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ALL FORMATS

Wireframe

LIFTING THE LID ON VIDEO GAMES

Rise of the ROBOTS

Cuteness takes over in Autonauts



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Jesper Kyd's stunning career in music

Refresh

The curious prevalence of drinks machines

Soundwave

Using sound to make better games



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Why video game critics need to stop pulling punches

In the last 20-something years of writing about games, I've apparently gained something of a reputation. I am, I'm frequently informed, a "harsh reviewer". I "bash games". I interpret it somewhat differently: I take the radical approach to games criticism of telling the truth.

The reality is, over my career, I've given colossally more positive reviews than negative. I've celebrated wonderful games to audiences that otherwise might never have heard of them. I've championed greatness, revered strangeness, and argued for the positive aspects of mediocrity. And alongside that, I've pointed out when something's a big steaming pile of crap.

I want to be clear – this can be a horrible industry to write in of late. Dissent against the collectively agreed political opinions of any of a number of well-organised groups of bullies and trolls, and your life can be made hellish. Not knowing which opinions those will be until it's too late is causing a lot of critics to write in fear of accidentally triggering a backlash. I get that. I've been on the receiving end of it. Multiple times. It sucks. It's also not what we're talking about here.

I'm here to argue that people need to toughen up their reviews. To stop pulling punches. To stop hedging bets. And I mean this in a more specific way than the usual, "We need to use the bottom half of the out-of-10 scale." Because here's a thing: it's really not worth getting worked up about those only marking from five to ten, or 50 to 100. If a game's getting a five, it's already half as bad as it's good, and pretty hard to recommend. Scores below 50% are just more firmly underlined appeals for someone to not buy it.

Bet-hedging and punch-pulling have been a part of games criticism for decades, in a way that just isn't apparent in other fields like film, theatre, and



JOHN WALKER

John Walker is a lovely man who has some opinions. He's been expressing them about games for the last 20-something years.

#23



TV reviewing. Sure, there are bad examples in all, but as a rule, in most other media you'll see excoriating reviews of dreadful movies, brutal take-downs of horribly written novels, and goodness me, don't even look toward the flying viscera in the world of theatre reviews. We need us some of this in gaming!

All too many reviews of the largest, biggest-budget games, from the giant publishers, seem to go out of their way to avoid reviewing games as a piece of art, instead resorting to squiggly ways out, like perceiving them as a technical accomplishment. We can find all sorts of reasons loudly given for this, from the most insidious (and vanishingly unlikely) suggestions of corruption, to declarations (also not that realistic) of sheer incompetence. But I believe the number one cause of this phenomenon, most especially when reviewing big-name games in isolation ahead of their review embargo, is a fear of not matching the others, of sticking out as the one negative review.

It's a sort of pre-emptive mimesis. An assumption that because this is the latest game in that most popular of series, that everyone's going to be loving it. So even if the critic didn't, they must be wrong, so they'll skew their review toward the assumed norm. Pop in those concerns somewhere in the text, but bulk it up with comments on the excellent graphicsability, and give it a safe 8/10, or an inoffensive 72%.

No! This has to stop! Just say what you think! And honestly, that the billion-dollar company could spend hundreds of millions making it look this good is great, but that's of side importance. Tell your truth, critics! Don't worry about what others think. Because if we start getting some proper criticism of the biggest games, maybe we'll have some tiny hope of them reacting to it, and improving. 🤖

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WELCOME

As you'll see in the news on page 14, No More Robots studio founder Mike Rose has collated some disquieting sales data from Steam. As of August 2019, indie games on the platform sell an average of 1500 units, and each makes \$16,000 in revenue during its first year.

Those numbers sound low by themselves, but there's something even more troubling about Rose's findings: his data only covers the top 20 percent of games sold on Steam. As he writes, "I removed the bottom 80 percent, as that 80 percent is barely making any money at all."

It's a stark reminder of just how tough the indie games market is. We all love the 'bedroom coder' narrative, but Rose's figures suggest that most indie devs will never see their games make a profit.

While it's inevitable that some games will struggle, more arguably needs to be done to ensure that talented newcomers can get their games played, and that smaller titles aren't eclipsed by triple-A behemoths. There are certainly changes to be made within the industry – Rose argues that indie devs are pricing their games too low, for one thing – but there are things we can do as gamers, too. If you see a smaller game you like, then buy it, tell all your friends about it, and retweet its dev's videos. It's easy to forget how hard it is to get the word out without a marketing budget; if we all bang the drum for the indie games we like the most, then we're all doing our bit to support a fragile and ever-changing ecosystem.

Ryan Lambie
Editor



They, Robots

We might all lose our jobs when the robots arrive in force, but for now we can just enjoy the likes of *Autonauts*



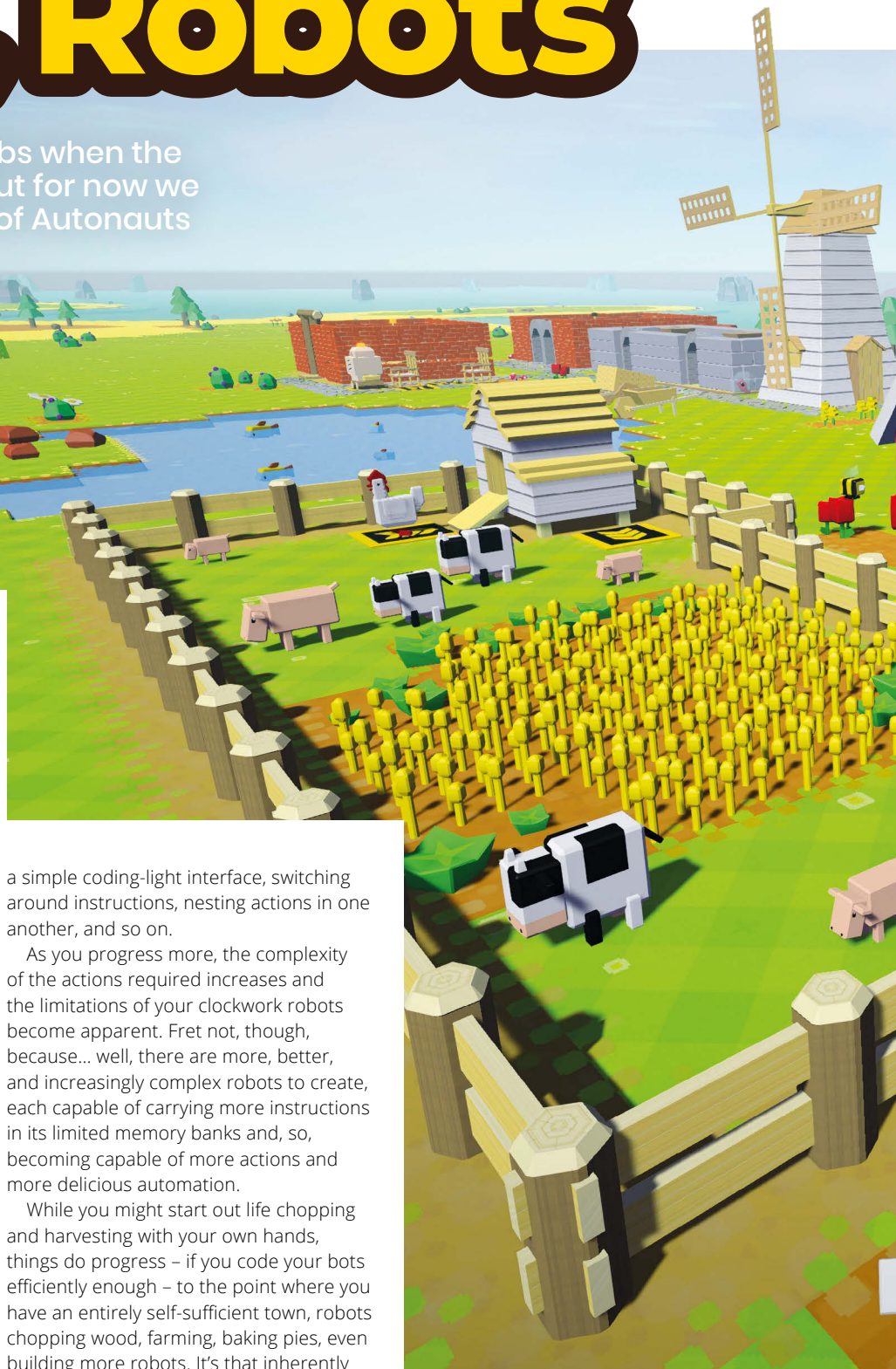
Struggling through Unity with a lone programmer on the team, having to rely on the Unity Asset Store for solutions to problems popping up – it's not the romantic notion of Creating Art that you might think of when it comes to small teams with big ideas, let's be honest. All the same, *Autonauts* has – through sheer force of will (and a lot of effort and iteration over a number of years) – made itself one of the most intriguing and engaging titles in recent memory.

The ultra-basic thinking is: you're a person trying to keep other people alive. At the outset, it's your typical survival-type game, all chopping down trees and building farms and so on. But soon enough you unlock a basic automaton, and this is where it gets really good. The robots can be programmed to do what you can do – you set them to record, go out and do what you want them to do, then have them do it. So they can cut down trees and carry the logs back to a storage facility, say. Need something more complex, or the order to be changed? The logic of the robots can be tweaked in

a simple coding-light interface, switching around instructions, nesting actions in one another, and so on.

As you progress more, the complexity of the actions required increases and the limitations of your clockwork robots become apparent. Fret not, though, because... well, there are more, better, and increasingly complex robots to create, each capable of carrying more instructions in its limited memory banks and, so, becoming capable of more actions and more delicious automation.

While you might start out life chopping and harvesting with your own hands, things do progress – if you code your bots efficiently enough – to the point where you have an entirely self-sufficient town, robots chopping wood, farming, baking pies, even building more robots. It's that inherently





“One of the hardest things of all for us to do has been to contain its potential”



satisfying nature of automation writ large, and it's utterly beguiling to boot.

Adorable? Check. Intelligent? Check. Capable of stealthily teaching players the basic tenets of coding? Check. Our three checks checked, we spoke to creative director (and former Zzap!64 editor) Gary Penn, and technical director Aaron Puzey, to find out more about *Autonauts*.

Where did the idea for *Autonauts* come from? And just how good is *Factorio*?

Puzey: I worked on a friend's farm for a day and realised there are a lot of interesting systems, some of which feed back into each other. For instance, crop waste is ploughed back into fields, sold to other farmers, or incinerated to make heat for growing berries in polytunnels. I made obvious connections to *Factorio* and immediately started on a prototype the next day.

Penn: I think it was the day after that Aaron brought in a Typically Aaron Prototype: a sketch borne from a personal game jam with enough functional charm to win me over there and then. *Factorio* is ace but too dry for my liking. The trailer video they did was fantastic and made me feel like an excited child desperate to play it; the reality turned out to be too 'grown-up' for me.

It's a small team with big plans – how challenging has it been to get the project up and running, and then to tweak it to the point where it's fit for release?

Penn: A lot of work – a lot of reworking, actually. But we love working with each other and love the concept, so it hasn't felt like work. Well, it has when it's been outside of our comfort zone, like when we considered publishing it ourselves. When there are only two of you, you have so many different types of job to →



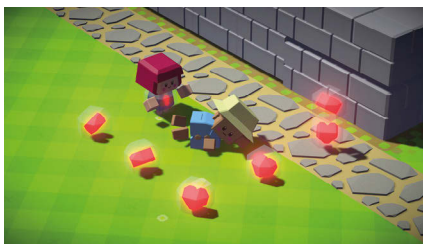
^ Putting that robot force to work is inherently satisfying.

do, and some are more conflicting than others – like being a creative child at the same time as a production [focused] adult. The community built up around the prototype we first released in 2017 has been wonderful. We updated the 'Pre-Pre-Pre-Alpha' with new features and bug fixes every single week for 22 weeks without fail. We made sure we shared our feature and bug list with the players, to help shape our output, and that relationship reminded me very much of working on a magazine. We learned *a lot* from doing that.

The game acts in part as a stealth teaching tool for coding fundamentals – was this always the plan? How did it come about?

Puzey: We've never had the intention of teaching coding. The scripting was really just a happy accident of prototype evolution. The first version featured farmers without any scripting. You clicked on a target, and the robots assumed what it was you meant. It worked but felt too simple, and sometimes didn't do what the player intended. Initially, we displayed a commentary just as a way for the player to see what was going on in the farmer's head, and then it was an obvious choice to allow the player to edit it. It's still not a full coding platform, but we would like to make it more like Scratch in a future version.

✓ **Autonauts is a positive, warm-hearted, and not-at-all negative experience. Which is nice.**



Are you working with any schools or learning establishments? Why/why not?

Puzey: We've been so focused on making it play well, we just haven't had time to consider the educational value of *Autonauts*. We've had a lot of encouragement from people saying how well this would work in schools and it's definitely something we want to push. An obvious inspiration for this has been Scratch. I'd like to see a free, educational version of *Autonauts* released which has the current missions replaced with more coding-focused ones. Time is our enemy right now. If we could automate a time machine...

"It's still not a full coding platform... we'd like to make it more like Scratch in a future version"

Realistically, how useful will Autonauts be for an individual's understanding of coding?

Puzey: This has to be a game first, and the coding is just a tool for the player. It doesn't try to teach coding. Ever. It really is just a means to an end as far as the player's concerned. They will gain an insight into some fundamental coding concepts whether they realise it or not, but this will happen over a long time as they solve the various problems they encounter.

The complexity of the commands your robots can accept is limited by their memory capacity, I believe, but how complex can things get for your auto-friends?

Penn: It gets complex when you have dozens or even hundreds of simple bots all working together. I used to make fewer

bots and fill their heads with long-winded scripts, 'cos I thought that was clever, but it isn't – it just unnecessarily overcomplicates things, and I'd quickly get into a right old pickle.

What is it about automation, about making things work, that's so inherently satisfying?

Puzey: For me, it's the contrast between doing it yourself and having someone else do it. I've been slaving away chopping logs, unable to do anything else because it's consuming all my time. Suddenly, I have a bot to do it for me, and it's such a great feeling of freedom – I have time to do something new and interesting.

Penn: The sense of achievement when you make even the simplest of processes self-sufficient is unprecedented. Until it stops and you have to figure out what's gone wrong and fix it, which is satisfying in itself – more so when you put it right.

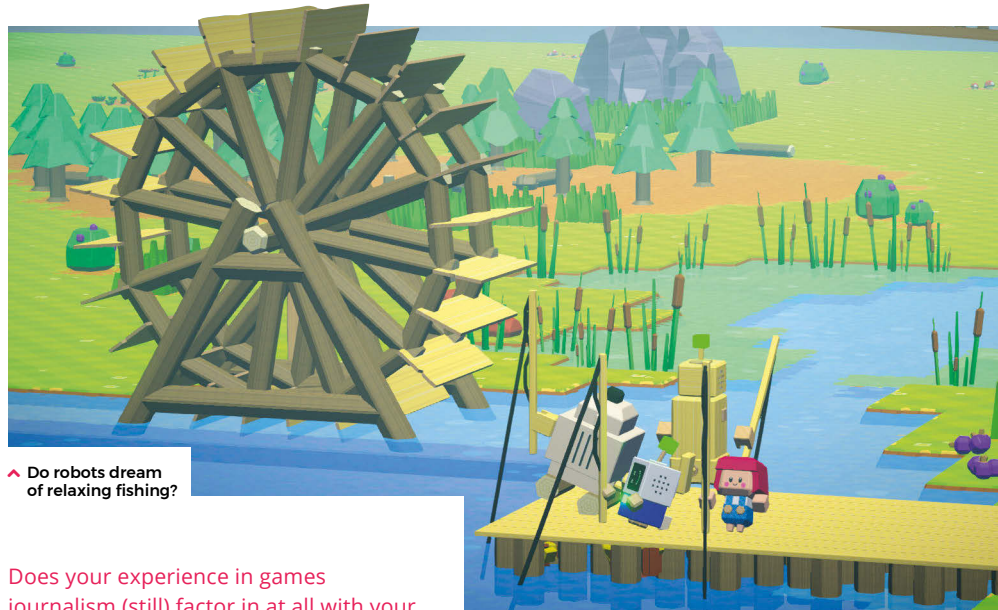
✓ **The game world is substantial, so your robo-towns can cover vast areas.**



I'm so bad at playing *Autonauts*. Well, not bad – I just play it my way, which is quite... erratic and messy, but I'm enjoying myself so, yeah. Aaron's the total opposite: all neat and tidy and logical. Recently, I've started watching him play and learning what he does and finding that he does have a point when it comes to storage and keeping the jobs simple and distributed. Aaron's got this nice little 'Just In Time' manufacturing method for a tool supply chain that I really like, so I use that now.

Autonauts is decidedly nice – why? Surely all gamers want to shoot and maim and nothing else, ever?

Penn: It wasn't a conscious decision to make such a nice game – not at first, anyway. It was probably a deep-rooted reaction to getting older, being a long-term parent, feeling sad about the way the world works sometimes... There's no political statement here, but there is a personal belief that we really ought to start being a lot nicer to each other and helping each other out more. I've definitely had enough of violence in my media. It's not that there isn't a place for it – that it's not effective in the right context – but it's rare for me to experience violence in media these days and it feels... congruous.



▲ Do robots dream of relaxing fishing?

Does your experience in games journalism (still) factor in at all with your approach to development?

Penn: My experience in games journalism has always factored in my approach to development. There's a lot to be said for frequent immovable deadlines, of having someone focused on the role of editor and tangibility. In print, there's no such thing as 'slippage'; you run too late, you lose your job: there are too many physical dependencies, too many people adversely affected by your failure to deliver. You learn to adapt; most importantly, you learn to make the most of what you have, be that time, content, or ability. Working on print periodicals isn't just about discipline – it's understanding and leveraging the power of editing and presentation. That said, with *Autonauts* in particular, where there are only two of us doing everything trying to make this very different thing, it's so hard to make time to focus on production.

You're an experienced hand in the industry, Gary – how do you see the health of modern gaming?

Penn: I like that games and gaming have become mundane and they don't stand out as... well, as weird any more. I think modern gaming is healthy enough in terms of it being easier than ever for anyone to make and share something with the world, but it's no easier to get noticed. I think the future of gaming... the trajectory is set, which means so many previous possibilities are unlikely to come to fruition now. What I mean is, games

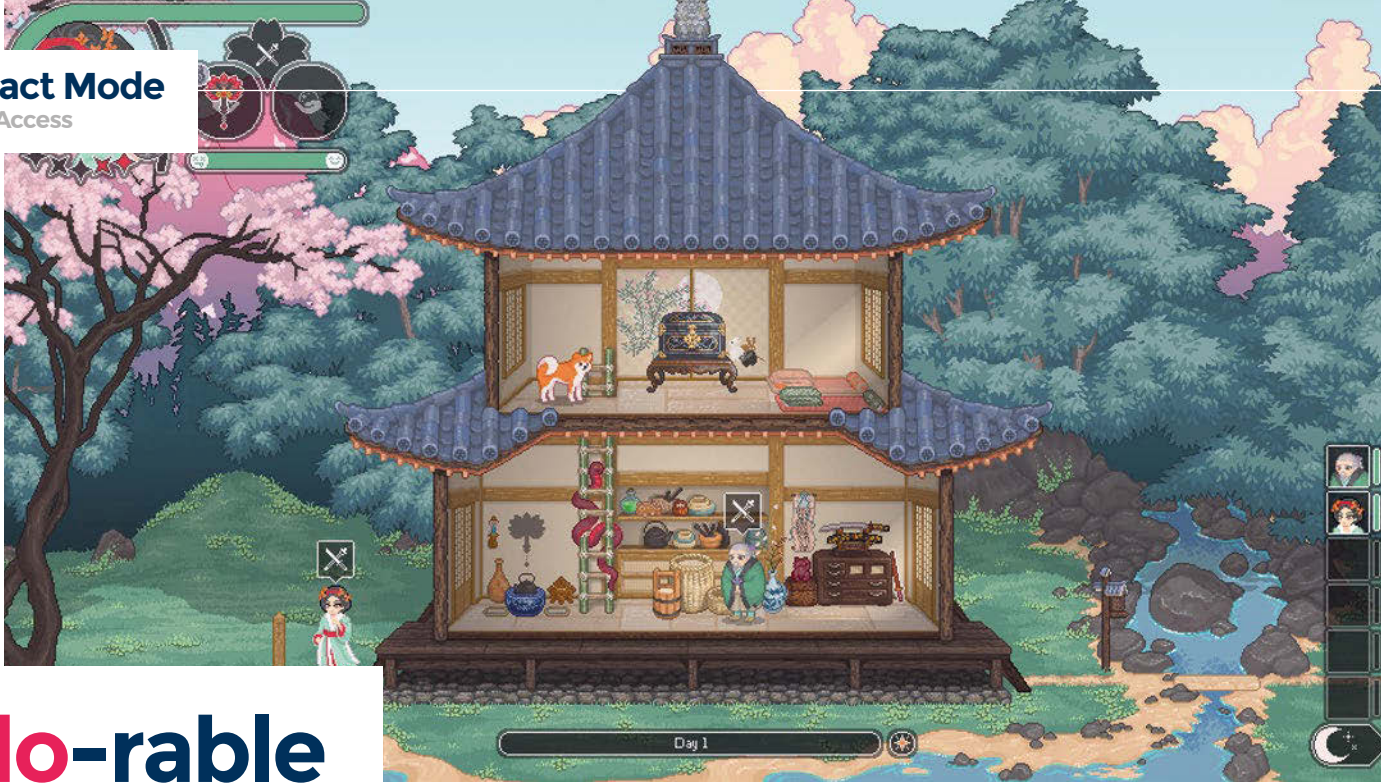
are settling down in the way that they work – the medium is more malleable than it was, which is good, but it feels like so many more interesting opportunities have been missed as a result. But, you know, we have a more stable foundation on which to build, so... It's not as if there's any shortage of interesting ideas out there these days, but too often, I find myself disappointed in terms of how those ideas actually play out.

Finally, what are your plans, hopes, and dreams for *Autonauts*, post-release? Potentially automating the game so it manages to code itself a sequel?

Penn: We joked about automating development... At one point, I gave serious thought to the idea of a game that made itself, not necessarily for real but presented as if it did. That said, I think it'd be fun to teach the Bots how to play games, like simple sports or how to navigate worlds like those in platformers and adventures and... Things like teaching bots to dungeon-crawl for you, for example. As we've developed *Autonauts*, one of the hardest things of all for us to do has been to contain its potential; there are so many different things we could do with the idea, and that paralysed us for a while, but we had to go with something – so we did, and it seems to be working. 🤖

Autonauts releases on PC very soon.





Edo-rable

Woodblock prints and defending towers in Yokai Moon

Info

GENRE
Tower defence

FORMAT
PC

DEVELOPER
A.C. Flores

PUBLISHER
A.C. Flores

RELEASE
2019

Yokai Moon isn't quite a sequel, but does act as a follow-up of sorts to one *Moonlight Fortress*, another tower defence game released through itch.io. The newer title maintains the fantastical air of the older one, but moves it from Slavic folklore into the world of Japanese myth. Made by a three-woman team – creative director Abigail Flores, composer and game designer Ashley Rezvani, and narrative designer Samantha Webb – *Yokai Moon*, as the three told us, represents the best of each individual's contribution to the project. Also, it looks pretty nifty, but that's just our editorialising here.

"The aesthetic of *Yokai Moon* draws on multiple different sources, from traditional Ukiyo-e woodblock prints to present-day anime and manga," Flores explains. "Particularly, we wanted to create an inviting, charming world reminiscent of Studio Ghibli's *Spirited Away*. We also love the look and feel of pixel art, so

we looked to turn-based games from Japan to prompt our artistic direction, such as *Final Fantasy IV*, *Disgaea: Hour of Darkness*, and the earlier *Pokémon* games. In this way, the world of *Yokai Moon* became our love letter to the games and the stories that we loved growing up."

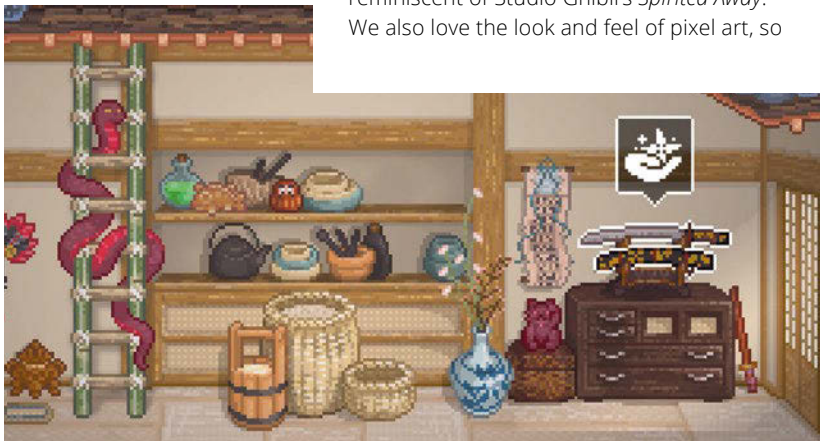
The game is being made using Clickteam Fusion 2.5, the same tool used to make the likes of *Five Nights at Freddy's* and Wireframe favourite, *Baba Is You*. While it's largely gone appreciated by the team, the drawbacks of Clickteam aren't being ignored: "Game development in Clickteam Fusion 2.5 revolves around editing a series of events and so, by nature of the engine, we're constrained to the events that are provided for us," the team explains.

"This means there isn't always a great way of implementing relatively complex features. However, for what we're trying to accomplish, Clickteam Fusion 2.5 has been very useful. The software boasts a lot of depth so it can be quite powerful if you're looking to create any kind of 2D game. For developers seeking to create 3D games, however, it might be best to look elsewhere.

"We think that the best thing about Clickteam Fusion 2.5 is that it's accessible to everyone regardless of their coding knowledge, allowing anyone to sketch out ideas and draft quick prototypes. The logic of the software prepares you to learn code, which is incredibly valuable if you ever want to start learning C# or other programming languages.

"There's also a great community around the engine, so there's always someone out there

♥ Snakes? Yes, but also dogs, so don't worry.





who's willing to answer questions and help you if you're struggling."

And, of course, there's the experience factor – not just for the individuals working on *Yokai Moon*, but through the simple fact *Moonlight Fortress* acted as a smaller-scale test run for the new game. "The greatest lessons we learned by sharing *Moonlight Fortress* online is to never, ever assume anything will be obvious to players and that frequent user-testing is vital to crafting an enjoyable and intuitive game experience," Rezvani says. "For example, even though Abby was certain she had left enough clues, a considerable number of players did not understand how to complete the final task in *Moonlight Fortress*.

As we've worked on *Yokai Moon*, we've made sure to conduct user-testing as much as possible with testers from all backgrounds, and share our work as widely and freely as we can to avoid this scenario happening again."

It feels a bit cynical to hoist it up the flagpole as a defining quality of the game, but this is still an industry dominated – in the mainstream and elsewhere – by a narrow 'type' of developer, and an equally narrow type of game coming from it. As such, *Yokai Moon* coming from a small-but-diverse team of women is worthy of note, even celebration, and it's something those working on the game have appreciated, too: "Personally, I

have enjoyed working with two other intelligent, driven, and talented women and I believe we've cultivated a safe, heartening work culture between the three of us," Rezvani says.

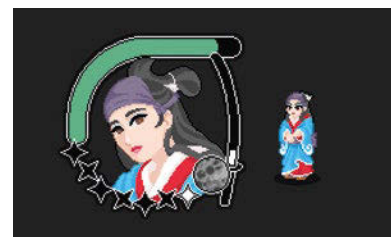
"I think that we have all been gracious and calm about accepting criticisms of each other, and we are respectful of each other and don't interrupt each other. I think the most amazing thing has been the fact that we all recognise each other's strengths and happily let the person with the most expertise take the lead when it would make most sense, without having to defend our own authority. This has made the development process enormously refreshing, and I genuinely believe that it has improved our

game by leagues."

Asking Flores her hopes for *Yokai Moon* leads to an answer beyond the usual 'I hope it doesn't fail' you get for

"Never, ever assume anything will be obvious to players"

questions of this type, again with things coming back to the make-up of the team behind it: "The three of us want to serve as an example that anyone, regardless of their background or experiences, can make games," she explains. "We hope to inspire others to get into game development, cultivate our own little *Yokai Moon* community, and add a bit of happiness to the world." And who can argue with that? 🌙



▶ The game's pixel art evokes the Edo period from which it takes inspiration.

REPRESENT

"I think it's getting better, certainly, but we're still a long way off [from] the representation of women being where it needs to be," Webb tells us when asked about the visibility of women in game dev. "You only have to look on Twitter or other social media platforms to see how women are perceived and treated in the games industry, especially in the dev space. I moved from the tech industry and have only been working in games for just over a year now, and one thing that has given me hope and continued to inspire me is the other women I have met, and who have mentored, supported, and taught me so far. Not least having the privilege to work with Abby and Ashley on this project! The games industry is full of strong, talented, compassionate, and creative women, and non-binary folks as well, and with them all working together I have no doubt we will continue to improve as an industry."

▶ Action is of the turn-based variety.





Zombie Army 4: Dead War

When there's no more room in Hell, the dead will star in a successful multiplayer shooter franchise

Info

GENRE
Horde-'em-up

FORMAT
PC / PS4 / XBO

DEVELOPER
Rebellion
Developments

PUBLISHER
Rebellion
Developments

RELEASE
2020

✓ Our heroes, in all their cartoony, zombie-blasting glory.

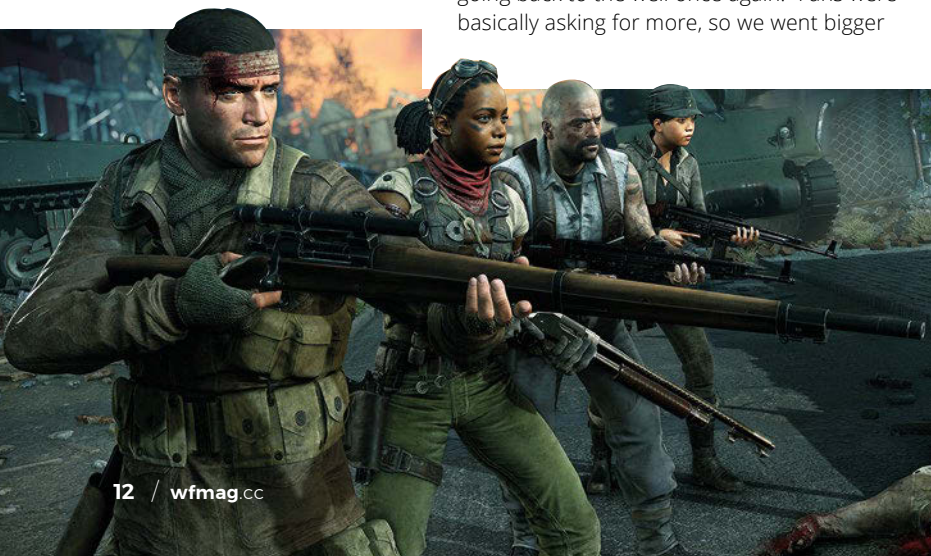
It's still a bit of surprise – especially if you haven't been paying attention to stuff and things – that the *Zombie Army* series is as successful as it is. Seems people can't get enough of the thrill of teaming with up to three other players and battling their way through increasingly difficult waves of zombies. Who are also Nazis. So, a horde mode, but with more questionable application of real-world history. And yet here we are: what began as a bit of a throwaway add-on to *Sniper Elite V2* developed into its own series, became really very successful, and has a full, proper fourth game coming in 2020 with extra bells and whistles to boot. It's the great British indie success story, except the indie in question is a relatively massive one, and the story concerns zombies. Who are also Nazis. Jordan Woodward, lead level designer on *Zombie Army 4*, explains the rationale behind going back to the well once again: "Fans were basically asking for more, so we went bigger

and better in every way. We added options for players, much bigger levels than any *Zombie Army* game we've seen before, a lot more depth, and a lot more storyline with things to discover throughout." Part of the new newness comes in the form of perks and upgrades, with this offering players a broader sense of customisation as they make progress, allowing them to make a character very much their own.

Naturally, this brings up questions of balance – is it something Rebellion has had to focus a lot of effort on? Well, yes and no. "We focus heavily on balance throughout development, we playtest a lot internally, and we balance for one-to-four-player games specifically," Woodward explains. "With the perk system, though, it's more about offering options for the game rather than trying to balance for every single combination – that would have been a gigantic challenge to do. So rather than trying to balance for every single combination, we focused on allowing people to specialise and have fun with the perks system, trying to maximise their gameplay with it."

Another pivot for *Zombie Army 4* is a focus more on the storyline aspect. You're not going to be sat in front of Kojima-level cutscenes taking up eight hours of your time apiece, but there is more of a narrative thread running through the previously mindless slaughter of the hordes. Again, balance is key.

"The story's always there running in the background, so if you're interested in it there's a lot of depth to pick up," Woodward explains. "Or you can focus on the game as just a zombie-





▲ It's safe to say the game's environments owe a fair debt to *Sniper Elite 4*.

killing shooter. It's not something you have to pay attention to, but there's a lot of depth there if that's your thing."

It's all presented with what could potentially be described as 'a bit of swagger'. Rebellion is a confident developer at this point, long removed from the days of the grinding output of a work-for-hire schedule, and the ability for the team to draw from recent successes has proven

another boon to *Zombie Army 4*. "We've looked at what people liked about *Strange Brigade* and *Sniper Elite*, and brought those things across to *Zombie*

Army, like the X-ray kill cams, traps, that sort of thing," Woodward says. "There's also the fact the dev teams from the previous two titles and *Zombie Army Trilogy* have transitioned across to the *Zombie Army 4* team, so a lot of what people learned on *Strange Brigade*, *Sniper Elite 4*, and *ZAT* has trickled down into *Zombie Army 4* as well. That experience comes across in the game."

Powering all of this – and most of Rebellion's output since around 2000 – is the proprietary Asura engine. Rebellion co-founder Jason Kingsley once said that the studio making its own engine 'probably wasn't the best idea at the time', but decades of upgrades, updates, tweaks, and experience (on the dev side) means

the team is now in a position where the burden has become a boon in a big way. "I love Asura as an engine," Woodward says. "I've used a ton of different engines, and Asura is technically really good, as well as being really intuitive for designers... Well, for anyone really, who's used industry-standard engines. Having our own independent engine internally allows us to iterate in a way that suits us and develop the

technology that plays to the strengths of the games we typically make. It's massively paid off. It's competing strongly with a lot of other engines."

"Fans were asking for more, so we went bigger and better in every way"

Of course, making your own entire engine isn't something every indie can actually do – it's not just the actual creation of the tool, but the ability to survive a further couple of decades and be able to improve things as you go.

Rebellion is in the unique position to be able to use Asura at its best, and as such has focused more on the stuff that really matters to those making the games: how it plays. It was evident with *Sniper Elite 4* and *Strange Brigade*, and – so far – it's looking like it might be the case with *Zombie Army 4*, too. 🗨

► Situations like this will arise, consistently, and are often high-pressure fun.



BUT... HOW DOES IT PLAY?

Yeah, it usually helps to tell you this stuff, doesn't it? *Zombie Army 4* plays... well. If you did pick up either *Sniper Elite 4* or *Strange Brigade*, you'll know roughly what to expect – especially if it was the latter you went for. The third-person action is snappy and satisfying, rarely leaving you wanting with navigation, shooting, or even turning tail and legging it from an unexpected swarm of the undead. It's instantly satisfying, and there's no doubt it'll be fun with friends, but the real test will come with those added perks and upgrades: will they alter the balance too much? And will it lead to a false sense of progress, or really bring something solid to the table?

Headlines

from the virtual front



02
03



01. Ubi opens up

Sometimes, a news story comes out and you have to double-check – is this something I've already heard? This is one of those cases: Ubisoft chief Yves Guillemot said the studio will focus more on open-world games in future. Turns out he hadn't said it before, it just felt like he had, given it's an incredibly obvious thing for Ubi – the studio that mainly does open-world games – to do.

Speaking with GI.biz, Guillemot added that he wanted Ubi's games to cater for those not after gigantic 150-hour epics, but that the main focus would be on crafting those gigantic beasts of games which can live on for many years with new content being added along the way.

02. Anti-sale to increase sales

No More Robots chief Mike Rose has publicly stated he thinks indie devs should charge more money for their releases, along with making concerted efforts to build stronger communities around their games. Citing Steam figures, Rose said sales of indie games are around 70% lower year-on-year between 5 July 2018 and 6 August 2019.

"Games released in 2019 are making around half as much money as games released in 2018," Rose said. "Developers are pricing their games too low – higher prices are, on average, resulting in better sales, and much better revenues... It's tricky to pin down [exactly] why this is happening, but the average developer is pricing their game lower, which definitely isn't helping them."

03. Angry, or just...

Huge news from Sony HQ as PlayStation owners around the world were served a diktat from the Japanese platform holder. Turns out we're supposed to be calling it the 'cross' button, not the 'ex' button. Apologies to anyone reading that who wasn't sat down, we should have forewarned you. The claim came from the official PlayStation UK Twitter feed, which named the four face buttons as square, triangle, circle, and cross. Reactions were swift and brutal.

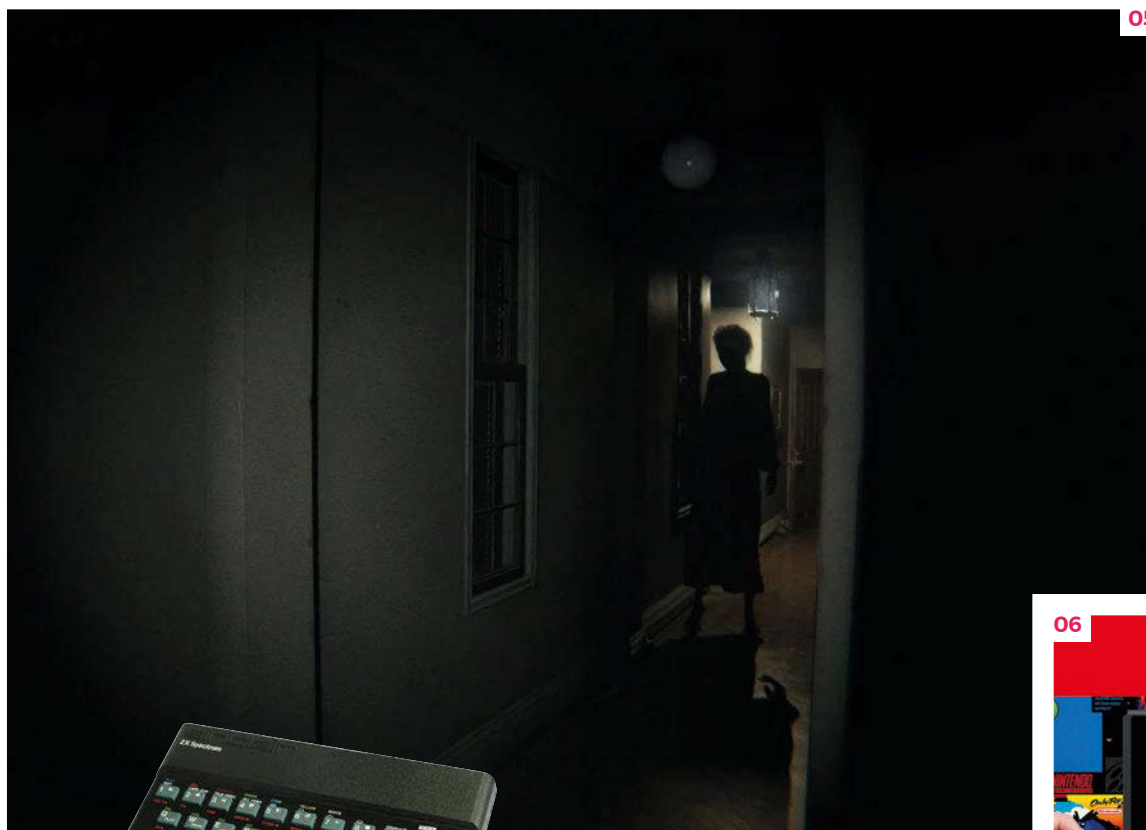
Not long after this vile communiqué was handed down, 168,950 people had voted on a Twitter poll started by PlayStation UK, with 81% of them agreeing it was, in fact, the 'ex' button. No word at the time of writing if PlayStation will bow down to the will of the people and correct its huge mistake.



KFC releases dating sim. Yep



PewDiePie abandons £40k donation to Anti-Defamation League



05

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



04

04. Speccytacular

Aspiring Speccy developers can enter this year's Yandex Retro Games Battle competition, held by Moscow's Yandex Museum. What's the stipulation? Well, you need to make a game for the ZX Spectrum 48K or 128K, it can't use any special peripherals beyond the basics, and... that's about it.

Winners will be awarded cash prizes, and entries are being accepted until 3 December. Though do remember to read the small print: this is not an endorsement of the competition from us – we just think it sounds cool.

wfmag.cc/speccy

05. Spooktacular

In other, spookier news, a crafty hacker (they're all crafty) worked their way through the backend of *P.T.* – Konami's aborted *Silent Hill* proof of concept demo, directed by Hideo Kojima – and discovered a shocking truth doctors didn't want you to know: malevolent spirit Lisa is *behind you the entire time*. Well, except for when she's in front of you, scaring the bejeezus out of you.

Hacker Lance McDonald revealed that Lisa is attached to the player's back, meaning the noises you hear behind you – and the fact you see nothing when engaging in more panic-induced turning – is all down to her actually being right behind you, and not any other trickery. Is that the spookiest development technique ever? Quite possibly.

06



06. Switchtacular

You've probably already seen them, if not played them, but it's still worth pointing out just as it took so long to happen: Nintendo has released a batch of 20 SNES games for the Switch. Huzzah! The selection, included with a Nintendo Online membership, includes rewind functionality and online multiplayer – as well as local, of course. Get on it, if you haven't already.

As well as the obvious big hitters of *Super Mario World*, *Zelda: A Link to the Past*, *F-Zero*, and so on, there are a few outliers such as *Brawl Brothers*, *Super E.D.F. Earth Defense Force*, and *Joe & Mac 2*. Thus proving Nintendo does have a sense of humour.

The Game Awards returns 12 Dec.
It's one big advert, wahey!



Nintendo releasing a ring
peripheral. For 60-odd quid

Preview



Paranoia: Happiness is Mandatory ↗

Based on the 1984 tabletop RPG, *Paranoia* is set in a dystopian future of compliance and double-dealing, with people living constantly in fear of being removed from the population if they're seen – or even perceived – to be working against the desires and guidance of the world's central AI, known as Friend Computer. The video game version takes that premise and sticks pretty close to it, resulting in a tactical RPG where opting for individuality over conformity will lead to all manner of problems. Mainly death.

Depending on how it all comes together, there's a captivating premise in there – unsurprising given it's based on the classic tabletop game. From what we've seen, *Paranoia* plays out as an *XCOM*-alike, bookended with role-playing choice and all that entails. The USP is, of course, played out when you can (“do”) turn on your teammates and dob them in to Friend Computer, giving a boost to your standing in the world and, thus, a higher security clearance to make your way around and explore. Simple, straightforward, honest dishonesty. Hopefully, the game will make us happy by choice, though.

Gold Express ↘

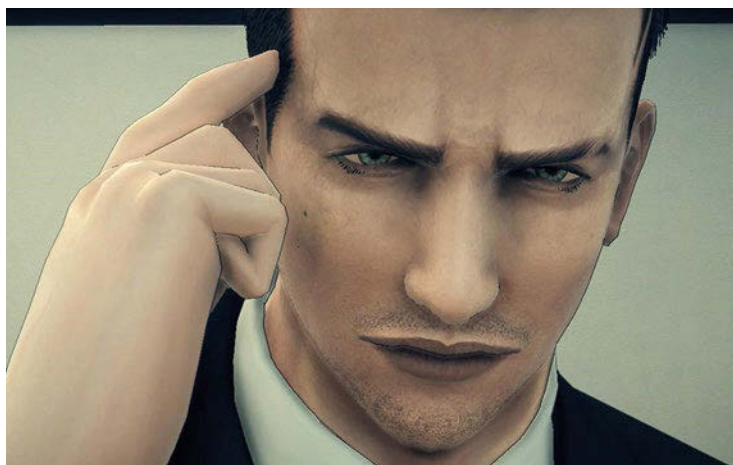
The ever-growing growth of the Chinese dev scene continues its... growth, with *Gold Express* offering some asymmetrical cyberpunk multiplayer action. It's four versus one, with the human team – the four – trying to steal data from the machine team – the one. So think *Evolve*, but with more neon and without the vast expectations burdening it from the get-go. Early Access is launching imminently, and private betas have seen some level of success for the game, mainly in Europe and the US. One to keep half an eye on if you wished *Evolve* was pinker, we'd say.



← Seed

Klang Games' *Seed* is, right now, still in a very early stage. Announced over two years ago, it's playable – we played it – but it's light on content for the time being. All this is set to change, of course, and plans are in motion to make this an innovative, unique MMO coupling organic community-building with a persistent, supermassive game world. Just remember, it's not 'conquering planets', it's 'making them habitable'.





Deadly Premonition 2: A Blessing in Disguise ↗

Just when you thought it was safe to stop washing, thus making a swarm of flies follow you wherever you go, an unexpected sequel appears. *Deadly Premonition 2* is being directed by series creator

Hidetaka "Swery" Suehiro and sees our hero agent York investigating a serial killer in New Orleans. If it's even half as idiosyncratic as the first game, we're in for a treat when this releases on Switch.



Edgar - Bokbok in Boulzac ↗

Look at the screenshot for this one. Now if you said 'That's a cosmic horror point-and-click game full of witty dialogue and with a chicken sidekick', you've been reading our notes. *Edgar* sees the titular outcast venturing into the bright lights of the titular Boulzac, alongside his titular companion Bokbok, as a result of a disaster forcing the move. In the city, where a fire has been burning underground for 800 years, a mystery awaits, and a conspiracy theory is ready to be uncovered. Developer La Poule Noire operates as a co-operative too, which is another thing that has us focusing our laser sights (in a good way) on this one.

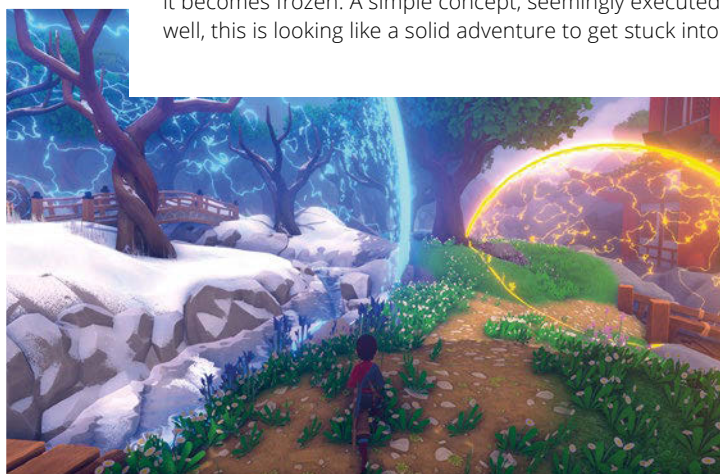
Overwatch ↘

This little-known indie darling is making a move few others have in recent memory: a port to Nintendo's unloved Switch console. Huzzah for false statements! No, but really, *Overwatch* is coming to Switch, that bit's true. How well it'll run is anyone's guess, but we'll find out by 15 October when it releases.



Ary and the Secret of Seasons ↘

The *Zelda* influences are sure to grab your attention, but *Ary's* actual mechanics are worth sticking around to see. The hero's powers include the ability to create spheres containing localised seasons – for example, water becomes traversable with use of winter powers, as it becomes frozen. A simple concept, seemingly executed well, this is looking like a solid adventure to get stuck into.





A SYMPHONY OF SHADOWS

The music of Jesper Kyd

Assassin's Creed II composer Jesper Kyd talks exclusively
about his two-decade-long career

WRITTEN BY MATTHIAS SUNDSTRÖM

for years, Jesper Kyd's work has defined the sound of some of the most popular and recognisable video game franchises. He isn't slowing down, either. *Borderlands 3* marks Kyd's fourth contribution to the popular series, while he's currently hard at work on a series of concerts celebrating ten years of *Assassin's Creed II* and his music for the franchise, which are set to begin this October.

The end of the year will also see the release of an expansive, long-awaited vinyl release of Kyd's much-lauded work on the *Hitman* franchise, spanning his scores from 2000's *Hitman: Codename 47* through to *Hitman: Blood Money*.

Kyd's first foray into music came at an early age, as he regularly wrote original compositions on the family piano. It wasn't until Kyd received a Commodore 64 at the age of 13, however, that he started to realise the full potential that computer technology could have for musical arrangement.

"When the Commodore 64 came around, there was suddenly a way to put all of those arrangements together," he recalls. "You could have a theme, and you could have something arranged around the theme. You

could have a bass line. You could make some percussive

stuff happen... And that was the first time that I felt like I could put everything together into a cohesive piece of music. It was almost like you didn't have to sit and play everything. You could put it in, and then you could sit back and listen to it, and that really fascinated me."

Kyd's curiosity led him to the international demoscene, a computer-art subculture focused on creating collaborative, audio-visual demos. It was here that Kyd met the future founders of IO Interactive, David Guldbrandsen, Karsten Hvidberg, and Jesper Jørgensen, with whom he would later found the game developer Zyrinx, which went on to create *Sub-Terrania* for the Sega Mega Drive.

"THE ONLY BRIEF I WAS REALLY GIVEN WAS THAT THEY WANTED SOMETHING UNIQUE AND ORIGINAL"



▲ Kyd, pictured here in the studio, has crafted scores that have defined the sound of multiple video game franchises for the past two decades.

THE SETUP

Sub-Terrania's success prompted the team to move to America, where they remained for five years, before returning to Copenhagen to establish IO. Kyd, meanwhile, opted to remain in New York to focus on his career, but it wasn't long before IO approached him with the opportunity to work on their very first title – *Hitman: Codename 47*.

"The only brief I was really given was that they wanted something unique and original,"

Kyd recalls. "It was very much a process of creative freedom... I had been working

with these people from the demoscene days, so I had proven myself and they trusted my instincts, so in that respect, it was more about finding out what the DNA of this game is and, as a gamer myself, what would I want this game to sound like?"

Kyd's work on *Hitman: Codename 47* set the bar for stealth scores to come, particularly as the game represented one of the very first examples of truly interactive music. "There was an interactive music system [Direct Music] built into that game, and it was a very challenging programme to work in," says Kyd. "It was almost like a database programme, whereas today you have very creative music programmes ➔"



STAYING POWER

"I like to think that the music, when you listen to it outside of the game, will help draw you back. It's one of those things that's perhaps not talked about much, but I do feel that when I listen to soundtracks, if I listen to the score for *First Blood* by Jerry Goldsmith, one of my favourite scores, I'm like, 'I want to watch that movie again.' And I don't see how that can't happen with games, either... When they come out with a sequel, guess what? You don't need a reminder. It's already in your head."

like Cubase or Pro Tools. Back then, I found this programme was so stifling my creativity that I had to write all of my music outside of the programme and then somehow try to fit it [back in]. That was a big challenge."

When it came to the sequel, *Hitman 2: Silent Assassin*, Kyd faced a new hurdle: the prospect of recording a video game soundtrack with a full symphony orchestra – an idea proposed to him by the CEO of IO Interactive, Janos Flösser.

"Janos was a big orchestral music fan, and he had some connections with the Budapest Symphony Orchestra and Choir, so he had this idea to bring in a fully symphonic score for the second one," Kyd tells us. "I had never written a symphonic score before, so this was just another one of those crazy challenges that seem to happen quite often in my career where I had no idea how to do this, and I'm like, 'Are you sure you have the right guy?'"

Undeterred, Kyd set about immersing himself in orchestral music, which proved to be a formative experience that would go on to shape his composing process today. "I was totally taken aback by the whole experience, so that's something that I added to my palette of sounds and music styles," he muses. "I really appreciate IO Interactive for that. They really helped me connect that interest that I now have

in orchestral music... I ended up being able to blend all of these different music styles together.

"WRITING A SCORE ABOUT MANHATTAN BEING INVADED BY A FOREIGN POWER, IT ALL CONNECTED IN MY HEAD"

[But] just because I am now fascinated with orchestral music, it doesn't mean that I'm going to stop writing electronic music. I don't just move on. I like to keep everything intact, moving forward with all of the different things I do."

Kyd built on this experience with his work on IO's much-loved standalone title, 2003's *Freedom Fighters*. A collaboration with the Hungarian Radio Choir, its score built on the groundwork

laid by *Silent Assassin's* unique sound and was heavily inspired by what was happening in America at the time.

"I remember writing a lot of the music right after 9/11 happened," Kyd recalls. "I was in Europe at the time, trying to get back to Manhattan... It was very difficult to get back, but we were finally able to get back in, and you see this stuff, and you can clearly see how this city just changed overnight... Sitting and having to write a score about Manhattan being invaded by a foreign power, it all kind of connected in my head, and I was able to use a lot of what I was feeling to put into the *Freedom Fighters* score."

THE CLEAN-UP

Hitman: Contracts, the third title in the series, was released in 2004. It saw Kyd experimenting further, shifting away from choral sounds to electronica and something altogether more sinister. "The brief really was how dark this game was going to be," he says. "[Agent] 47 is stuck in a hotel room, wounded, and having these flashbacks of his life while the French police are approaching his apartment. It's a very dark premise. There really is kind of no hope when you're thrown into that world, and that's something that we really wanted the score to reflect."

As the game itself reworked several environments and missions from *Codename 47*, *Contracts* served as an opportunity for Kyd to revisit themes and ideas that he'd been unable to explore due to technical limitations at the time of *Codename 47's* production. "I'd always wanted to go back and create an updated sound of *Codename 47*, so I really wanted to bring in everything that this electronic sound could be for *Hitman*, and that's why I felt that that was my goal."

As Kyd's final entry in the franchise, the soundtrack for *Hitman: Blood Money* served as a culmination of the various palettes that Kyd had been playing with throughout the franchise, blending elements of orchestral and electronic music to create one of his most distinctive scores to date. "I wanted to combine *Contracts'* electronics with the orchestra of *Silent Assassin* to create the ultimate version of what the *Hitman* score should sound like," he says. "When *Blood Money* came around, it was more like, take everything I've learned and find a way to blend them together."



CREED'S DNA

"Ubisoft gave me three key words," says Kyd. "'Tragic', because of the time period; 'war', because there was a lot of war going on back then; and 'mysticism'. 'Mysticism' is something that I really grabbed onto and that became the DNA of my sound for *Assassin's Creed* in general, and the three future *Assassin's Creed* games that I worked on. It really became a big building block."

It was a fusion of genres that few video game composers had dabbled in before, and effectively offered Kyd the chance to write his own rulebook. "At that time, there wasn't a lot of music being written where orchestra and electronics were being blended together," he says. "There weren't a tonne of references out there that I could go and listen to... I felt very much on my own throughout that whole thing and... I think the way I look at it is, I took a lot of risks and a lot of chances, and I had a lot of fun with that. I think that reflects in the music; I really was able to get inside the head of [Agent] 47... It kind of just flowed, because I knew at that point exactly what I was doing."

A NEW SET OF TARGETS

Following the release of *Blood Money*, the *Hitman* series went on hiatus for several years. Kyd didn't return to the franchise again, but he wasn't quite done with the stealth genre. Ubisoft Montreal were already hard at work on a new IP, and it had all the hallmarks of a great Jesper Kyd project written all over it.

"I was pitched this idea in a hotel room at E3," he recalls. "They showed me the concept art, and I was like, 'This is crazy... You can go anywhere in the environment that you want? You can scale buildings?' Nobody had done that before. At that time, the only thing that even came close was *Grand Theft* ➔

▼ The Symphony of the Shadows is a unique concert devoted entirely to Kyd's work from both *Assassin's Creed II* and the entire *Hitman* franchise.

THE SYMPHONY OF THE SHADOWS

OCTOBER 19



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STANDING OUT

"As long as I can keep going to new places, I feel like I have something to offer when it comes to creating something that stands out, or perhaps is a bit more unique... If you ask me to do something I've never done before, I can't tell you what it's going to sound like, but I know I'm going to keep working on this until something interesting happens, and that's what I'm still doing to this day."

▼ Kyd's work shaped and defined the sound of the *Hitman* franchise for more than half a decade.



Auto III, which had just been released... They had just figured out how to take *Grand Theft Auto* and put it in a 3D environment, which to me felt like a bit of a revolution. And so the second revolution, to me, was *Assassin's Creed*."

The rest, of course, is history. The *Assassin's Creed* universe would go on to become Kyd's playground for several years, with him working on four titles from 2007 to 2011, later passing the mantle to a line of successive composers.

As well as building on his stealth-genre roots, the series also granted him an opportunity to experiment with a wealth of environmental challenges and unique play states that had indeed never been seen in a game before, let alone considered from an audio perspective.

"There was so much new stuff happening in this that nobody had ever attempted to do before," he recalls excitedly. "Gameplay elements, such as sitting on a bench, eavesdropping; that needed music. Then the character you eavesdrop on gets up and starts walking off – you have a choice. Do you want to follow him? I had never heard of anyone

writing or doing this kind of stuff for a video game. It just felt so new."

Assassin's Creed's blend of historical settings and contemporary science fiction greatly influenced Kyd's creative process. The Animus, a machine that transplants the player from the present day to the Holy Land during the Third Crusade, played a significant role in shaping the game's sound. "With the Animus, we take everything and make it sound like it's coming through a filter to remind you that you're in some kind of simulator," says Kyd. "That put a spin on everything I wrote."

Scoring the sequences in which the player has to make a hasty exit from the Animus following an assassination also proved to be a huge undertaking, largely because of the way the audio coalesced with the unique visual aspects of the Animus. "Probably the most difficult thing for *Assassin's Creed* was the chase sequences," Kyd recalls. "When you're playing those escape sequences, we really wanted it to feel like the Animus was being pushed to the limit."

IMPROVISING UNDER PRESSURE

When it came to working on *Assassin's Creed II*, Kyd was already well-versed in the art of upping the ante, and the advantages and disadvantages of working on a sequel. "The games industry is one of those rare places where you have a sequel and it's often usually better than the original," he muses. "The sequel is usually where you get to do what you wanted to do, but perhaps didn't get to do previously... There might be some themes that you bring back, but you still have to rewrite those themes to fit with the new storyline or new location, and I often put a lot of pressure on myself when working on a franchise and coming back to a franchise – I always like to explore new areas, and it's not so much outdo myself, but I like to keep trying to explore new things."

One thing that continues to surprise Kyd is the enduring legacy of the game's main theme, *Ezio's Family*, which has gone on to attain a life of its own, both as a recurring motif within the franchise and as a piece of music in its own right. "It's great to see that it's outlived its original purpose," he laughs. "I don't think I could have named that track better, too. It's very much tied to Ezio, but it is also able to transcend its original purpose. When I hear *Ezio's Family* in all these *Assassin's Creed* games, I think more about

the sacrifice that the assassins go through to become who they are. That's what that theme represents to me now when I listen to it."

This year sees the return of the *Borderlands* franchise, the open-world RPG shooter series, which Kyd has scored since its inception in 2009. An entirely different proposition to the likes of *Hitman* and *Assassin's Creed*, the series has evolved since Kyd first came aboard, from a gritty, realistic art style to the cel-shaded look and feel that has come to define it.

UNSETTLED SCORES

"At the time, I hadn't written a tonne of music, so it didn't really affect me in a big way," Kyd recalls. "But it did suddenly become something that looked a little more 'gamey', a little more fun. That's how I see *Borderlands*... It's a good time. And that's something that I really feel *Borderlands 3* represents as well."

The franchise's expansive apocalyptic setting, combined with its RPG elements, also granted Kyd license to experiment with sounds that are led less by a linear narrative and more by the player's own choices. "I very much felt I was given more creative freedom, because there weren't so many restrictions due to all of the little gameplay things you have to play with. It was more like an open world, and I interpreted the different environments and wrote themes for them."

Borderlands 3 has provided Kyd with an opportunity to branch out further with a new music system, which integrates music and interactive elements in exciting ways. "I've had to write music in ways that I've never had to before," he explains. "A lot of the music is constantly evolving and never goes back... The first few music cues were written completely outside of the music system, in order to put all the focus on finding the sound of the score first. Once we had the sound, I started to focus more on making the music work with it... I've really been striving to find what the *Borderlands* sound is and what it represents for me. And I think that, with this one, I've come closer to that than any of the other *Borderlands* games."

For now, Kyd is focused on the upcoming Symphony of the Shadows concert at the Game Music Festival in Poland this October, which celebrates his contributions to both the *Assassin's Creed* and *Hitman* franchises. It follows a series of celebratory concerts marking

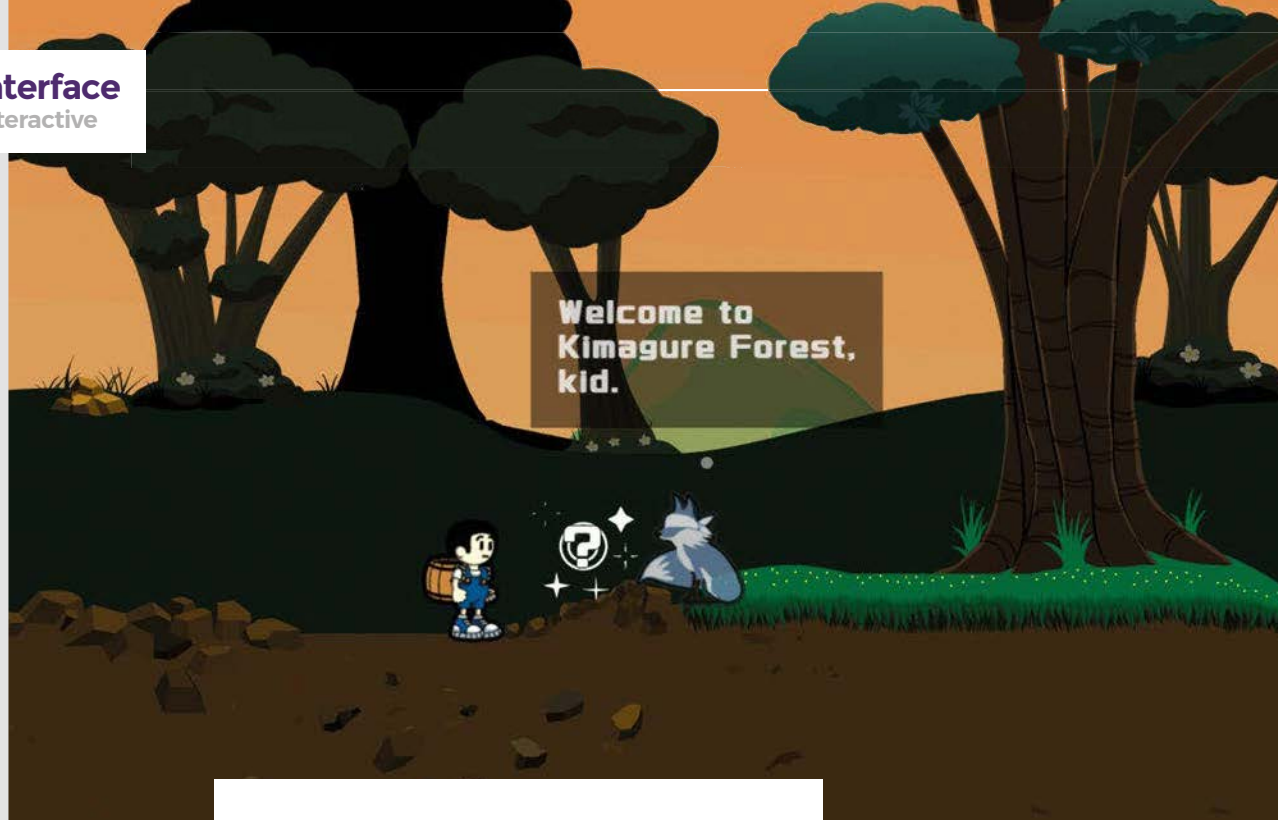
"WHEN YOU'RE PLAYING THOSE ESCAPE SEQUENCES, WE WANTED IT TO FEEL LIKE THE ANIMUS WAS BEING PUSHED TO THE LIMIT"

Assassin's Creed III's tenth anniversary and its enduring musical legacy – something that Kyd is still touched by to this day.

"It's hard to put into words, but it's quite amazing to think something that was written that long ago still remains a type of blueprint," he says. "It's a great thing that the fans and the game players have kept this music alive. The fact that it's out in symphony halls around the world and is being played by orchestras – that is really something that blows my mind." 🎵

▼ The groundwork laid down by Kyd on the first four *Assassin's Creed* games can still be heard in the franchise today.





Interactive

Taru Taro Legends

We chat to the trio of international developers behind a browser-based platformer steeped in Japanese lore

^ You agree to help the enigmatic fox, but can he really be trusted?

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



Character art is drawn with pencil and paper before being traced and refined in Illustrator.



A bit of advice for newcomers: if you're exploring *Taru Taro Legends'* leafy world for the first time, don't do what this hapless writer did, and plough on through the level without taking note of the axe sitting high up in a tree right at the beginning. Without first climbing a bough and grabbing the weapon, you'll be defenceless against the barrage of flying insects, and pretty much guaranteed to die within seconds. Grab the axe, and you discover that the game's world is an awful lot bigger – and friendlier to navigate – than it initially appears.

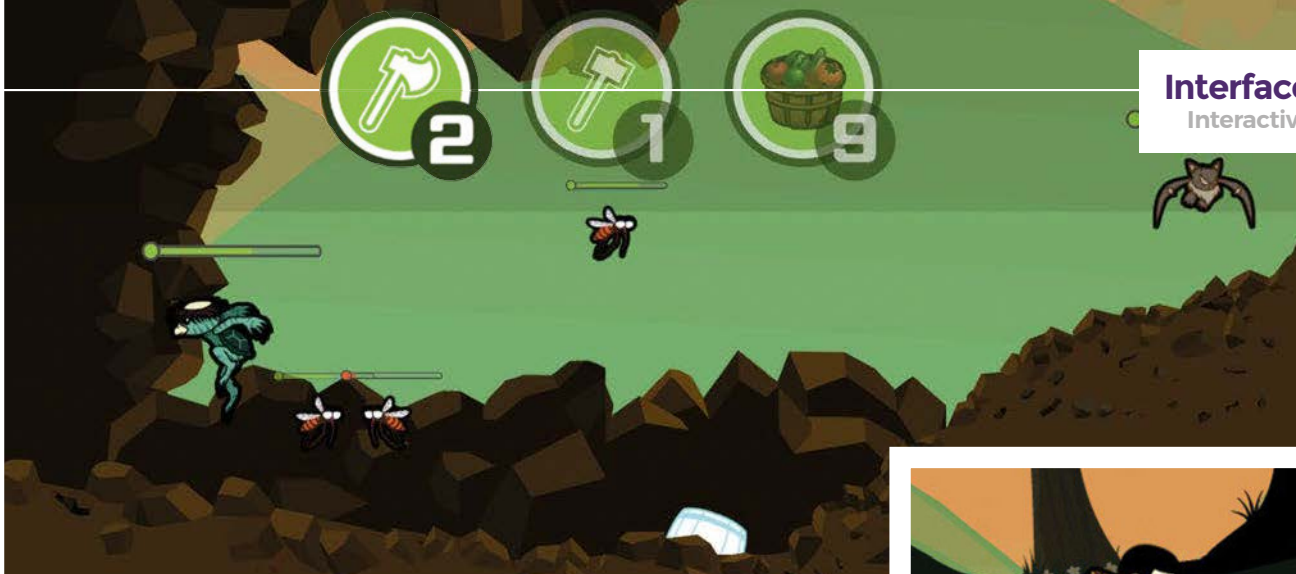
In fairness, browser-based platform adventure *Taru Taro Legends* is still at a relatively early stage of development, and designer Silvan Strübi is already thinking about making the axe a bit easier to spot in later builds. "I watch other people play in front of me as much as possible to see where they're having issues," Strübi says. "For example, most players miss the first weapon placed on the first branch, so we have to consider making it more obvious rather than mysterious."

"Ninja Gaiden, Shinobi, Metal Slug, and Sonic the Hedgehog are all cited as influences"

Axe placement aside, there are plenty of other mysteries left to uncover. As the game starts, its young hero Taro encounters a white fox, who's blindfolded and, thanks to some unknown curse, chained to an empty rice wine barrel. Determined to find his missing friends, Taro agrees to carry the barrel for the fox, and

sets off on his side-scrolling adventure. "The origins and intentions of just who and what the fox is isn't known to the player at the start of the game," Strübi says. "Since the fox needs Taro to carry the barrel, there's a 'who's-helping-who' element that might make players question the fox's motives."

So begins a free-roaming Metroidvania, where you explore the landscape in search of energy-reviving fruit and items you can use to progress. As you've probably gathered by now, *Taru Taro Legends* is steeped in Japanese culture, from the folklore that runs through its story and characters to the arcade games that inspire its action: *Ninja Gaiden*, *Shinobi*, *Metal Slug*, and *Sonic the Hedgehog* are all cited as influences. The small team behind *Taru Taro* are, however, properly global: Strübi once lived in



^ The barrel Taro carries can also be used as a shield to protect him from enemy attacks.

Japan, but is now based in Switzerland; graphic artist Rubén Peña was born in the Dominican Republic and spent his formative years in the US before moving to Osaka; sound designer Troy R Manning is also an Osaka resident, but is originally from Canada. Together, the trio have spent the past three years or so creating their platform adventure in their spare time – or in “the hours between hours,” as Manning memorably puts it.

DESIGN, DEVELOP, DRUM

Each member of the team is an expert in their respective fields – Strübi is a web developer by trade, Manning is a drummer and former hip-hop band member, while Peña’s a freelance designer and illustrator – but none have been involved in making a game before, and so *Taru Taro Legends’* production has also proved to be something of a learning process. Says Strübi: “As this is our first attempt, we often stumble into uncharted territory, making mistakes, learning about game development and the tools we are using as we develop our game. Needless to say, the learning part is the most time-consuming.”

The team have also been careful to tailor the game not only to their skills, but also the resources they have to hand. “At the time we started, there was no Unity for Linux, and at the same time, my home PC was just too slow to run Windows,” Strübi explains. “That left me with HTML5 [game engine] Phaser as the framework. Also, HTML5 games run anywhere – we’re very happy that anybody with a medium-powered device can play our game in their browser.”

“I’ve had to pool every resource available to me,” Manning concurs. “The soundtrack was almost entirely produced on a 1993 Korg X3 workstation that was given to me by a friend who ran a studio in Osaka that went bankrupt. The fox’s voice is my neighbour, who just happens to have a cool Toshiro Mifune kind of voice. Taro’s voice is my five-year-old son.”

For the game’s bold, cartoon-like graphics, meanwhile, Peña sketches out his characters on paper before redrawing and animating them with Adobe Illustrator and Adobe Animate respectively. Mostly, though, *Taru Taro Legends* is developed using open-source software like Tiled – used to build its levels – and p2.js, a 2D physics library that gives the game some unexpected glimmers of realism. It’s possible, for example, to throw an axe straight up in the air to kill a flying enemy – but if you don’t get out of the way, you can easily be injured as the weapon comes tumbling back down to earth. This latter aspect is particularly important to Strübi: “[I like] games which have real-world physics, a sense of reality, or at least reality in their own logic. 2D games where enemies also get wounded by spikes and where enemies could kill each other.”

Work on *Taru Taro Legends* is still ongoing, but the team has big plans for it, whether it’s refining its levels and ironing out bugs, or coming up with new challenges and minigames; their goal is to enter the game in next year’s BitSummit – Japan’s huge annual games expo. Until then, you can freely explore its mystery-filled world for yourself at tarutarolegends.com. Just remember: if you really must throw an axe in the air, be sure to get out of the way before it lands. 🍷

SPOOKY UNDERPINNINGS

Among his inspirations, illustrator Rubén Peña cites *GeGeGe no Kitarō* as a reference point for *Taru Taro Legends’* folklore and character designs. Beginning as a manga series created by Shigeru Mizuki in 1960, *GeGeGe no Kitarō* tells the surreal and often darkly funny tale of a lonely ghost boy – the Kitarō of the title – and his encounters with assorted ghouls and monsters. Widely credited with bringing traditional Japanese legends back into modern consciousness, the manga spawned an astonishing array of animated shows, movies, and video games. Without *Kitarō*, we probably wouldn’t have Level-5’s media-hopping franchise, *Yo-Kai Watch* – or, less memorably, the early NES game, *Ninja Kid*, which began life in Japan as a *GeGeGe no Kitarō* tie-in before its graphics were changed for its release in America.



^ Peña regularly shares his work-in-progress on Twitter. “It’s a good way to give the audience an in-depth look at how our game is made,” he says.

“It’s (not) the Real Thing”



LOTTIE BEVAN

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

“Most people outside of the industry, including gamers, have little to no idea how games are made”

I’ve been playing *Fallout 4*’s Nuka-World DLC. Hoofing it through postapocalyptic with a customised robot companion and shooting raiders in the face has always been fun, but I was surprised to find that Nuka-World, though vast, felt constrictive. It’s a bit like an ocean tuna transported to a nice aquarium that’s chock-full of specially constructed tuna-tainment but where the coral’s all made of plastic. Part of the reason for this, I think, is that Nuka-World is in a separate area from the rest of the game: there’s not much interaction between Nuka-World and the Commonwealth. It got me thinking about partitioning in games, and particularly – as I rummaged through another bin full of clinking, thinly-veiled allegories for corporate America – about the partition between games and real life.

Games are at once very separate and very close to the real world. On one hand, we no longer believe that violent video games encourage actual violence, or that pouring 300 hours into *Final Fantasy XV* has any demonstrable effect other than reducing the amount of time you spend with your friends. On the other, we see games we’ve been bingeing behind our eyelids when we go to sleep. Nuka-World does have something to say about the emptiness of mass-consumerism. And when I visited the Duomo in Florence, the first thing I thought wasn’t how glorious and ineffable the architecture was, but ‘I climbed that bit as Ezio’.

A number of *Black Mirror* episodes highlight the uneasy relationship between games and reality.



▲ *Fallout 4*’s Nuka-World – the scariest fictional theme park since Krustyland.

The dystopian plots usually revolve around the negative possibilities of integrated tech, like the rules of relationships in virtual reality or the dangers of using biotech for a responsive user experience. However, you’re reading an article by possibly the world’s only Google Glass fan. So I’d counter that there is so much positive stuff that comes out of merging games and reality, whether that’s encouraging people to exercise with *Zombies, Run!* or the huge entertainment value in *League of Legends*’ augmented reality opening ceremonies, or just the spicing up of a tedious commute to work on the Tube.

So games seem to be trending towards a more integrated game/reality experience. Oddly, the industry still seems rather separatist. We’re connected to neighbouring industries like film and TV through organisations like BAFTA, but there’s far less overlap than you might expect. Most people outside of the industry, including gamers, have little to no idea how games are made, and most developers know people who Just Don’t Get what the hell we do in our jobs. Operating on our own terms has both good and bad effects: the good is that there’s a lot of new and exciting things going on, while the industry itself is healthy and expanding. The bad is that we don’t yet have the structure to ensure everyone gets treated well, resulting in everything from crunch to low salaries to mistreating each other without much established process to help.

I suspect the industry will follow its tech and become more connected with the wider world. So I wonder what this will do to its products. Will we see our narratives change, focusing on subtle human dramas rather than fantasy playgrounds? Will tech really trend towards wearables, and will AR defeat VR because it integrates rather than partitions the real and the unreal?

I’d guess at least that we’ll see a wider variety of games, as the industry starts incorporating a wider range of influences, with shifting target audiences of complex psychographics rather than ‘RPG fans’ or ‘likes shooters’. Now, though: back to rummaging through bins. 🗑️

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^ Landmarks can help orient the player and give your game a sense of history. Find out more on page 30.



Hamster
It's noon.

^ Make your first visual novel in the free game engine, Ren'Py. See page 36.

The principles of game design

What was the thinking behind the infamous E.T.? Here's the truth, straight from its creator



AUTHOR
HOWARD SCOTT WARSHAW

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

“What were you thinking?” After nearly four decades of talking with people about the *E.T.* video game, this question still rears its ugly head. Usually in close proximity to: “Oh my God, all those pits!”

What was I thinking? Hmm. With your permission, I'd like to settle this once and for all... at least until the next time someone asks. The big thing about *E.T.* was actually the little thing: the schedule. At a time when video games typically took at least six months to develop, I had five weeks to deliver a completed game for a high-profile property.

I usually have time to play around and experiment. Not on this occasion. I need a strategy to get the most results with the least risk. I get one shot and I've got to make it count by allocating my resources wisely. It's a good thing I have a degree in economics.

The first choice is the genre. What kind of game will fit the bill? There are a number of basic game types: combat, racing, action/pattern, puzzle, and sports. Combat, racing and action/pattern games all share the same liability: tuning. They require striking a delicate balance of challenge and reward. This takes lots of time, which I do not have. Puzzle-solving takes time to think up little tricks and nuances and clue planting – time I do not have. And sports games need artificial intelligence to make the computer opponent worth playing, which sucks up most of the development schedule. I need something different.

SHIFTING FOCUS

I shift my thinking, focusing on the basics. At its essence, a game is simply a goal in a specific environment with a set of rules, obstacles, and a well-defined start. What makes a game good? That's easy, a game is good if it's fun to play. Unfortunately, fun is very difficult to define or predict – I just know it when I see it. There are, however, some common themes that good games share.

In my opinion, one significant factor in a game's entertainment value is the relationship of game rules to game possibilities. The best games, the classic games, have the magic balance of few rules and a huge number of possible outcomes. Take Chess for instance, or Backgammon. And the quintessential model for thousands of years, Go. Simple rules, vast horizons.

This formula is especially useful for good video games, because game rules cost



▲ With little more than five weeks to complete the game, Howard spent unfathomably long hours at his workstation.

▼ *E.T.*'s map layout was essentially laid out around a cube – an ingenious idea, but one that had a tendency to confuse players.



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programming time. Fewer and simpler rules are quicker to program. Therefore, I need a game with few rules and a simple environment which combine to create lots of possibilities.

How about a treasure hunt game? The basic treasure hunt game goes something like this: find some treasure. Is this enough treasure? No, get more treasure. When I have enough, take it to the bank and win the game. The game components are simple: pieces of treasure, places to hide them, obstacles to increase the challenge, and some way to use the treasure to win the game. I only have to tune the basic process of finding the treasure and using it. This sounds like something I can make happen in five weeks.

“Fewer and simpler rules are quicker to program”

But meeting the time challenge isn't enough. What about longevity or replayability? I can make the game shorter, but it still has to have legs.

The key feature of the treasure hunt game is the fact you can actually win it. With the exception of Warren Robinett's *Adventure*, most video games of the era had no 'win' condition. Players played until they ran out of lives, trying to set new high scores. It's the How-High-Is-Up model of gaming. This is because most thinking about home game creation was based on the arcade paradigm. Having a win condition makes no sense in an arcade game because you need people to keep pumping quarters into the machine. But home gaming? Not so much.

How do you keep a 'winnable' game fresh? If I can make the basic mechanics of the game enjoyable enough (i.e. finding, collecting, and using treasure), the player will want to do it again after they succeed. Then I randomly redistribute the treasure for another round, and if there are enough hiding places, then the challenge level should be maintained. This could give the game some life.

So how does all this fit with the movie? After all, at some point in the *E.T.* video game design process, I'm going to have to account for the Steven Spielberg film it was meant to be based on.

When I think about the treasure hunt model in the context of the *E.T.* movie, it goes like this:

E.T. assembles a phone from a variety of junk. Once assembled, he uses it to call home. Then he must find a way to evade interfering humans and board the returning ship.

PHONE HOME

It's a beautiful, multilayered structure of quests. Number one: find all the phone pieces hidden in various places (pits). Number two: find the place to call home among all the 'locations' in the world. Number three: find the designated landing zone in the forest (while avoiding the humans) in time to meet the ship.

Three successive treasure hunts, each building on the last. As long as I have enough phone pieces, pits, locations, and zones, the random redistribution each time hopefully creates a challenge fresh enough to motivate the player to try again (particularly if executing the search and rescue feels fun). The player will be E.T. This way, they can have special powers more credibly, and it's probably a more interesting graphic than Elliott. The game practically designs itself. Nothing else to it but generating assets and coding. This could work!

And there you have it. The next time you or someone you know asks what that guy was thinking when he made the *E.T.* video game...

This is what I was thinking. 🗣️

▲ Released to a huge marketing campaign in December 1982, *E.T.* sold well, but reviews were poor, and Atari produced a huge oversupply of cartridges.



Spielberg's Suggestion

When I first presented my design to Steven Spielberg, he suggested I do a *Pac-Man*-like game. I suspect he was thinking about the action sequence near the end of the movie, with Elliott running around town (the maze) and people chasing him (the ghosts). His friends are helping him along the way, and E.T.'s in the basket as a wild card for special powers. It's a perfectly reasonable concept for a video game. I'd considered it initially, but getting something like this programmed and playable at an acceptable level was unlikely to happen in five weeks.

Landmarks and edifices

There's a good reason why King Kong only ever climbed iconic buildings



AUTHOR
KONSTANTINOS DIMOPOULOS

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

Natural Landmarks

Dramatic topographic features, vast ancient forests, and so-called natural monuments such as Mount Fuji, the hills of Rio de Janeiro, Lake Geneva, or the L-shape of the Thames as it crosses central London can function as perfectly memorable landmarks.

Adding natural elements like these to an imaginary city will give it another layer of richness and character, as well as more points to navigate by.

Cities are about the life and societies they contain, but they can sometimes be summed up by their most famous buildings: landmarks that encapsulate local daily life, societal aspirations, historic achievements, and dominant ideologies. These edifices can become iconic, and define a city's character; they're often considered recognisable enough to act as a logo or trademark; as a summary of a city's identity.

The Parthenon and the Athenian Acropolis around it, the Colosseum in Rome, London's Big Ben, New York's Empire State Building, Christ the Redeemer in Rio De Janeiro, and the Forbidden City in Beijing are all synonymous with the cities in which they were built.

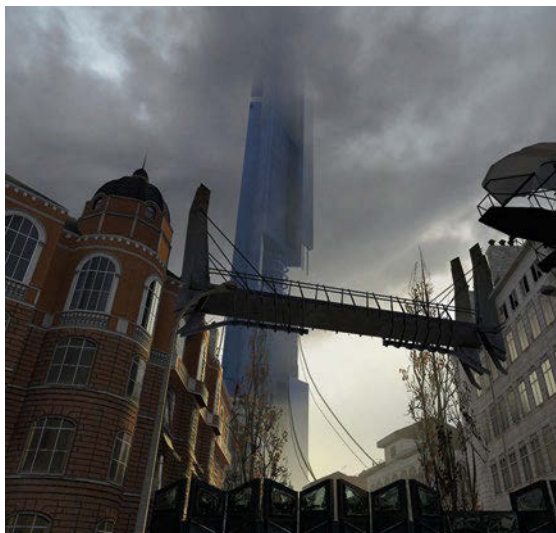
Besides being recognisable, landmarks also tend to function as spatial points of reference. They instantly draw the gaze, and thus become part of the citizens' (or visitors') mental map

of the city and everyday experience. They're handy for navigation, and are often used to provide directions ("The pub's on the left, next to the great tower") or serve as common meeting points. Landmarks can vary greatly in function, shape, size, and even visibility, as their perception is up to a point always subjective – there is, after all, such a thing as a personal landmark. That colourful shop we pass on our daily walk to the office? That's a personal landmark, just like the brightly painted home of an oft-visited friend.

SIGNATURE BUILDINGS

In video games, level design should give players the chance to make personal landmarks, and should also provide recognisable buildings that will serve as the focus for their setting. The latter are the objective landmarks, if you will: the waypoints players can mentally note and use as reference points for other important locations, just as you might remember where a jazz club is in relation to the Empire State Building in real-world Manhattan. These grand landmarks should be important and imposing enough to define an area, or even a whole metropolis.

A landmark gives us a simple way of describing a city. As in real life, they should be recognisable, sport a distinct architectural style, carry some sort of historical significance, and be ideologically important to the city. Like the Eiffel Tower and the Sydney Opera House, and like Perdido Street Station in China Miéville's novel of the same name, such buildings are shorthand for the city itself. See the Space Needle, and you instantly think of Seattle.



> The Citadel in *Half-Life 2*'s City 17 not only establishes who rules the place, but also acts as a clear gameplay goal.



▲ The Brandenburg Gate is often regarded as the symbol of Berlin. Photo by Runner1928.

Though few things last forever, landmarks carry a sense of permanence, even as history changes societies and upsets political realities. Old, usually minor, landmarks are sometimes destroyed, though many societies seem to like claiming some sort of continuity and thus prefer building new ones while preserving the older ones. The Eiffel Tower was a symbol of a new industrial era that no longer needed the old Parisian palaces, just as London's cathedrals gave way – without being destroyed – to vast, iconic train stations and eventually, corporate skyscrapers.

DESIGNING GAME LANDMARKS

So, how do we make an objectively recognisable, memorable landmark for a game city? How can we add gravitas to a virtual edifice? Well, first of all, we must make sure our landmarks fit our world. The weird and unsettling Abattoir of *Pathologic*, the ruined tower in *Destiny's* Last City, and the Combine Citadel of *Half-Life 2's* City 17 are all fine examples. The latter in particular, an out-of-proportion behemoth that is both otherworldly and strikingly new, is more than just the expression of alien dominance on Earth – it's an instant gameplay goal. See it, and you instantly want to reach it. Even after the details of City 17 have faded, the tower lingers in the memory.

Gameplay is therefore a key consideration when designing a landmark. Historical context should be another one, as it greatly influences architectural styles, the building's possible functions, and even placement. A central Gothic cathedral – a place of worship but also social interactions – would be perfect for a burgeoning medieval city, whereas 200 floors of corporate office space will show economic dynamism in a contemporary setting.

“Gameplay is a key consideration when designing a landmark”

▶ *Pathologic 2*: Not all town landmarks have to make immediate sense.



Common characteristics of landmark buildings include their size and scale, significance, and purpose, as well as their defining architecture, which often influences the wider styles of an urban region. A clear, unique form is also important, as is positioning: it's no accident that Florence's Duomo is visible from both near and far away. What's more, buildings are easier to identify when contrasted against their background (the Acropolis against the sky, say, or the Sydney Opera House against the sea), and have been placed in prominent locations such as a great civic axis, a hill, a major junction, or surrounded by open, low-density areas.

Occasionally organising an entire game city around a landmark can thus work wonderfully. The Cathedral at the core of Anor Londo in *Dark Souls* dominates everything around it, and sits at the prominent end of the city's raised promenade (a major axis). It's the heart of the city, the plot, and gameplay, and definitely looks the part. Oh, and do note that emphasising landmarks in games is much easier than in real life. We can give them the backstories and names that will truly make them shine; play epic music when first they come into view; light them to stand out from their environs; and even make the weather part of their very own backdrop. 🌍



▲ Sometimes a single landmark is enough to imply an urban environment. Here's the Super Computer Complex from *Space Quest IV*.

On Monuments

Landmarks don't have to be part of the flows of the contemporary city. They can be, and usually actually are, remnants of a past that exists separately from the city's daily activities. These monuments often describe how a society views itself; they're expressions of cultural heritage, and a constant as life around them evolves. They're often considered worthy of preservation even under extreme conditions such as war.

Game audio part 1: Voices and listeners

An intelligent use of sound can transform how a player interacts with a game. Simon explains all



AUTHOR
SIMON N GOODWIN

Simon N Goodwin has been making games and audio tech professionally since 1979, including twelve years as Codemasters' Principal Audio Programmer.

Decades ago, Apple and ZX Spectrum programmers built up sounds by toggling a single bit of hardware connected to a speaker. My 1983 Spectrum game *Gold Mine* mimics the sound of digging with a one-bit beeper. Imagination was required, and back then, sound generation stalled the CPU. The multichannel sound chips of 1980s consoles and home computers helped out later, by buzzing to order while the processor attended to graphics or gameplay.

These chips played three or four buzzy notes or 'voices' at a time, with crude volume and pitch controls. A 'noise generator' mimicked rough hissing and explosions. Commodore's SID chip sounded superior because it had a filter

to smooth out the jagged clicks. Similar filters are still used to vary the tone of modern game sounds, to hint when the source is distant or partly blocked, mimic concussion, or just add variety.

PRINCIPLES OF SOUND

Sound is a form of vibration. The rate of vibration, measured in cycles per second or Hertz and known as frequency, determines the perceived pitch, with shorter cycles giving higher notes. Intensity, or wave height, determines volume. Vary these parameters fast enough, and any sound can be synthesised. Adding vibrations together creates chords, or the impression of several sounds playing at once.

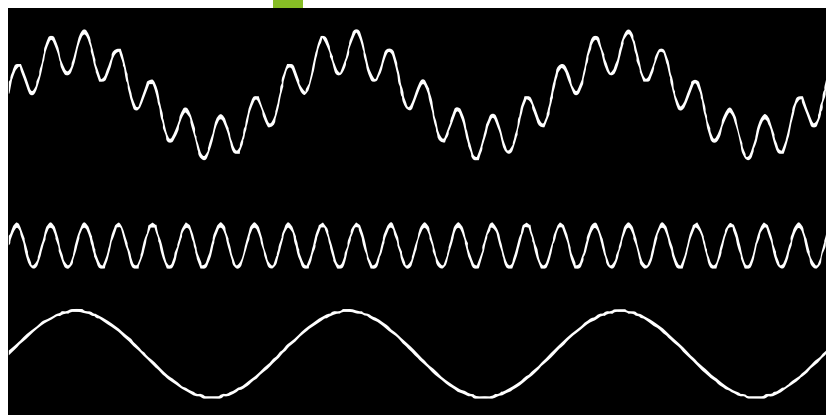
Figure 1 shows a combined wave at the top, and two components, which will be heard as distinct tones three octaves apart, in the lower rows. Electronic or digital filters sift out tones of differing frequencies, though the separation is rarely as precise as shown here.

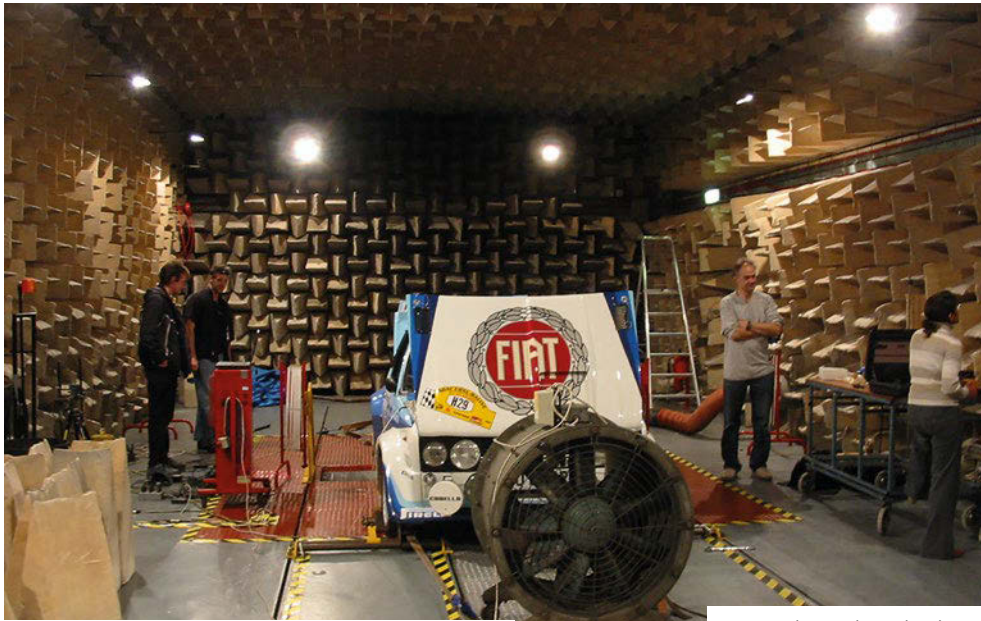
CURVES OF PERCEPTION

Computers measure time and intensity linearly, but brains deal in relative differences. Audio systems and their designers must heed this, or players will get confused.

In **Figure 2**, dark bars represent changes that sound smooth to the ear. Bigger values need bigger changes to give the same apparent interval. The lighter bars are linear to the computer, but the leftmost steps

▼ **Figure 1:** Audio mixing superimposes waves, so we hear two or more distinct sounds from one 'voice', but they all come from the same direction.





▲ Recording engine noises in the anechoic chamber at the Motor Industry Research Association. The massive fan clears out the smoke between takes.

are barely perceptible to humans, and jerky later. Designers favour psychoacoustically weighted units like decibels or semitones, and programmers must understand both. One decibel of change sounds the same amount wherever you start.

Pitch is the logarithmic counterpart to frequency, which doubles across any twelve consecutive piano keys (semitones). Brightness is perceived similarly. Whenever a game models these properties, it needs to follow the human curves rather than the electronic ones, or fades sound unnatural, and players will struggle to determine the direction, distance, and speed of the game objects they're trying to catch or avoid.

“Vary these parameters fast enough, and any sound can be synthesised”

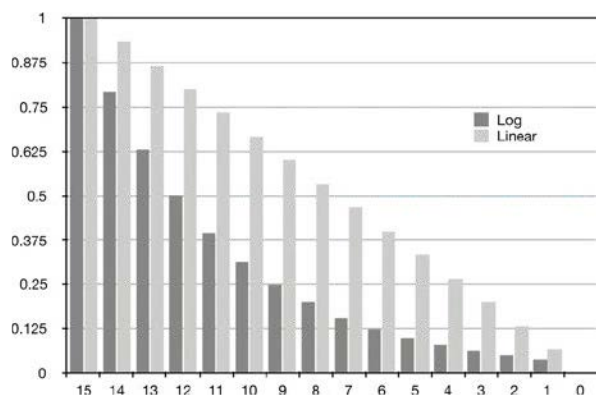
by fiddling with noise and tone controls, and wrapping the lot up in machine code which the game could call 50 or 60 times a second to keep the bleeps coming.

The Commodore Amiga introduced sample replay, then some audio engineers specialised in recording or replay. There were still only four ‘voices’ but they could sound like anything you could spare memory to describe. Any sequence of samples, played at a steady rate, generated a correspondingly shaped waveform. Varying the rate varied the pitch. PC sample replay cards like the Sound Blaster followed suit. ➔

FILTERING FREQUENCIES

Figure 3 shows how filters divvy up sound. Mix the low-pass and high-pass bands to exclude frequencies in the middle, or emphasise the passband component for the opposite effect. Varying the gap width – known as resonance, or sometimes ‘Q’ – selects just the frequencies you wish to catch or lose. Sweeping the centre frequency (fc) of filters applied to output for each ear, rapidly up and down in opposite directions left and right, gives a dizzying effect that makes players think their heads are spinning.

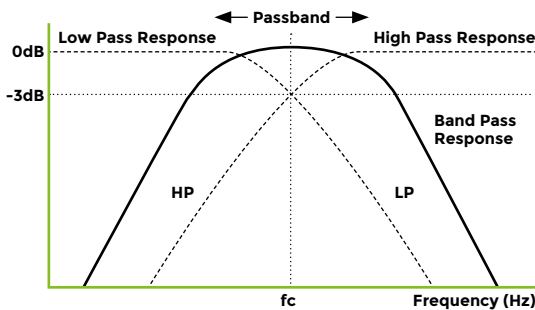
At first, one engineer did all the audio jobs – sequencing music, creating sound effects



◀ Figure 2: Human perception is non-linear, so gains must be multiplied, or decibel attenuations added for mixing to sound realistic.

Toolbox

Game audio part 1: Voices and listeners

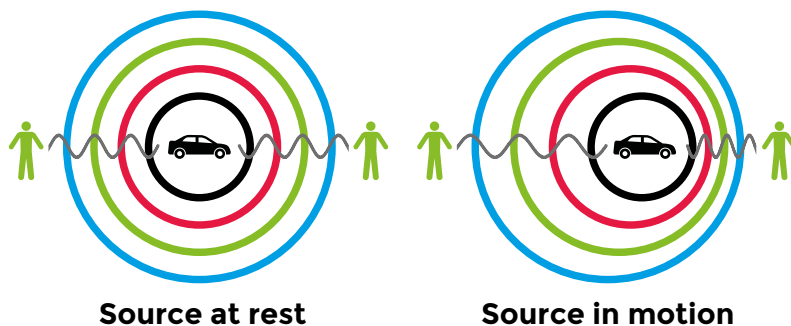


▲ **Figure 3:** Criterion's shooter *Black* indicates the player's health by feeding almost the entire game audio mix through a sweeping resonant filter like this.

FREQ AND RES

The five-knob parametric filter, pioneered by Commodore's C64 SID chip and now common in modern games, splits sounds into three frequency bands – bass on the left, treble on the right. Two more controls set the centre frequency and resonance (or width) of the 'passband' in the middle. Analogue synthesisers label those particularly expressive knobs Freq and Res. Nowadays, the same effect can be achieved with half a dozen lines of C and two static variables per voice, though you do need to run the code over every sample, tens of thousands of times a second.

▼ **Figure 4:** In 1842, Austrian scientist Christian Doppler showed how relative motion affects sound waves: raising their frequency upon approach, lowering it as they recede.



Priority systems allow sound effects to share voices with music. Modern games can mix a hundred or more voices, but still need a designer to help work out which are most

important in a busy game world, with thousands of potential sound sources.

Long samples are played or 'streamed' from disc, or 'looped' to make characteristic sounds of any duration – great for weather, surfaces, and engines, as well as music. Stream mixing allows interactive music, like the eight layers in *Race Driver: Grid* which fade up and down as you overtake, crash, or enter the final lap.

For a decade, triple-A games have routinely juggled thousands of short samples in memory, plus music and ambience streamed from disc, along with perhaps hundreds of thousands of localised speech samples, loaded on the fly.

LISTENERS AND CAMERAS

There are two sorts of sounds in a game: diegetic ones are the sounds of things in the world which you can potentially see, while non-diegetic ones include commentary, radio messages, local ambient sounds like weather, and most sorts of music. Diegetic sources are all positioned, mixed, and played in association with one or more 'listeners' – these are virtual 3D microphones, often associated with the camera position or where it's looking.

A third-person game may associate player-centric sounds with either position. This isn't strictly accurate but sounds natural enough in most games, providing clear direction and distance cues. But weird things happen, audible equivalents of oversteer, if you try to put them

somewhere in-between. Split-screen multiplayer games always require multiple listeners, at least one per screen slice. Their diegetic sounds must usually be played twice – once for each view – to bed them individually into each window in the game world.

For convenience when mixing, and sometimes to give the player extra control, voices get grouped together, so all the speech, music, or ambiances and weather sounds can fade up and down in sets. Changes in camera position also affect the mix, varying exhaust and engine sound levels, helping to distinguish noises inside and outside the vehicle, or those made by the player, or other players.

Figure 5 shows how voices are mixed as groups, then the diegetic ones are positioned via listeners before panning for the appropriate endpoint. Non-positional sounds may be added into the main mix, routed to a secondary output like the Wii U GamePad, or sent directly elsewhere.

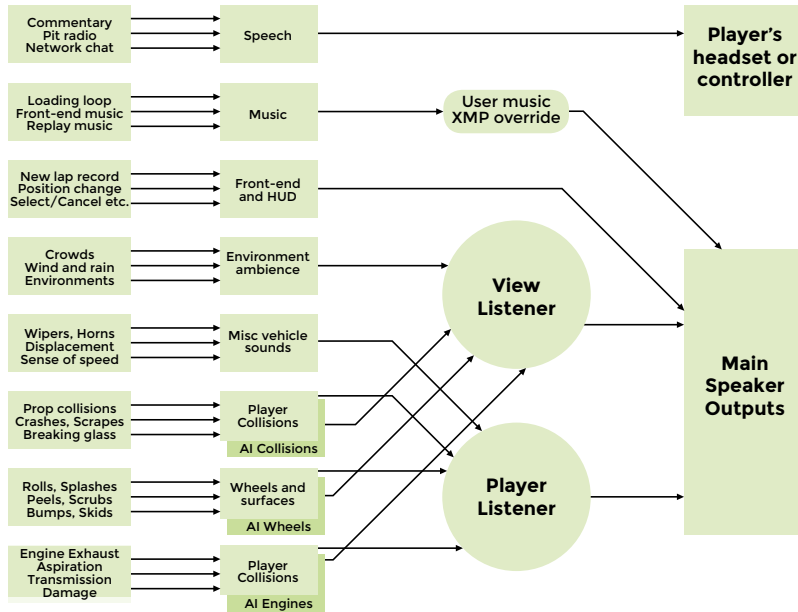
WHERE'S THAT SOUND?

We determine the distance, direction, and movements of sounds around us using a mixture of cues. Distant sounds are quieter, duller, and tend to have more echo. The relative loudness and timbre of sounds reaching each ear give us an idea of their direction in two main ways: time and phase-based up to about 700Hz, or two-thirds of the way up a piano keyboard; and intensity-based at higher frequencies.

This inference is inexact, particularly prone to front/rear confusion, especially in the presence of realistic reverberation. In the real world and VR games, we resolve such ambiguities with small unconscious head movements. Sounds in front move the opposite way to those behind. Camera and listener movements, controlled by a twitch of the thumb, are the equivalent in conventional games, whether played in stereo or surround. The importance of movement and orientation in spatial perception cannot be understated, and the player's control over this and consistency of rendition in the game is critical.

WHERE'S THIS GOING?

We infer motion from both volume and pitch. The crucial 'Doppler effect' is easy to implement by varying the pitch of moving sounds. In a fast-moving game, it means that almost all the



▲ **Figure 5:** Sources, mix-groups, listeners, and outputs soon add up when simulating the sound of a motor race.



▲ **Sound designers periodically drag a bag of cash down to the scrap yard in return for crunchy new impact samples.**

diegetic sounds – other than those on top of the listener – play a bit faster and at a higher pitch when approaching us, and deeper and slower as they recede.

The same principle, on a grander scale, affects the colours of stars in the night sky. Those approaching Earth are shifted to the bluer, higher frequency end of the optical spectrum, while the majority are moving away, causing the so-called redshift.

If we represent sound radiating from a source as concentric ripples, these will be evenly spaced around a stationary source. In **Figure 4**, listeners on either side of the first source hear it at the same pitch. But the second source is moving, so the waves it emits are packed together in front and spaced out behind. The pitch heard depends on which side the listener is.

The ‘correct’ formula depends in principle on the speed of sound and, in practice, also the scale of the game. A few sounds like church bells sound weird if given the ‘correct’ amount of Doppler and need to be scaled down, as we did in *Colin McRae Rally*, to sound realistic. Even when placed in the world, music sources from static radios or PAs sound weird if Doppler-shifted around a fast-moving listener. Remember, it’s a game – prioritise the most

significant sounds and tweak them continuously so the player doesn’t factor them out and can infer useful things from the fluctuations.

Figure 5 shows how sounds are grouped and mixed in racing games, like my *F1*, *Lego Racers*, *DiRT Rally*, and *Race Driver* titles. Other 3D sims, including shooters, sports games, and even physics-based puzzles, use similar categories.

Notice how music and speech are grouped separately. These non-diegetic sounds might have their own volume controls, in the pause

menu. Game music may be overridden by the user’s own – Microsoft’s XMP feature requires this, and it’s easily done on PlayStation and iOS too, though not compulsory. Speech could be routed directly to the player’s headset, as shown, or mixed into the main speakers.

Apart from menu beeps and notifications, in the ‘Front end/HUD’ group, all the other sounds are positioned in 3D, relative to two virtual microphones or ‘listeners’ placed in the game world. Player-centric sounds have their own listener, and equivalents from other players or AI cars are mixed with environmental sounds – local ambience, crowds, and weather – into the View Listener.

In the second part of this article, we’ll consider how sounds are placed and processed so that each gamer gets a custom mix. 🎧

“Modern games can mix a hundred or more voices”

SOUND JOBS

Audio team roles split beyond designers, composers, and programmers to include game trigger, effect, and mixing system programmers, plus full-time specialist designers concentrating on dialogue, location recordings, front-end, ambience, and engine noises. Codemasters has specialists who do nothing but capture engine recordings on location (unless you’re Phil Spector, it’s frowned on to rev motors in the studio) or have a full-time job editing the results, back at the office.



I nudge the fire with a stick. It doesn't do any good though, as the logs just tumble on top of each other, smothering the already pitiful flame.

^ This game tugs at my heartstrings in just the right way. I'm not usually a fan of romance games, but after this, I'm more open to playing them.

A beginner's guide to Ren'Py

Creating a visual novel is a snip thanks to the free engine, Ren'Py. Anna shows you how to get started



AUTHOR ANNA BLACKWELL

Anna Blackwell is a freelance game journalist and hobby game designer in both the digital and tabletop worlds. Check her out at blackwellwrites.com

Interactive fiction is an oft-overlooked genre that hosts some fantastic games in a wide variety of styles, from the world of visual novels to Twine's hyperlink choose-your-own-adventures to Quest's parser format to Multi-User Dungeons. In Wireframe #10, we looked at Twine and how to create your first text adventure using SugarCube or Harlowe.

This time, we're going to take a look at an alternative engine that's free to download and similarly easy to use: Ren'Py.

WHAT IS REN'PY?

Developed by Tom Rothamel and first released in 2004, Ren'Py provides creators with an easy to understand engine that uses text, images, and sounds to create high-quality visual novels.

With a visual scripting language and Python functionality, Ren'Py can be used to create straightforward visual novels or complex simulation games.

In a more direct sense, Ren'Py is the tool behind thousands of visual novels on platforms like Steam, itch.io, Android, and iOS. Its popularity is likely because the software is open source and free for commercial use, easy to grasp for beginners with no coding experience, compatible with PC, Linux, Mac, Android, iOS, and Chrome OS, is frequently updated, and has a large and helpful community.

ENGINE OF CHOICE

If you like visual novels, you'll likely have played a Ren'Py game: high profile titles like *Doki Doki Literature Club!*, *Black Closet*, and *Butterfly*

Soup having been made using it. But Ren'Py isn't restricted to purely visual novels; some developers have used the engine to make text adventures, a *Pipe Dream*-style puzzler, and even hidden object games.

The excellent royalty simulator, *Long Live The Queen*, which tasks you with making choices as the princess Elodie in order to survive long enough to become a monarch, is a great example of a non-standard visual novel. The core mechanic of choosing your classes to improve your various skills, in order to fend off the multitude of attempts on your life, makes for an engaging puzzle. At the same time, choosing where to go after the end of your lessons gives the story some much-needed exploration, and allows you to discover some interesting side stories.

One Night Stand mixes point-and-click investigation with branching dialogue to create an emotional experience in a similar vein to *Gone Home*. Built using Ren'Py and featuring some beautiful rotoscoped animations, *One Night Stand* is a great example of how detailed you can be with your visuals.

Alternatively, you could take the same path as the beautiful romance road trip, *Highway Blossoms*, a straight-up visual novel without any

extra mechanics – the whole experience is a showcase for its sharp writing.

Fair warning to any newcomers, though: itch.io is one of the more popular portals for Ren'Py games, but be aware that itch.io has a lot of adult content, and you'll find a large amount of erotic visual novels on there.

WHAT CAN IT DO?

Ren'Py uses a stage direction style language that lets you write your scenes in a similar format to a screenplay. Even dialogue is easy

to coordinate, with characters' lines and their timing simple to construct with a handful of commands. You can also play video, music,

define characters' positions on the screen, define backgrounds for each location, and even set up minigames within your game by using Python.

Let's start with the basics, though, and jump right in to making our first game.

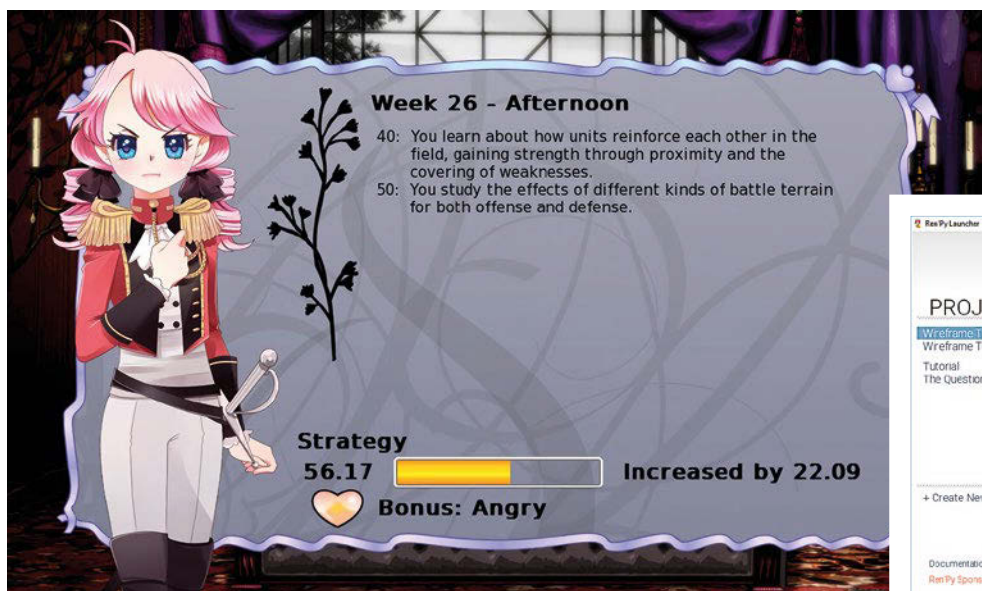
GETTING STARTED

To start making your game, click the +Create New Project button and give your game a name. For this tutorial, I've gone with the genius name 'Wireframe Tutorial Game'. Select an aspect ratio (I've stuck with the default recommended) ➔

“Ren'Py lets you write your scenes in a similar format to a screenplay”

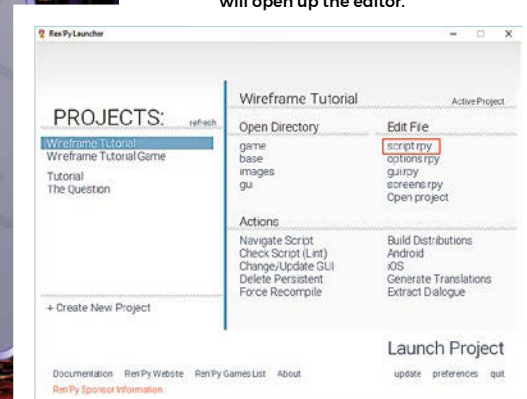
THE BEAUTY OF SIMPLICITY

It can be tempting as a game designer to fall victim to feature creep, especially when your tools suggest all the extra stuff you could add to your game. Don't fall for it. Novels and movies are still going strong thanks to their makers' focus on refining their craft rather than relying on gimmicks. You can make an excellent visual novel without overloading your story with extraneous mechanics.



◀ Leading poor Elodie to the throne is a difficult and dangerous task that I still haven't managed.

✓ **Figure 1:** Whenever you go to work on your game, you'll click Edit Script and Ren'Py will open up the editor.



Toolbox

A beginner's guide to Ren'Py

```
1 # The script of the game goes in this file.
2
3 # Declare characters used by this game. The color argument colorizes the
4 # name of the character.
5
6 define e = Character("Eileen")
7
8
9 # The game starts here.
10
11 label start:
12
13 # Show a background. This uses a placeholder by default, but you can
14 # add a file (named either "bg_room.png" or "bg_room.jpg") to the
15 # images directory to show it.
16
17 scene bg room
18
19 # This shows a character sprite. A placeholder is used, but you can
20 # replace it by adding a file named "eileen happy.png" to the images
21 # directory.
22
23 show eileen happy
24
25 # These display lines of dialogue.
26
27 e "You've created a new Ren'Py game."
28
29 e "Once you add a story, pictures, and music, you can release it to the world!"
30
31 # This ends the game.
32
33 return
34
```

▲ Figure 2: A sample of the commands you'll commonly use in Ren'Py. It's worth keeping a note of these to hand as you're getting started.

```
1 # The script of the game goes in this file.
2
3 # Declare characters used by this game. The color argument colorizes the
4 # name of the character.
5
6 define f = Character("Fox")
7 define h = Character("Hamster")
8
9
10
11 # The game starts here.
12
13 label start:
14     transform fbar:
15         xalign 1.0
16         yalign 0.55
17     transform hbar:
18         xalign 0
19         yalign 0.55
20     scene bg room day
21
22     show fox confused at fbar
23
24     # These display lines of dialogue.
25
26     f "Who?{w} What time is it?"
27
28     show hamster angry at hbar
29
30
31     h "It's noon.{w} You said you would help with this tutorial.{w} Remember?"
32
```

▲ Figure 3: You can define the characters used in your game, and set their positions on the screen, with just a couple of lines of code.

and a colour scheme. Ren'Py will then build your project, and you're almost ready to get started.

Once your project has been created, go over to **script.rpy** and pick a text editor to install (see Figure 1). For this tutorial, I'm using Atom, and Ren'Py recommends you do too. All you need to do is click on the name and Ren'Py will take care of downloading and updating it. Once you have your text editor installed, you should see something along the lines of Figure 2.

“With just these simple functions, you can make a visual novel in Ren'Py”

We'll delete most of this in a second, but it's useful to see how Ren'Py sets itself out. If you want to see this script in action, go back to the Ren'Py launcher and launch your project. In the meantime, let's break down what the commands in the script mean:

Hashtags: These are Atom's way of putting in comments. These lines will not appear in the game and are skipped during compiling.

Define: A way of storing a character or object into an easily called variable. If you're going to be typing your character's name a lot, then you might want to just use their initial as you can see in the green text. You can also use the

define function to determine the colour, sizing, font, and style of a character's name, saving you from setting it every time.

Label start: This tells the game where to start, and with the use of the **jump** command, you can use labels to jump to different sections of your game. For example, you could use labels as a way to allow the player to navigate a world map, jumping to the appropriate location on a click.

Scene: Clears the screen and sets a new background image. You'll likely use this if you're changing location or ending a chapter. 'Bg' is just shorthand for 'background', and 'room' is the name of the image the default game uses. For your own game, I recommend using something more memorable, as 'room' can quickly become ambiguous as your game grows.

Show: Lastly, **show** is the function for displaying characters on the screen. Eileen is the character and Happy is the specific emotion to call. The best format for saving your characters is **'character emotion.jpg'** so Ren'Py can read it correctly.

So, the first step for us is to define our own characters. I've decided to go ahead and use two free-to-use character images – a rather charming fox and hamster duo – that I've downloaded from itch.io.

VISUAL NOVEL DATABASE

Like IndieDB for indie games and IFDB for interactive fiction, visual novels have their own database that lists basically every visual novel ever made. With over 25,000 listed on **vndb.org** at the time of writing, you can be sure you're not going to run out of games to play any time soon.



^ **Figure 4:** You can also change the background of the dialogue bar so that it's opaque and doesn't show off your character's floating torso.

```

24 # These display lines of dialogue.
25 play sound "Confused.mp3"
26 f "wha?(w) What time is it?"
27
28
29
30 show hamster angry at hbar
31
32 h "It's noon.(w) You said you would help with this tutorial.(w) Remember?"
33
34 play sound "Yeah.wav"
35
36 show fox normal at fbar
37 show hamster normal at hbar
38
39 f "I remember!"
40
41 h "Do you want to show them how to play music then?"
42
43 f "That's easy... just like this"
44 play music "fox-song.mp3"
45 f "See!"
46

```

> **Figure 5:** Here you can see how we can use simple commands to play sound effects or pieces of music at specific moments in our game.

You can see how characters are defined and positioned in **Figure 3**, with **f** being our fox and **h** being our hamster. You won't necessarily have to use the **transform** function, but as my character images were a bit shorter than they usually are in visual novels, I've had to place them higher up the screen, so they aren't obscured by the dialogue window. **xalign** sets their position horizontally (0 for left and 1 for right) while **yalign** sets their position vertically (0 for the top of the screen, 1 for the bottom). As I'm just having the characters stay in one position for this tutorial, I've only set two custom locations, but you may want to set more.

The **{w}** tag tells Ren'Py to display the first part of the dialogue then wait for my click to display the rest. And by having **show** after the dialogue, the game waits until it has displayed the dialogue before displaying the hamster. You can see what the results look like in **Figure 4**.

Now let's add some quick sound effects and music. To play sound effects, use the

command **play sound**, and in double quotation marks, follow this with the file name and its extension (see **Figure 5**). The same goes for music – you can see in the example script that I've used **play music "fox-song.mp3"** to set a melody playing between two lines of dialogue. Note that Ren'Py doesn't like spaces in audio file names, so you'll want to get used to including dashes or get really good at coming up with single-word names.

As you can see, I've also included another **show** function for **fox normal** and **hamster normal**, which just shows you how simple it is to change your character images for different emotions within a scene.

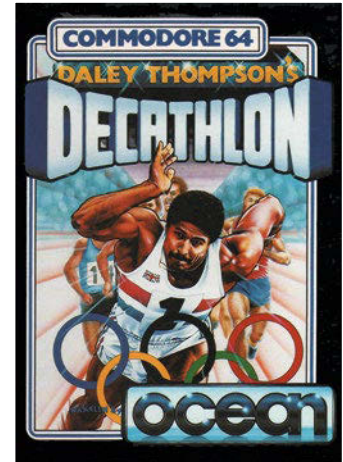
With just these simple functions, you can make a full visual novel in Ren'Py. Even if you can't draw or write a soundtrack, there are tonnes of free-to-use resources out there – incompetech, for example, is an amazing resource for free music. So what are you waiting for? Go and tell your story. 🎧



< **With the goal of discovering what happened or escaping at the right moment, *One Night Stand* creates a very real and tense experience.**



◀ Spurred on by the success of Konami's *Hyper Sports*, Daley Thompson's *Decathlon* featured a wealth of controller-wrecking minigames.



Source Code

SPEED

Make a keyboard-bashing sprint game



AUTHOR
RIK CROSS

Learn how to code a sprinting minigame straight out of Daley Thompson's *Decathlon*

Released in 1984, *Daley Thompson's Decathlon* was a memorable entry in what's sometimes called the 'joystick killer' genre: players competed in sporting events that largely consisted of frantically waggling the controller or battering the keyboard. I'll show you how to create a sprinting game mechanic in Python and Pygame. There are variables in the `Sprinter()` class to keep track of the runner's speed and distance, as well as global constant `ACCELERATION` and `DECELERATION` values to determine the player's changing rate of speed. These numbers are small, as they represent the number of metres per frame that the player accelerates and decelerates. The player increases the sprinter's speed by alternately pressing the left and right arrow keys. This input is handled by the sprinter's `isNextKeyPressed()` method, which returns `True` if the correct key (and only the correct key) is being pressed. A `lastKeyPressed`

variable is used to ensure that keys are pressed alternately. The player also decelerates if no key is being pressed, and this rate of deceleration should be sufficiently smaller than the acceleration to allow the player to pick up enough speed.

For the animation, I used a free sprite called 'The Boy' from gameart2d.com, and made use of a single idle image and 15 run cycle images. The sprinter starts in the idle state, but switches to the run cycle whenever its speed is greater than 0. This is achieved by using `index()` to find the name of the current sprinter image in the `runFrames` list, and setting the current image to the next image in the list (and wrapping back to the first image once the end of the list is reached). We also need the sprinter to move through images in the run cycle at a speed proportional to the sprinter's speed. This is achieved by keeping track of the number of frames the current image has been displayed for (in a variable called `timeOnCurrentFrame`).

To give the illusion of movement, I've added objects that move past the player: there's a finish line and three markers to regularly show the distance travelled. These objects are calculated using the sprinter's `x` position on the screen along with the distance travelled. However, this means that each object is at most only 100 pixels away from the player and therefore seems to move slowly. This can be fixed by using a `SCALE` factor, which is the relationship between metres travelled by the sprinter and pixels on the screen. This means that objects are initially drawn way off to the right of the screen but then travel to the left and move past the sprinter more quickly.

Finally, `startTime` and `finishTime` variables are used to calculate the race time. Both values are initially set to the current time at the start of the race, with `finishTime` being updated as long as the distance travelled is less than 100. Using the time module, the race time can simply be calculated by `finishTime - startTime`. ☺

Download
the code
from GitHub:
[wfmag.cc/
wfmag23](https://wfmag.cc/wfmag23)

Sprinting in Python

Here's Rik's code snippet, which creates a sprinting game in Python. To get it running on your system, you'll first need to install Pygame Zero – you can find full instructions at wfmag.cc/pgzero

```

from time import time

WIDTH = 800
HEIGHT = 300

ACCELERATION = 0.005
DECELERATION = 0.0008
# number of pixels representing 1m
SCALE = 75

# display an image at a specific distance along the track
def displayAt(img, pos, y):
    screen.blit(img, (sprinter.x + (pos * SCALE) - (sprinter.
distance * SCALE), y))

class Sprinter(Actor):
    def __init__(self, **kwargs):
        super().__init__(image='idle', pos=(200,220), **kwargs)
        self.startTime = time()
        self.finishTime = time()
        self.runFrames = ['run' + str(i) for i in range(1,16)]
        self.timeOnCurrentFrame = 0
        self.speed = 0
        self.lastPressed = None
        self.keyPressed = False
        self.distance = 0

    def nextFrame(self):
        # start the running animation if currently idle
        if self.image == 'idle':
            self.image = self.runFrames[0]
        else:
            nextImageIndex = (self.runFrames.index(self.image)
+ 1) % len(self.runFrames)
            self.image = self.runFrames[nextImageIndex]

    def isNextKeyPressed(self):
        if keyboard.left and self.lastPressed is not 'left' and
not keyboard.right:
            self.lastPressed = 'left'
            return True
        if keyboard.right and self.lastPressed is not 'right'
and not keyboard.left:
            self.lastPressed = 'right'
            return True
        return False

    def update(self):
        if self.isNextKeyPressed() and self.distance < 100:
            self.speed = min(self.speed + ACCELERATION, 0.15)
            # decelerate if no key pressed
            else:
                self.speed = max(0, self.speed-DECELERATION)
                # use the sprinter's speed to update the distance
                self.distance += self.speed
                # animate the sprinter in relation to its speed
                self.timeOnCurrentFrame += 1
                if self.speed > 0 and self.timeOnCurrentFrame > 10 -
(self.speed * 75):
                    self.timeOnCurrentFrame = 0
                    self.nextFrame()
                # set to idle animation if not moving
                if self.speed <= 0:
                    self.image = 'idle'

sprinter = Sprinter()

def update():
    # move and animate the sprinter
    sprinter.update()
    # add to the finish time if race is still in progress
    if sprinter.distance < 100:
        sprinter.finishTime = time()

def draw():
    screen.clear()
    # draw the track
    screen.blit('track', (0,0))
    # draw distance markers and finish line
    displayAt('25m', 25, 200)
    displayAt('50m', 50, 200)
    displayAt('75m', 75, 200)
    displayAt('finishline', 100, 230)
    # draw the sprinter
    sprinter.draw()
    # draw the current distance and time
    screen.draw.text('Distance (m): ' + str(int(min(100,
sprinter.distance))), (20, 20), fontsize=32, color="white")
    screen.draw.text('Time (s): ' + str(round(sprinter.
finishTime - sprinter.startTime, 2)), (250, 20), fontsize=32,
color="white")

```

✓ Press the left and right arrow keys alternately to increase the sprinter's speed. Objects move across the screen from right to left to give the illusion of sprinter movement.



Directory

Telling stories with Shaun the Sheep

Code Club is running an exclusive Shaun the Sheep competition in collaboration with Aardman Animations

GET INVOLVED

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

Code Club is a worldwide network of free teacher- and volunteer-led coding clubs for young people, and it's part of the Raspberry Pi family. The Code Club team is currently collaborating with Aardman Animations, the studio behind the *Shaun the Sheep* series/movies, to bring an exclusive coding competition to more than 13,000 clubs around the world. To mark the release of *A Shaun the Sheep Movie: Farmageddon*, Code Club members are getting the chance to use Scratch to tell a story about Shaun and his new friend Lu-La, and to maybe win a prize for their digital creation. To enter, young learners create a Scratch animation based on a ready-made project guide provided by Code Club and images provided by Aardman Animations.

From beginner to advanced

The competition is accessible to all learners, regardless of their coding knowledge, and entries will be judged on their creativity and storytelling as well as the quality of their code. Code Club's Shaun the Sheep: Mission to Space project guide

teaches learners to create an animation by using repetition to move sprites around the screen. It's a suitable project for beginners, and more advanced

learners can easily expand on it to challenge themselves. In addition, entrants will be judged in one of two age categories: 11 and under, or 12 and above. This way, judges can fairly compare entries of learners with similar literacy and numeracy skills. To help learners who aren't fluent in English to participate, the project guide is available in eight languages.

The competition's open exclusively to registered Code Clubs across the world. If you're interested in starting a Code Club in your community, register to get involved. Visit codeclub.org if you're based in the UK, USA or Republic of Ireland, or to codeclubworld.org to start a club in the rest of the world.



> In Code Club's competition, children use Scratch to tell a story about Shaun and his new friend Lu-La. The closing date for entries is 25 October 2019.





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How virtual vending machines make us feel at home in video games

WRITTEN BY JESS MORRISSETTE

W

hether it's Grog in *The Secret of Monkey Island*, Nuka-Cola from the *Fallout* series, or Juicy Raccoon in *Resident*

Evil 3, if you've spent much time playing video games, you've likely encountered a virtual soda machine or two in your adventures. Some are interactive and dispense drinks or power-ups; others are merely decorative. Some are destructible, showering the player in cans or coins when smashed; others are impervious to assault. If you happen to be playing *Deus Ex: Human Revolution*, some can even be telekinetically lifted into the air and hurled at your enemies, crushing them with refreshment.

I've thought a lot about drinks machines and where they fit more broadly into game design since I launched The Video Game Soda Machine Project in 2016. The project, like all the best ideas, started out as a joke. I tweeted a screenshot of a Sprinkle Fizz drink machine from *Batman: Arkham Knight* and suggested someone should compile a list of similar machines from other games. That someone became me. The collection, housed at vgsmpproject.com, has since grown to include screenshots of more than 3000 drinks machines, spanning every major platform and genre. If you vaguely recall seeing a vending machine in the final level of an obscure Game Boy Advance title you played in 2002, there's a decent chance it's already archived at The Video Game Soda Machine Project.



▲ *Mega Man Legends* originally featured product placement for the Japanese energy drink Oronamin C, cited by fans as a possible explanation for why the game isn't available for modern consoles.

As my peculiar collection grew, I started to reflect on what these machines do in terms of game design, what they mean, and why they appear so frequently throughout the history of the medium. After all, it's not as if they appeared at random in our favourite games; developers made conscious design choices to include them, presumably with a sense of purpose that varied from one context to another. My goal here is to explore the roles these drinks machines play in game design, suggesting that one of their most critical functions is to help us feel grounded and at home in the virtual worlds of video games.

Product placement and advergames

Perhaps the most obvious role virtual vending machines can play is as a form of product placement for real-world beverages. Memorable examples include Coca-Cola machines in the original Japanese release of *Shenmue*, Powerade machines in *Tony Hawk's American Wasteland*, and SoBe machines in *Oddworld: Munch's Oddysee*. In-game advertising has grown into a multibillion-dollar industry in recent years, and placement deals to feature familiar brands can obviously help underwrite the rising costs of game development.

In other cases, beverage companies themselves have commissioned 'advergames' to showcase their brands. The PlayStation curiosity *Pepsiman* has achieved almost legendary status in



CATCH-A-COKE

The earliest known video game soda machine appeared on screen in 1983's *Catch-A-Coke*, part of the backdrop in a game that involved a delivery man catching soda cans thrown by a monkey perched in a coconut tree. The simple LCD game was mounted on actual Coca-Cola vending machines, and customers could play a short round while they waited for their drinks to dispense. Coke later partnered with Bandai Electronics to produce a handheld version of *Catch-A-Coke* to distribute to its sales team.



gaming circles, while 1998's *Mr. Pibb: The 3D Interactive Game* invites players to chug large quantities of Mr. Pibb and vanquish zombies with the ensuing burps. Nevertheless, instances of product placement – perhaps surprisingly – represent only a small fraction of the drinks machines present in games. Players are far more likely to encounter an ersatz Loco-Cola or Bepsi machine than, to borrow from an old Coke slogan, the real thing.

Design purposes

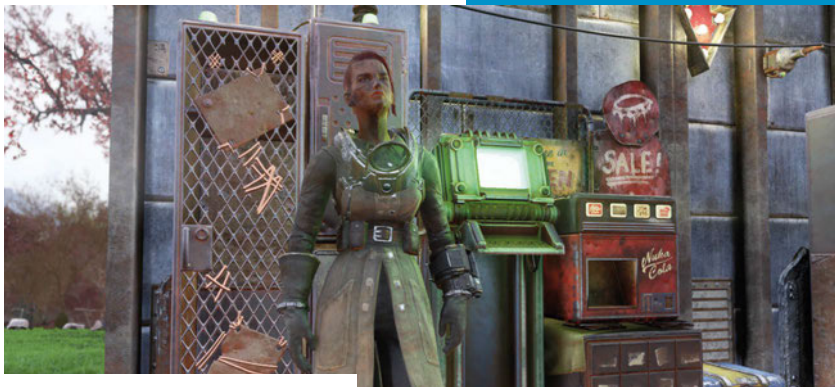
Moving beyond these commercial concerns to matters of design, drinks machines can also contribute significantly to a game's overall look and feel. A well-placed drinks machine, for instance, can add variety and a pop of colour in an otherwise drab setting.

The aforementioned Sprinkle Fizz machine in *Arkham Knight* stands out because it's a brightly lit cotton-candy pink and blue anomaly in the gloomy streets of Gotham City. The flickering light from a drinks machine in a shadowy corridor not only adds dramatic tension to survival horror games like *Silent Hill* and *Resident Evil*, but it can also serve as a visual waypoint to guide players through a level. From a practical standpoint, it's worth noting that the simple geometry of vending machines makes them relatively easy to implement in both 2D and 3D environments. *Pokémon Red* and *Blue* for the original Game Boy serve as illustrative examples of how a few monochrome pixels can effectively communicate the idea of a drinks machine to players.

Additionally, developers have worked soda machines into gameplay in a myriad ➔

IS PEPSI OKAY?

In 2006, al-Qaeda's propaganda wing released a first-person shooter titled *Quest for Bush* (also known as *Night of Bush Capturing*). Intended as a recruiting tool, the game casts players as an al-Qaeda operative carrying out a campaign of violence against American foes. While infiltrating a military base in an early mission, players encounter a lone Pepsi machine. Whether this is intended as a sly critique of western consumerism or simply an attempt to create a more realistic setting is left to the player to decide.



▲ When Bethesda added player-controlled vending machines to *Fallout 76*, a vibrant economy sprang up around them, selling everything from weapons to armour to (of course) Nuka-Cola.

of ways. The most common is as a means of dispensing health or power-ups to players in the form of beverages. For example, arcade brawler *Two Crude* (or *Crude Buster* in Japan) offers players the chance to punch a Power Cola machine at the end of each level to replenish their health bars. Downing a Nuka-Cola from a machine in the *Fallout* series similarly restores the player's health, albeit with the potential risk of addiction or even radiation exposure. Perk-a-Colas from the *Call of Duty* series bestow a wide range of power-ups on players, including faster reload time, increased fire rate, and immunity from falling damage. Other titles have employed drinks machines as save points (*City Shrouded in Shadow*), interior décor (*The Sims*), and masquerading as extraterrestrial enemies (*Alien Storm*).

In some instances, designers have even leveraged vending machines as storytelling devices. A soda machine serves as the setting for *Do Not Fall*; the entirety of the game's platforming action takes place inside a drinks machine. In *NightCry*, a survival horror adventure, one of the first hints of the terror that lies ahead is when a drink machine gruesomely devours a supporting character during an early cutscene. In an eminently meme-able moment from the original *Deus Ex*, the player overhears a conversation between two NPCs, Anna Navarre and Gunther Hermann, about what Gunther suspects is a secret plot to deprive him of his preferred orange drink from the breakroom machine at UNATCO headquarters. This incidental back-and-forth offers important characterisation, establishing Anna as the pragmatic voice



THE LOST MACHINES

One of the fundamental challenges of preserving video game history – including collecting virtual drinks machines – is tracking down content from games that are simply no longer available. This includes instances where companies have shut down the official servers of once-popular online games. Thanks to ongoing fan efforts to keep these games alive, The Video Game Soda Machine Project has catalogued 'lost' vending machines from several defunct MMOs, including *The Matrix Online*, *City of Heroes*, and *The Sims Online*.



▲ Inflict additional damage on your opponents by body-slaming them into a backstage vending machine in *WWE SmackDown vs. Raw 2011*.

of reason and Gunther as stubborn and conspiracy-minded.

Virtual soda machines also represent opportunities to inject humour into games. Why drink Mountain Dew when you can enjoy parodies like Fountain View (*Hitman*) or Mountain Screw (*Rise of the Triad*) instead? Sure, it might be difficult to track down a proper pixelated Dr Pepper, but *F.E.A.R. 2* has you covered with its spoofy Professor Doctor machines. Soda machines can also aim for satire with brand names like the "deliciously infectious" eCola from *Grand Theft Auto* and *Halo 2: Anniversary's* straight-to-the-point Sugar Water machine.

Presence and 'being there'

Taken as a whole, the roles played by drinks machines in game design contribute to an overall sense of what scholars call 'presence' – the sense of 'being there' in a virtual environment. Drinks machines, and any number of other otherwise mundane environmental objects, help make game worlds feel more natural, real, and complete. In other words, these machines serve as familiar, predictable objects that connect gaming environments to players' actual lives.

After all, drinks machines are a fixture of everyday life in many countries – particularly in Japan and the United States, which are major centres of the games industry. A drinks machine in the background of a subway platform in *Metro Exodus* not only makes the setting feel more authentic, but it's also an object that's

instantly recognisable to players. They know what a drinks machine is, and they can anticipate a range of likely interactions with it. As a result, they feel present in the space. Whether players consciously realise it or not, familiar environmental objects help ground them in a place that feels like home. It should come as no surprise that nearly every game in *The Sims* franchise has allowed players to decorate their virtual homes with a variety of vending machines. This is particularly important, however, in more fantastical settings. The voodoo-infused piratical backdrop of Mélé Island in *The Secret of Monkey Island* or *Mass Effect*'s futuristic Citadel space station are undoubtedly strange places, but the drinks machines in these environments serve as subtle, yet meaningful, points of connection to orient unmoored players.

Of course, that's not to suggest drinks machines are the only environmental objects that can create a sense of presence in games – or, for that matter, even the most common examples. Trash cans, lamp posts, and any number of other unremarkable objects can help accomplish the same immersive ends. Rather, The Video Game Soda Machine Project's ever-growing collection simply suggests that developers have frequently fallen back on soda machines to perform this role.

Welcome to Nuka-Cola World

If soda machines are such effective tools for making virtual worlds feel like the real world, what does that say about the real world? It's difficult to discuss soda machines in this context without thinking of them as reflections of modern consumerism. Actual soda machines and the drinks they dispense epitomise several facets of consumer culture – advertising, brand affinity, impulse purchasing, and disposability for starters. Virtual drinks machines take this a step further by offering a commodity with even more dubious value than carbonated sugar water: a collection of pixels representing a beverage.

It's perhaps telling that game environments only seem 'real' to us inasmuch as they reproduce the signifiers



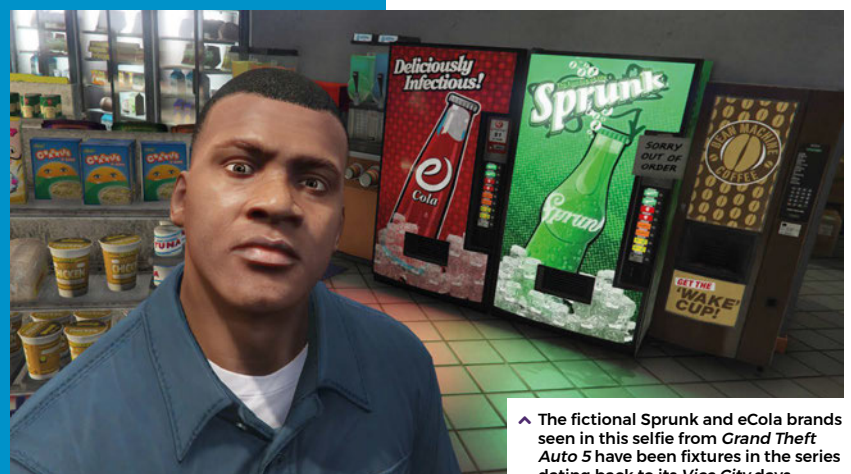
KEEP IT REAL

Deus Ex: Mankind Divided is a prime example of how designers can use environmental objects to advance a game's themes. *Mankind Divided* depicts a world teetering on the brink of conflict between cybernetically augmented humans and their baseline counterparts. Early on, players encounter drinks machines with provocative slogans like, "They may have batteries, but we got this" and "Machines cannot taste, but your tongue does. Keep it real." These vending machines help build the world of *Mankind Divided* by driving home just how pervasive this social division is – so much so that it has even seeped into beverage advertising.

of a consumer culture that surrounds gamers on a daily basis. Players can easily suspend disbelief when it comes to games featuring dragons, zombies, superheroes, and blue hedgehogs in tennis shoes. But a world without capitalism? That's a pretty big stretch.

To quote Sierra Petrovita, a soda-obsessed supporting character from the *Fallout* series, "I guess sometimes I just take this Nuka-Cola stuff so seriously!" In fairness, sometimes a soda machine is just a soda machine. Still, while virtual vending machines and other environmental objects have the design potential to create an immersive sense of presence and realism in game environments, it's important to note that these artefacts also come embedded with meanings.

Exploring these values not only holds the potential to tell us more about the games we play, but also about ourselves and the world in which we live. 🗨️



▲ The fictional Sprunk and eCola brands seen in this selfie from *Grand Theft Auto 5* have been fixtures in the series dating back to its *Vice City* days.



Libble Rabble

Astral Chain's link to the past

With their “synergetic action game” *Astral Chain*, PlatinumGames harked back to an obscure relic from Namco’s archives

^ With its Motorola 68000 processor, the *Libble Rabble* arcade machine could display far more enemies on the screen than *Pac-Man*.

v *Libble Rabble*'s arcade flyer attempts to explain its array of rules. 'Bashishi' is the game's name for the stretchy elastic.



Astral Chain's opening hours throw so much at the screen that it almost feels a bit overwhelming at first. It's a third-person brawler. No wait, it's also a kind of detective game. It's a monster-hunting-and-catching RPG, like *Pokémon* but with the stylings of *The Guyver*. There are also puzzles, elements of sci-fi, fantasy, and general anime strangeness, including a police officer who provides advice while dressed as a big canine mascot named Lappy.

Like *Nier: Automata* before it, *Astral Chain* has the feel of a game where its creators at PlatinumGames have allowed their imaginations to run riot. But while director Takahisa Taura's game feels like a bewildering melange at first, it soon snaps into focus thanks to the coherence of its world – where the notion of cops fighting crime with the help of a supernatural being on a leash actually feels plausible – and some rock-solid design principles. *Astral Chain*'s action essentially boils down to a kind of co-operative mode, except with the player controlling both central characters; as a skilled member of a special police task force named Neuron, you can freely move and attack, and by pressing and holding the left trigger,

you can move your monster – or Legion – around the battlefield to fight enemies.

If your Legion's close to an enemy, it'll start fighting it, but by manipulating the astral chain that connects it, you can perform special attacks and even use the chain itself to wrap up and ensnare enemies. This latter technique soon becomes a useful tactic, since it prevents foes from fighting back as you and your monster

partner finish it off with a killer blow, or switch your focus to another enemy.

This chain attack also has an interesting origin: in a June interview with

“On occasions, a chiptune rendition of Mendelssohn's Wedding March would play”

Polygon, director Takahisa Taura revealed, in an almost casual aside, that the mechanic was directly inspired by a little-known Namco game from the early eighties. “Now that we've got a chain between these two characters, we decided to use that within the gameplay,” Taura explained. “Whether that's using that chain to wrap up enemy characters, or pulling it tight to trip them, at the time of development we kept putting out ideas like that to better-use the chain. I don't know if you know about this, but this is an old arcade game that we were influenced by called *Libble Rabble*.”



Released in 1983, *Libble Rabble* was an arcade action game created by design genius Toru Iwatani – the creator of *Pac-Man*, as well as another of Namco's golden-age money-spinners, *Pole Position*. Like *Pac-Man* before it, *Libble Rabble* was a bright and cheerful romp that emphasised timing and precision. It placed the player in control of two characters at once – the arrow-shaped Libble and Rabble of the title – which could be moved independently with their own separate joystick. The aim was to draw polygonal shapes around enemies to trap them; this was achieved by stretching what felt like an elastic vector line around fixed points on the play area. Think of pulling a rubber band around a handful of nails hammered into a piece of wood, and you'll get the idea.

SURROUNDED

In designing *Libble Rabble*, Iwatani once said he based the game around a one-word concept – “Surround” – and at first glance, his idea simply looks like a more whimsical mid-point between his own *Pac-Man* and Taito's much earlier coin-op, *Qix*, which also involved drawing shapes to score points. The twin-joystick controls, however, make *Libble Rabble* a completely different kind of experience: unlike *Pac-Man* and *Qix*, *Libble Rabble* needs considerable practice to get to grips with, since you're effectively having to coordinate the movements of two objects at once, while at the



▼ *Libble Rabble's* difficulty curve isn't helped by the sheer number of enemies and rules it throws at the screen from the beginning.

same time manoeuvring the connective elastic to ensnare and destroy enemies. There are other rules and ideas to wrap your head around too, including hidden treasure chests, an ever-decreasing energy bar, big-mouthed enemies capable of munching through your elastic, and goblin-like critters that show up if you take too long to complete a stage. On occasions, a chiptune rendition of Felix Mendelssohn's *Wedding March* would start to play. *Libble Rabble* is such an eccentric game that it's hard to imagine Iwatani would've been given the chance to make it without the success of *Pac-Man* behind him; certainly, its complicated controls counted against it in the competitive world of eighties arcades.

“It was an interesting game, but unpopular because it was so hard to play,” Iwatani admitted in a 2010 interview with *Wired*. “You used joysticks on the left- and right-hand sides to control two arrows on the screen, but when they crossed over each other, the right hand was controlling what was going on on the left side of the screen, like a mirror.”

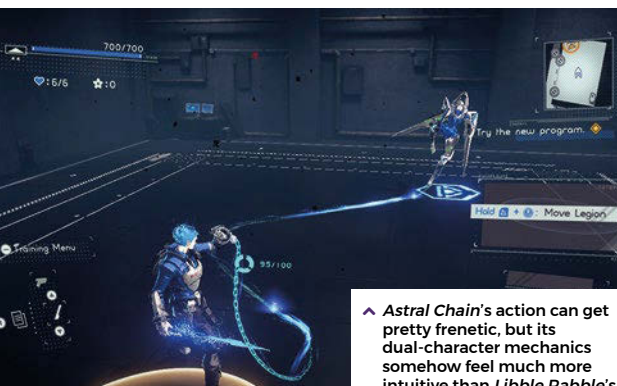
Elsewhere, Iwatani expressed his pride in *Libble Rabble*, and even suggested that it was better than *Pac-Man* (“Not to toot my own horn,” he said in the mid-eighties, “but *Libble Rabble's* the best”). Inevitably, the gaming public didn't agree, and a few home system ports aside (see boxout), *Libble Rabble* ranks as one of Namco's more obscure outings from its early-eighties boom years. That Takahisa Taura wound up using the game's defining mechanic in *Astral Chain* – albeit in a way that's much more user-friendly to deploy – is belated proof that Iwatani really was onto something with *Libble Rabble*. It may not have been a smash hit in 1983, but its ‘surround the enemy’ concept was just sitting there, waiting for a designer like Taura to pick up the baton and run with it. 🎮



RABBLE ROUSING

Despite its relative failure in arcades, *Libble Rabble* was still ported to a couple of home systems from the nineties onwards, including the Sharp X68000 and the Japanese Super Nintendo. The former included a special gamepad with twin direction controllers, while the latter came with a circular piece of plastic that turned the SNES controller's action buttons into a second joypad. Sadly, these ports were never released outside Japan, meaning a vanishingly small number of western gamers ever got to sample *Libble Rabble's* dual-control delights.

▼ Stretching your elastic around posts to capture enemies sounds simple – at least until your player characters cross over and you get all muddled up.



▲ *Astral Chain's* action can get pretty frenetic, but its dual-character mechanics somehow feel much more intuitive than *Libble Rabble's*.

Developer Profile

Larian Studios

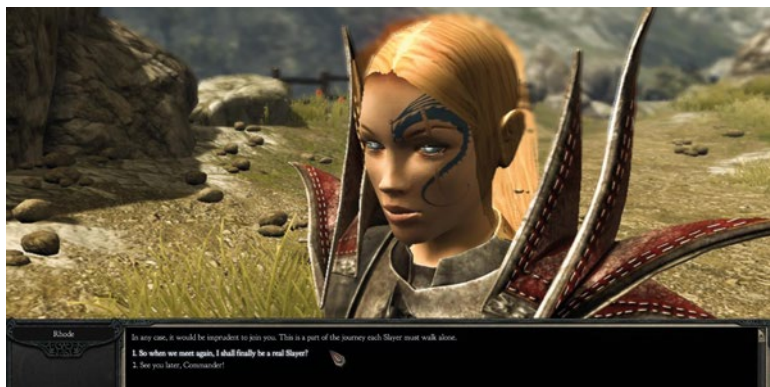
A tale of slow-burn Belgian success

It feels typical that this all comes from little old Belgium; the European nation plenty of us pass through on our travels across the continent, but not necessarily the one many of us end up staying in for any period of time. Or even really thinking about. It's just... Belgium, you know? And yet it's the seat of power for much of the EU, it hosts NATO's European headquarters and – most importantly – it's the country from which we've had one of the best, if not *the* best, RPGs ever made. Little old Belgium, you're not just full of chips and old statues, it seems.

Larian Studios came to be back in 1996, the brainchild of founder Swen Vincke, and began life just as you'd expect a celebrated role-playing game studio would: with a *Command & Conquer*-derived RTS. Alright, so the studio did attempt to make something resembling its contemporary output, but was forced into making *L.E.D.*

Wars – a low budget *C&C*-alike with hints of *Total Annihilation* sprinkled on top – in order to prove its development mettle. It made the game, it did... well really, who here had heard of it before today? If you say yes, you're probably telling porkies. Or you just really love Belgian games. Either way, it wasn't something that put Larian on the map.

And that's the story here: no single game for



almost 20 years managed to put Larian on the map. Yes, *Divine Divinity* and the sequels and spin-offs set in its narrative universe were generally well-received – even loved in some quarters – but the audience was niche. Your hardcore RPG fans, those hardly catered for through the lean decade-and-a-bit following *Baldur's Gate II* and *Fallout* – they knew they had something special, a studio capable of building and refining in a very real sense over the course of iterative releases. The rest? Well, they were being wowed by the surging popularity of the FPS, bewildered by the lifelike animation of Paul Scholes' face in *FIFA 20XX*, and generally building towards widespread acceptance of the lifestealer itself, *Assassin's Creed*. But Larian continued on.

MASS EFFECT

It's not that Vincke and his studio actively avoided attempts to court the masses – *Divinity II: Ego Draconis* made its way to Xbox 360 in 2009, Larian obviously keen to get a foothold in the console market for the first time. Elsewhere, it had made inroads towards the educational market, teaming with Belgian children's TV channel Ketnet for a kid-focused, branded tie-in. There was even a re-dabbling in the RTS genre with *Divinity: Dragon Commander*, with Larian testing its mettle in yet more unfamiliar territory for the studio. None of this was a stubborn approach; it wasn't a closed-off one in which Larian only ever wanted to appeal to the niche it had already carved out. It was just that things hadn't exploded in popularity. Yet.

Kickstarter gets a lot of stick these days, and a lot of it with good cause.

^ Larian's games are known for their smart writing and deep storytelling.

> Pictured: a chap who probably isn't very happy.

v In the centre we see Vincke, Larian's founder, probably not dressed how he does every day for work. We hope.



But at its heart, the attempt to use crowdfunding to bypass publishers – specifically in video gaming – meant there was always a chance something great could come of it. Larian took full advantage of the platform and, in 2014, released *Divinity: Original Sin*. A CRPG seemed a risky choice when the campaign launched, given the genre had been written off

as dead since about the late 1990s, but the reaction of the crowd(funders) said otherwise: a giant thumbs-up to the tune of three-quarters of a million pounds, and an instantly renewed interest in the genre (alongside other Kickstarter big hitters like *Pillars of Eternity*, naturally).

Original Sin managed some breakthrough, garnering as it did huge amounts of praise for its atmosphere, writing, and old-school RPG sensibilities

(in a new-school skin). It was natural a sequel would follow, and just a few years – and another Kickstarter later – *Divinity: Original Sin II* launched. Then, like its predecessor, an updated version hit consoles. Then, not too long ago in 2019, it landed on Nintendo's Switch. If that's not a mainstream breakthrough, I really don't know what is. It's almost

“A CRPG seemed a risky choice, given the genre had been written off as dead”

an afterthought here to point out development duties for the upcoming *Baldur's Gate*

III – sequel to the series that was such a huge influence on the studio – were handed to Larian. After all, it just feels so obvious – of course it's making *Baldur's Gate III*.

It might have taken around 20 years to really get noticed, but just like everything else in Belgium, Larian has been quietly making itself a central seat of power on the world stage. 🌍

Larianmania

10 steps to CRPG glory

From low-rent C&C to high-profile D&D

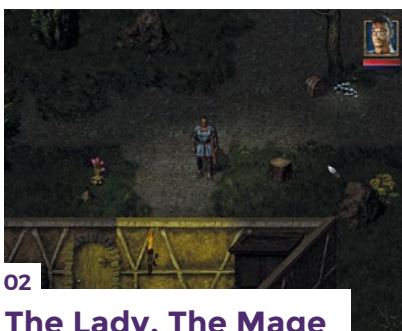


01

L.E.D. Wars

PC – 1997

Seen as something of a low-rent *Command & Conquer*, *L.E.D. Wars* acted as a proof of concept of sorts for Larian Studios, showing the world it was a studio capable of actually making a game. The end result was another me-too real-time strategy title, similar to oh-so-many in the latter half of the nineties, and is largely forgotten these days.

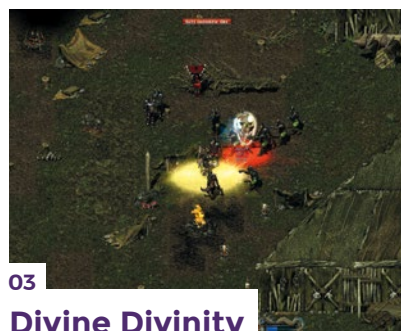


02

The Lady, The Mage and The Knight

PC – Cancelled

The Lady, The Mage and The Knight was actually the reason Larian popped out *L.E.D. Wars* to begin with: this was the real passion project, said to be set in the *Realms of Arkania* world, though not a sequel. Collaboration with Attic Entertainment didn't go well, and the project was abandoned around 1999.

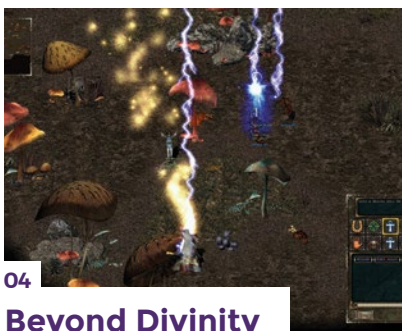


03

Divine Divinity

PC – 2002

The European alternative to *Diablo*, *Divine Divinity* combined your pursuit of loot with thwacking loads of enemies about the head – as you'd expect – with a slightly deeper RPG system than seen in Blizzard's classic series. Much-loved in its day, *Divine Divinity* finally saw Larian on the path it had wanted to be on for just over half a decade.



04

Beyond Divinity

PC – 2004

This follow-up to 2002's successful original carried on with the action-RPG theme and was largely successful at making those incremental updates you'd expect of a sequel. Sadly, it arrived with a host of issues, looked even more old-fashioned than the last game, and suffered some genuinely atrocious voice acting. By no means a bad game, but definitely a misstep.

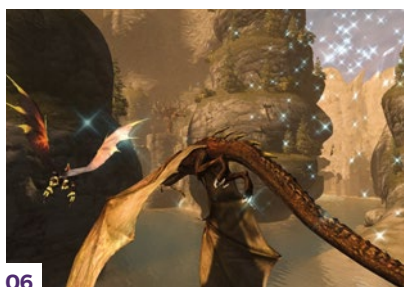


05

KetnetKick

PC – 2004

Sidestepping dark fantasy, Larian went down the child-friendly educational route with this one, made for Belgian kids' TV channel Ketnet. A combination of platformer and creative outlet, *KetnetKick* saw a sequel and the general idea reworked into both *Adventure Rock* (for CBBC), and *Gulliland* (for Jeunesse TV). But it was back to the dragons soon enough.

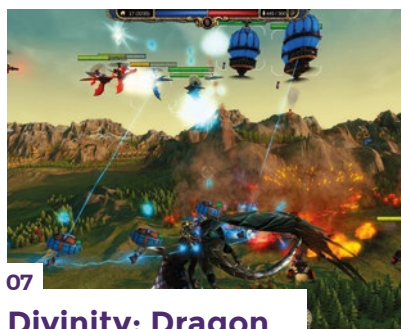


06

Divinity II: Ego Draconis

PC / X360 – 2009

The technological step-up needed at the time, *Divinity II: Ego Draconis* took the action to a third-person 3D realm and added in the chance to control a dragon as well as your human avatar. An impressive narrative backbone and plenty of choice throughout made it a hit with fans, even if critics remained cautious with their praise.



07

Divinity: Dragon Commander

PC – 2013

Another step out of the comfort zone, *Dragon Commander* remained in the *Divinity* world but took things in an RTS direction – a return to the genre Larian began with. Seen as a brave effort, *Dragon Commander* did receive a bit of criticism for trying to be too many things at once. All the same, those who loved it, loved it.



08

Divinity: Original Sin

PC / PS4 / XBO – 2014

What do you do with a committed fan base, a media focused elsewhere, and the desire to make a game in a genre seen as 'dead'? You go to Kickstarter, raise over £750k, and you make one of the best CRPGs ever, that's what. *Original Sin* may have been bettered, but its launch changed Larian – the studio suddenly became hugely respected across the industry.

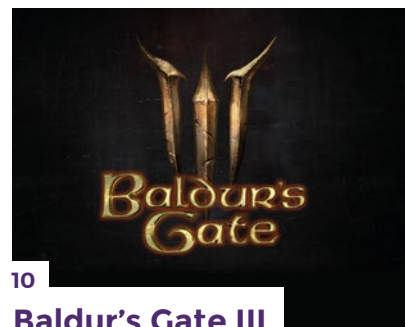


09

Divinity: Original Sin II

PC / PS4 / XBO / Switch – 2017

This is way too short a space to do a game as truly stunning as *Original Sin II* any justice. Safe to say, it earned a lot through Kickstarter, it over-delivered, it put its excellent precursor in the shade, and if you haven't played it, you really should do yourself a favour. Hand on heart one of the best RPGs ever made, and a no-brainer recommendation for any and all.



10

Baldur's Gate III

PC / Stadia – TBC

After making one of the best games ever to emerge from the *Dungeons & Dragons*-like wheelhouse, it's of little surprise Larian was handed the reins to the actual D&D-based *Baldur's Gate III*. We know little about this long-awaited sequel, but with a team capable of putting together *Original Sin II* at the helm, there's little doubt it's going to be a good 'un.

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Info

GENRE
Survival
FORMAT
PC
DEVELOPER
Panache Digital Games
PUBLISHER
Private Division
PRICE
£32.99
RELEASE
Out now

REVIEWED BY
Richard Wakeling

HIGHLIGHT

I once decided to make my whole clan follow me out into the jungle. Surely our sheer numbers would intimidate any predators, right? Wrong. Watching my clan of apes struggle to work out how to run away from a giant cat eating their mates would've been funny if it wasn't so disheartening.

▼ The food chain in *Ancestors* isn't huge, but you're definitely at the bottom of it to begin with. Maybe your predators will just eat each other?



Ancestors: The Humankind Odyssey

The beginning of the end for Planet Earth

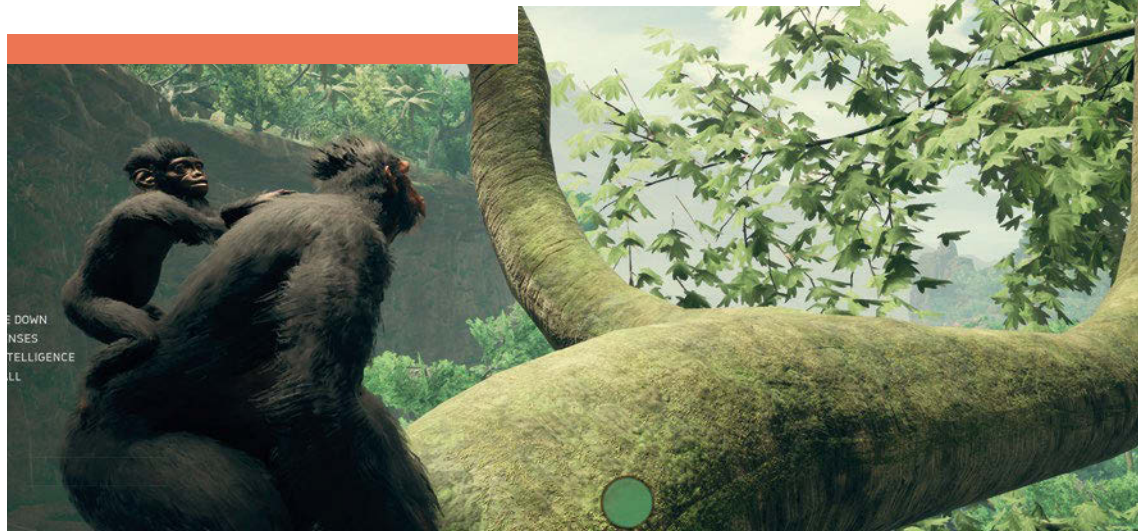
The beginning hours of *Ancestors: The Humankind Odyssey* are filled with promise and intrigue. The first game from Panache Digital Games, headed up by Patrice Désilets – best known for creating the *Assassin's Creed* series – takes place ten million years in the past, putting you in the primitive body of an early hominid. It's a fascinating premise for a video game, revolving around humanity's evolution from early apes to something more closely resembling humankind, whether you're gradually learning how to walk on two legs or discovering how to craft spears to defend against the myriad predators stalking the African continent. Beyond those first few hours, however, I spent the rest of my time with *Ancestors* just waiting and hoping for it to evolve in some way (if you can pardon the pun).

Your long-term goal is to advance the species and ensure your clan's lineage by surviving across eight million years. What this boils down to on a moment-to-moment basis is relatively simple: you'll venture out into the wilderness, discover your surroundings, and find ways to use tools and the local flora in order to survive. It's a similar structure to other survival games

of recent years, except *Ancestors* is so incredibly opaque that much of your time is spent trying to figure out what you're supposed to be doing and how you're supposed to do it. This makes sense conceptually, considering you're in the body of a protohuman discovering the world for the first time, but it doesn't take long before the whole game descends into a monotonous grind of repetition and frustration.

Take the routine discovery of objects in the environment as an example. This is done by using different senses to examine your surroundings, but the act of doing so quickly becomes a laborious test of patience. Each time you opt to use one of your senses to uncover the various plants, water sources, and other animals lurking amidst the jungles, swamps, and savannahs of Africa, you have to come to a complete stop and spend time hovering over a surfeit of icons that appear on the screen. If you find something foreign, you need to pick it up and examine it to reveal its true identity

▼ You can only earn neuronal energy by doing everyday tasks with an infant on your back. Figuring out how to mate is needlessly vague, though.



and potential purpose. Initially, this taps into an inherent sense of discovery as you spend time uncovering the numerous food sources and tools within close proximity and figure out how to combine them, but it doesn't take long before this turns into another repetitive task to tick off on a checklist of increasingly repetitive tasks. There's a lot of tedious stopping and moving, and the slow process of uncovering everything is only exacerbated when you're injured and in desperate need of a particular plant to heal yourself.

And believe me when I say you'll be injured a lot in *Ancestors*. Almost every surface is climbable, whether you're scaling a sheer cliff face or scurrying up a towering tree. Désilets' background designing *Assassin's Creed* is evident in the way you climb and move through the trees, yet traversal isn't as intuitive as I had hoped. Climbing is fine, but navigating amongst the branches is overly cumbersome, and there's no easy way to climb down beyond jumping to other surfaces. Think back to *Assassin's Creed 3* and the way the position of trees was contrived so you could quickly move from one to the next without missing a beat. In *Ancestors*, the formation of trees is much more natural, but this means the distance between them isn't always conducive to free-flowing platforming. I can't count the number of times I had to take a leap of faith only to fall 50 feet and break a bone for the umpteenth time. Movement is already lethargic without a leg injury slowing you down to a crawl.

Despite the perils of falling, trees do provide a measure of safety compared to what's prowling on ground level. Giant snakes, crocodiles, and big cats are just a few of the animals with hunger pangs for a slice of ape flesh. There's a tangible sense of peril and vulnerability when you're on the ground, especially when you're helpless to fight back against all the things trying to eat you. Eventually, you might learn how to craft a spear, but this is another part of the *Ancestors* learning process. The game tells you absolutely nothing beyond the basic controls. Some of the 'shoulds' and 'should nots' are common knowledge, like don't drink from a standing water source, and probably don't stuff those mushrooms down your gullet. Others, like figuring out how to sharpen a stick or open a coconut, aren't as



▲ Fear of the unknown is a prominent obstacle for *Ancestors*' hominids. Venture too far from home and you get this creepy assault of wild-eyed predators.

obvious as they maybe should be, but there's a definite thrill that comes from learning how to use and combine the various tools.

Ancestors has some great moments like this in isolation, such as the first time you pierce a spear through one of your predators' skulls, or clamber up the majestic world tree – but they're fleeting and punctuated by sheer tedium. The UI and skill tree are at odds with the primitive game wrapped around them, focusing on evolution like you're sat in a science lesson as opposed to inhabiting an ape. New skills range from learning how to pass items from one hand to the other and increasing the range of your senses. Unlock enough of these and you can advance time by a single generation or leap forwards hundreds of thousands of years. When you do this, you can only

“Believe me when I say you’ll be injured a lot in *Ancestors*”

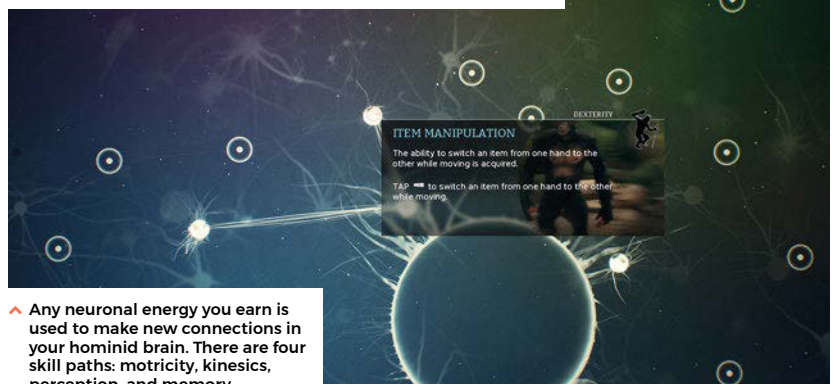
take a couple of your learned skills with you, and if your whole clan dies, you lose everything, which forces you to go back and relearn every skill you had on top of discovering each plant, rock, and predator all over again. Whether you progress through time or lose everything, the game doubles down on being a major drag that could've really used some kind of persistence.

As it is, *Ancestors*' novel premise isn't enough to stave off the repetitive, dull, and unstructured game wrapped around it. 🙄

VERDICT

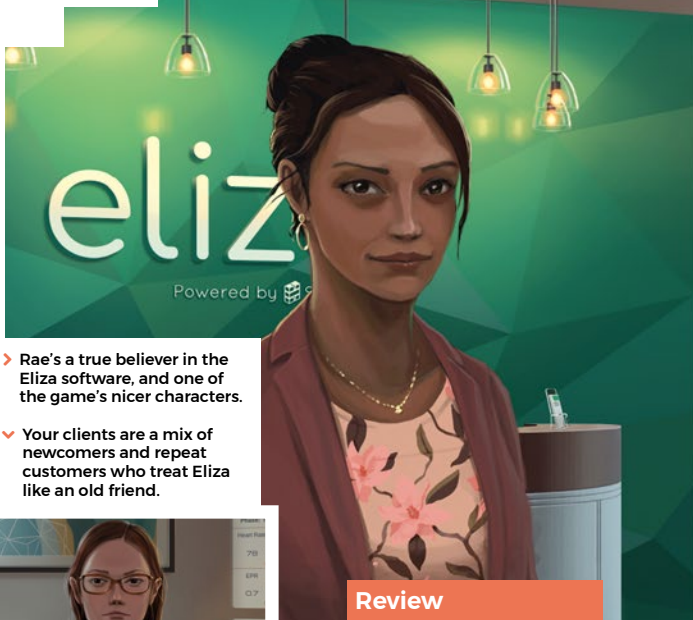
Ancestors' fascinating premise gets bogged down by a repetitive game of tedious survival.

40%

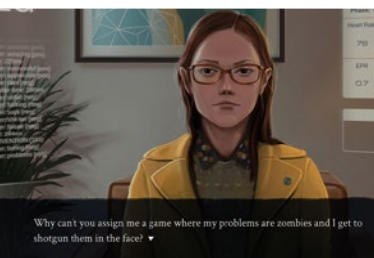


▲ Any neuronal energy you earn is used to make new connections in your hominid brain. There are four skill paths: motricity, kinesics, perception, and memory.

Rated
Review



- Rae's a true believer in the Eliza software, and one of the game's nicer characters.
- ✚ Your clients are a mix of newcomers and repeat customers who treat Eliza like an old friend.



Review



HIGHLIGHT

Although *Eliza* isn't a particularly romantic game, there's something charming about the extraordinarily low-stakes flirting you can engage in. A handful of characters will develop a bit of a crush on Evelyn, and while there's no 'partnering' system, which characters you're most receptive to might impact your final decision.

Eliza

Therapy for the gig economy

Info

GENRE
Visual novel

FORMAT
PC

DEVELOPER
Zachtronics

PUBLISHER
Zachtronics

PRICE
£11.39

RELEASE
Out Now

REVIEWED BY
James O'Connor

VERDICT

A well-written and engaging visual novel with a little less on its mind than it initially suggests.

67%

In the world of *Eliza*, mental health care has become a thriving business. Machine-based AI therapy has emerged, and the titular Eliza is the market leader because it retains the human touch, delivering consultations through low-wage human 'proxies' who read from a teleprompter. You play as Evelyn, one of the program's original coders, who has returned to the industry that burned her out to experience Eliza as a proxy and see whether it's really helping people.


Eliza is a visual novel that purposefully and cleverly limits your ability to interact with it. You're only given a few choices per chapter, and during therapy sessions, you can't deviate from the script provided by Eliza, even when it seems cold or unhelpful. Evelyn gains more agency as the game goes on; in the early stages, your choices will often amount to whether you say 'yes' to requests with conviction or hesitation. It's restrictive by design, because that's the nature of the technology Evelyn is handling. This means that once bigger decisions start to present themselves, your choices feel more meaningful, although there's nothing here you're likely to agonise over for long.

Much of the game is about the Eliza system, and the concept of AI-driven therapy. There are advantages to this system: therapy is now more affordable, less time-consuming, and easier to seek out. On the other hand, there are serious

concerns with data privacy to consider, and the effectiveness of a system that removes so much of the human element from therapy, and limits many of its suggestions to games and exercises available within parent company Skandha's own app, is called into question.

It would be all too easy to veer into a *Black Mirror*-style takedown of a thing that doesn't actually exist, but to the game's credit it never comes right out and says that the concept of automated therapy is inherently bad, as long as it's not viewed as the be-all and end-all of mental health treatment. The game is consistently well-written and voice-acted, but it's perhaps, ultimately, a bit soft on its targets. It's unlikely that you'll come away from the experience with a changed perspective or deep takeaway.

As a story, *Eliza* is effective, with interesting characters, solid dialogue, and tremendous flavour text in the various texts, emails, and reports that make up much of the experience.

As an interactive experience, it lacks bite, though, rarely asking you to engage with its themes on a deep level. Even the ending is based entirely on a single decision you make right at the end, and viewing all of them is easy, so there's little sense of consequence (even if you pick the one extremely sinister ending). But even if it doesn't always have good answers, *Eliza* asks plenty of interesting questions. 

"It never comes out and says the concept of automated therapy is bad"

HIGHLIGHT

The 1990s setting is reinforced by the inclusion of video camcorders and Polaroid photographs, but the best part is being able to pull out your old brick phone and play *Snake*. A perfect way to recover during a tense moment. Admittedly, it's an anachronism by a couple of years, with *Snake* not hitting phones until 1998, but at least this isn't the kind of magazine to be pedantic enough to... oh.

^ Despite the technical issues, forest environments have never looked this beautiful.

Review

Blair Witch

A fright in the woods

It's 1996. A boy has disappeared in the woods near Burkittsville, Maryland. You're Ellis, a former police officer with a tortured past who's joined the search for the child with your reliable canine companion, Bullet. *Blair Witch* puts you at the heart of the forest with little more than a radio, a torch, and a video camera. It's a horror that appeals to the senses, with subtle noises and visual cues driving the main scares. Part of the mystery comes from trying to solve what exactly is happening in this twisted place. Is a person behind this kidnapping, or is it the work of supernatural forces?

As you proceed further into the forest, you find creepy photos of missing children and video cassettes that allow you to psychokinetically manipulate the world around you. Bullet comes in handy, as he can collect hidden items and sniff trails to lead you on the right path, but

dodgy pathfinding and confusing level design can frequently have you getting lost. While it may seem apt for a *Blair Witch* game, there comes a point where it's more frustrating than scary.

I think one of my favourite parts of wandering these woods was how much uncertainty there was with every step I took. Like the film, the geography seemed to 'warp' depending on my movement. Walking in a straight line eventually returned me to a spot I'd visited earlier, creating the illusion of a circular journey while reinforcing a distorted perception of the world. It made me question myself. Did I really circle around this area, or was the game intentionally messing with me?

Despite the trickery, *Blair Witch* isn't as terrifying as it promises. Getting lost, questioning your own perception, and hearing tree branches break in the darkness all feel in line with the film's legacy, but it's also reliant on hallucinations to create jump scares and moments of anxiety. Flashbacks to Ellis' time as a police officer and the emotional toll it had on his mind take precedence over the scary things happening in the woods. Once you deduce the events that aren't real compared to the ones that are, it doesn't work for the horror it tries to be.

If there's a true horror in *Blair Witch*, it's the bugs. Poor frame rates and occasional crashes are one thing, but the game's also host to a myriad glitches. If Bullet isn't clipping through trees, he's running around in circles, ignoring my commands. While they're uncommon enough to not be a real nuisance, these moments ended up ruining any sense of tension the sequence had going for it. In the end, *Blair Witch's* horror ebbs rather than builds to a terrifying crescendo. 🐾

Info

GENRE
Psychological horror
FORMAT
PC (tested) / XBO
DEVELOPER
Bloomer Team
PUBLISHER
Bloomer Team NA
PRICE
£24.99
RELEASE
Out now

REVIEWED BY
Olly Smith

VERDICT

The *Blair Witch* film series could be perfectly translated to a modern horror game, but the execution doesn't respect the legacy the franchise has built over the years.

60%

^ While largely disconnected from the original film, a lot of its imagery is used in the game.

Info

GENRE
Action

FORMAT
Switch (tested)

DEVELOPER
PlatinumGames

PUBLISHER
Nintendo

PRICE
£49.99

RELEASE
Out now

REVIEWED BY
Jon Bailes

HIGHLIGHT

The five Legions are the stars of *Astral Chain*. Each has its own fighting style and sync moves, not to mention a little personality. But the fun often comes from deploying their individual skills in and out of battle, from severing wires and sniping targets to sniffing out hidden items and lobbing heavy objects around.

✓ The game's atmosphere is fantastic throughout.



Astral Chain

Police armed with angry, invisible monsters. What could go wrong?

W

alk around *Astral Chain*'s police station, or its Harmony Square, and you'll notice how clean everything looks.

This consumerist idyll of chatty

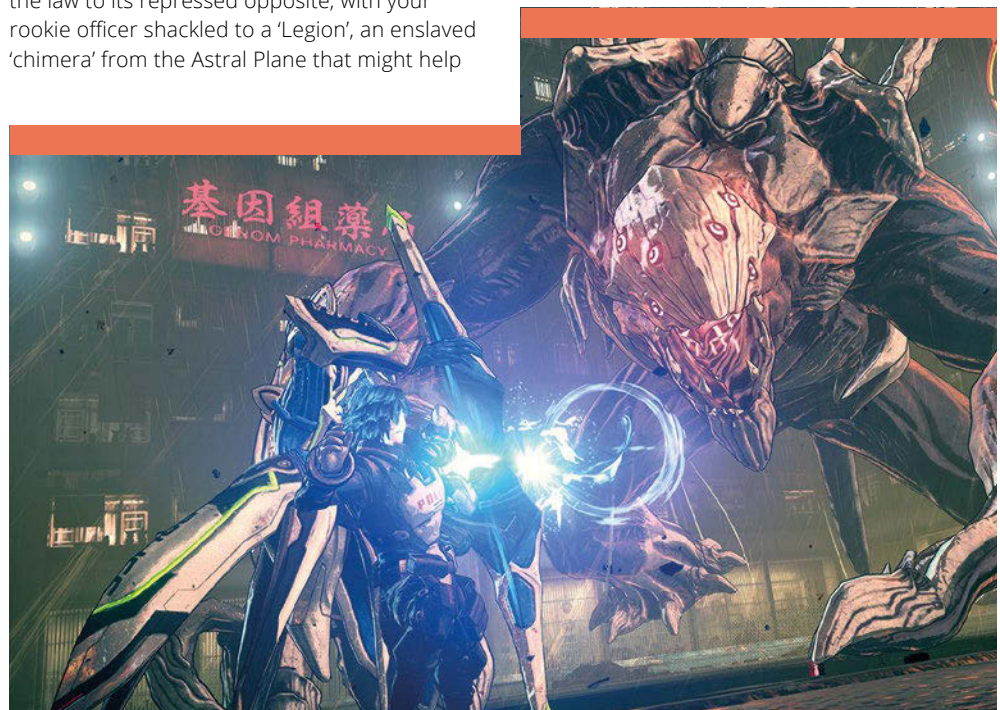
vending machines, electronic J-pop melodies, and backlit advertising displays also implies a strict order, where citizens are gently herded by holographic barriers, and a discarded drink can feel so incongruous you can't help but pop it in the nearest bin. It's beautifully clinical, but at the same time unnervingly sterile. So when the rifts appear in this society, literally, as gaping red holes punched into that pristine surface, spewing forth warped creatures and dragging civilians into a nightmare dimension, it somehow feels fully deserved.

It seems you can't maintain perfect order without a touch of chaos bursting through. Somehow, it's necessary to balance the two. And this is where you come in. Part man (or woman), part commander of dimension-shifting monsters, all cop. The titular astral chain links the law to its repressed opposite, with your rookie officer shackled to a 'Legion', an enslaved 'chimera' from the Astral Plane that might help

stop society dissolving around you, as long as you keep it on a leash.

The surprising brilliance of *Astral Chain* is how it uses this setup to thematically unite all kinds of disparate objectives, making you play both everyday beat cop and superpowered action hero. Here, rescuing cats, collecting litter, and chasing down graffiti artists are as much your job as flying through a dimensional portal to take down some vicious fiend. In one mission, you have to destroy a colossal creature tearing up the city centre. In the next, you're sent to help with the clean-up effort afterwards. But it never feels disjointed. As a kind of total action-adventure that constantly segues between exploration, environmental puzzles, platforming, and combat, it has parallels to the recent *God of War*, but with a streamlined cohesion that stops it feeling so overweight.

The result is a game of huge variety where everything somehow slots into place. Director Takahisa Taura brings aspects of his





➤ Your own weapons are limited to a baton, pistol, and blade, but can be upgraded between missions for new techniques.



design approach over from *Nier: Automata*, with a playful willingness to impede predictability, using shifts of pace and perspective to keep the experience fresh. As you gather more Legions, each with its own helpful abilities, they create potential for new forms of navigation, minigames, and detective work (handled in a more interesting manner than in *Judgment*, incidentally). It's not deep or taxing – the game rarely seems keen to hold you up for long – but it's so slick and seamless that even occasional busywork never feels gratuitous.

Besides, *Astral Chain* knows when to shift away from minor distractions to more sustained objectives, and has the perfect narrative mechanism in place. Entering a rift leads you to the Astral Plane, an abstract void filled with huge cuboids of floating rock that provides the game's conventional challenge space. With the clutter of reality swept away, it serves purely to construct cunning arrangements of platforms and switches, or provide flat, open stages for more substantial battles.

And the battles are of course the key to the game's depth, as Platinum's latest system of flair and intricacy remains the centrepiece of the show. It's not easy to grasp, as the game bombards you with instructions and piles on techniques with each new upgrade. The control pad can seem overloaded with possible inputs, to the point that remembering what you can do and deciding when to do it can be paralyzing. With a camera that misbehaves in tight spaces, the opening chapters can be a mess of air shots and pratfalls as you stumble between D-graded victories.

But in full flow, it's as joyfully artistic and comprehensive as *Bayonetta*'s more immediate fighting style. You soon adjust to moving yourself and your Legion simultaneously and turn the chain itself into your biggest asset. 'Chain jumping' is a game-changer, as you fire your Legion towards a single opponent or weave it into a pack then yank your character in behind, knocking down anything en route. Or you wrap an enemy in the chain to briefly immobilise them, or catapult them away when they charge

towards you. Combined with more familiar Platinum flourishes – well-timed dodges enable quick counters, combos end in 'sync' attacks that combine the power of human and Legion, finishing moves can be triggered to refill lost health – and the unique abilities of each Legion, there's incredible flexibility, and it eventually becomes second nature.

The camera does still struggle, and you can sometimes lose track of your position in the mayhem of a large brawl. Platforming can also be needlessly fussy for a game that otherwise doesn't place a premium on precise movement. But these issues do become less bothersome over time. Once you're spinning through the laser breath of a huge

boss to wrap your chain around its feet, and especially when the S+ ranks start to trickle in, anything else fades into insignificance.

Astral Chain is Platinum's most well-rounded game. Structurally, it nestles between *Bayonetta* and *Nier: Automata*, offering exploration and side quests within the confines of designated mission areas, and combining light RPG upgrading with expressive and rewarding combat. But most of all, with its laid-back tone, variety, and human-legion partnership, it's a thing all of its own. It's a game created through carefully-ordered precision, with just enough joyful chaos to make it truly special. 🗨

“Astral Chain is Platinum's most well-rounded game”



▲ The visual style has an almost cel-shaded sheen, with the city especially giving off *Jet Set Radio* vibes.

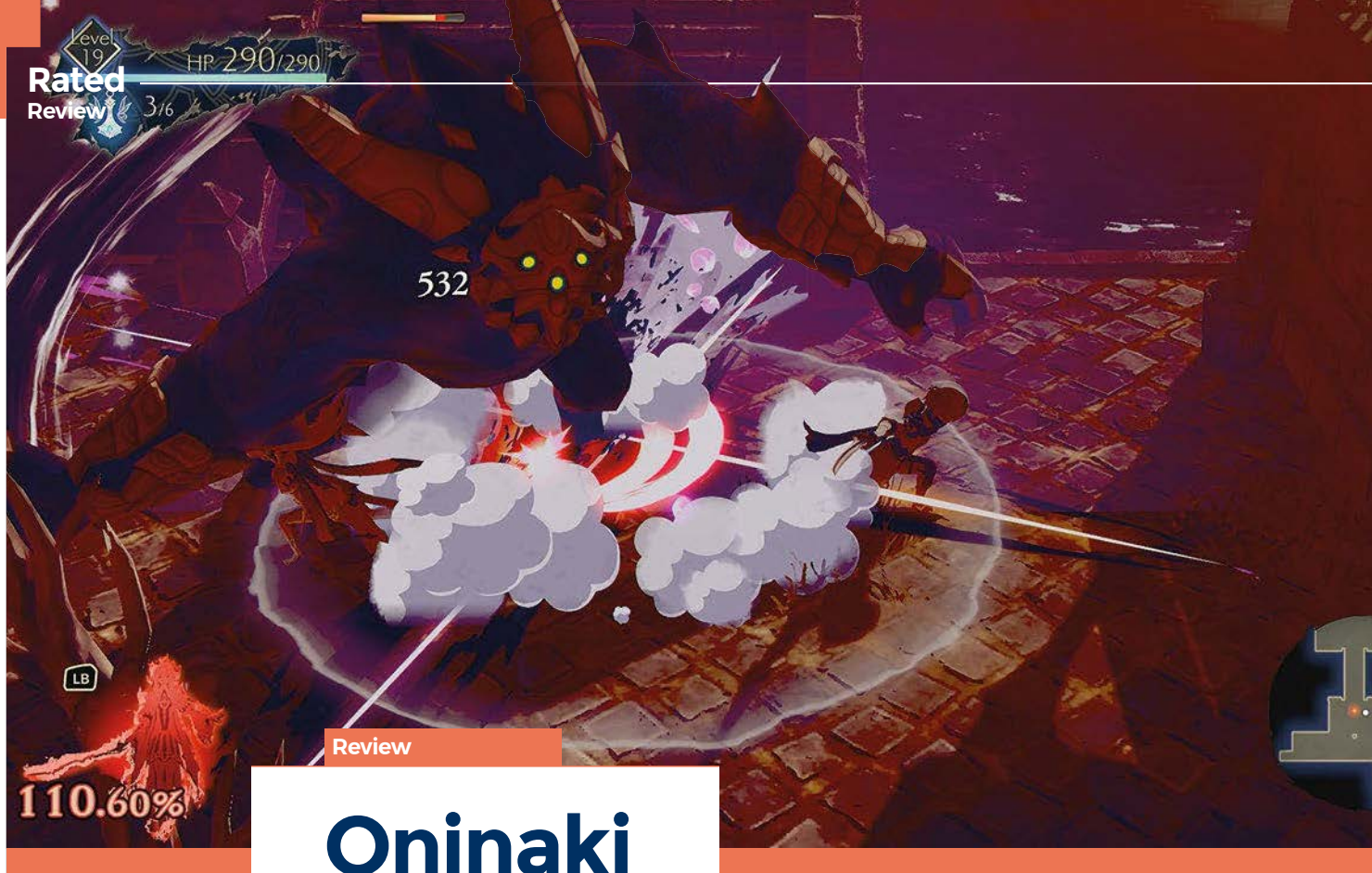
VERDICT

Astral Chain is Platinum at its most daring and confident. A genuine pleasure.

91%



▲ Legions will attack on their own, but learning how to combine your damage and theirs is key to quick victories.



Oninaki

A matter of life and death

Info

GENRE

JRPG

FORMAT

Switch (tested) /
PS4 / PC

DEVELOPER

Tokyo RPG
Factory

PUBLISHER

Square Enix

PRICE

£39.99

RELEASE

Out now

REVIEWED BY

Alan Wen



▲ Using soul stones, you can expand your daemon's skills and buffs. Naturally, the more you use a daemon, the more you get out of them.

In trying to emulate the JRPGs of the nineties, Tokyo RPG Factory's past two efforts – *I Am Setsuna* and *Lost Sphear* – felt too much like games rolled off a production line. Third time's the charm, you might think, with *Oninaki*, which adopts a different, more anime visual style, switches turn-based battles for real-time action, and even adds partial voice-acting (albeit only in Japanese). Nevertheless, the earlier games' themes of death and lost memories remain the core here.

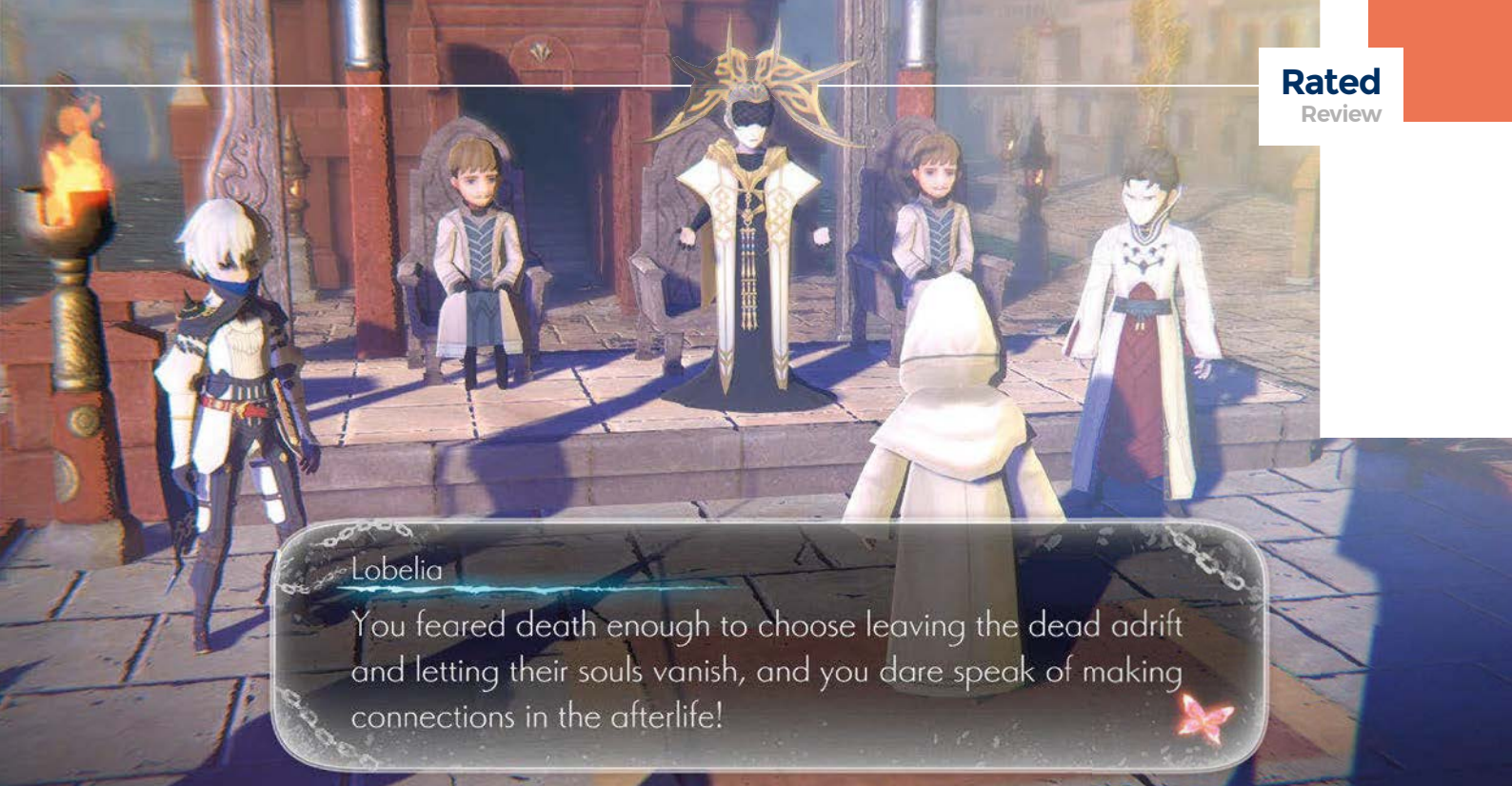
Set in a realm where the population believes in reincarnation, death is supposed to be accepted with joy, while grief can prevent the departed from moving on to the afterlife. Naturally, this belief system is all too questionable when lovers are buying special charms in the hopes they can reunite in the next life, while bereaved parents can choose to be with their dead child by taking their own lives. Just to make matters worse, a serial killer known as the Night Devil is on the loose. As you might gather, *Oninaki's* tone is almost unrelentingly grim.

You play as Kagachi, whose role as a Watcher is to help lost souls pass on in peace, lest they stray into the purgatorial dimension of the Veil for too long and turn into monsters. To do this, you have the power to cross between the world of the living and the Veil at the press of a button.

You're also accompanied by a daemon – these are former lost souls that now serve as powerful weapons, a bit like the Blades from *Xenoblade Chronicles 2*. You can equip up to four daemons and switch between them at any time with a directional jab of the right stick.

There's a decent variety of play styles for each daemon, from Aisha's swift sword slashes to Zaav's spear, which includes a jump ability similar to the dragoon class in the *Final Fantasy* series. Daemons even dictate your actions with the B button, so while Aisha might let you dash to evade attacks, the tank-like Gavod can help you set up a shield, while for others, it acts as a jump button. The idea is to switch between daemons, depending on the situation. Daemons aren't just weapons, however, and function more like party members with their own progression systems. The more you use them in combat, the more you get out of them.

This becomes a problem when your current daemons are already providing you with a suite of skills and buffs, so that taking on a new daemon can feel like starting from scratch. Still, it's worth putting in the grind to unearth their potential; scythe-wielding Izana's moves start off much too slow and limited, for example, but after investing the time, the extra buffs and skills I've unlocked make her much swifter and deadlier, including an attack that has a chance of



Lobelia
You feared death enough to choose leaving the dead adrift and letting their souls vanish, and you dare speak of making connections in the afterlife!

▲ Gameplay is mostly from an overhead perspective, but dialogue scenes allow for more detailed cel-shaded character models. Animated cutscenes are kept to a handful.

one-shooting the enemy. Unless you're prepared to grind all your daemons, though, it's likely that many just fall by the wayside as you stick to one or two favourites.

There's nonetheless plenty of opportunities to level up, if only because Fallen are in generous supply. On occasion, you'll be trapped in a purple ring until you defeat all the enemies there, but even if you decide to clear the room, plenty more just miraculously spawn in. Sometimes it just gets taxing on the eyes, not helped by all the particle effects or your own floating daemon obscuring your view.

The real frustration's reserved for the bosses, which have a habit of unleashing a flurry of attacks that put you in a stunlock, leaving you vulnerable to the next hit, and the hit after that.

An autosave system that lets you restart a boss fight immediately after death is also far from ideal if you went in with low health or no

“Just to make matters worse, a serial killer known as the Night Devil is on the loose”

potions, meaning you might have to restart from your last manual save point.

The repetition and frustrations of combat would be easier to overlook if there was a compelling reason to endure them, but even a midpoint twist doesn't save *Oninaki* from being weighed down by a miserably heavy-handed story. Despite the many tragedies that occur, I found myself unable to invest emotionally in the characters, and I soon became as jaded as Kagachi, who follows the angsty hero stereotype to the letter.

As interesting an idea crossing between realms is, besides speaking to lost souls, there's barely any distinction between worlds,

so there's very little incentive to traverse the Veil unless the narrative dictates it. The lost souls themselves are also reduced to quest givers, though their requests aren't logged anywhere, making it even more difficult to compel yourself to carry out their wishes, if you can even remember what they are.

Oninaki is a worthy attempt to break from the mould of *I Am Setsuna* and *Lost Sphear*, but ultimately, it's just another underwhelming JRPG that can't hold a candle to the classics that the studio holds dear. When Square Enix already seems content repackaging its rich back catalogue, pumping out ersatz titles like this is starting to feel redundant. 🗿

HIGHLIGHT

Daemons aren't just sentient weapons. As you upgrade their abilities and your affinity with them builds, you can also unlock memories, unearthing fragments of their tragic backstories, which are fully voiced. The caveat is that, after the first one, each memory costs soul stones to unlock, which you'd rather be using on a new upgrade.

VERDICT

Another downbeat JRPG from Tokyo RPG Factory, *Oninaki* never quite delivers on its intriguing premise.

58%



▼ You'll often have to defeat tougher enemies called 'Sight Stealers' in the living world before you can safely traverse the Veil.

HIGHLIGHT

Hunt didn't start out life as a battle royale game, and it shows. I can't stress enough how much *Hunt's* aesthetic carries the whole thing. The music, the grotesque monsters, weapons, sounds, and world itself all knit together to make a Deep South nightmare that is begging to be expanded on in future games.



Review

Hunt: Showdown

Deep down in Louisiana close to New Orleans

▲ A mutated cesspit of evil shouldn't look this pretty.

Info

GENRE

Battle royale/
survival horror

FORMAT

PC (tested) /
XBO / PS4

DEVELOPER

Crytek

PUBLISHER

Crytek

PRICE

£35.99

RELEASE

Out now (PC
and Xbox
One), TBA
(PS4)

REVIEWED BY

Joe Parlock

VERDICT

Brings some much-needed atmosphere and tension to the battle royale genre.

75%

Hunt: *Showdown* has a tough job. In the couple of years since its breakthrough, the battle royale genre has lost some of its lustre, with the tactical kill-or-be-killed

drama and chicken dinners of *PUBG* and its contemporaries overtaken by promotional events, battle passes, and stolen dances being sold as emotes – even relative newcomers like *Apex Legends* or *Black Ops 4* showed signs the genre's popularity may already have peaked. *Hunt: Showdown* breathes new life into the genre, though, by making it trouser-fillingly terrifying.

Hunt: Showdown has most of the battle royale trappings: an open-ended map full of people out for blood, with the primary goal being survival against your fellow player. On top of that all-too-familiar foundation, however, is a big dollop of creating-and-hunting action akin to Capcom's *Monster Hunter*, as each team takes on the role of bounty hunters competing for jobs in a monster-ridden, 19th century Louisiana bayou.

Setting isn't usually the battle royale genre's biggest strength – it's considered ground-breaking when a desert map is replaced with a snowy one – but Crytek has poured a striking amount of personality into this Cajun-flavoured hellhole. The enemies are intimidating, disgusting, and fascinating in equal measure: mutated dogs, walking hives of venomous bugs, and brutes with armour made out of wasps' nests stalk the swamps, and bigger bosses look like something straight out of *The Texas Chainsaw Massacre* or John Carpenter's *The Thing*. *Hunt's* world is the best the genre's ever seen, and it's also a massive step

up from Crytek's usual fare of gruff supersoldiers in skintight nanosuits. The design on offer here could stand alongside gaming's Gothic greats, like *Bloodborne* or *Legacy of Kain*.

Hunt: Showdown also builds on earlier battle royale games by introducing elements of character progression and permadeath, which makes each bout more than a discrete 15-minute affair with no longer-term impact, as is all too common for the genre. Progression is tracked by your 'bloodline', which dictates some weapon and equipment unlocks. Your characters can, however, be permanently lost out in the bayou, making kitting them out a balancing act between keeping them strong enough to survive while also risking only the equipment you can afford to lose.

Hunt: Showdown points to a bleak yet beautiful future for the battle royale genre beyond *Fortnite*. Its high price, horror elements, and emphasis on monster-hunting may make it less of a mainstream success. In a world full of generic clones, though, *Hunt* attempts to build something new – and that alone makes it more than worth your time. 🗡️



▲ Choose your first hunter, but don't get too attached to them. They won't last long.



To infinity... and explode

Kerbal Space Program is still harder than actual space flight

W

ith the announcement of a sequel coming our way, the dried-out old husk of an excitement gland actually started to quiver a bit.

It's happening, and it's going to be great. Unless it's terrible, but I won't accept that as a possible outcome. Anyway, inevitably this leads to the desire to go back to one of nature's finest ever games: *Kerbal Space Program*. And going back to it leads to the discovery that, while I had learned a fair bit about the game in the years following its 2015 (full) release, I've since forgotten it all. *Kerbal* might look cutesy, but it is *harsh*.

Actually, considering the accurate simulation of real-world (and out of this world) physics, it's a bit rich calling it harsh. 'True' would be a better descriptor. See, *Kerbal* has you building up a space program – the clue is very much in the name – and while you can go through a campaign mode of sorts, managing money and achieving goals of exploring your solar system, what I wanted to go back to was the professional mucking about bit: the sandbox. This mode removes the need for money and research, instead just letting you run free with all the off-brand NASA equipment you need.

Step one: build the rocket. I'm keen to get back into *Kerbal* with something more on the ambitious side of things – I'd been through the baby steps of making tiny rockets, getting them to the stratosphere, manoeuvring a bit, then

safely bringing my people back to the safety of the ground. That's boring. Alright, it's not, it's absolutely brilliant. The point I'm making is that I wanted to show off to myself and to you, dear readers, that I'm able to remember how to do things, and apply some general physics-based knowledge to anything I might apply myself to. Physics is straightforward, right?

The rocket was built, a series of large boosters engaging in two stages to offer the most propulsion possible from the ground – exactly where it's needed the most. A third-stage engine to give that final push out of the atmosphere. Trinkets and scientific equipment, auto stabilisers, and

other such luxury compute-o-parts to make the whole thing go without a hitch. It was a beaut. Alright, it was really ugly, but the parts were there, they would work, and they would throw me back into *Kerbal* with a head start.

Naturally, I'd forgotten a crew module so had no way of controlling the rocket, so it wouldn't take off. One quick fix later and we're there at ground control, counting down the launch. Stability support on, thrust at maximum, three, two, one... blast off... oh. The precariously balanced fuel tanks atop the rocket's side boosters had bent inward on take-off, colliding with the main body and exploding spectacularly. The launch was an absolute, catastrophic failure and would need some serious redesign to even get off the ground to begin with. *Kerbal Space Program* is an astoundingly good game. 🤖

**“The launch
was an absolute,
catastrophic
failure”**

Now playing
To infinity... and explode

Wireframe Recommends



Universe Sandbox ²

PC

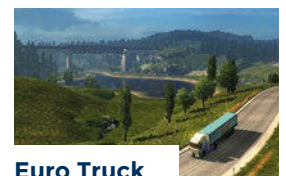
Education might be its intention, but the universe physics simulation encountered here lets you crash planets into each other. So, really, that's all you end up doing.



Bridge Constructor Portal

PC, PS4, XBO,
SWITCH, MULTI

Bridge Constructor might have started out with serious intentions, and its physics are sound, but the *Portal* spin-off really grasps what makes the series fun. Failing, basically.



Euro Truck Simulator 2

PC, MAC, LINUX

The one everyone always wants to laugh at – until they play it. *Euro Truck Simulator 2* is bewildering in just how much it can take over your free time, given half the chance. Absolutely compulsive.



Tony Hawk's Pro Skater 3

20 years since the first game was released: an apt time to talk about the third entry's killer feature

NEVERSOFT / 2001 / PS2, GC, XBOX, PC, MULTI

Hindsight is a luxury, but the context it offers can bring about some fun little realisations. Now the *Tony Hawk's* series is long-dead (*THPS5* never happened), we can reflect and not worry about what's next, what changes will happen, what tweaks to the formula will occur. Actually, that's quite sad at the same time. But I digress: *Tony Hawk's Pro Skater 3* is, with the benefit of hindsight, the most exciting point in the series' history.

The first game was revelatory, the second had the finest soundtrack of any game ever made, but it was the third game where those solid, compulsive mechanics were introduced that made this a competitive player's dream. If you know, you know. If you don't: I'm talking about reverts. That is to say, pivoting your stance on landing from a jump or drop in order to switch your dominant footing on the board, be that left or right-sided. That sounds awful and boring, of course, but hey – would you believe it was much more than that?

Reverts in *THPS3* could be chained with manuals (balancing on the front or back two wheels while still being in motion), and when you did this, the combo you had been building up just before landing *did not end*. Manuals were introduced in the second game, but the simple act of adding and allowing you to chain reverts *into* manuals meant combos – and so

scores – were now feasibly unlimited in scope. That's how to add something of value to a yearly update.

Neversoft had seen what made the *Tony Hawk's* games successful so far – a fiercely competitive local multiplayer mode. A room with a bunch of people in it all taking their turn to better each other across a few different modes. The one constant? It was all about the score. The contributing factor to scores? Combos. Whoever took that knowledge and decided to add in revert-

to-manuals as a combo extension deserves the highest honour gaming is able to bestow (probably a furry badge with the Wireframe logo on it), because whoever had that idea made the *Tony Hawk's* series one of the best multiplayer games of the early

noughties. Not to go too old man on you whipper-snappers, but that thrill of face-to-face competition – not the band, they weren't on the soundtrack – is a thrill no amount of superb online multiplayer games can beat.

The *Tony Hawk's* series would have been absolutely fine had it continued the way it was heading. Uninspiring, maybe. Perhaps it would have expedited the series' plummet toward the likes of *Ride* and Robomodo's other execrable entries to the series, I can't say for sure. But with the benefit of our good friend hindsight, I can say it was the addition of reverts in *Tony Hawk's Pro Skater 3* that made a great series transcendent. 🐾

“Whoever had that idea made the *Tony Hawk's* series one of the best multiplayer games of the early noughties”

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