived-in' feel.

"Visual storytelling is a powerful tool in situations like this," Hafner says of the *Unreliable*. "In the kitchen, for example, we created assets that would reflect that people are living here. Board-games are strewn across tabletops, empty glasses and dirty dishes are laying about, playing cards are thrown about next to empty alcohol bottles. The cargo bay is overflowing with stacks of crates and unkempt collections of goods piled throughout. These items that are left around help to convey a sense of usage and an overall messy-but-homey personality to the space."

YOU CAME IN THAT THING?

'Personality' is the key word here. In the stories that inspire these games, the hero ship is often referred to as another character. But where a lot of games that use spaceships as their home →

MASTERS OF SPACE

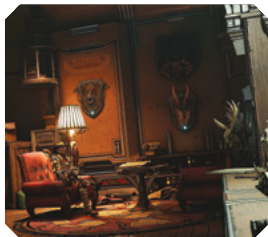
While in many respects a spaceship hub is just another level, it has its own requirements, and a big consideration is size, as Hafner explains. "We knew players were going to be spending a great deal of time running around *Unreliable*, so we didn't want the interior to be massive," he points out. "I didn't want to inconvenience players by forcing them to run for minutes at a time, to go from speaking with ADA, for example, to getting over to the Workbench. So ultimately, I made the *Unreliable* a bit of a shorter ship overall." The layout of the ship was also designed with how a game is played in mind: "It has a loop-like structure to it, meaning you can run from the bottom floor to the back of the ship, climb up to the top floor, run back to the front, and travel back down some stairs and get back to where you began," says Hafner. "This was done intentionally to facilitate players in getting where they need to go on the ship as fast and conveniently as possible."

Interface

There's no space like home



▲ Graffiti makes the Sanctuary III feel lived-in and communicates the character of the crew.



▲ As the player completes missions, their rooms gain trophies and mementos to reflect their progress.

base allow the player to customise every detail of their character's appearance, they rarely give them free rein when it comes to interior decorating. This makes sense, unlike in a space sim, where the spaceship is the player's in-game avatar, a travelling hub is designed to be an environment that tells part of the story, and communicates a character of its own. It's a reflection of the design seen on spaceship sets in movies and TV – details like the 'used' look of the Millennium Falcon, or the flowers painted up the wall of Serenity's kitchen, give us an insight into the crew, as well as the universe they inhabit.

"If I had to describe Sanctuary III's personality, I'd have to say it's plucky," Timmins says. "It's that person in your life that might have faced some hardships, but instead of being down, it soldiers on, happy to meet each day and adventure. It's not a perfect or new ship, but it's been lovingly

watched over and pulled together by Ellie. This vibe of taking the broken, putting it together, and restoring its function in some way is a big part of all the designs you'll find in *Borderlands*."

This character isn't always incidental – it can strike powerful emotional notes with the player. *Knights of the Old Republic II* opens with the player inside the burning wreck of the ship from the first game, a deliberate decision to communicate that something pretty dark and dangerous had happened, while also flagging the change in tone from the first game to the second.

Mass Effect 2 goes even further, opening with the total destruction of the Normandy SR-1 that players had come to know so well during the first game. The bigger, meaner replacement, built by the enigmatic Cerberus organisation, spoke volumes about the new kind of mission Shepard would be undertaking. The changes needn't always be so drastic, however.

"We knew the companions were going to get their own rooms aboard the Unreliable, and we wanted those rooms to feel lived-in, to feel used and occupied," Hafner says. "And we thought a good way to do this was to fill them up with items and collectables that the companions themselves, or players, have brought on board. We created numerous art assets based on our narrative designers' takes on the companions' interests."

For instance, when you welcome Felix, a huge sports fan, on board, you'll notice that he has a Tossball stick and Tossball posters hanging up, or when the mechanic, Parvati, comes aboard, her once empty room is filled to the brim with tools, some photos, and plants. In the same way, the player's own quarters will change according to



▲ Spaceship hubs offer an essential place for the whole crew to get together.

their actions. "The player's quarters will slowly fill up with trinkets and memorable items from their adventure," Hafner points out. "When a quest of significance is completed, we may populate that room with a memento of something the player would have seen or engaged with during that quest." *Borderlands 3* operates similarly, filling the Sanctuary III with allies, hunting trophies, and even lore-plugging audio logs.

MOTLEY CREW

While decoration and environmental storytelling are essential for creating atmosphere, it's the crews of these ships that make them feel like a home. While *Star Citizen* boasts fully realised spaceship interiors, and *No Man's Sky* lets you command your own massive space freighters crewed by anonymous aliens, without the dirty dishes, personalised rooms, and staged interactions between the NPCs these can feel sterile, or like they stop existing the second the player character steps out of the air lock. With RPG spaceship hubs, however, you can often feel like you've walked in on a conversation that began while you were out exploring a planet.

"We knew early on we wanted the companions to take on a life of their own once set free on the ship, and we wanted to showcase the fact that this is now their home as well, and they should appear settled in," says Hafner. "The companion events aren't meant to be over the top, they're meant to be normal activities that people would take part in. Simple things that folks would do while living in a space like this, sharing a drink together, talking about last night's show, or fighting over the bathroom are simple yet subtle activities for the companions to show that this is now their new home together."

"The player's quarters will slowly fill up with trinkets and items from their adventure"

"Having NPCs milling about, making small talk with you, really helps you believe that this ship is alive, and not just another level in the game," Timmins says.

Similarly, in *Mass Effect: Andromeda* we can read the messages the crew leave each other on the noticeboard, and an entire side mission is devoted to arranging and getting snacks for the crew's movie night. It's a trope that goes all the way back to *Knights of the Old Republic II*: as you walk around the ship, you'll find characters performing maintenance, or just meditating by the ship's bunks.

These touches are what really hammer home the immersion in a way games that avoid the hub aspect of a spacefaring vessel just can't manage. *Void Bastards*, for instance, moves the player between levels in a spaceship the player uses to select their next destination, craft new equipment, and set up their loadouts for the next mission, but it's little more than a good-looking set of menu screens. Similarly, *The Long Journey Home* sees its crew interact with each other, but the various rooms of the ship are represented by animated images and menu screens – a nod to *Wing Commander*, whether intentional or not. Using a menu gets the job done, but it's

creating a space for the player in the game world that provides a real grounding in the universe. "Having the Unreliable be a physical space and not just a menu item was really important to us," Hafner says. "There's something satisfying about being able to grab a chunk of the game world and call it your own." 🗨



▲ Toilets have no gameplay function, but are essential for making the ship seem like home.

SPACEBNB

These spaceship hubs are intended as your home away from home, but which one is actually the best to stay in?

Ebon Hawk

A classic, retro design, although admittedly somewhat spartan in its furnishing.

SSV Normandy

Both Normandys feature a sharp, professional decor reminiscent of your favourite *Star Trek* episode, with more comfortable sleeping arrangements than the Hawk – so long as you're the Captain.

Tempest

If the Normandy is your sleek, professional corporate office, the Tempest is a smaller, zanier start-up, where people sit on yoga balls, ride around on mini-scooters, and leave passive-aggressive notes to each other on the fridge.

Sanctuary III

Sanctuary III is the 'Party House', where the music's loud, the drinks keep coming, and the floor's sticky. The sort of place you'd dream of living in when you were 17, and absolutely hate after your 25th birthday.

Unreliable

Everyone has their own room, but tends to hang out in the kitchen. There are board-game nights, but after two rounds the game's forgotten amid the chat. Queue for the bathroom is a nightmare, though.

Stinger Mantis

The listing on the website said 'yacht', but your bed is a bunk next to the ship's engine. Also, when the ship's landed, the door's left open all the time. For camping enthusiasts and gap-year students only.

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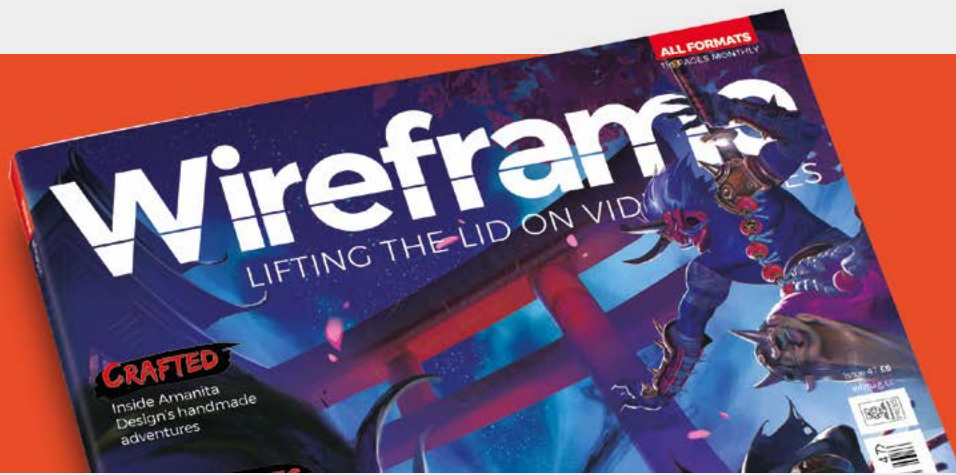
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how we made

Alba

a wildlife adventure

WRITTEN BY
RYAN LAMBIE

ustwo games' David Fernández Huerta chats to us about making a charming island paradise

Proving that open worlds don't have to be huge to be beautiful, the Mediterranean setting of *Alba: A Wildlife Adventure* is an island you can run, skip, and jump across in mere minutes, but it's one packed with personality and charm. The game's a gentle eco-fable about a young girl – Alba Singh – who, along with her best friend Inés, resolves to save her grandparents' island's nature reserve from a greedy property developer's hotel construction project. It's a quest that involves doing odd jobs to help coax the

local populace into signing her petition, fixing up bird boxes in order to coax wildlife back to the island, and taking wildlife photos, which are then recorded on Alba's mobile phone app. It's an open-ended game, but one that provides a delightful counterpoint to the dark, dystopian, and sprawling *Cyberpunk 2077*, which launched on the very same day as *Alba* in December 2020.

Alba's compact setting also speaks to a game design that respects the player's time. "The density was a much more important conversation for us than the size of the island, so it felt alive but not overly busy or too sparse," explains creative director David Fernández Huerta. "I love open-world games, but with kids at home and all the obligations of adult life, it takes me over six months to complete one. And I do complete them. I love finding every nook and cranny and collecting all the collectables, and I think that compulsion is quite universal."

Work first began on *Alba* in 2018, when Huerta and developer and sound artist Kirsty Keatch were reminiscing about their childhoods in Spain. It was an unusually hot British summer, and the sticky heat made them think back to the rural lives they enjoyed as youngsters. "We'd both been living far from home for years," Huerta says, "and when we →





Ecco-conscious

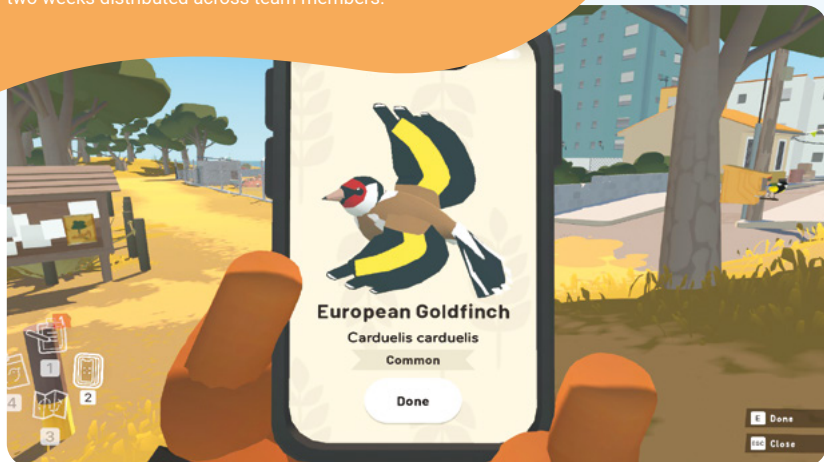
For Huerta, *Alba* was partly informed by the eco-conscious games he played as a youth. "I think there were a lot of games when I was growing up that had similar ecological themes, or dealt with very personal issues. I'm thinking of games such as *Ecco the Dolphin*, or *Lost Eden*, *The Dig*, *Grim Fandango*... There was an era in the nineties when games started to be quite mature in their themes or aesthetics, as the technology allowed for more nuance. I always felt that the jump to 3D graphics in the late 1990s and 2000s created a shift towards more action-oriented games and that it somewhat dumbed down what games were doing in terms of literary depth. But that really only lasted a few years, and even big triple-A studios are incorporating these themes again, seemingly taking a page from the indie game book of the 2010s. I'm definitely hopeful that as the industry grows and becomes fully mainstream, we'll have a growing number of experiences that go beyond entertainment, but we can't forget that games are first and foremost about play."

▲ Creating *Alba*'s charming menagerie of creatures required a "strike team" of artists and designers, according to Huerta.

◀ Environment artist Jessie van Aelst studied real-life locations around Valencia to design *Alba*'s setting. Google Street View came in handy here.

Animated Animals

The detail in *Alba's* assorted birds and other creatures is an undoubted highlight, and that's because a considerable amount of time and effort went into ensuring that each one had its own unique behaviours. The birds are able to "perch on branches, have specific animations for landing and taking off, have a variety of idle animations, different movement patterns, and lots of other details that, when added up, really make a big difference and gave each species a distinct personality," Huerta explains. "It's hard to measure how long it took to make a single animal, as the task was split between 3D art and animation, the art for the wildlife guide, the programming, behaviour design, placing it in the world, doing user testing, plus some additional work for the ones that were trapped or those that appeared in cutscenes, but a lot of them took up to two weeks distributed across team members."



^ Birdwatching with Grandpa is a way of bonding, while secretly realising the activity isn't spody and nerdy and is actually fun. Huh.

"For the first couple of years I'd been writing [everything] myself, and I was hesitant to add another writer"

found that we had these memories in common, these shared experiences of a very particular kind of rural world, it all kind of developed naturally in that direction. Having these memories in common meant that it was very exciting and natural for us to come up with situations, locations, and characters that felt authentic and believable, which is exactly what you're looking for when you create a virtual open world."

Alba grew from that seed of an idea, which gradually developed further as Huerta and his team did their research, which ranged from birdwatching in London nature reserves to studying Spanish architecture on Google Street View. And while the game's partly drawn from personal experiences, it's all fictionalised to the point where it becomes "like a dream", according to Huerta. "Alba's house and her grandparents are modelled after my own, but this is done to give them a sense of authenticity rather than to recreate a personal story," he explains. "Once

these characters appeared in the game they stopped being my grandparents and became characters in their own right, with personalities and traits that would help the [game], but by basing them on real people, they have this look to them that's different from your typical video game grandparents."

The lack of clichés among the game's cast extends to its well-observed script: *Alba's* grandparents often throw modern phrases into their conversations ("It's a pile of pants!") – which helps make them feel more like real people. "They're active and have goals of their own," says Huerta. "One of these goals is to connect with their granddaughter, whom they see once a year. Grandma uses these modern phrases as a way to bond with Alba, which is something that my own grandma would do all the time with me. In the same way, Grandad shares his hobbies of birdwatching and hiking with her. It's a way for them to be close to a person they have limited access to but that they love with all their hearts."

According to Huerta, the script really came together when Georg Backer came aboard, furthering the developers' aim of writing characters with nuance. "For the first couple of years I'd been writing [everything] myself, and I was hesitant to add another writer, fearing that the vision would suffer," Huerta tells us. "I couldn't have been more wrong. We started working with Georg, who has an incredible amount of experience, and he took the world and the characters and gave them that nuance. The characters already had their own personalities and their own voices, but they used to be much more archetypal. When he joined us this was



◀ As little Alba hops and skips across the island, it's striking how, even compared to the animation of some triple-A games, her youthful gait says so much with so little.

something that stood out to him, that felt at odds with the authenticity of the game, so he started working out what different characters thought about the hotel, and made the mayor a much more nuanced character like he was the hero of his own story. Then, our senior designer John Bye wrote the dialogue for most of the background characters, and the game totally changed – suddenly the whole island was full of personality.”

Huerta emphasises *Alba* was a team effort – including its heroine's adorable run animation. “That’s the work of our principal animator Simone Tranchina and our senior programmer Gianluca Vatinno,” he says. “For the original prototype, I had made a very crude and expressive model and set of animations for Alba, with the intention to go to a more traditional character model when we entered pre-production. But we kept trying and trying versions of the character, but none felt as expressive and fun as the old one. When Simone joined and did his first pass on the character, we decided to try the old sphere look, but done in a much more polished way, and everything felt right... Simone had a strong vision for making Alba's character feel alive, fun, and free, and he pitched the idea of blending animations randomly, including the skipping animation, among other additions. He and Gianluca gave it a go and everyone was blown away, it was pretty much perfect the first try.”

By going for depth rather than breadth, *Alba's* comparatively small development team was able to focus on perfecting little details that make a big difference to the setting's atmosphere: animator

Joan Borguñó concentrated specifically on the animals you'll find flitting and scurrying around the island, from birds of prey to squirrels and an elusive family of wild cats. Early in development, the game's creatures were “a bit robotic”, according to Huerta, but thanks to Borguñó's work, and a “strike team” of programmers, designers, and animators, they managed to breathe life into *Alba's* wildlife.

The result is a game that captures a child's-eye view of nature, and helps reinforce the game's hopeful ecological message: that by pulling together, we can all do something to help the environment. So, does Huerta think the game could help awaken the same wonder at the natural world in its players? “I would love it if that was the case,” he says. “When I was younger, I was really into nature documentaries and books, some of which have stayed in my memory and shaped my way of thinking. I think games can be that as well. I always felt that connection with *Sonic the Hedgehog*; those games were always about saving animals from industrialisation and pollution, and it made it sound like the coolest thing ever. If this game had a similar effect on new players, we would be incredibly proud.” 🌿



▲ *Alba: A Wildlife Adventure* creative director David Fernández Huerta.



◀ A well-observed script means that even minor characters are more than mere stereotypes.

Online Diary

GITTIN' GUD

Polishing off some turtles in a few rounds of
Command & Conquer Remastered

WRITTEN BY IAN "INSUFFICIENT FUNDS" DRANSFIELD

The folly of war is second only to the folly of thinking you can win at a (digital) war when played online against other humans. While the cry of 'Shall we play a game?' rings in your head as these virtual skirmishes come to virtual life, virtually, and the power of nostalgia helps you ride through multiple games with a big grin on your face, immune to the fact that you're just *losing* at this re-creation of humanity's worst invention. War, I mean. War is humanity's worst invention. Not playing things over the internet. That's a close second. And when I say 'you' and 'your' there, I'm really talking about me

and my experiences with *Command & Conquer Remastered*, specifically when playing it online.

I didn't go into this with an attitude as I did with *Tony Hawk's Pro Skater 1 + 2*; I didn't think because I'd played it a fair bit as a younger idiot I'd be able to run headlong into multiplayer competition and make a good showing for myself. Fact is, I hardly played *Command & Conquer* (or *Red Alert*) online in its first go around. The first game didn't feature multiplayer on PlayStation, and *Red Alert* could only be played via link-up cable, so we had limited opportunities to break that muddy funster out. I came into this particular experiment blissfully aware of my limitations, and expected sudden, unavoidable war crimes to occur all up in my face.

I wasn't wrong. *C&C Remastered's* online mode has been updated and refreshed for the contemporary world, so it's as easy as clicking a couple of things and getting into one of the few lobbies that always seems to be doing the rounds. More at busier times of day, of course, but generally speaking you're unlikely to be unable to join a game. I jumped right into a game with five other folks, the organiser splitting us into two teams of three, and the match kicking off alongside that vague adrenaline-anxiety that wells up inside of you when you're playing competitively online. The one that makes your chest feel a bit tight and fluttery? Can't stand the feeling someone might try to talk directly to you? *Know* you're going to lose imminently and feel powerless to stop it? No? Just me? Ah.

So the first game lasted a legitimate ten minutes, at the very top end of my guess. I should

▼ When you get triple-team tank rushed, you know you're not going to have a particularly successful time.





▲ **Part I: Building up for a big, Mammoth tank-infused tank rush of my own, confidence was high that I'd be able to break through this bottleneck of Tesla coils and turrets.**

have seen it coming when one of my opponents sent a scouting party out to my base in as much time as it takes somebody to start a game, click some soldiers, and send them to where they clearly know an enemy base is located. The full attack came for teammate one in the bottom left first, then two in the middle, and finally me with the might of all three opponents rushing me.

It wasn't even disappointing; the 'lolrush'

comments in the top corner keeping a jovial atmosphere around a tactic that is, let's be honest, not exactly the hallmark of a good sportsperson. But then this is *Command & Conquer (Red Alert, specifically)*, where the immutable power of the tank rush casts its gaze over every battlefield you enter. That's to say: it's a useful tactic, even if it is cheap as particularly cheap chips.

Suitably baptised by fire, I stepped into a few more games – avoiding one because people in the lobby were rude and immediately ganged up on me for being an interloper. I'm sure that would have proven fun to play as all seven of them immediately form a pact and kill the snot out of me within the first couple of minutes. Hmph. Still, other games did happen with less snooty folk hosting them, and they all ended up much of a muchness: no wins, but the feeling I would be able to put some of my single-player learning into action with a level of success.

That success came... and by that I mean I was the last member of a team eliminated by the

match's eventual winner – and it was all thanks to the miracle of turtling and tank rushing. Turtling, for those unaware, is the incredibly brave and heroic tactic of trying to make your base an impenetrable shell, not venturing very far out of it, and absolutely riddling it with defensive structures and units. The intention is to make it so your opponents can't get a look-in should they choose to attack you, thus making you safe in a classic arms race stand-off-y way.

Tank rushing is getting loads of tanks and rushing the enemy with them. I did this, after about half an hour of turtling and seeing off a few waves of assaults – thanks muchly, Tesla Coils – with a force of some 25 or so Mammoth tanks rolling up alongside other supporting units with long-range or anti-infantry capabilities. A good mix, basically. Smart, thought through, the sort of

thing you see victories come off the back of. Fittingly, it was folly.

All the time I'd been hiding out, watching my own teammate be wiped

out, peeking through the iron curtain at battles on the other side of the map, and fending off cursory attempts to breach my defences, I thought I'd been smart. I was building tanks. But my opponents were building tanks too.

My opponents were building *more* tanks, because they were making cheaper ones.

As the old saying goes: there's always a bigger tank rush. But by gee golly, it might be as dumb as a bag of rocks, but *Command & Conquer* online is a heck of a lot of fun. ☹

▼ **Part II: Said confidence was misplaced, and my base took an absolute battering in the process. But I persevered! Until losing 15 minutes later instead.**

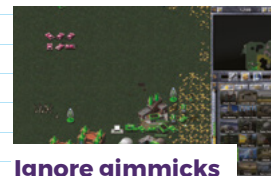


Real-time tips



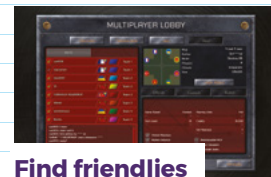
Do it offline

Hey look, it's 'practice' advice! But do, because even though it's 900 million years old, *Command & Conquer* does still have a learning curve. Plus playing against the AI does give you a nice overview of basic strategies. Like tank rushes. Just do tank rushes.



Ignore gimmicks

Spies can be helpful, dogs are even better, and Tanya can take down an entire army... offline. Online, you're looking at three types of unit that will do little other than die, quickly, and cost you money in the process. Ignore the gimmicky units.



Find friendlies

Go into the lobby for a game, pay attention to how people are talking, and immediately leave if they all instantly turn on you for being an outlander, or whatever silly things people say online. Repeat this process until you find somewhere with nice people, *and you'll have a much better time.*



System Profile

Nintendo 64

Why yes, it is a quarter of a century old



▲ No time for fancy doodads – when you looked at an N64 box, you knew what you were getting.

Time, you sly old coot, you've done it again: this coming June marks 25 years since the Nintendo 64 released in Japan. It seems like only yesterday we were still both trying to stop calling the console the Ultra 64, and champing at the bit, willing Nintendo to pull its collective thumb out and get the console out in Europe before too long. Fun fact: it didn't release in Europe until March 1997, so anybody still moaning about the one or two weeks' difference in PS5 launches... *yeah*.

Sega's Saturn was established, the PlayStation had gouged itself a significant share of the market, and the upstart Sony was looking to dominate the generation. But while Nintendo was late to arrive, the hype surrounding the N64's

release didn't let on that anybody was annoyed with the wait. Not *really*. And the N64 did stand out, even with those other two dominant consoles already having done the rounds for almost two years by the point Ninty's new machine came out. Because it used cartridges.

We were onto CD-ROMs now, silly Nintendo! We were all about FMV cutscenes and loading times and putting a game into a CD player to hear its music. We'd *moved on*. But Nintendo, being Nintendo, said no. The Nintendo 64 would stick with tried-and-tested cartridges with their near-instant loading times and their near-inability to be pirated, at least by regular players without specialist equipment. A glance at the PSone shows what happened on the CD side of things, but hey.



^ Not often a single game changes all gaming forever. The N64 - and Super Mario 64 - did that on day one.

But the surprise of the storage medium passed by and, when it released, the N64 blew a fair few minds. Helpfully, it launched with one of the best games ever made, to this day - *Super Mario 64*, a game that reinvented what a platformer could be and set the gold standard for all 3D platformers that followed. It might have teased us by appearing to be another traditional Nintendo games machine, but in practice, the N64 pushed things further than might have been expected, in no small part thanks to the hardware being derived from SGI's Onyx supercomputer.

“Helpfully, the N64 launched with one of the best games ever made”

The Nintendo 64 was capable of outputting perspective-correct textures, meaning no warping like in so very many PlayStation and Saturn titles; it featured mipmapping which helped with the clarity of textures in the distance; and it used a z-buffer - aka a depth buffer - to help with rendering polygons at different depths. No other major console

by this point had any of these features, and it helped the N64 stand out as a 3D-shunting beast. There were also little flourishes like the four controller ports - something seen in the likes of the Bally Astrocade previously, but never before in a major, mainstream console. *And* there was a bundled-in controller made for and with 3D gaming in mind. It had a lot going for it, did the N64.

But there were issues from day one. Those cartridges had benefits, but the drawbacks were

felt on the consumer side a fair whack - mainly thanks to games being pricier than their CD-burned compatriots. Additionally, this bold new world of video footage and CD-quality soundtracks on your disc... well, wasn't on cartridge, because it couldn't be. Nintendo was also forced into a fairly embarrassing climbdown price-wise, as after launching in March 1997 in the UK at £250, Sony swiftly dropped the price of the PlayStation to just £130. Nintendo's →





^ *Ocarina* gets all the plaudits, but #truegamers know it's *Majora's Mask* that's the cooler game, because it's edgy.

hand was forced, the N64 dropped by around £100 not long after launch, and it was playing catch-up from then on.

But *what* a catch-up it played, even if in the grand scheme it didn't take the crown. The Nintendo 64 was home to the aforementioned *Super Mario 64* – a game that *changed gaming*. It was home to

“On the N64 it really was a case of quality over quantity”

The Legend of Zelda: Ocarina of Time, a... well, legend of a game. It was home to *GoldenEye 007*, which fundamentally altered the direction in which first-person shooters – then still referred to as *DOOM* clones – were heading.

And even below the legend-tier, the N64 saw game after game that just nailed it, that brought something special to the table – four-player sessions on *Mario Kart 64*, or plugging in the 4MB RAM expansion to have your expectations

overwhelmed by *Perfect Dark*. Or, just, the swearing on *Conker's Bad Fur Day*. It might not have seen the

thousand-plus games of the PlayStation, or even the 600 or so of the Saturn – ending up with just shy of 400 games in total – but on the N64 it really was a case of quality over quantity. Except for *Mortal Kombat Trilogy*, which was toilet.

Never ones to just leave the hardware alone, Nintendo had secretly been beavering away on something else in the background – a move away from high-price cartridges and into the much more modern physical storage medium of... Zip disks? Alright, they were proprietary magnetic storage discs, but the media for what was eventually revealed as the 64DD did bear a passing resemblance

^ Atrocity of a control scheme aside, Treasure's *Sin and Punishment* showed there was scope for trying something different on the hardware.





iQue

In typical bullish Nintendo fashion, the company attempted to bring the N64 to China, a country where piracy was rife, so purchasing consoles and games wasn't a typical 'thing to do', and games consoles were banned anyway. Classic Nintendo. Anyhow, the result was the iQue Player – known as Shén Yóu Jī in Chinese, which translates as 'Divine Gaming Machine'. Bit of an ego. It was a controller with a built-in N64 SoC, which could download games like *Ocarina of Time* and *Super Mario 64* from dedicated kiosks, then hook up to the telly to play them. It was a curious experiment on the part of Ninty, but by all accounts was not a huge success in the region. Even so, the iQue was up and running from 2003 through to it being wound down in 2016, so it wasn't a bad run.

to the short-lived 'better than floppies, not quite CDs' storage medium. What is there to say about the hardware add-on? Not much, honestly. It only came out in Japan and saw just nine games released, including *Doshin the Giant* (re-released on GameCube) and the excellent *SimCity 64* (look it up on emulators). Safe to say, the 64DD was a dud and was discontinued in February of 2001, just over a year after its original December 1999 launch.

It wasn't much longer after that that the N64 itself bit the bullet, with Nintendo moving on to the GameCube and ditching its previous machine in 2002. Understandable, given the competition from Sony's PS2 and Microsoft's Xbox. The N64 did see a few genuine greats in those last couple of years, like the incredible *Perfect Dark* and the (originally) vastly overlooked *Conker's Bad Fur Day*, but overall it did feel more like a quiet retirement for the machine rather than it going out swinging. A solid run of six years and at least three – maybe even four or five – all-time, game-changing greats isn't exactly a bad one, though.

These days, the N64 has seen a reputation built around it as one of the most important machines in the evolution of gaming, but the sales figures never did quite back it up. While massive in the Americas, selling 20.63 million consoles in its lifetime, in Japan it shifted just 5.54 million, and the rest of the world (mainly Europe) it sold 6.75 million. For comparison, the PlayStation

shifted over 100 million worldwide, while Sega's Saturn even managed to outsell the N64 in Japan.

As such, the N64 straddles a strange line: not big enough to be a *true* legend, but too good to be ignored in discussions about the GOATs. Modern views of the machine do skew North American, and as such tend to overstate its impact. The US-centric commentary on the console can obfuscate the limited performance of Nintendo's console on the world stage, resulting in a skewed overall vision of the N64's position in the pantheon of gaming history. Still, *Perfect Dark* was bloody ace, wasn't it?

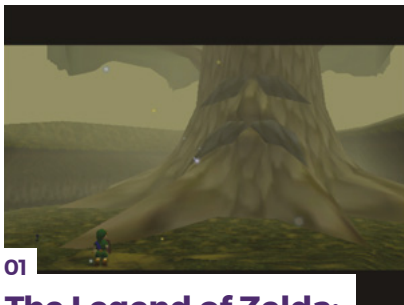
We await the Nintendo 64 Mini with barely contained glee. Even though it hasn't been announced at the time of writing. 🐾

▼ The N64 saw its share of controversy, not least of which in the harrowing "what the hell is *Lylat Wars*" conflict of 1997.



Ten N64 games to play today

Five obvious picks, and five alternatives



01

The Legend of Zelda: Ocarina of Time

1998

Who'da thunk it? One of the finest RPGs ever made gets put on a recommended list. What are the odds, however did this happen etc. etc. Still, the fact always remains that *Ocarina of Time* was a trail-blazer, and still stands tall – even at 20-plus years old – as an example of what *good design* can achieve.



02

Mystical Ninja Starring Goemon

1997

Alternatively, why not try *Goemon*? It's a bit more Japanese-y, sure, and if you're not up for a bit of daftness with giant robots and musical numbers, you might want to steer clear (and lighten up, let's be honest), but *Mystical Ninja* is a fun RPG *and* a unique offering in the world of both N64 and gaming as a whole.

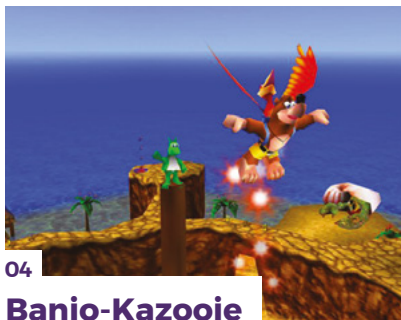


03

Super Mario 64

1996

Who'da thunk it? part II. One of the finest platformers ever made gets put on a recommended list. What are the odds, however did this happen etc. etc. *Super Mario 64* was the first 3D platformer to get it all right, and it did so with abandon. It's frankly ridiculous that nothing has bettered it to this day.

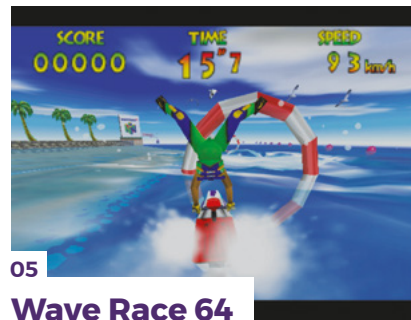


04

Banjo-Kazooie

1998

Or go the Rare route and opt for something with a bit more narrative depth to proceedings, as you join the warm embrace that is a bear and bird working together to foil a naughty witch in the best alternative to *Mario's* 3D platformer hegemony. It's arguably formulaic at times, but it's still an absolute hoot. Best of all, it's easy to play on Xbox, thanks to Game Pass.



05

Wave Race 64

1996

Where PlayStation had *Ridge Racer*, the N64 had *Ridge Racer* – eventually – but mainly it had *Wave Race 64*. It's racing, but on water. Mind: blown. We were lured in back in 1996 by that water animation, with rolling waves looking like they were about to smash out of the telly and flood your living room. And now? Well, now it's just a darn fine racing game.





06
Beetle Adventure Racing

1999

On the other hand, you could try a licensed racing game published by EA that, actually, is surprisingly good. One of those ‘you won’t believe it ‘til you play it’ situations, really, and it wouldn’t surprise us much if a lot of you have never actually played this one. But it’s inventive, creative, and a lot of fun – and still worth a pop.



07
GoldenEye 007

1997

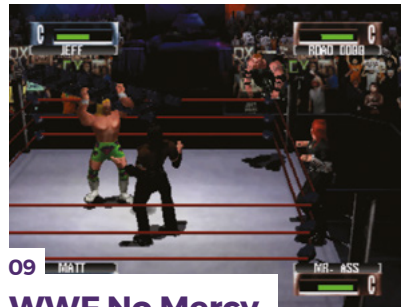
Another ‘who’d a thunk it?’ *GoldenEye 007* changed console shooters forever, quite frankly, both for its *crafted* single-player mode and its slapped-on-but-amazing multiplayer. Impossible to say it hasn’t aged, because crikey it has, but the impact is eternal with Brosnan’s finest Nintendo outing.



08
Perfect Dark

2000

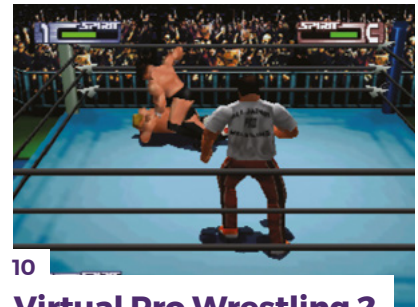
Meanwhile, a few years later, Rare quietly bettered *GoldenEye* with its licence-free tale of a spy, the future, and an alien buddy with the follow-up FPS, *Perfect Dark*. Time has been kind to *Perfect Dark*, allowing it to blossom as the N64’s best shooter, but it wouldn’t have been possible at all without *007* leading the way.



09
WWF No Mercy

2000

Fighting games on the N64 weren’t a particular highlight, except for in the world of pro wrestling where we got things like this. AKI’s best take on the WWF offered technical grappling the likes of which you don’t see repeated these days, and an incredible amount of depth – along with a wonderful create-a-wrestler mode that added hours of fun. It is, indeed, still real to us.



10
Virtual Pro Wrestling 2

2000

Across the planet, you could have opted for *VPW2* instead, though, which was practically the same game as *No Mercy* but a) with a slightly older version of the same engine, and b) with a broader set of options to tinker with, including shootfighting (think MMA). It’s the connoisseurs’ choice for combat titles on the N64, and with good reason.

The priciest Mario game of all time



STEVE MCNEIL

"Let's-a-go?" More like "Le-go", amirite? (I am rite.)

"I'll just try it once. No big deal. I can stop any time I want"



Lockdown can do funny things to a tipsy web surfer. I'm sure many of you could glance up right now and see something you impulsively treated yourself to after a rough '2020 moment'. Mine's pretty extreme though: I just bought the world's most expensive Mario game.

Not the sealed copy of the original NES *Super Mario Bros.* that sold recently for a mere £90,000. I wish I had that level of restraint. No. To get me and my kid through lockdown, I have now bought every Lego Mario set*. To be clear, when I say every set, I mean EVERY. SET.

I began innocently enough back when it launched, grabbing just the starter pack and a character pack my kid picked out. "This is OK," I thought. "I'll just try it once. No big deal. I can stop any time I want." We played with it; it was fun. It went back in its box. Everything was *fine*.

It genuinely is great, by the way. Lego Mario makes bespoke sounds as he navigates and recognises the various bricks and baddies, and the related app times you and logs how many coins you collected. You can create endless levels, and re-run existing ones to beat your previous bests. If you've got a young kid, they will *love* it.

Anyway, in the run-up to Christmas, that big Lego NES/TV thing popped up on the Official Nintendo Store with a 15% discount. "It's been a tough year," I thought to myself. "That'll make a nice project. I'll treat myself." Christmas came, and several expansion sets went on sale on Amazon. We were going to be getting the little Lego Mario

out again to pair him with the NES/TV set, so why not grab a couple of cheap expansions to let him stretch his legs?

And then I had what I call 'Bath Whisky'. For the uninitiated, this is where you drink whisky, in a bath. Somehow I accidentally purchased every single remaining set on Amazon. Whoops.

But I wasn't done yet. One tumble down a wiki** hole later and I discovered there were several sets unavailable to purchase if you were just some casual Lego Mario-er. A set that had only been available during pre-orders, with an exclusive "Stone-Eye"! North America-only Thwomp and Toad expansions! And, the pièce de résistance, "King Boo and the Haunted Yard", found only abroad. And on eBay, of course. On there, you could even find people who'd created complete sets of the character packs, for just a modest(ish) contribution in recognition of their time and effort wading through duplicates.

It'd be foolish not to buy these rarities too, right? I mean, it's an investment. If you bought a PlayStation 5 and an Xbox Series X at launch, you'd be £900 out of pocket, and they'd be worthless in 10-15 years. For just another £150, you could have a single game that covers your entire dining table forever, to the delight of your partner.

Oh God, what have I done? 🤖

* I'm probably legally obliged to point out that this isn't more expensive than the NES cart, but it's certainly more than I needed to spend on plastic bricks.

** You mean whisky? - Ed.



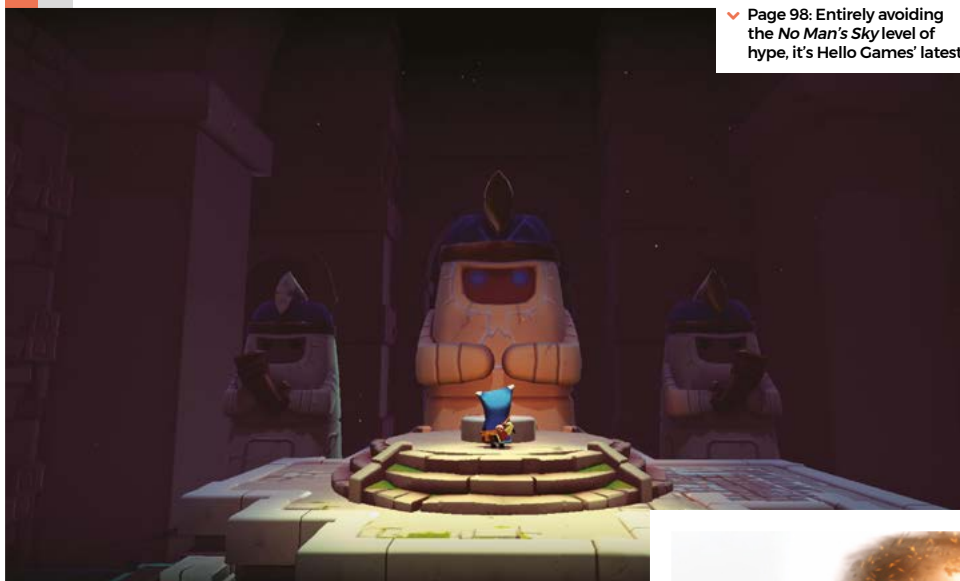
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Reviews, retro games, and lots more besides

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- 94. GG Aleste 3** PS4, Switch, Game Gear
- 95. A Monster's Expedition** PC, iOS, Mac
- 96. Terror Squid** PC, PS4, XBO, Switch, Mac
- 97. Ghostrunner** PC, PS4, XBO, Android
- 98. The Last Campfire** PC, PS4, XBO, Switch, Mac, iOS
- 100. Good Mourning** PC
- 101. El Hijo** PC, Stadia
- 102. Haven** PC, PS5, XB S/X, PS4, XBO, Switch

OUR SCORES

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



▼ Page 98: Entirely avoiding the *No Man's Sky* level of hype, it's Hello Games' latest.

PLUS

- 104. Backwards compatible**
There's a lot of hardware tinkering going on in this month's retro pages
- 108. Now playing**
Box surfing and other such treats in the games that had our eye recently



> Page 108: This month we've been playing some Very Normal And Sensible Games.



Info

GENRE
Platformer/Auto-runner

FORMAT
PC (tested) / PS4 / XBO / Switch / PS5 / XB X/S / Android / iOS / Linux

DEVELOPER
Team Meat

PRICE
£15.99

RELEASE
Out now

REVIEWED BY
Alexander Chatziioannou

Review

Super Meat Boy Forever

Procedurally degenerated

Super Meat Boy Forever welcomes you back with a slap in the face. A decade after its predecessor redefined hardcore platforming, testing the nerves and wrecking the controllers of a million players in the process, Tommy Refenes, sole remaining member of the original creative team, has come up with a sequel that significantly alters the formula but shows no intention of pulling its punches. Even the introductory levels will have you screaming at the screen, its teaching methods for newcomers entailing little more than throwing you in at the deep end and unlatching the shark cage.

Despite its enormous success and influence, the reputation of *Super Meat Boy* has remained pristine, untouched by the stream of unnecessary, successive iterations that have clouded the lustre of the other early-2010s indie milestone co-created by Ed McMillen, *The Binding of Isaac*. Whether in an effort to preserve

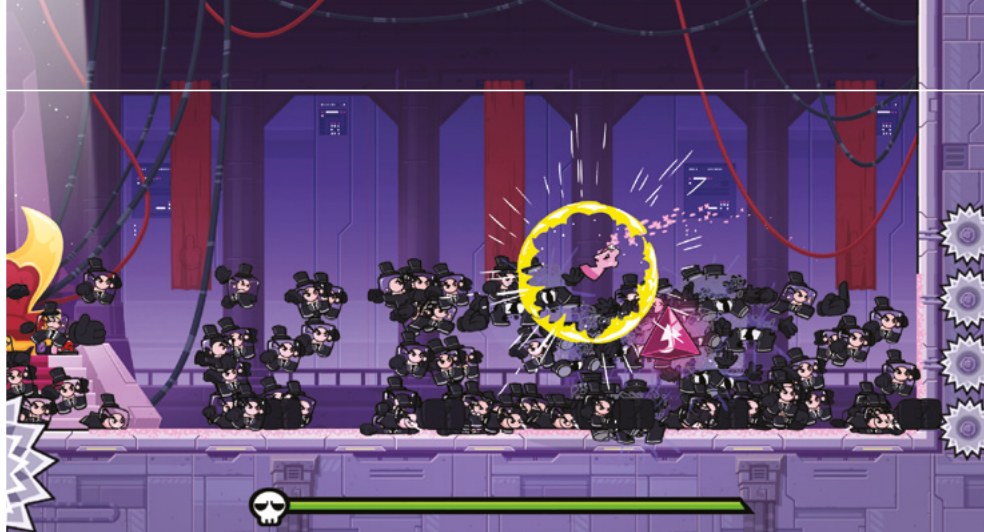
that aura or due to the specific demands of the mobile market (at which it was initially aimed), Refenes has retained the cartoonish gruesomeness but designed a radically different game, migrating to a neighbouring genre and looking to other classics, rather than its own predecessor, for inspiration.

The most drastic departure is that you no longer exert any control over your movement speed and direction. The two protagonists, Meat Boy and Bandage Girl (eventually joined by several unlockable guest stars), rush ever-forward to save their cubical toddler from the clutches of evil Dr. Fetus. In other words, *Super Meat Boy Forever* is an auto-runner, hurtling you toward the same thicket of bladed, whirring contraptions over and over again, with nary a moment to figure out how to avoid staining the scene with your entrails for the hundredth time.

It could be argued that the change foregrounds the original's core qualities. *Super Meat Boy* was always about meeting the challenge head-on, with perfect timing on your jumps and a deft grasp of its physics allowing you to complete each hazard-filled level in the shortest time. What *Forever* does,

✓ Destructible environments, like these boulders and crates, mean that timing your jumps perfectly remains vital.





◀ One of the game's most memorable boss fights pits you against a horde of Dr. Fetus clones.

by transforming a hard-as-nails platformer into a conveyor belt of death, is disabuse you of the notion you ever needed to hit the brakes. But as exhilarating as it can be when things click, this purity comes with constraints. There's less room for exploration and a severely reduced capacity for experimentation. Each course poses a question with a single answer, one you're led to through a process of trial and error, until it's muscle memory, not a series of conscious decisions, ensuring every button press lands at the correct microsecond.

That is, assuming you understand what's required of you in the first place. The game's perpetual motion becomes frustrating when the path forward is unclear, whether due to an unlucky dice roll from its level generator or because some new mechanic was inadequately explained. In these (infrequent) moments of disorientation, instant restarts, and deaths blurring into one another, *Forever* becomes something the original never was: boring.

A necessary dose of variety is injected in this rigid template via a range of newly introduced mechanics. There are shades of *WVVV*'s gravity fields and *Portal*'s dimension shifts, self-destructing blocks, expanding platforms and, most prominently, the ability to punch enemies in mid-air, thus extending the length of your jumps. Not all of those work equally well, and some of the

more elaborate ideas (like the directional warps propelling you to the other side of the level) result in some of the immediacy getting lost. But the possibilities inherent in them are fascinating, even if they're not fully explored because of *Forever*'s other major break with traditional platforming tropes: its reliance on procedural generation.

Taking a page out of *Spelunky*'s book, Refenes has decided to outline the rules and delegate level-design duties to the machine. I'm assuming that's where the 'Forever' in the title originates from: the desire to create an endless playground

“Each course poses a question with a single answer”



▲ You only have a couple of seconds before those rigged blocks explode so better not tarry.

for die-hard fans – an admirable ambition, no doubt, but one that clashes with fundamental auto-runner principles. Derek Yu's masterpiece is about exploration first and competitive high-scoring second. With those priorities inverted but no way to compare your times against other players' (not even via daily seeded runs – a baffling omission, given that glaring weakness), who exactly is *Forever*'s Sisyphean gauntlet for?

Moreover, with randomness already imposing upper limits on complexity lest levels start unravelling at the seams, the full potential of some of the game's best ideas remains untapped. It's not a coincidence that the most enjoyable sequences of

Super Meat Boy Forever, both as spatial puzzles and as reflex tests, are the handcrafted boss fights. Even when they're frustrating, even when they're confusing, they demonstrate something of the ingenuity that made the original game special. And, while the achievement of delivering an innovative, mostly fun variation of a beloved formula that manages to remain cohesive on the shaky foundations of procedural generation cannot be underestimated, 'most impressive' is not necessarily a synonym for 'best'. Still, there is enough here for a few engaging hours, if not exactly forever. 🐷

HIGHLIGHT

The punching mechanic is perfectly implemented, with a satisfying heft and the liberating ability to extend your jumps by chaining strikes in mid-air. A shame that the randomly generated levels don't allow it to be as creatively used as in the boss fights, where it really shines.

VERDICT

A fascinating experiment in procedural generation, but *Super Meat Boy Forever*'s best parts remain the handcrafted ones.

62%

Rated
Review

HIGHLIGHT

GG Aleste 3 captures something that eludes a lot of abstract-looking bullet hell shooters: a cinematic sense of occasion. The first stage alone, where you blow up gigantic star destroyers by hitting their vulnerable cores, makes you feel like you're in the midst of an 8-bit space opera.

Review

GG Aleste 3

It's a mega blast

Info

GENRE

Shoot-'em-up

FORMAT

Switch (tested) / PS4
/ Game Gear Micro

DEVELOPER

M2

PUBLISHER

M2

PRICE

£35 (approx)

RELEASE

Out now

REVIEWED BY

Ryan Lambie

VERDICT

A satisfying throwback to a bygone era of Compile shooters.

81%

First, the bad news: at present, *GG Aleste 3* is only available as part of the *Aleste Collection*, a Japan-only release which also gathers together a bunch of other eighties and nineties Compile shooters in one bundle. The better news: it's such a great game – at least if you're into traditional shoot-'em-ups – that it justifies the price of the collection by itself.

The first *Aleste* game in about 28 years, *GG Aleste 3* is a sequel to the pair of handheld entries that appeared on the Sega Game Gear in 1991 and 1993, and developers M2 and director Manabu Namiki (composer on such shooter classics as *Battle Garegga*) have programmed the game so that it could conceivably run on that ageing bit of Z80 hardware. What does this mean from the player's perspective? Chunky pixels, warbling chiptune music, and a somewhat limited number of bullets and enemies on screen. This isn't to say *GG Aleste 3* feels outdated, however: it's still a fast-paced and immensely absorbing horizontal blaster with some classy music and superb design flourishes, from big, imaginative end-of-level boss designs to the tiny birds that flutter across the trees at the start of stage two.

GG Aleste 3 (or *Galvanic Gunner Aleste 3*) also stands in stark contrast to the kinds of modern shooters that have appeared in more recent years: the great curtains of swirling ordnance that define the bullet hell subgenre are nowhere to be seen, and neither are there additional baubles like elaborate score mechanics. Instead, the sequel quite rightly harks back to the style and pace of earlier spaceship shooters; here,

the emphasis is on memorising enemy patterns and controlling the centre of the screen. In this respect, *GG Aleste 3* remains true to its series lineage: like earlier games, your craft has primary and secondary weapons. The first can be upgraded by collecting the tiny pellets that shower forth as you gun down certain enemies, while the latter can be switched and upgraded by grabbing lettered power-up icons.

There are six secondary weapons; these range from homing missiles to more defensive spinning shields to bolts of energy that fire straight ahead, and each has its own glorious name ('Rising Laser' is my personal favourite).

GG Aleste 3 is by no means the hardest in the series, but there's a pleasing balance here that feels nicely pitched for modern audiences: getting hit will downgrade your weapons, but it won't rob you entirely of your defences like, say, the original *Aleste* – also known as *Power Strike* – which was an unremittingly harsh game. *GG Aleste 3* doesn't exactly tear up the shooter rule book – as always, it's blast the bad guys, avoid the bullets, save the galaxy – but it does provide an experience that's so true to its retro roots that it all still feels somehow fresh. 🎮

HIGHLIGHT

Tap on the monster and he'll have a little sit-down. It's such a simple thing, but it's emblematic of the good feeling that resonates throughout every second of *A Monster's Expedition*. And every time you start the game, he'll be having a little nap. Make sure you look out for the coffee stand as well.

Review

A Monster's Expedition (Through Puzzling Exhibitions)

A museum piece that's full of wit, whimsy, and wonder

A *Monster's Expedition* is a game that resonates with good cheer. It's a happy grin in digital form, packed full with little moments that are going to warm the cockles of your heart. And on top of all of that, it's also a supremely engaging puzzler with plenty of tricky challenges.

The game sees you working your way through a strange museum. You're playing as a podgy monster with spindly arms and legs. The exhibits are all remnants of human civilisation, replete with funny descriptions that are going to raise at least a chuckle.

The museum is made up of little islands, and you need to figure out how to move between them. Sometimes that's as simple as pushing a tree over and bridging a gap next to it. The trees all roll and move in the same way, and you need to figure out how to move them to where they need to be.

After a while, you'll be building rafts by combining logs, then pushing off from rocks to explore even further. There are taller trees as well, which can bridge longer gaps. The map is huge, and it's open for you to explore however you want. Postboxes scattered around let you jump across bigger distances when you've unlocked them too.


While the islands themselves might be small, you never feel hemmed in, and there's a real

sense that you actually are on an expedition. The sort of expedition you might make on a Saturday afternoon with a backpack full of jam sandwiches and ginger beer.

But the simplicity of the mechanics means you can drop in and out whenever you feel like it. It's lovely to be able to pick up where you left off, like climbing back into bed on a frosty morning and snuggling down under the covers.

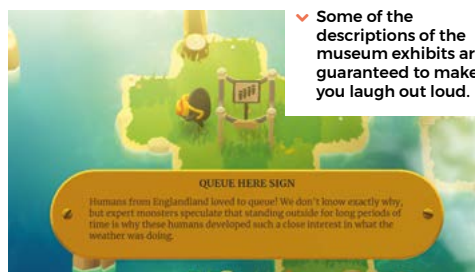
There's a decent level of challenge here as well, but it's never enough to leave you frustrated or furious. Slow but steady progress is the order of the day, and you can always

wander off somewhere else if you can't get past a tricky section.

A Monster's Expedition is a heart-warming and friendly adventure. It might not be the deepest game in the world, it might not shake up the foundations of the puzzling genre, but it is going to make you feel warm and fuzzy in ways most games can only dream of. This is a slice of escapism designed to whisk you away from grey reality and brighten up your day. You should definitely let it. 

“Like climbing into bed on a frosty morning”

Some of the descriptions of the museum exhibits are guaranteed to make you laugh out loud.



Info

GENRE
Adventure / puzzle

FORMAT
iOS (tested) /
Windows / Mac

DEVELOPER
Draknek & Friends

PUBLISHER
Draknek

PRICE
Free (Apple Arcade sub)

RELEASE
Out now

REVIEWED BY
Harry Slater

VERDICT

A game filled to the brim with goodness and light that's sure to put a big ol' smile on your face.

82%

Rated
Review

HIGHLIGHT

A game this spartan and oppressive has few pleasures, apart from simply surviving a few more seconds than the last. There's nonetheless some source of amusement in hearing the different words of encouragement (or admonishment) coming from the dark computer voice after every detonation result, like 'Radical', 'Jolly Good', or 'Holy S***'.

Review

^ If this is Ritual 4, you'd hate to see what it looks like at Ritual 32.

Terror Squid

A survival shooter where you are your own worst enemy

Info

GENRE

Bullet hell

FORMAT

PC (tested) / Mac / Switch

DEVELOPER

Apt Games

PUBLISHER

Apt Games

PRICE

£7.19 (Steam) / £8.99 (eShop)

RELEASE

Out now

REVIEWED BY

Alan Wen

VERDICT

Old school, no frills, hard as hell, and it doesn't care. Take it or leave it.

60%

Terror Squid is the hardest game I've ever played. Just how hard, exactly? My record time has been just 9.51 seconds. At the time of filing this review, just to get into the game's

Top 100 requires surviving for at least 20 seconds, though perhaps that says more about the number of players who have dared to pick the game up.

Taking place on a 3D sphere, with vector-style graphics that would make it sit comfortably alongside other old-school arcade shooters, it's not exactly a shooter, even though it's firing bullets non-stop. As your titular squid moves, it leaves behind a trail of projectiles, and since you're on a relatively small sphere, that means it's all going to come back to a bullet hell of your own making.

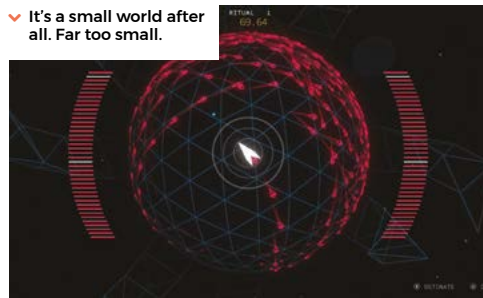
Erratic movements are to your detriment, so you need to think about how you move so that you stand a chance of dodging the upcoming danger. Your only help comes from a cooldown-based warp dash and the ability to blow up projectiles in

close proximity with a detonator that takes time to charge. Using the detonator also moves you to the next phase – or ritual, as the game calls it – with a new pattern of projectiles you then have to deal with. Frankly, the first ritual is child's play compared to what you have afterwards as these become harder to detonate, meaning you'll end up having to avoid multiple projectile patterns on a map with less space to hide. And that's usually where my run ends.

In fact, as a game where the leaderboard only takes time into account, you might find it better to just try and last as long as you can on the first ritual, literally running rings around the sphere until you've filled up every last inch before hitting the detonation, instead of rushing head first into one ritual after another. But either way, most of us mere mortals are unlikely to survive further than the third or fourth ritual before your squid meets its maker, let alone see the 16 possible rituals that exist before it loops back ad infinitum. I'll have to concede that I was only able to see beyond the first few rituals by referring to a YouTube video uploaded by a player called Timoshi, who at the time of writing topped the leaderboard with 687.12 seconds survived.

True to its hardcore nature, there are no concessions, no cheats, no power-ups, only your pure skill to survive. To say that this won't be for everyone is an understatement, then. Judging by *Terror Squid's* disturbing teaser marketing, it might just be content with becoming a cult urban legend, lingering in a dark, dusty arcade visited by those few in the know. 🐙

✔ It's a small world after all. Far too small.





Review

Ghostrunner

▲ Filthy, glowy, beautiful cyberpunk.

High-tech, low society, stratospheric frustration

Difficulty is a tricky thing to get right in any game. You need to carefully balance the player's comfort in their own utility with the uncertainty of the challenge they face; an imbalance can either result in a game being too easy, or hair-pulling frustrating. A great example of this in action is *Ghostrunner*, a game with fantastic ideas let down by wildly uneven difficulty in each of its components.

Set after the apocalypse, *Ghostrunner* is a cyberpunk platformer that combines the parkour and mobility of *Mirror's Edge* with the one-hit-kill difficulty of *Hotline Miami*. One moment you'll be flowing through the gritty, high-tech dystopia of the massive Dharma Tower, humanity's last refuge, in a series of wall runs, leaps, grapples, and slides, and the next you'll be taking down the ruling tyrant's henchmen in bullet-hell-esque combat segments. The story is as generic and predictable as anything, but the aesthetics are on point. Gritty, high-tech, and synth, it's pure cyberpunk schlock that I can't help but love.

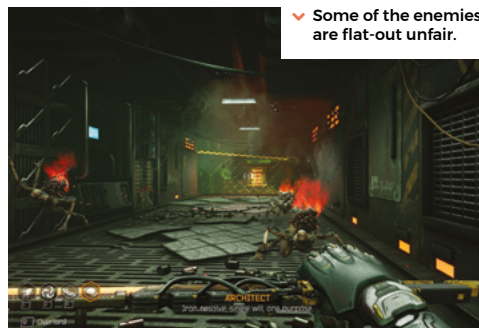
Ghostrunner's platforming could've been an entire game on its own, and it would've been incredible. Fluid and physical, running and climbing through Dharma Tower is electrifying, and I struggle to think of any game with parkour feeling this great since *Mirror's Edge*. It's nice to see platforming put front and centre so frequently, with plenty of tough segments requiring your full attention instead of just being a way to get between combat encounters.

With platforming this good, it's a shame the combat really drags. Everything in the game dies

in one hit, and to avoid enemy fire, you can slow down time and dash in any direction to get an advantage. The problem is the enemies simply don't feel designed with your skillset in mind. Your hitbox feels way bigger than you, meaning bullets that should've missed you end up taking you out. There are enemies that can home in on you, enemies with swords that require parrying with hugely inconsistent results, and dreadful exploding enemies with huge areas of effect that are all too often crammed into narrow passages.

As I mentioned, the difference between good and unfair difficulty can be summed up as the ratio of player utility to systemic uncertainty, and *Ghostrunner* certainly has that a bit off. When you don't know whether an attack will register, or whether a shot will sail past you or kill you, or whether you're out of range of an exploding fool, that uncertainty is ramped up way too high to be enjoyable.

Ghostrunner is a superb platformer with a mediocre first-person slasher grafted on like a buggy cybernetic implant. When it lets you run and be free, *Ghostrunner* is possibly the most fun I've had with a game in absolutely ages, but its commitment to a faulty idea of difficulty really pulls it down. 🗿



HIGHLIGHT

The parkour is incredible. Running through a cyberpunk megacity with a grapple and gravity-defying wall runs could've kept the game going for its entire campaign if One More Level wanted it to.



Info

GENRE
Action / platformer

FORMAT
PC (tested) / Switch / PlayStation 4 / Xbox One

DEVELOPER
One More Level

PUBLISHER
All In Games, 505 Games

PRICE
£24.99

RELEASE
Out now

REVIEWED BY
Joe Parlock

VERDICT

Overly frustrating, but with some of the best platforming in recent memory.

65%



Ember was terrified, but tried not to show it.

Review

Info

GENRE

Adventure

FORMAT

iOS (tested) / Switch
/ PS4 / XBO

DEVELOPER

Hello Games

PUBLISHER

Hello Games

PRICE

Free (Apple Arcade)
/ £11.99 (PS4/XBO) /
£13.49 (Switch)

RELEASE

Out now

▲ During conversations, you often get a glimpse into what's happening inside of Ember's head.

▼ Discovering a secret chest always puts a smile on your face, as well as giving you a glimpse into the story of a wanderer who came before you.

The Last Campfire

A merry blaze from the developers of No Man's Sky

The *Last Campfire* is the sort of game you get lost in. Not a confused, stumbling, frustrated lost, but the sort of lost you experience staring at a beautiful landscape. The sort of lost that fills your heart with wonder and hope and sticks with you long after you've felt it. The best kind of lost.

The game is a 3D adventure that sees you trying to find your way out of a series of ethereal landscapes. You play a character called Ember, separated from the rest of your expedition, stuck on your own in a world full of oddities and dangers. It's also filled with lost souls, known as Forlorns, stuck in place by their sadness, confusion, and hopelessness.

Along the way, you'll help these trapped creatures, solving puzzles to aid them in their escape. Once you've saved all of the Forlorns in an area, you can move on to the next. The rescued creatures settle down around a campfire, the colourful hues of life returning to their once-gloomily-dark-blue forms.

There are other characters too, from an ancient fisherman to enormous slobbering pigs, mad bird kings, and huge, hungry frogs. Each of them has a story to tell, and each of them is looking for your help in one way or another. You'll need to talk to them to move things along, but those conversations are an absolute joy.

The puzzles here are reasonably simple. You'll move blocks around, sometimes using a magical horn, push switches, and try and snatch keys from wary crows. There's a logic to everything you do, far removed from the slightly crazed object combining of classic adventure games.

That's not to say they're overly simple, and the little Eureka moments peppered through the experience are more than enough to make you feel smart. The world you're exploring is big enough that you never feel trapped, but small enough that you never feel overwhelmed. As with most adventure games, there's some backtracking, but it's never more than a few screens.

Some of the ideas here really are brilliant. One particular gem involves a map that you





▲ Parts of the world need to be manipulated manually so that you can keep going, requiring you to swipe the screen to get them moving.

need to find the parts of. As you shuffle it around, it changes the world around you, allowing you to reach new places and uncover new secrets. You're never playing a puzzle for more than a handful of minutes, then it's off to another new challenge that's going to stretch slightly different parts of your brain.

There's a gorgeous sparkle to the game as well. Every screenshot is like a little work of art, with little details bringing the scenes to life before your very eyes. There are clever environmental cues that make sure you remember the important information, and often after a tricky section you'll find a shortcut back to where you started.

Ember manages to be charming and endearing even though you can't see their face. Their movements are brilliant, little legs wiggling when they reach into chests, head bobbing when they walk. The controls are solid, too. You can choose between a floating joystick or touch controls, and both of them are more than up to the task.

Even just wandering around the world of *The Last Campfire* is a simple, effective joy. There's a deep sense of wonder to the experience, from the little beams of light breaking through the canopy of trees, to the snippets of story you discover in hidden chests.

You'll want to push on to find out what happens next, to uncover the next chapter of the story and find the next intriguing idea the game throws into the mix. And sometimes you'll just stop and stare at the world around you, drinking it all in, bathing in the warmth and the colours and the joyous glow.

The Last Campfire manages to strike an almost perfect balance between exploration and guidance, between knowing what you're

supposed to do and being told. Even the hints, which you can ask from the ghostly guardian of the camp-fire, are delivered in a way that asks you to figure them out for yourself.

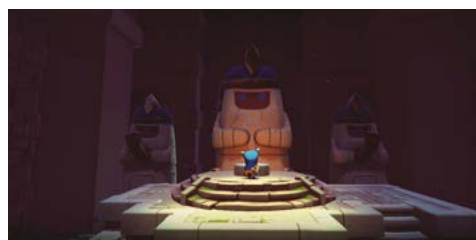
There's a grand scope here without the airiness or meandering, and a fluency that's second to none. It blends together concepts from a whole bunch of other genres into a seamless, elegant whole, always enticing you to play for just a little bit longer.

Yes, there are a few moments when things are a little too esoteric. Moments when the way is a little bit too obscured, or you need to try and

remember too much to move forwards. But they're few and far between, and often the solution is well within your reach if you take a slightly different tack.

The Last Campfire isn't perfect, but it's still a remarkable achievement. Its story of hope and loss is beautifully life-affirming, its puzzles are smart without ever being smug, and its charm is utterly undeniable. All in all, it's a wonderful way to while away a chilly winter's afternoon. 🐷

“Sometimes you'll just stop and stare at the world around you”



HIGHLIGHT

One puzzle involves getting past a carnivorous plant. A sleeping pig and a sweet piece of fruit are your only tools, but the game gives you all the clues you need in little snippets of text to figure out what to do. It's a lovely little microcosm of everything that makes *The Last Campfire* so entertaining.

REVIEWED BY
Harry Slater

VERDICT

A heart-warming and endearing puzzling adventure that will stay with you long after you've finished.

86%

I'M SORRY DAD.



HIGHLIGHT

Each new scene you watch fills up your urn with memories. It's only after a few playthroughs that it'll be full enough to see the true ending to the game, which leads you to repeat runs. It's a shame there's too much repetition in that process and the individual scenes do vary in quality, but there are still some memorable moments – like one particular game show scene – that play on twisted ideas.

- > A key theme is the tense relationship between father and son, but it never quite flourishes.
- > In typical platformer style, you're almost always moving from left to right, with story scenes interspersed.

Review



Good Mourning

Happy death day

Good Mourning prides itself on being the world's first run-based walking simulator. Confusing as that might sound, it's a narrative game where each playthrough presents different randomised elements of its story. It's an interesting experiment, but the lack of a carefully crafted experience hampers enjoyment.

What immediately intrigues is the art style. Presented in 2D, the visuals are all stark black and white with splashes of colour, well-suited to this modern noir tale. Coupled with hypnotic soundscapes, the game has an abstract aesthetic that gives a haunting, nightmarish vibe. For a game all about death, that coldness is perfectly chilling.

As with any walking sim, you're tasked with wandering through scenes, making a few dialogue choices, and seeing how the story plays out. Here we follow a nameless guy who's just died. Beginning with his funeral, he must relive his past through fragments of memories, slowly piecing together what kind of man he is. What's fascinating is that the narrative decisions we make are not his but the people around him: his death is inevitable, and our journey through the narrative reflects how the choices of others can impact our own lives.

Yet the concept of choice is, mechanically, the game's biggest flaw. On the first run, it's hard to tell exactly how the narrative branches or what impact any decisions have. Future runs prove that branching is limited. A few story scenes

differ or lines of dialogue are tweaked, but for the most part, each run has the same characters in the same order. What's more, which scenes are shown is randomised – not only does this result in some repetition, but there's no ownership over the narrative or the choices you make. Instead, it feels, rather cynically, like a ploy to extend longevity without enough content provided.

The game certainly touches on some dark themes, from marriage break-ups and poor parenting, to infidelity and depression. There are some aggressive and disturbing moments, but the often heavy-handed writing isn't quite strong enough to really interrogate these traumatic ideas. There are some comedic moments too, but like the visuals, they're merely splashes of colour on a very dark background.

As the world's first run-based walking simulator, *Good Mourning* makes an interesting case for the sub-genre. Repeating a story to uncover different perspectives is a sound idea, and the game's surreal aesthetic sets a stark tone. But by randomising its story, the player is left out in the cold. ☹️

> *Good Mourning* is all about self-reflection and understanding the impact of the relationships around us.



Info

- GENRE**
Walking sim
- FORMAT**
PC (tested)
- DEVELOPER**
Platonic
Partnership
- PUBLISHER**
Platonic
Partnership
- PRICE**
£3.99
- RELEASE**
Out now
(Early Access)

REVIEWED BY
Ed Nightingale

VERDICT

Good Mourning is an intriguing experiment, but its narrative structure doesn't hold up to scrutiny.

56%



Review

El Hijo

A delightful western with disappointingly wonky stealth

El Hijo doesn't lift stealth games out of the rut they seem to be stuck in recently. While you may get a *Hitman* or a *Dishonored* every couple of years, between those high points lies an endless sea of rudimentary sneaking, wonky AI, and so, so much conveniently placed tall grass. I'm a massive stealth fan, yet regularly find myself despairing at unsatisfying games that seem to use stealth as filler, rather than the core design tenet. *El Hijo*, unfortunately, is another drop in that vast ocean of mediocrity, and its few charming points aren't enough to rise it from the muck.

Following a boy who has been forcibly separated from his mother as he ventures across a spaghetti western-inspired landscape, *El Hijo* is, ostensibly, an isometric stealth game with light puzzle elements. As you strike out across the world, you're incredibly vulnerable to the monks, cowboys, and sheriffs who seem obsessed with making you, and all children, their slaves.

One thing I do love about *El Hijo* is how it provides a unique viewpoint into the rootin', tootin' cowboy genre, by shifting the perspective to an innocent child. You're not a merciless gunslinger or a God-fearin' peacekeeper, you're a boy looking for his mother, crawling through frenzied gunfights, exploded bridges, blasted-out canyons, and a whole host of tropes that make a western what it is. This isn't a *Red Dead Redemption*-style celebration of the genre, it's a critical lens at it we don't see all too often, wrapped up in a delightful low-poly art style.

The problems come when *El Hijo* tries to be a stealth game. Stealth is all about the interplay

between the environment, the player, and the AI, and there is very little of that to be found here. It's not so much stealth as it is avoiding cones of vision on enemies that rigidly stick to their patrol routes. Hiding is entirely dictated by a binary system of whether it is light or dark, or whether you're in cover or not. There's none of the emergent gameplay or storytelling that makes or breaks a stealth game to be found, making the whole experience feel flat and dull.

The game does try to liven things up sometimes by including some very basic puzzles. All too often they amount to pushing a box around or avoiding a swinging light, but there are times when there is a hint of something special. Hitting a buffalo with your slingshot to make them move and provide mobile cover, or having to traverse a sandstorm by timing your movements provide a nice change of pace, but it's over too quickly, and once more you're back to avoiding enemies that feel more like shop window mannequins than cowboys.

With a wonderful art style, *El Hijo* tells an emotive and serious story of rebellion against authority in a lawless world. But the systems underpinning the game are so basic that *El Hijo*'s worthwhile message is sadly lost. 🗿



HIGHLIGHT

The art style is fantastic. Combining low-poly models with a watercolour style helps make the wild west feel vibrant and whimsical, as if from a child's perspective, and it helps make the environments quickly legible to the player.

Info

GENRE
Stealth

FORMAT
PC (tested) / Stadia

DEVELOPER
Honig Studios/
Quantumfrog

PUBLISHER
HandyGames

PRICE
£17.99

RELEASE
Out now

REVIEWED BY
Joe Parlock

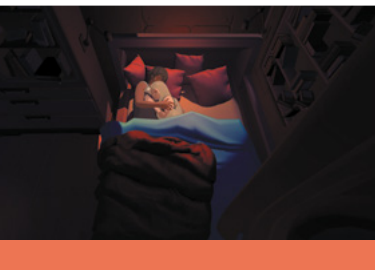
VERDICT

Delightful visuals and a new perspective on western tales aren't enough to make *El Hijo* more than a rudimentary and dull stealth game.

45%

HIGHLIGHT

Haven very much hangs on your belief in the relationship between Yu and Kay. Fortunately, their respective voice actors Janine Harouni and Chris Lew Kum Hoi nail the chemistry that's essential to the couple's banter and more intimate moments. You can also hear them narrating the credits, providing some wonderful insight into the people who made the game.



When bedroom scenes in most games verge on soft porn, just seeing these two snuggle up after a long day is refreshing.



Review

Flow threads become important for accessing certain areas otherwise out of your reach. Finding the right flow thread, however, isn't so straightforward.

Haven

A chilled co-op RPG with a French touch

RPGs have a tendency to add romantic subplots for the sake of it, but *Haven* isn't a girl-meets-boy story. The two leads are already in a relationship when we first meet them, stranded on a seemingly empty and fragmented planet after their spaceship breaks down.

Yu and Kay make for an attractive (and typical) couple: they bicker, they goof about, they're physically attracted to each other, but they're just as comfortable snuggling up without saying a word. You aren't limited to one perspective, either, since you're playing as both of them, with dialogue choices sometimes coming up for one or the other. You can switch between the two at the tap of a button when out exploring the mysterious world in search of resources, the pair holding hands as they glide around. Gliding is your best means of traversal, too, with the couple able to drift and do 180-turns with ease, while you collect flow energy that's used for cleansing the planet of a corrupt substance known as rust. It adds to the already chilled and breezy vibe, similarly conveyed by the game's excellent music from French producer Danger, which marries vaporwave synths with Daft Punk's more laid-back material.

It's a shame, then, that this doesn't extend to everything else. *Haven* is meant to be a relaxing game, which works well when the couple is chilling back at their ship, but if it wasn't for the

music, exploring Source often feels aimless and boring. The world's made of many tiny connected islands, but these seldom differ from its rocky, grassy terrain. That sameness makes it trickier to make sense of where you're going, not helped by a map that only displays the islets as nodes, neither pinpointing your location nor showing where you haven't already explored.

Its take on party-based, turn-based battles, where you control both Yu and Kay with face buttons and D-pad respectively, does have interesting ideas, such as combining each other's turns for duo attacks, or how you can shield

yourself and your partner. However, controlling both characters' actions, which also take time to charge up, is as awkward as patting your head while rubbing

your belly. When battles occasionally spike, it only gets more irksome, as you're barely able to keep up with enemies changing stance or quickly recovering from stunned or downed statuses, or the blighters who keep respawning.

Yu and Kay have a rock-solid relationship, and their reasons for escaping their dystopian fate in their former home is a story I would've been content discovering through a visual novel – the dialogue and character portraits would've been a perfect fit for this. But through *Haven's* muddled execution of RPG exploration and combat, it's disappointing how often I felt out of sync with such a likeable duo. **W**

“Exploring Source often feels aimless and boring”

Info

GENRE

Loving RPG

FORMAT

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

DEVELOPER

The Game Bakers

PUBLISHER

The Game Bakers

PRICE

£19.99

RELEASE

Out now (Switch/
PS4 TBC 2021)

REVIEWED BY
Alan Wen

VERDICT

Good vibes and a duo you can fall in love with, if not with the game itself.

63%

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Backwards compatible

WRITTEN BY RYAN LAMBIE

Ultimate Sega Game Gear: Part 1



▲ The main board with all the old caps removed and some new ones in place.

If you own a Sega Game Gear, chances are it's dead or dying. The failure rate of the handheld's capacitors appears to be almost 100%, and given Sega's device is now three decades old, there are vanishingly few working, unmodified examples left. The good news? Assuming those dodgy capacitors haven't destroyed your Game Gear's PCB, it's possible to replace the components and bring it back from the dead. This is something I'm hoping to do with a battered Game Gear I purchased from eBay; thanks to the wonderful folks over at Retro Six (retrosix.co.uk), I have a complete kit which, once everything's finished, will leave me with a better system than the one that rolled off the production line in 1991 – it'll have a clear, modern McWill screen, new case and buttons, plus a CleanPower GG regulator that'll replace the old 9V adapter with USB-C connectivity.

First, though, there's the capacitor kit to install. I've been known to wield a

soldering iron occasionally, but replacing the dozen-or-so caps in a Game Gear requires concentration and a steady hand; the particular capacitors Retro Six provides are of the tiny, ceramic chip variety rather than the cylindrical kinds more commonly seen in this kind of modification. My advice? Invest in a good pair of tweezers before you get started – moving these components into position is detailed work. Before that, though, I need to open the Game Gear and check the status of the boards; in this instance, I'm lucky – there are signs of corrosion from the caps in places, but I've seen far worse in the past.

After a quick inspection, I started gently lifting and desoldering the old capacitors from the main board – relatively easy since they're surface-mounted – before cleaning everything with isopropyl alcohol. Putting in the new capacitors was a case of using those tweezers, dabs of flux, and ensuring I didn't have too much solder on the tip of my iron. Again, it's detailed work, and it's

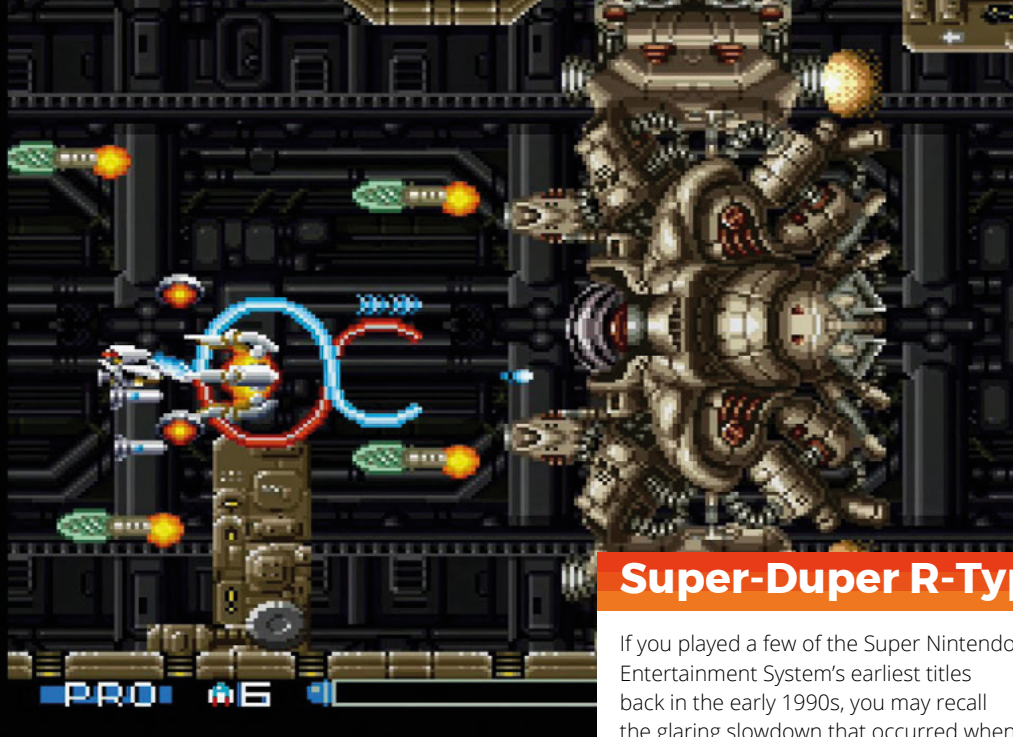


▲ With the capacitors replaced, the sound works and the image is much brighter. I still need to replace this broken old screen, though.

important that you don't muddle up 100 uF capacitors with the 10 uF or 1 uF variety since they're almost impossible to tell apart.

With the main board done, I then turned to the audio board – a slightly trickier proposition, since these capacitors are glued solidly to the PCB. Still, I found that gently clipping the bulk of the old caps off the board with a pair of sharp snippers was a safer option than the advice I've seen in some quarters, which is to rock the capacitors back and forth until the legs break; the latter runs the risk of tearing the pads off your PCB. With the tops of the caps gone, I could then use my soldering iron to gently desolder the legs and leave the pads on the board intact.

With all this done, I reassembled the device and gave it a check; aside from the old damaged screen, it powered up just fine – the sound even worked thanks to those new capacitors, which is a step forward from the silence that greeted me when I first purchased the handheld. Next month, then, I'll start working on that CleanPower GG board and McWill screen. The latter requires removing a bunch of components and a lot of delicate wiring. Nothing could possibly go wrong...



Super-Duper R-Type

If you played a few of the Super Nintendo Entertainment System's earliest titles back in the early 1990s, you may recall the glaring slowdown that occurred when too much stuff was happening on the screen. Konami's *Gradius III* and Irem's *Super R-Type* were particularly bad on this front, though the moments where bullet and enemy movements slowed down to a crawl did at least make those shooters a bit easier to navigate. Thanks to Brazilian hacking genius Vitor Vilela, however, we can now sample both of those games without the distracting slowdown issues; his latest ROM hack of *Super R-Type* leaves the game running

at a silky smooth frame rate, even when there are dozens of enemies and projectiles hurtling around the screen. Like Vilela's *Gradius III* ROM hack from 2019, the modded *Super R-Type* makes use of an external SA-1 chip, which takes some of the workload from the SNES's internal processor. If you own a flash cartridge that supports the SA-1 chip – such as SD2SNES Pro – then you'll be able to patch the original game ROM and run it on proper Nintendo hardware. Be warned, though: without slowdown, these games become viciously difficult. You can find out more at Vilela's GitHub: [wfmag.cc/sa1](https://github.com/vilela).

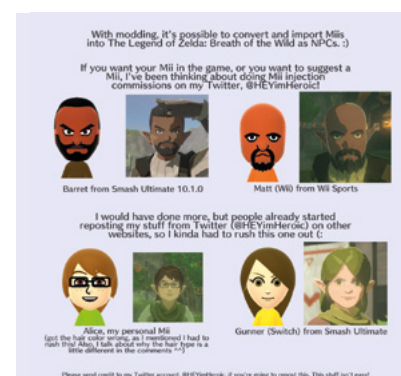
Prince of Artness

On the subject of clever people doing clever game-related things, Splash Damage programmer Giuseppe Navarria has managed to use machine learning to upscale a classic piece of box artwork. The art in question? Katsuya Terada's cover for the Japanese Super Nintendo edition of *Prince of Persia*. For our money, it's one of the most beautiful pieces of box art ever created, and Navarria's AI-led upscaling means it's now possible to appreciate every fine background detail. You can view (and download) the full piece of art at wfmag.cc/pop.



Mii of the Wild

OK, so *Breath of the Wild* stretches the definition of 'retro' well past its limits, but the venerable Mii, which made its debut on the Nintendo Wii in 2007, is now over a decade old – so that just about counts, right? At any rate, Twitter user HEYimHeroic has come up with a service we had to mention in the magazine somewhere: they've found a way of taking your Mii and 'injecting' it into Nintendo's open-world *Zelda* sequel. Ever wondered what your bobble-headed likeness would look like tottering around in Hyrule's lush landscape? Thanks to HEYimHeroic, it's now possible – their research reveals that *Breath of the Wild* uses "an advanced version of the Mii format" to generate its non-player characters. This means it's possible to have user-generated Miis running around



in the game without resorting to mods of any sort. HEYimHeroic even plans to offer a Mii injection service for anyone who's interested. Find out more about this – and browse a complete library of every Mii ever – at wfmag.cc/inject-mii.

Backwards compatible

WRITTEN BY IAN "NORF" DRANSFIELD

The digital revolution

I have failed you, dear readers. I fully intended this project to be entirely homespun, like our Ryan does when he's a-tinkerin' with his Game Gears and the like. I have a soldering iron, solder, a thingy to get solder *off* the iron, flux, a few lights, all sorts of gear. I'm practically riddled with gadgetry to help with this sort of thing. *Riddled*. But one look at what the PS1Digital required completely put me off, so instead I paid someone to do it for me.

I can only apologise, though at the same time pull a bit of a flex in that I'm supporting small business during difficult times. That's the line, I'm sticking with it.

But why does this matter? What is the PS1Digital? And who even cares? Well, regular viewers will remember something of a similar title – formerly DCHDMI, latterly DCDigital – I mentioned in a Wireframe past: an HDMI mod for the Dreamcast that brought out a wonderful,

crisp, and thoroughly sexy digital signal via an HDMI lead (and the hardware installed inside the machine, of course). It was not a quick-fix £20 box that gets you a decent, but fundamentally *off* image: it presented a pure, flawless image for a 20-year-old games console, as well as allowing it to connect directly – and actually work on – modern displays.

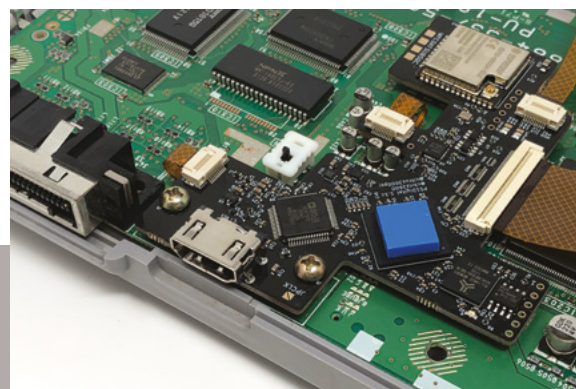
The PS1Digital is that basic idea again, from the same creator, Black Dog Technology, but this time for Sony's original PlayStation. Now, we can argue the toss about which console was better until Sega gets back into the hardware business, but the fact is I was genuinely excited about an HDMI solution for the POne. It's one of my favourite consoles ever released, and the chance to just have one that played fine with any screen (with an input) I had laying about was one I couldn't pass up. Sure, something like this is never going to be an essential – it's



100% a luxury, spare-money item (especially at £115 plus postage) – but if you can get one, and you do want one, it's revelatory.

What sets the PS1Digital (and the DCDigital) apart from other – more affordable – solutions is how it draws its signal directly, in digital form, from the console's motherboard. There's no conversion at play, this is pure, uncut signal, both visual and aural, then whipped through a dooleymajigger to pump it out at anything from 240p to 1080p.

The results, I'd say, speak for themselves – even though POne games were made with the standard definition displays of the day in mind, so many 3D polygonal titles get a genuinely impressive boost from the jump in resolution and clarity. *Tekken 2* looks like my brain remembers it, for one, while *Metal Gear Solid* is just... *crisp*.





There are resolution options, screen adjusts, deinterlacing filters, and plenty more to mess around with – and even more to come.

It's not the ideal for every game – there's a lot of dithering on the PSone, which basically shows up as a 'dotty' look, mostly on 2D sprites. This was blurred fine on CRT tellies, but via the PS1Digital they're just sort of *there*. Work's underway to disable or otherwise circumvent the dithering on a game-by-game basis, though, so that'll hopefully be sorted soon enough – did I mention the PS1Digital can update via WiFi, direct to the unit? Because it can.

Also, putting an HDMI port on your console means losing your serial port, so no link-up games are playable once it's in there. This is, again, being worked on – a wireless serial link-up has been touted, which has genuine intrigue around the potential there. *DOOM* PSone over WiFi? Well... probably not. But I can dream.

All in all – and just to hammer the point home – this is absolutely a luxury that isn't for everyone. That said, the PS1Digital is already brilliant, and breathes a whole new lease of life into the console. I now have the machine stationed like a loyal steed under

my work monitor, ready to switch the input over and get a few races done on *R4: Ridge Racer Type 4*. Just don't tell Ryan about that bit.

It's worth mentioning that I also had an optical drive emulator installed at the same time – the XStation. This natty little device replaces the PSone's CD drive with an SD card interface, allowing you to... well, you can probably figure that out for yourself. I'm sure Sony doesn't actually care too much these days, but I'm still scared they might come and kick my door down for having it put in a second-hand console I only nabbed off eBay for a tenner.

Big thanks to James at Bytes Free (wfmag.cc/install), both for having steadier hands than I and for offering a smooth and successful install service. He also took the lovely photos you can see on these pages. I'm off to play *Silent Bomber* in resolutions a 15-year-old Ian would have balked at. *Balked*, I say.

MAKE IT AGAIN

As mentioned on the left, my renewed interest in revisiting PlayStation games reminded me of forever-favourite *Silent Bomber*: a pants story wrapped around a magnificent, girthy chunk of fun that managed to successfully bridge the gap between arcade titles of yore and the (then-)modern approach of progress and upgrades and not dying after 13 seconds' play. It is still utterly brilliant to play: snappy and responsive, the right level of challenge, and good-looking enough that it doesn't actually embarrass you when younger players see it and sneer at its polygons. Best of all, developer CyberConnect2 is still going, so there's literally no reason it can't pump out a sequel or remake. *Literally no reason.*





Emerging

Ian's questioning his memory with
Metal Gear Solid V: The Phantom Pain

On playing a certain *Cyberpunk 2077*, I was left wondering: is my brain wrong? Has it opted out of retaining memories, and instead replaced what actually happened with a great big pile of What Did Not (happen)? I'm there, playing through emergent encounters in CD Projekt Red's mix of bugs and beauty, and I'm thinking: "*Metal Gear Solid V* did encounters significantly better". But I can't be sure. It's been some months since I've played Kojima's Konami swan-song, and a few years since I've played it with any real commitment. Maybe my mind has indeed

become more selective with the truth it chooses to present to me. I need to go back and play again, to be sure, to know if I do know what I'm talking about. That's the reason I've been playing *Metal Gear Solid V* recently, definitely just that, and not because I only need the slightest of slight excuses to play one of the greatest games of all time.

So I set up the situation: pick up where a save, from early 2020, left me off: the middle of the desert in Afghanistan, covered in blood, a horn protruding from my head, ammunition 70% spent, wearing a tuxedo. Of course. I decide to head to a prisoner rescue mission one kilometre that-a-way, powering my journey using legs only. So far, so as I remember it. Heading up the nearest sand-dune, I suddenly remember one thing needs to be handled before getting to a combat instance: mucking about. Mucking about is key to enjoyment in open-world games, and *MGSV* allows a lot of it. So I spend five minutes surfing dunes in a cardboard box, the sun beating down on the blood still caking up my formal outfit.

Surf decidedly up, I get back to business: 950 metres that-a-way. On the sprint, I come across a small guard post – a checkpoint looking out for mercenary/private army chiefs with horns and tuxedos sprinting through the desert. They may be on the lookout, but they don't see me. It's a chance to remember my old skills in the

Always put aside time to muck about otherwise you'll never get the most from anything – in games, life, anywhere. Maybe don't try box surfing in a combat zone, though.





game, as well as a chance to be distracted, again, mere seconds after the surf incident. It's short and slight, but still so satisfying to scope out the area, to pick the troops off one by one – tranquillising them, of course – and retrieve their unconscious bodies to send them home in the hopes of 'convincing' them to join Team Tux. I am done here, but I am emboldened: this is what I remember. This is *fun*.

The rest of the sprint goes by without incident until I arrive at the mission area proper and begin my scouting. I set up my companion Quiet in her favoured sniper's nest – she's wearing clothes, because I want her to, because I am not a weird pervert – to aid in the quest to See All The People. It's a few minutes, I figure I'm done, I move in... and

suddenly stop because I realise I'm right next to the communications array for this particular base. One bit of C4 later, there is no ability for this unit to contact the outside world, so no chance of them radioing in for reinforcements. *Emergent*.

Alas, setting off C4 has done that thing of 'alerting guards', because explosions make sound and fire and stuff, and they've all seen it. The radio becomes frantic, alarmed, and troops start making their way to my playground of plastique to find out just what's happened. It's fine, I accounted for this, so I start to make my way in a loop around to head incoming soldiers off from the side, tranq them, and bundle their bodies up through the personal wormholes I can create in

the sky, and no, I am not making that bit up. It's not what I initially planned, but it's a new plan I've come up with along the way.

Which immediately gets thrown in the bin, as I am seen by a troop neither I nor my companion had spotted. I try to get off a shot to put him to sleep before he alerts anyone, but it's too late: he's fired a shot. Everyone's heard it. They're on high alert. This was not my first or second plan, true, but screw it – plan three is on the go. Quiet starts popping out tranquillizer shots of her own, the defending troops don't know whether to head towards me or her, and it's all a grand old mess both on my side and theirs. Thing is, they don't know I've messed up my plan, and I can adapt.

Firefights, sleep grenades, flanking, and distraction swiftly show themselves to be useful

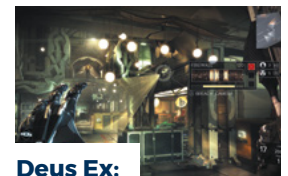
tools, and I maintain the approach of not killing a soul. I even break out the Hand of Jehuty – a robotic attachment themed around *Zone of the Enders* that

allows you to rope a dope from a distance – which stuns them. *Metal Gear Solid V* is great. Everyone's unconscious and wormholed away, I've picked the area clean of items and objects – even stealing a couple of trucks for good measure – and I'm on my way, the helicopter approaching to extract me blaring a-ha's *Take On Me* from its built-in speakers.

As I sit in the chopper, flying above the combat zone and away to safety, counting my new troops and planning to sell the items I've nabbed, three things dawn on me: one, I wasn't wrong about how great *MGSV's* emergent scenarios can be; two, this game is *magnificent*; and three, I've forgotten to rescue the bloody prisoner. 🙄

“They don't know I've messed up my plan, and I can adapt”

Wireframe Recommends



Deus Ex: Mankind Divided

PC, PS4, XBO, MAC, LINUX
The overlooked one in the series, *Mankind Divided* didn't do much better than its predecessors – but it still nailed that emergent, situational *thing* that makes *Deus Ex* such a captivating series. Well worth a play to this day.



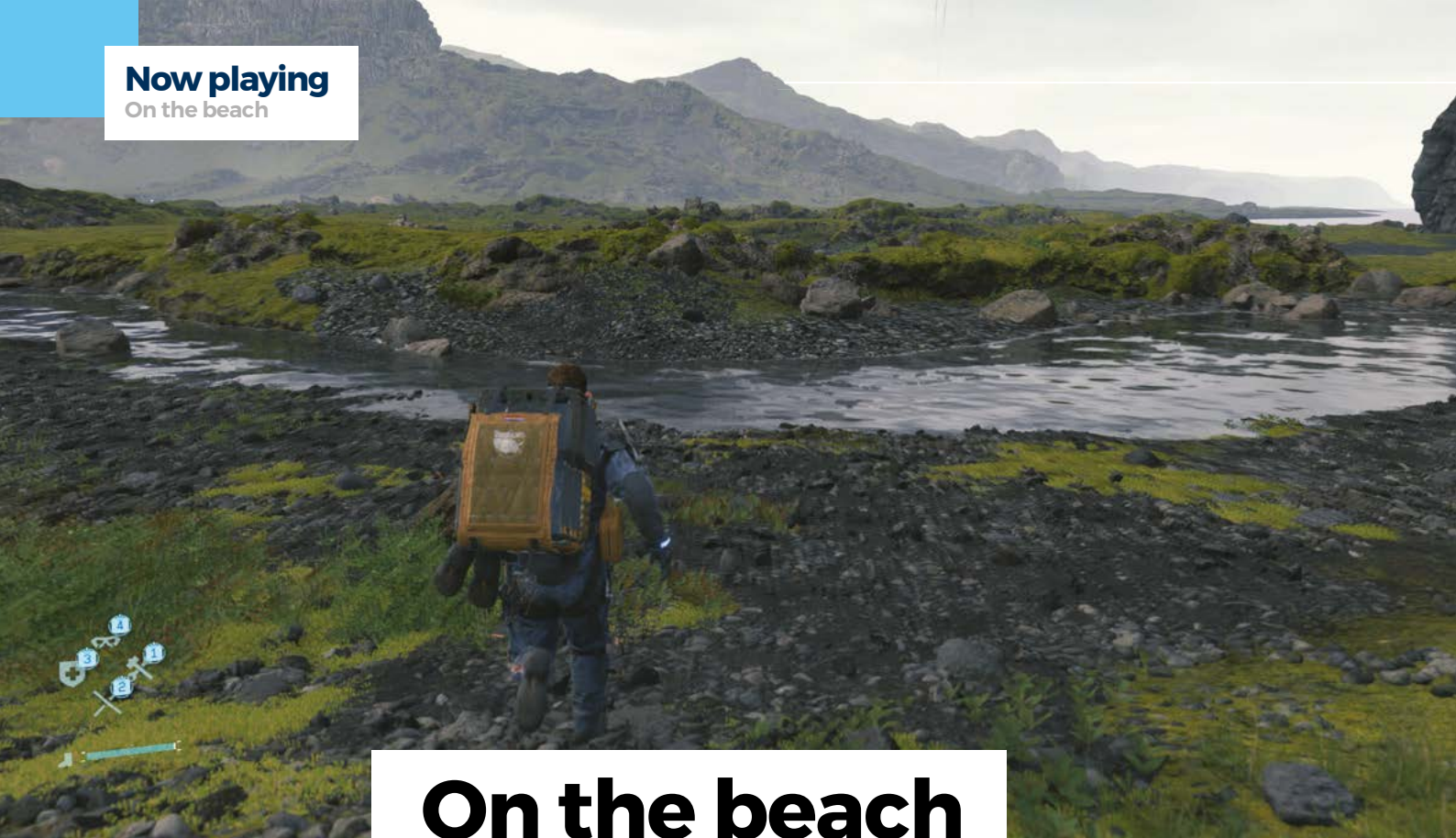
Spelunky 2

PC, PS4, SWITCH
Roguelikes are set up to be emergent joys, and *Spelunky 2* is no slouch in that department. Anything that happens by accident is brilliant – whether positive or negative, it's always great.



Kerbal Space Program

PC, PS4, XBO, MAC, LINUX
Physics plus the ability to do what you want when you're building some space vehicles equals a playground of emergent fun times, minus the risk of anyone actually dying. Much love for *Kerbal*, here.



On the beach

Ryan goes off for a post-apocalyptic hike in *Death Stranding*

Remember when ‘walking simulator’ was used as a semi-derogatory term by a certain section of the game-playing public? When things like *Gone Home* and *Dear Esther* were dismissed as ‘not real games’ because they weren’t based on dexterity and challenge? I wonder what those Proper Gamers thought when Hideo Kojima, legendary designer of several Proper Games (not least *Metal Gear Solid V*, which Ian wrote about on page 108), emerged from the marketing smoke with his first independent title, *Death Stranding*, an adventure game that (whisper it) truly is a walking simulator.

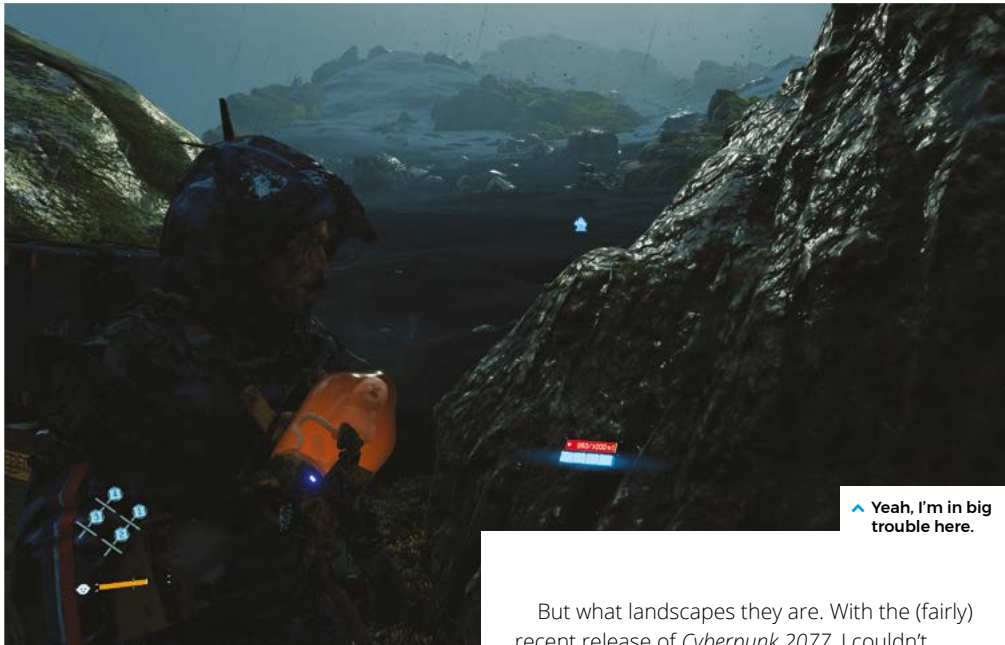
For all Kojima’s cinematic flair and taste for surreal imagery, walking – and climbing – is what you’ll spend most of your time doing in his latest opus: it’s difficult to think of another game, in fact, that puts so much design detail and emphasis on the task of putting one foot in front of the other. Cast as post-apocalyptic courier Sam Porter Bridges (a flinty-eyed Norman Reedus), you spend much of *Death Stranding* moving packages from one point on the map to the other. In the early going, at least, you’ll spend a great deal of time on foot, packages delicately balanced on your back, and getting from point A to point B involves a surprising level of concentration. To avoid falling over and damaging your goods, you have to carefully study the terrain, avoiding ruts and jutting rocks, or anything that might upset your equilibrium – put a foot wrong, and you’ll feel your controller vibrate perilously as Bridges tries to regain his balance.

It’s an offbeat concept for a game, alright, and it’s easy to see why Kojima waited until he started his own development studio, Kojima Productions, before embarking on it. Konami would’ve probably laughed him out of the office if he’d pitched the idea there. Even Sony must’ve had a few misgivings at lending their support to a game that, starry cast and gorgeous visuals aside, places so much emphasis on completing fetch-and-carry missions.

▲ The lengthy moments of calm give you a chance to take in the scenery, but danger can soon rear its head in *Death Stranding*.

▼ As slow-going as climbing and hiking can be, there’s a certain thrill in getting to your destination, exhausted and covered in muck.





^ Yeah, I'm in big trouble here.

This isn't to say that *Death Stranding* is boring, though. In fact, there's something quite ingenious about the way it places intense survival horror moments alongside long stretches of almost nothing at all. The largely invisible threats Kojima conjures up here lead to some truly pulse-pounding moments, but they often give way to hour-long sequences where you're simply trying to figure out how to cross a river or navigate your way around a hillock. Then the clouds will gather, the mood changes, and you're suddenly plunged back into a supernatural nightmare.

There are similar tonal clashes elsewhere: Kojima and his team have put significant time and resources into creating their idea of a post-collapse America, with its landscape of volcanic greys and mossy greens. It's immersive world-building, but also wilfully undercut by the insertion of jarring bits of product placement: here and there you'll notice cans of Monster Energy drinks, and even adverts for Reedus's real-world television show. Then there's the plot: it's a quite earnest saga about the reunification of a shattered, divided America that draws obvious parallels with current headlines. But then this is contrasted by characters with names like Die-Hardman and Heartman, and a strange conceit where actors' names come up on the screen alongside the people they play. It's as though Kojima wants to constantly remind us that we're playing a game, even as the almost photoreal landscapes threaten to make us forget that we're sitting on a chair holding a controller.

“An adventure game that truly is a walking simulator”

But what landscapes they are. With the (fairly) recent release of *Cyberpunk 2077*, I couldn't help but think about the approach of that game versus the design choices Kojima's team made in *Death Stranding*. Where CD Projekt Red went for a maximalist approach in their attempt to create an entire future city teeming with life – and evidently struggled technically with the scale of what they were trying to do – *Death Stranding* goes the opposite way. America's remaining cities are tucked almost entirely away from the player's gaze, and only implied through an interior here or a holographic image there. It's a creative decision that adds to the game's sense of isolation, and also allowed the team to focus on making the assets we do see – the great expanses of pasture,

the eerie, threat-strewn ruins of a fallen empire – look all the more dazzling.

Of course, *Death Stranding's* distinctly meditative pace also means

it's perhaps a bit too arthouse to appeal to a section of gamers who prefer their sci-fi larded with more of *Cyberpunk 2077's* extreme gore and sexed-up sauciness, and I do wonder how many of Kojima's devotees actually saw his delivery epic to the end. For now, though, your humble writer's quite happy to stick with Bridges for a good while longer – I'm approximately ten hours into the campaign, and still captivated by the quietly weird world Kojima's managed to conjure up. 🗨

✓ Hideo Kojima is a renowned film nerd. So is *Death Stranding* a nod to 1990s Kevin Costner flick, *The Postman*? Quite possibly.



Wireframe Recommends



ICO

PS2 / VARIOUS

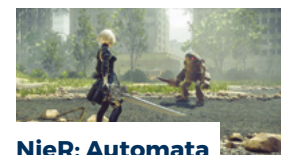
Yes, it's a game we keep coming back to, but that's because Fumito Ueda's game is such a towering exercise in minimalistic game design. It's flawed, yes – the camera and combat aren't the greatest – but like *Death Stranding*, it creates a bewitchingly strange world with the lightest of strokes.



Okamiden

NINTENDO DS

Its bigger brother, *Okami*, is rightly regarded as a classic, and has been ported more than once since the original's release on PS2. This Nintendo DS spin-off adventure? Strangely ignored, even though it packs as much detail, mystery, and charm in its cel-shaded world as its predecessor. Can we have a Switch port please, Capcom?



NieR: Automata

PS4 / PC / XBO

PlatinumGames' action RPG always kept us transfixed with its wealth of ideas and things to do, but beyond that, there's the strength of its world-building: countless other games have come up with their own post-apocalyptic settings, but few are as distinctive – or melancholy – as the one that unfolds before you here.



Demon's Souls

The miracle of messaging, and how it can help

FROMSOFTWARE / 2009 / PS3

It's quiet in FromSoftware's original *Demon's Souls* now. Not a... well, *soul* makes a peep if you're playing the game on its original home, the PlayStation 3. When the servers were shut down in February 2018, it all fell silent. Well, 'silent' as long as you ignore the enemies slinking in the shadows, the dragons flying overhead, the mumbling incoherent weirdos filling you in abstractly on some bit of lore or other, and a few other gubbins. Beyond all that? Silence. Where once was noise, now is non-noise. Sunrise, sunset. And so, if you're playing the PS3 version of *Demon's Souls* now, you're actually missing out on one of the game's most enduring, smart, and – yep – killer features: messaging.

As part of the push to make the multiplayer in *Demon's Souls* that bit different, FromSoftware didn't stink up the joint by allowing players free rein in chatting to one another. It didn't even allow players to actually choose to go and help their friends as and when they wanted to, instead relying on a system of anonymous signals being set up and responded to... though that's not the focus here. It all blended into a package that offered a *vaguer* take on multiplayer than we were used to. Hearing some soul coming to help you bleating on about min-maxing to tackle this boss or the other would have ruined that all-important ambience.

But – and you *may* have heard this before – *Demon's Souls* was, and is, a tough game. The sort of thing that pushes

players to really try hard to tackle the challenge, to push themselves ever onward even though the odds are, at times, ludicrously stacked in the favour of the AI. But there was something else at play throughout. People don't push on *just* because something's challenging – there's always something behind the challenge, or woven throughout it. And in the case of *Demon's Souls*, it was communication.

Spiritual daubings littered the world, you see. Initially you'd encounter some that would act, as you'd expect, as a basic tutorial – general controls, a bit of advice – but soon enough they'd end up appearing in odd locations. A bit off-centre. In a hidden corner. Awkwardly positioned on a bit of a hillock. And the advice they offered – the words they contained – wouldn't actually make 100% sense, at least not in those first few hours. Rather than 'press circle to roll', you'd get 'imminent enemy', 'try jumping off', or 'praise the sun!', alongside a rating.

Those of us playing *Demon's Souls* in its pre-western release might have been a bit confused had we not read up on the game – yes, I'm talking about myself here – but it soon became apparent that these messages had actually been left by other players as they made their way through their own run in the game. These messages were handed down from the universe of one player to another, the note's creator trying to help others who might be less experienced, or who might have forgotten what was coming up around

“FromSoftware didn't stink up the joint by allowing players free rein in chatting to one another”



the next oh-so-deadly corner. It was a messenger system that ended up being a crutch to many a player who needed it, offering support via an asymmetrical online system that required no fast reflexes, no quick thinking, and no fear of being humiliated in a test of skill against a child.

Soon after learning that, though, it also became apparent *Demon's Souls* players were using the messaging system to lie, to psych out, to *troll* other players into believing something that wasn't true. A message would pop up saying it's safe – enough other similarly-minded players had recommended the comment, meaning it stuck around longer and seemed legit... until you suddenly got your face kicked off. This was admittedly far less prevalent than the genuinely helpful messages left throughout *Demon's Souls*, but it did happen – and it did add on another layer of subtle excellence.

This crowdsourced wisdom, accessed and applied with ease via a few button presses, both allowed communication in a game that didn't attempt to do much in 'normal' ways and followed the Souls series into its later reincarnation as *Dark Souls*, *Bloodborne*, and full circle again back to Bluepoint's excellent remaster of *Demon's Souls* on PS5. What started as a fine idea evolved into a genuine cornerstone of the entire style of game FromSoftware was putting out, and it's impossible to imagine any of them without the ability to leave cryptic clues on the floor for others to stumble across and gain an advantage from. Or to die horribly after listening to them. 🗨



Elsewhere

It's surprising you don't see the messaging mechanic ripped o-'borrowed' more in other games, but then the subtlety of such a system isn't an obvious fit for many titles. Much as I would like to see it featured in *Call of Duty* in place of voice chat. One title that did riff on the original idea was Kojima Studios' 'best game ever to score 62% in Wireframe' *Death Stranding*, which opted for simple animated images rather than words, but offered the same fundamental experience. For a game in which you're almost entirely alone the majority of the time, it really worked incredibly well – as well as offering help (or hindrance, though less than you'd see in the early *Souls* games), it brought a sense of community, of belonging, and of that classic wacky Kojima silliness you might hope for. How do you spell multiple universe theory...

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