Wireframe

LIFTING THE LID ON VIDEO GAMES

Hounded Out

Two canine heads are better than one in PHOGS!

CARDS AND DICE
The growing influence
on video game design

YOUR STORY
Code an FMV
adventure game

LOSS AND FOUND
Making personal games
that deal with grief

PHILIPS
Monitors

get
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Overwatch and the return of the trolls

"We often talk about ways to punish players who are behaving poorly, and it's not very exciting to a lot of us. I think, more often than not, players are behaving in awesome ways in *Overwatch*, and we just don't recognise them enough."

Designer Jeff Kaplan offered this rosy take on the *Overwatch* community in 2018 as he introduced the game's new endorsement system, intended to reward players for sportsmanship, teamwork, and leadership on the virtual battlefields of Blizzard's popular shooter. After matches, players could now vote to endorse one another; a steady stream of endorsements would earn occasional loot boxes and shiny badges indicating their status as worthy teammates. If bans existed to punish disruptive behaviour, this new system commodified and incentivised positive interactions. After all, the world could always use more heroes.

Flash forward to 2020. *Overwatch 2* is in the works with no official release date announced, and development of new content for the original *Overwatch* has slowed to a crawl. While fresh character skins appear with seasonal events and the perpetual cycle of gameplay balancing continues unrelentingly, *Overwatch* has stagnated, and its player base is restless. In the absence of new heroes, maps, and modes, a growing number of players have leaned hard into toxicity to keep themselves amused.

As a die-hard *Overwatch* player, I've observed a considerable up-tick in abusive chat, gameplay sabotage, and other forms of disruptive behaviour. These problems aren't new or unique to *Overwatch*, but they're increasingly becoming the norm rather than the exception. While a certain percentage of the player base has presumably drifted away to other games as development on *Overwatch* has wound down, certain
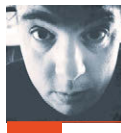
JESS MORRISSETTE

Jess Morrissette is a professor of Political Science at Marshall University, where he studies games and the politics of popular culture.

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stalwarts who remain have resorted to trolling out of sheer boredom.

Blizzard has long emphasised the motto "play nice, play fair" among its core values, and *Overwatch*'s endorsement system seemed to embrace this ethos. Why has it failed to rein in a community increasingly intent on acting out? I argue that *Overwatch*'s endorsements created a form of performative sportsmanship. It's the promise of extrinsic rewards – rather than an intrinsic sense of fair play – that motivates players to mimic behaviours associated with good sportsmanship. With the endorsement system, Blizzard gamified the social interactions that happen around *Overwatch* with points, ranks, badges, and rewards. Now, in addition to competing over a control point or payload, players can compete over who's nicest.

So, what's the big deal? Is 'fake niceness' functionally different than genuine human decency in the context of an online game? While players bashing out 'gg' on their keyboards after a match instead of 'gg ez' is arguably a step in the right direction, performative sportsmanship remains, at best, superficial. In the absence of meaningful options to sway the hearts and minds of toxic players, performative sportsmanship simply isn't durable. It lasts until it doesn't anymore, and then the trolling commences anew.

Perhaps the recent release of Echo, *Overwatch*'s 32nd – and presumably final – hero, will shake things up a bit and reverse this backslide. If recent history has taught us anything, though, it's that Echo will only be a temporary fix. Once the newness wears off, bored players will fall back on bad habits, and it's going to take a whole lot more than the occasional loot box to calm the toxic discontent bubbling under the surface of a game Wired once hailed as the rare example of a "troll-free online shooter." Ⓦ

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WELCOME

Whether game designers mean to or not, they can't help but leave traces of themselves in their work. It's something you can see in several games we've covered throughout this issue. Some, like developer Dan Hett (see page 18) have funnelled tragic and deeply personal experiences into their games. Others, like Tim Bekkers, creator of *Imagine Lifetimes* (see page 48), have made games initially built around their somewhat cynical outlook, only for their perspective to change as development has progressed, and they've grown older and more positive.

As Shane McCafferty, designer of *LOVE: A Puzzle Box Filled With Stories*, points out on page 12, the medium has long been a venue for drama and human stories – but games that explore the more delicate, nuanced areas of existence are comparatively rare. "By and large," he says, "games that try to tackle tougher emotions are still the exception rather than the rule."

Kudos, then, to the designers that dare to explore those trickier sides of the human experience: loss, regret, and a smattering of existential dread. Video games are an escape, of course – and god knows we need a bit of escapism with the real world being the way it is right now. But like poetry, novels, music, or any other art form, games are also a valuable mirror, offering reflections that can be comforting, thought-provoking, or plain disquieting.

Ryan Lambie
Editor

Gone to the Phogs

Coatsink's Jack Sanderson talks us through the studio's playful co-operative puzzler

We have a bit of a soft spot for games with unusual control systems here at Wireframe Towers. Back in issue 23, we reminisced about Namco's half-forgotten *Libble Rabble*, designer Toru Iwatani's follow-up to *Pac-Man*, which involved simultaneously moving two cursors to stretch marquees around objects. There's a hint of *Libble Rabble* in *Noby Noby Boy* – Keita Takahashi's charming interactive toy, which involved stretching two ends of the same character using the twin analogue sticks. And traces of *Libble Rabble* also made their way into PlatinumGames' *Astral Chain*, where you could move two characters to ensnare enemies with its titular weapon.

All of which leads us to *PHOGS!*, an action-puzzler that continues the head-scratching tradition of those earlier games. Either on your own or with a friend, you take control of a two-headed dog as it stretches and bounces around a cosy 3D world; but unlike those earlier games, *PHOGS!* is more specifically focused on solving environmental puzzles. Whether it's using your critter's body to roll along objects, or gripping onto bits of scenery with your teeth to traverse tricky obstacles, *PHOGS!* is less eccentric than *Noby Noby Boy*, and more broadly approachable than Namco's frighteningly hard, arcade-focused *Libble Rabble*.

In short, it takes the 'controlling two interlinked characters at once' concept somewhere altogether different. To find out more, we caught up with PR manager Jack Sanderson at Coatsink – the studio co-developing the game with Bit Loom Games.

It's a game that lends itself well to the question: what is *PHOGS!*?
In *PHOGS!* you play as a stretchy-bellied double-ended dog with two heads. Together, you explore three strange and wonderful worlds and co-operate – either with a partner or between the two halves of your own brain – to help the inhabitants in unusual and surprising ways, like hosing water in Food World to dragging around orbs of glowing light in Sleep World.

How did the idea come about? *Noby Noby Boy* naturally springs to mind.
We wanted to create something none of us had played before, and honed in on the idea of the double-ended dog. Then we explored gameplay possibilities, looking at games like *Noby Noby Boy* and *Push Me Pull You* before settling on a puzzle-focused direction. We also wanted to pack in tons of charm and personality, so we looked to series like *Mario*, *Spyro* – even *Dark Souls* – to help develop the themes of the environments and characters.

Why specifically a two-headed dog? Both from the perspective of why two heads, and why dogs? Why not a four-headed squirrel, say?
The idea began as simply an animal that could connect two pipes to become part of the pipe itself. Then we imagined it grabbing and fetching things, being cute and lovable... And with the focus on co-operation – specifically between two people – a double-headed dog was the obvious choice. ➦

> **"With the focus on co-operation, a double-headed dog was the obvious choice"**

⌃ **Relaxation is also part of the game, as you can see.**

Given the tribulations unfolding in the real world, *PHOGS!*'s whimsical landscape looks incredibly inviting.

When it comes to designing puzzles, how challenging is it to factor in the stretchy-belly mechanic?

The stretchy belly was at the core of the puzzle design. We wanted to allow players to find creative solutions using the body and the fact they're always tethered together. This idea is conveyed through the shared controller, tying players together both in-game and in reality, encouraging constant co-operation. The challenge was actually in devising the 'rest' spaces between puzzles – places the players can just relax and enjoy the surreal world.

Similarly, is everything designed with co-operative play in mind, or is that a happy accident after the fact?
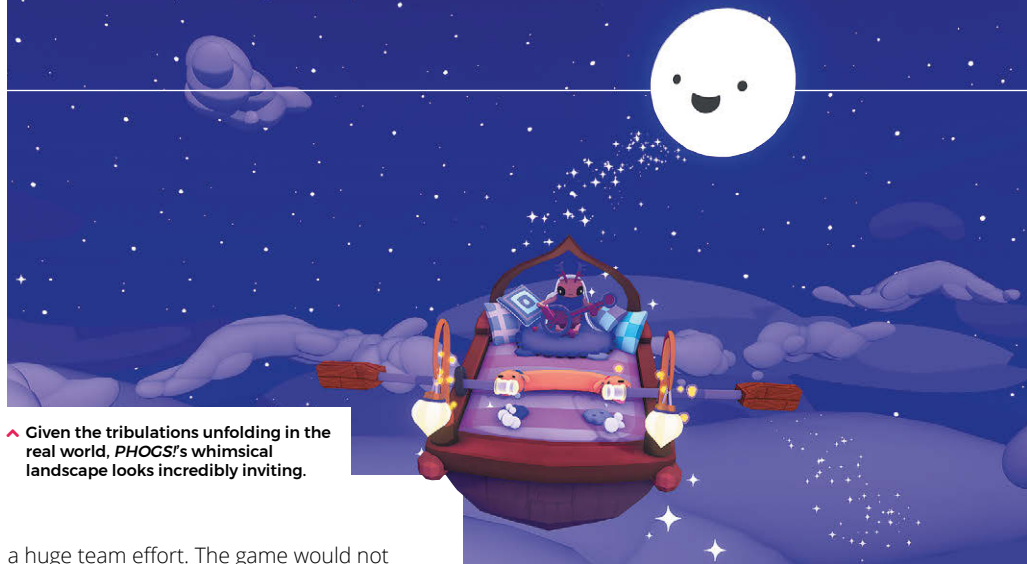
We wanted to push the co-operative angle as much as possible, always with the understanding that both heads could still act separately. We went through a lot of iteration to ensure our puzzles made the most of the character.

Who are you aiming *PHOGS!* at? Will it be something akin to, say, *The Witness*, that has grown-ups weeping in frustration at their inability to solve something?

If you're into the style or the characters, or just puzzles and physics-based fun, then we made the game for you. It's designed to be surprising, exciting, challenging... and definitely geared more towards exploration and communication in its problem-solving than head-scratching, stare-until-you-solve-it befuddlement. And we kept both children and adults in mind when gauging the difficulty. We hope it'll bring a smile to a wide range of players.

How many are working on the game? Have you had much support from outside the studio?

The initial demo was created by the three of us at Bit Loom, and we began co-developing the game with Coatsink in 2018. Since then, Bit Loom has been responsible for the design, with Coatsink helping out with art, animation, code, and audio. We also had the pleasure of working with our friend Caitlin Smith, who created the wonderful user interface and menu characters. So it's been a huge team effort. The game would not be as charming and wonderfully detailed without the help of everyone involved.

What engine is *PHOGS!* being made in, and what were the positives and negatives of using it?

We're creating *PHOGS!* in Unity 3D, which has allowed us to rapidly prototype and experiment throughout development, and using Pro Builder to create the terrain. Overall it's been great, although it's occasionally been tricky reigning in the physics to ensure natural-feeling controls and intuitive gameplay – difficult when you don't know exactly what's going on behind the scenes, but still far more preferential

> ## "We're creating *PHOGS!* in Unity 3D, which has allowed us to rapidly prototype and experiment"

to creating the system from scratch. For the sake of build stability, we also froze the version halfway through development. This saved on a lot of fixes but – hindsight being 20/20 – we missed out on a number of helpful features.

What lessons have you learned from developing the game? Anything you wish you'd known earlier on?

We've received so much great help and advice over the course of development – and setting up the studio – and we're so lucky to be surrounded by such a fantastic community. The biggest realisation came at the end, and how the tools and practices we were using (some from the beginning) were having an impact as we polished the game for release. From feature tweaks to bug fixing – it's not simply about the time and difficulty involved, but how the processes we've built affect everyone in the team.
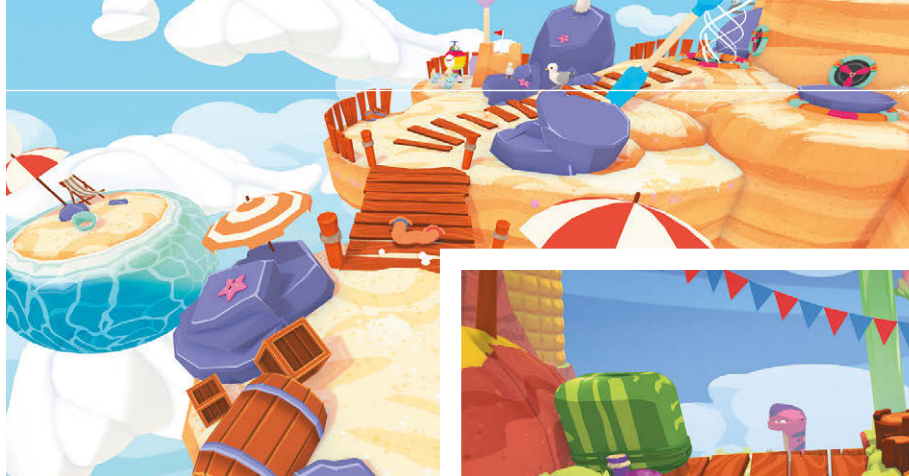
Are there any specific tools you made that ended up being useful throughout development?

Developing the camera took a while because both analogue sticks are used to control the Phog. Our solution was to take direct control away from the player and move the camera automatically – much like in *Super Mario 3D World* – and determine its position and rotation using 'zones' based on the best Phog in any given position. We created a tool to simulate camera movements in-editor, then iterated on the different angles without having to run the game. This allowed us to quickly preview cutscenes and position objects. ProBuilder also became a core part of development, which we used to edit basic geometry and puzzles quickly, without switching applications.

How did you go about playtesting the game during development? Any specific tools or techniques involved?

We kept our playtesting lo-fi to begin with, just asking friends to sit down and check

PHOGS! is built in Unity, but the developers created a custom tool to control the in-game camera.

Controls are context-sensitive, so your dogs will automatically bite onto bits of scenery or perform other actions depending on where you are.

Roping in a second player will simplify the controls a little, but will almost certainly result in you both shouting at each other a lot.

it out with little to no heads-up, watching them work out the mechanics and solve problems, and only intervening if they got stuck. We also took *PHOGS!* to plenty of events, and it was great to see how the different generations of players approach the game, particularly compared to more experienced gamers.

Working with Coatsink has also been a huge help, with regular gameplay feedback and frequent discussions with the team about the development process. And the QA support has been invaluable. The team helped polish the game to a shine, ensured a smooth learning curve for each world, identified any communication flaws with the puzzles, and generally made sure the whole game was a consistently enjoyable experience.

From your experience in developing *PHOGS!*, **what nuggets of advice do you have for other indie devs?**
It's very easy to get caught up in ideas that sound great in theory but simply aren't exciting or enjoyable in practice. It's crucial you take a step back and imagine how a new player will experience each moment – then rework or discard whatever's not working. So playtest. Get your game in front of fresh eyes and find out what works, what doesn't work… and what new players think to try that you never even thought of.

How's the market out there right now for games of this ilk (not that there are many)? Are you confident there's an audience?
I think in recent years there's been a shift towards slower, friendlier experiences like this. So while *PHOGS!* may be unique in its design and characters, it echoes a popular sentiment in terms of aesthetics and tone. We've been fortunate enough to show it all over the world, and the responses have been fantastic. It feels like

there's a real appetite for different and unusual experiences which *PHOGS!* will definitely satisfy.

Do you worry about being 'too weird' at all? I know how conservative a lot of publishers/audiences can be, so I wonder if it crosses your mind at all.
If anything, I worry we haven't been weird enough! Games have so much potential to be a ridiculous, no-limits, carefree space to explore the imagination. But during development, we often got caught-up making sure the puzzles were suitably clever and that the world felt consistent, enforcing all these rules that ended up limiting what we added. In future, we should try letting go of some of these concerns and focus on the joy. Strangeness is so much more inviting when it comes from a place of fun, rather than being weird for the sake of it.

Finally, what are your hopes for *PHOGS!*? **What does the future hold – a series, spin-offs, three-headed dogs maybe?**
We're all excited to see it out in the wild, watching new players and hearing their thoughts. We've spent a lot of time considering how everything fits together and feel we've made something really unique and surprising. If people enjoy it, we'd happily come back and investigate potential new adventures in the phoggyverse. Time will tell. Until then, we have plenty more crazy ideas to explore. ⓦ

PHOGS! **is due for release in June 2020 for PC, Switch, PS4, and Xbox One.**
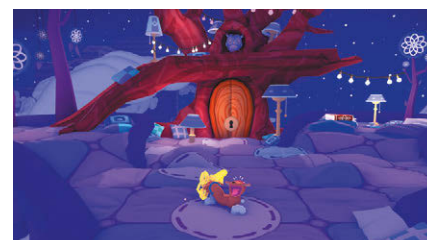
WAIT, DARK SOULS?

If Sanderson's suggestion that the murky, stormy *Dark Souls* was an influence on the much sunnier *PHOGS!* took you by surprise, then you're not alone. So we had to ask: what links Sanderson's double-dog puzzler to FromSoftware's grimdark RPG? "One thing about the *Dark Souls* series really resonated with us: how the world is revealed entirely through the environment and only the briefest interactions with the characters," Sanderson tells us. "There's no explanatory text or long speeches; you're able to piece together a deep understanding of the lore through the world design. We used this as inspiration and aimed to create a fantastical world in which the history, mechanics, and characters are all revealed through exploration." So there you have it.

Monster Train

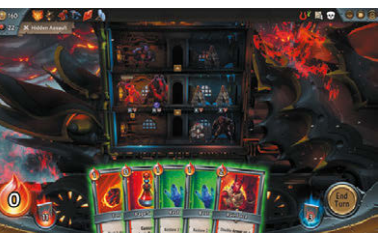Bringing a twist to your standard deckbuilding card game

T he basics of any deckbuilding competitive card game are always along the same lines: pick your cards to best deal with the situation in front of you, play them at the right times, try to avoid screaming too much when everything inevitably, semi-randomly, goes against you. In that respect, *Monster Train* is no different from what's come before. But in its actual setting, things start to veer away from the well-trodden path.

You are in charge of one of five monster clans attempting to repel the assault of a faction of rogue warriors from heaven, all while barrelling through hell on a train. Your goal is to protect your pyre – or engine – from attacks, defending multiple floors from these vertically encroaching enemies. It is very literally a *monster train*. Fail a run? You will. Pick it all up and start over, because the other sprinkle on top here is that of the roguelike. It's an intriguing mix, at first glance.

This is developer Shiny Shoe's second 'traditional' release since its formation eight years ago, with the studio mainly focusing on support for other teams and titles. Founder and CEO Mark Cooke tells us the atmosphere is optimistic in the team: "I really enjoy working with everyone on the team I've built, and this is a game genre we really love. Many of us have played a lot of Magic: The Gathering, for example – I started with the Magic Revised set in 1994. Developing an original, traditional game isn't completely new for many of us though – around half our team are industry veterans, myself

included, and we've been on the development teams for full price PC and console games from publishers like LucasArts, EA, Activision, Sony, and Sega in our careers."

With prior experience on larger projects, as well as experimental streaming-only titles like the team's two *Death's Door* releases, the approach to development is focused on areas that might not traditionally be thought of first: "Tailoring the user interface of *Monster Train* to quickly communicate the state of the game to a streaming audience," Cooke says. "Since viewers can pop in and out at any time, it's important for them to be able to quickly understand the context of what they are watching. That means key statistics and metagame state need to be immediately obvious. We're working to make that as clear as possible in the UI to make the streaming experience as both a broadcaster and a viewer enjoyable."

There is a focus on streaming and multiplayer – with an eight-player mode offering real-time battles that ramp up the whole 'frantic' aspect of things. But *Monster Train* does still offer a fair chunk of focus on its single-player aspect. "Single-player has a number of progression goals separate from multiplayer," Cooke explains. "You can level up your monster clans, unlock cards and artefacts, and aim to complete all challenge levels of the Covenant. The Covenant is our single-player elder game. It's a system of ramping difficulty for those who really want a challenge. Our goal is to have two appealing elder game tracks. On the single-player side, the elder game is unlocking all content,

▼ Multiplayer is the focus, but there's a robust single-player mode available, should you want it.

◄ A lot of focus has gone into playtesting and analytics to try and ensure balance throughout the game.

completing all Covenant levels, and earning all achievements. On the multiplayer side, it's beating everyone else in direct competition."

It's not necessarily the engine most would jump to when thinking of a deckbuilder, but *Monster Train* is indeed built using Unity. "The main pros are that you get a lot out of the box and the tools are quite good overall," Cooke says. "The biggest con is that we don't have the engine source code. There have been numerous times where we've wanted to be able to see how the underlying engine works to understand run time behaviour or debug performance issues. If you're a larger studio, it's possible to get access to the engine source code for Unity, but we're not big enough for that yet."

Nevertheless, Shiny Shoe has been progressing apace with *Monster Train* and most recently offered the game up in public beta form for some extra help testing things with the community. "Balance is a very challenging problem in a game like this," Cooke says. "Many different game systems come together to determine how balance ultimately feels to a player, and when you make a major change in one area, you end up having to change the others half the time to compensate." To tackle this, the team has three approaches: the dev team playtests "all the time" and shares internal feedback, beta testers (private as well as public) offer more feedback, and data collection are all used in tandem.

"*Monster Train* is packed with analytics about gameplay," Cooke explains. "We have internal dashboards with all sorts of graphs and tables telling us things like card pick rates, win rates with certain monster clan combinations, median amount of player health lost on a certain battle, etc. It can be hard to interpret the data in a way that is deeply meaningful at times, but there are lots of obvious problems you can identify quickly from the data. I'm talking about things like noticing a card is never picked, or a battle is way too easy or hard."

There can never be a guarantee that something will be good, of course, but Shiny Shoe appears to be making all the right moves in ensuring its deckbuilder has all the ingredients necessary to both stand out in an ever-more crowded field, and to actually *be pretty good*. We'll find out if it lives up to this potential later this year. ⓦ

"Balance is a very challenging problem in a game like this"

⌄ It looks by-the-book serious, but there is a sense of humour running beneath *Monster Train*'s surface.

LOVE: A Puzzle Box Filled With Stories

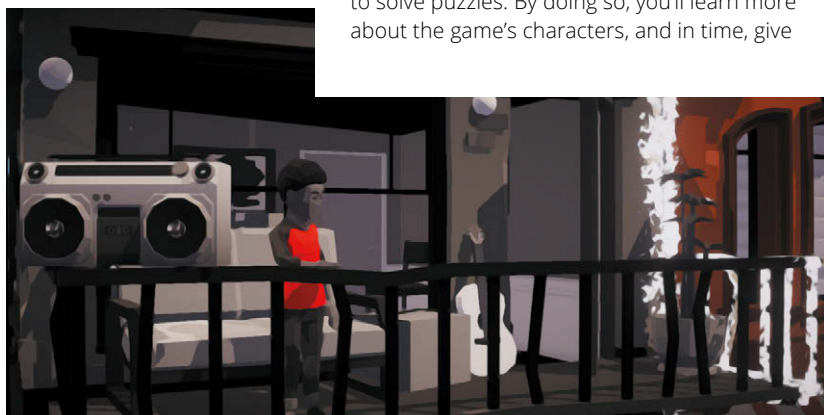Designer Shane McCafferty unveils his emotional Rubik's cube, LOVE

Info

GENRE
Puzzler

FORMAT
PC / Mac

DEVELOPER
Rocketship Park

PUBLISHER
Rocketship Park

RELEASE
TBC 2020

> McCafferty describes *LOVE*'s tone as like "when you sit and watch a sad movie under a warm blanket on the couch with your significant other."

How many games deal with the feeling of regret? Not many, we'd wager. We're not talking about the buyer's remorse you might have after spending too much money on football players in *FIFA*, either: rather, the feelings that spring from missed opportunities, long-gone relationships, and paths not taken.

It's something Rocketship Park is tackling in *Love: A Puzzle Box Filled With Stories* – what studio co-founder and developer Shane McCafferty calls "a living diorama." The game provides a voyeur's perspective on a five-storey apartment building where each floor can be rotated – an action that not only provides glimpses of the tenants that live inside, but also moves the passage of time back and forth.

Taking its cue from classic point-and-click adventures, *LOVE* sees you interact with the tenants and various objects within the building to solve puzzles. By doing so, you'll learn more about the game's characters, and in time, give each of their stories closure. In line with the game's gently melancholic tone, however, that sense of closure doesn't necessarily mean a happy ending for the various people you meet in the game. "We're never undoing, or fixing, these people's stories," McCafferty explains. "We're trying our best to keep these stories real. We're not looking to reunite a prince with a princess. Everyone has experienced stories of love and regret, both romantic and otherwise – and we've all been in moments where we find ourselves stuck, unable to move on from the past. Each puzzle in *LOVE* will take the residents to a place of peace with their experiences."

Each of *LOVE*'s puzzles is intimately intertwined with its story and characters: one example McCafferty describes involves two childhood friends who've grown apart as the years have rolled on. "Early players have described this story in a variety of ways, from being about two friends who had a falling out to being sisters that simply don't stay in touch," he says. "There are no wrong answers here. Once a puzzle is complete, your interpretation of what happened is yours and yours alone."

For McCafferty, the initial inspiration for *LOVE* came a decade ago, when he first heard a song written by his friend Neil White. That piece of music, *Devils In My Head*, eventually accompanied the game's trailer. "It's a beautiful, haunting piece of music that blends melancholia, sadness, and optimism in a way that feels eerily familiar," McCafferty says. That piece of music led McCafferty to start thinking about how he could evoke similar emotions in a video game. "When
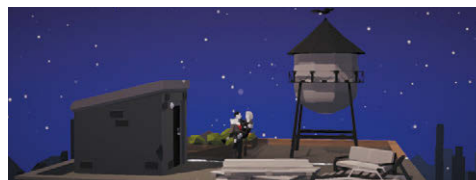
Each floor of the building rotates like a Rubik's cube, shifting perspectives and time back and forth.

"Unlike the cat hair moustache solutions the point-and-click genre's known for," McCafferty says, "our puzzles tend to follow a logical rhythm."

Built in Unity, *LOVE*'s low-poly characters and painterly filter complement the wordless, minimalistic storytelling.

we talk about the emotions we feel in games, we're often too keen to lean into the same powerful-but-simple emotions that we might experience in a summer blockbuster. There are some wonderful instances where this isn't the case, but by and large, games that try to tackle tougher emotions are still the exception rather than the rule."

LOVE's emotional focus extends to its design, which takes low-poly models and a post-processing filter that gives its domestic scenes a diffuse, painterly look. Aside from a few words on the user interface, *LOVE* also eschews dialogue between its characters; instead, you'll grow to understand their relationships and shifting moods through their body language. It's a design choice that "lets the player have their own experience within the narrative," McCafferty says. "Once words get involved, you're just dictating to the players how they should feel."

The game's minimal aesthetic is complemented by the complexity going on behind the scenes. The tenants' interactions

"Each of *LOVE*'s puzzles is intertwined with its story and characters"

with each other, and the player's ability to manipulate time to see their past actions, has required a great deal of planning, iteration, and storyboarding to plot out, McCafferty tells us. "The process for the game design is iterative. We storyboard a puzzle, we implement it, we test, and we circle back around. This loop can happen dozens of times. Each puzzle has to hit the correct feeling. Each story beat has to hit home. And then, once it's all together, each puzzle needs to be able to live alongside the other puzzles in the building. It's quite the involved process, but tremendous fun."

Ten years and a lot of experimentation later, development on *LOVE* has reached its latter stages, and it's shaping up to be a thought-provoking and refreshingly different kind of puzzle game. It's not all ennui and regret, either; there's another theme here, McCafferty says, and one he hopes players will take away with them once the final puzzle's solved. "There's a complementary emotion that's running through the game as well, [which] can sometimes help characters in finding their next steps: a feeling of community. As the game progresses and stories crossover, you'll reveal existing relationships between the residents. I'd love for the game to make people think a little more about the people who orbit their life. How are they? And should I say hello more often?" 🅦

EMOTION ENGINE

As you'll see on page 18, video games can be a useful means of processing difficult, real-world emotions like loss and grief. And while *LOVE* isn't an autobiographical game like Dan Hett's deeply moving *c ya laterrrr*, it's still designed to reflect common human experiences, as McCafferty explains. "Over the last decade, as I've gotten older and had children, I've become acutely more aware of people's struggles and the importance of talking about them. As creators, no matter the medium, it's important that we provide opportunities for people to reflect on their experiences. Films, television, books, video games – these all have the power to help us process some very real aspects of our lives."

Headlines
from the virtual front

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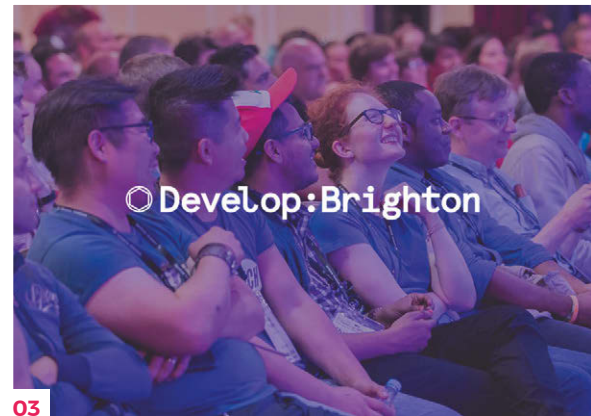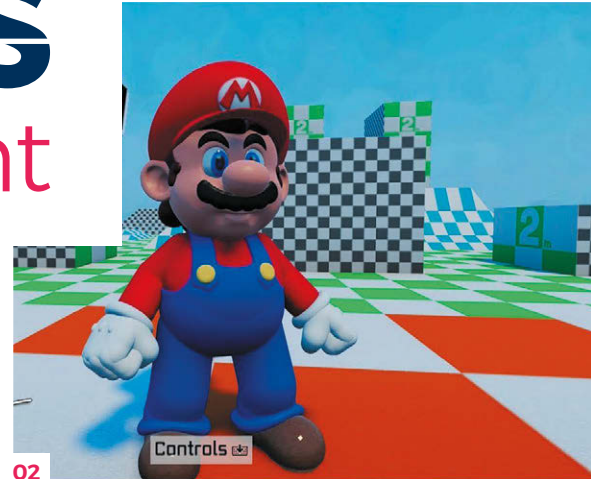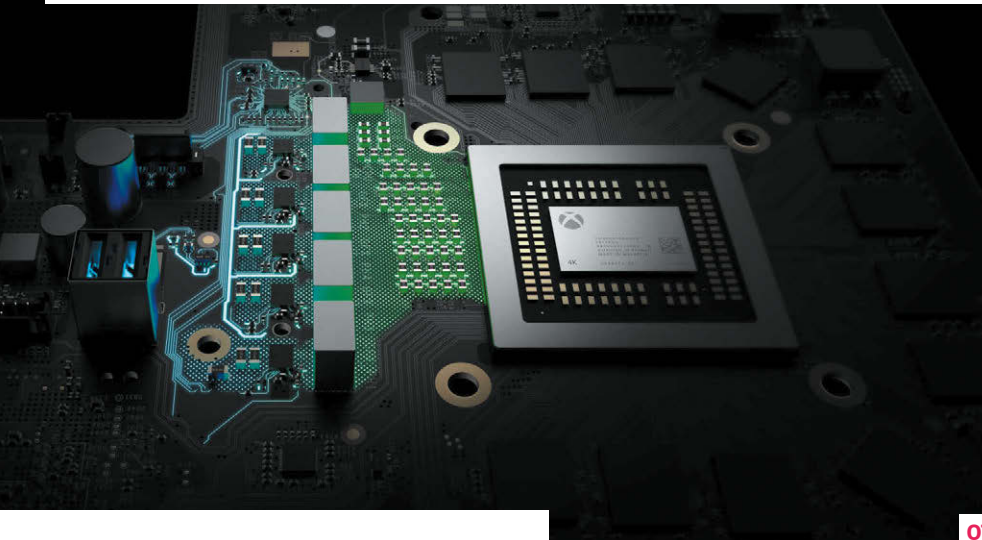
01. Naughty hackers

The sort of hacker you wouldn't see in our sister publications The MagPi, Custom PC, or HackSpace magazine – there's nothing ethical about this – claims to have stolen source code for AMD's Big Navi and Arden GPUs, threatening to release the data to the public if the manufacturer doesn't pay them $100 million. While the Arden is said to be the template for the Xbox Series X's own GPU, which would make knowledge about how this stuff works very valuable indeed, it seems there's little worry the code stolen will actually tell anyone anything, or be of any worth at all – at least by itself.

Tellingly, a statement from AMD read in part: "We believe the stolen graphics IP is not core to the competitiveness or security of our graphics products." That's about all the info you need to figure out that ransom isn't going to get paid.

02. Nightmar-io

Media Molecule's *Dreams* allows you to create pretty much anything, so naturally, people have been drawn to remaking what they know. It's how we work. One such creator, Piece of Craft, has seen their specific creations taken down, however, because a) it was Mario, and b) Nintendo isn't a fan of its IP featuring as shareable content on a Sony-exclusive game.

Dreams offering such openness in its creative endeavours means things like this have always been expected. In fact, Liam de Valmency, senior principal programmer for *Dreams*, told VG247 before the game's release: "If you're making IP stuff, it might disappear at some point. Our general policy is that if IP owners ask us to take something down, we will." Especially if it's the Big N a-knockin'.

03. Developing situation

After the wave of cancellations and delays comes the second wave – this one of rearranged dates. One of the big hitters of the European gamedev circuit, Develop:Brighton, has been announced as running 2–4 November later this year at the Hilton Brighton Metropole. At the time of writing, there were no concrete changes in place regarding speakers at the event – Todd Howard is still set to keynote – but, understandably given the four-month delay, some folks originally set to make an appearance might not. Winter on the seafront? We look forward to it.

Silent Hill / *Silent Hills* reboot rumours 'not true', according to Konami

Sony throttles download speeds, Xbox does not; this statement likely won't age well
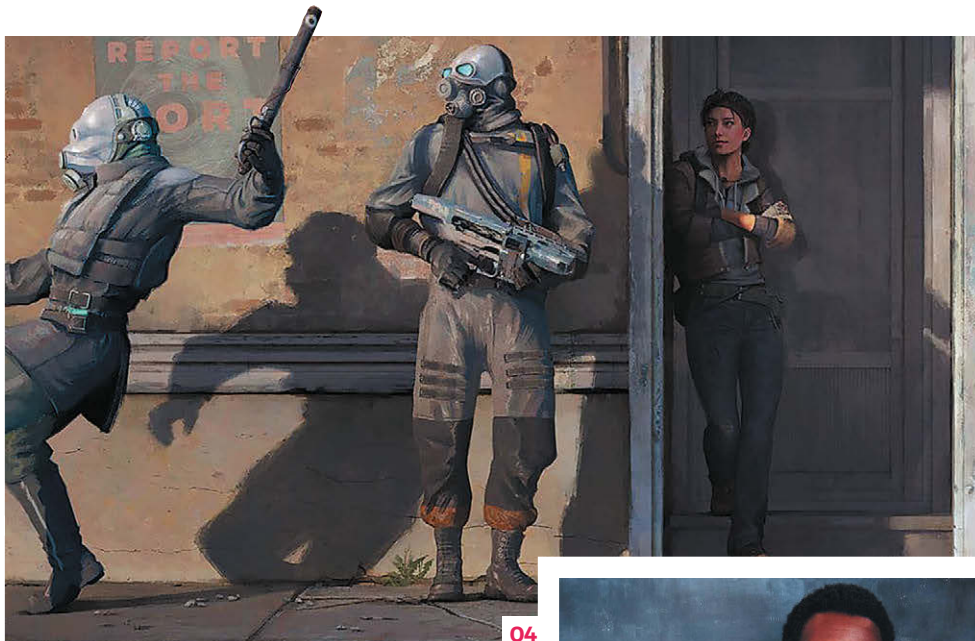
04

04. (Why there's no) Half-Life 3 confirmed

The rumour-meme might have fallen out of favour, but there is still interest in a *Half-Life 3* – or more specifically, a *Half-Life: Episode 3*. And, following the release of *Half-Life: Alyx*, we finally have some form of confirmation as to why exactly the episodic sequel never came to be. Speaking to IGN, Valve level designer Dario Casali explained: "We found ourselves creeping ever forward towards, 'Well, let's just keeping putting more and more, and more, and more stuff in this game because we want to make it as good as we can,' and then we realised these episodes are turning more into sequels."

After *Episode 2*'s release, Casali said realisation set in: "Maybe this episodes thing, it was a good concept, but we're not executing [it] terribly well as far as getting things out quickly enough." A rethink was in order, plans were changed and dropped, and we ended up where we are today: sans *Episode 3*.

05

05. It pours

Begin clanging the new studio gong! Silver Rain is the latest gaming startup to go live in the UK, headed up by BAFTA-nominated actor Abubakar Salim and with support from head of studio Mel Phillips (former BAFTA Games programme manager). The team's first project wasn't announced at the time of writing, but it is pushing to hire new talent to help work on whatever the mystery project is. "We are currently in the prototype stage," Phillips said. "We are keen to hear from all levels of talent who might potentially fit into our team, and will be looking for funding opportunities over the next few months."
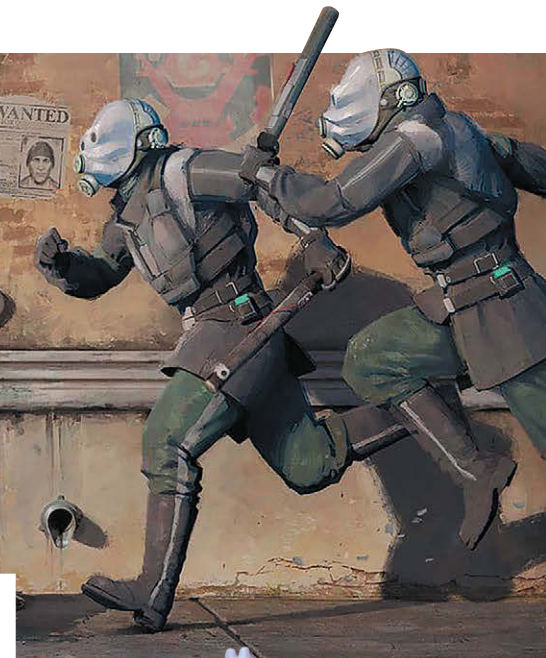

06

06. Oh, and a dream-ario

Mario celebrates 35 years since his first proper game this year, and Nintendo is going big if a report by Video Games Chronicle is anything to go by. In short: *Super Mario 64*, *Super Mario Sunshine*, and *Super Mario Galaxy* are all coming to Switch, alongside some other Mario-themed releases. Bliss.

Nintendo also revealed that by 29 May we'll be playing the *Borderlands* collection (the first, second, and *Pre-Sequel* entries), the *BioShock* collection (all three games), the *XCOM 2* collection (the core game plus add-ons), and *Xenoblade Chronicles: Definitive Edition*. It's a big year for Switch-based re-releases and remasters.

Epic Games Publishing signs Remedy, Playdead, and genDESIGN
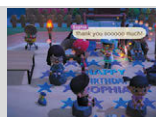
Nine-year-old gets *Animal Crossing* birthday party as a result of COVID-19 lockdown

Incoming

Ghost of Tsushima ⬆

Sucker Punch's upcoming open-world adventure set in 13th-century Japan finally has a release date: 26 June. Reveals around the game have appeared in a staccato fashion since its 2017 announcement, with bits and bobs popping up to whet appetites – while simultaneously not quite showing *enough* for us to really know what to expect from the game. Setting and atmosphere will be present and correct, of course, with *Ghost of Tsushima* being very much a looker: dark, brooding, steeped in realism. Story-wise, it riffs on real-world beats – the Mongol invasion of Japan in 1274 – and skips past the magic and fantasy that might have been expected from the team behind *inFAMOUS*. But what about how it all actually plays? That's the key question, and one we'll be keen to find out the answer to on *Tsushima*'s release. If it manages to mix the quality of *Sly Cooper*'s stealth with the fun of *inFAMOUS*'s combat, we could be onto a winner. Let's just hope it avoids the blandness of the latter, though.

Imagine Earth ⬊

After almost six years in Early Access, this two-person-developed, environmentally conscious strategy title looks like it may well be ready for full release later in 2020. A mix of *Civilization*-like city- (and world-) building with elements like tower defence, *Imagine Earth* has proven to be a real labour of love for Serious Brothers, that aforementioned dev team. There's a bit of buzz around it in online circles, and with such a long time being tweaked, updated, and upgraded, said buzz might not be far off the mark.


⬐ Rising Lords

This medieval turn-based strategy title has one thing immediately going for it: visuals. Who hasn't wanted to have a quick go on the Bayeux Tapestry? Who, indeed. *Rising Lords* brings all the usual facets you'd expect of a strategy title of this type – resource management, production, battles, and lovely, lovely taxes, among others – to make for an intriguing package. The cherry on top could well be multiplayer, allowing us all the chance to ransack our friends' homesteads as and when we see fit. In the game.

Trials of Mana ⬆

Unless you're a superfan, you likely haven't played *Seiken Densetsu 3* – what *Trials of Mana* was known as prior to its official western renaming in 2019. And that's a shame. A genuine classic of the SNES's end days, this *Secret of Mana* sequel has been revamped and reworked as a 3D remake for modern machines – though it is markedly different to the original on which it's based,

with elements like a class system introduced and new combat mechanics, among many others. It's not going to be the most faithful re-creation, but the original was finally released in the west on Switch in 2019, so there's always the option to play that. As for the 3D game, it's out on 24 April, so you really don't have much longer to find out how it's turned out.
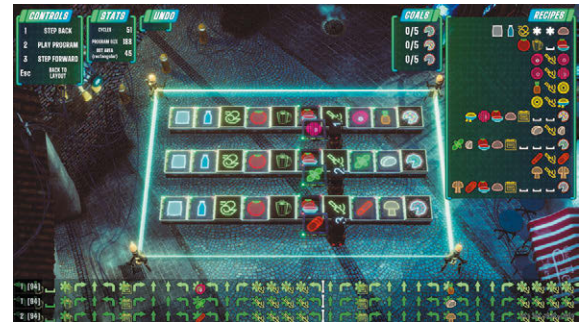
Neon Noodles ⬆

If you ever thought *Overcooked* could do with a bit more *Autonauts* in it, *Neon Noodles* is what you're after. Your goal is to build a fully automated kitchen to prepare a range of meals, feeding logic and instructions to your machines and attempting to construct a monstrosity of gastronomic delights. Also: cyberpunk!
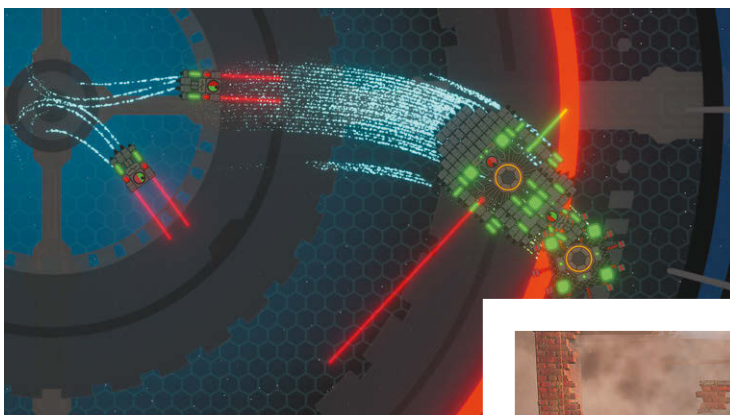
Nimbatus – The Space Drone Constructor ⬆

A beautiful neon universe welcomes you in *Nimbatus*, wherein you partake in the fine activity of... constructing space drones. Clue's in the name, folks. What this means is you choose from dozens of parts, build your spacefaring vehicle, and head out into one of three modes: survival, sandbox, or competitive. Space-based *Robot Wars*? Yeah, that'll do.

Iron Harvest ⬇

Never hurts to have a bit of alternate history on the go, so *Iron Harvest* looks like it could be a welcome distraction. Set in '1920+', this real-time strategy title sees soldiers fighting alongside walking tanks in a world that very much resembles the artwork of brilliant board game, Scythe. The setting nailed, all King Art has to do is make sure its game's actual RTS bits are fit for purpose. We're hopeful.

Loss &
Found

How tragedy has shaped Dan Hett's experimental games, which explore grief, press ethics, and radicalisation

WRITTEN BY
ALAN WEN
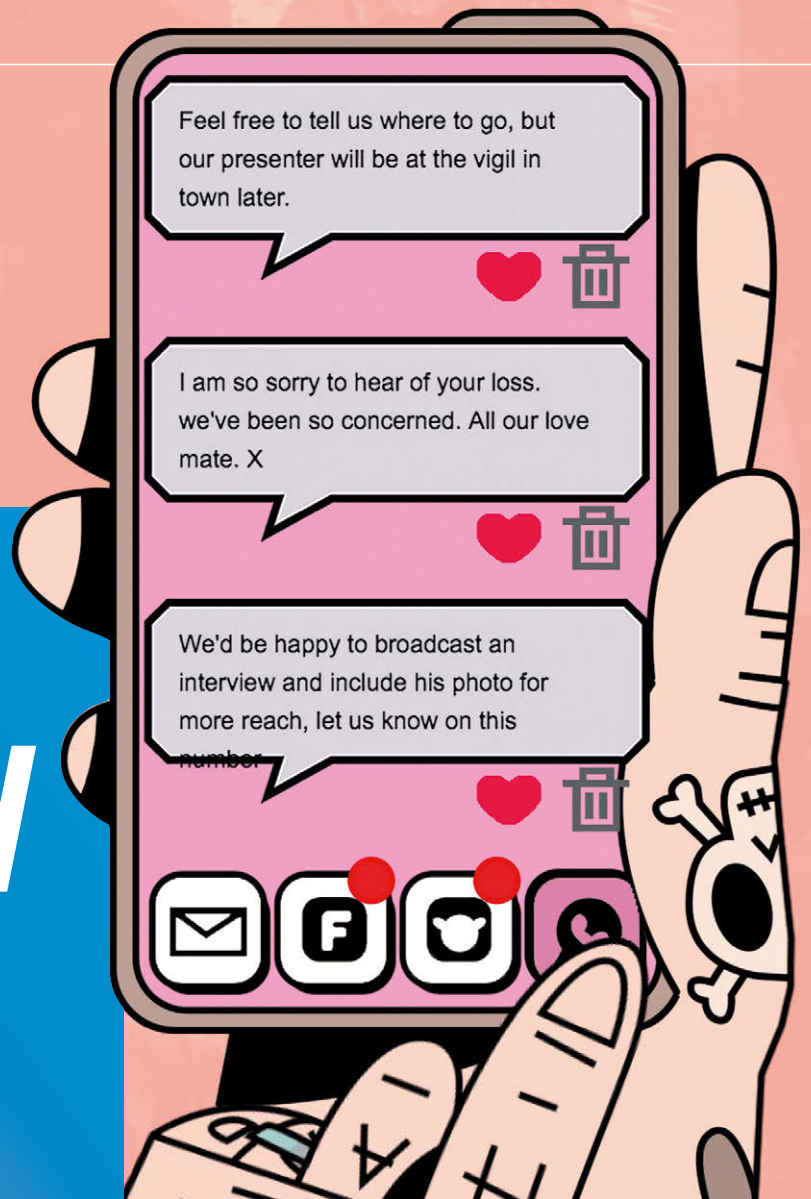
> Dan Hett graduated in design and visual arts before getting involved in BAFTA-winning projects for the BBC.

There aren't many developers whose games are quite as bold and unflinching as Dan Hett's. The medium has tackled more challenging themes and subjects in recent years, especially in the indie space, but it's rare to experience a game – much less a series of them – rooted in such personal tragedy.

In 2017, Hett's younger brother Martyn was killed in the Manchester Arena bombing, a horrific terrorist attack that left 23 people dead. Unsurprisingly, the event and its aftermath has left a profound mark on Hett's creative output as a game developer. "Imagine if I was a painter, or a poet," he says. "And after going through all this trauma, the nature of my painting or poetry took on a different tone or different feel, you'd get it. Except I don't paint – I make video games."

Hett may not claim to be a poet, but he does use writing extensively in his work as a digital artist – indeed, shortly after the attacks, he worked with the artist Naho Matsuda to create

many choices he made or didn't make during that time: "Did I answer the door to that person? How did I handle it? Twine really easily lets you express that stuff in a way that just writing on a page doesn't."

Hett was also inspired by another personal piece of interactive fiction a friend had written about her experience of losing her partner to a terminal illness, much of it focusing on what she didn't do. "It was a really introspective piece that read like it was written for her to get this out, not as a 'product'," he says. "That showed me that it can be cathartic writing this."

MICRO-**GRIEF**

c ya laterrrr was released for free on itch.io in December, just a few months after the tragedy, a relatively quick time to process still painfully raw emotions. It also quickly picked up traction through conduits like Reddit. Feedback was mostly positive, although there were some grumbles questioning the validity of interactive fiction as a game. So when Hett was commissioned by experimental game festival Now Play This in London's Somerset House, he made it a personal challenge to distil his hypertext narrative into what he calls "the most video game-y game I could possibly make."

Developed on PICO-8, *The Loss Levels* presents Hett's story as a lo-fi pixel art arcade game, which he even displayed inside a custom-made arcade cabinet with joystick and buttons for the exhibition. Players who've navigated *c ya laterrrr* will recognise many moments that now play out as a series of microgames, from walking around the arena where roses lain on the ground mark the dead to the grim chore of packing away his brother's belongings into boxes.

Gamifying the ordeal in a series of seemingly throwaway objectives – mashing buttons as you frantically try to find the latest news from various screens, running away from sympathetic guests like a bleak version of *Pac-Man* – might seem almost crass, yet it's also intentional. "I like the idea of somebody walking up to this glowing cabinet in the middle of a game show, expecting a button will make them shoot lasers or explosions, being almost blind-sided by what they're presented with, and then it being over in a flash," he explains. "It's almost ridiculous in hindsight, but it was a conscious decision to ➔

> ## "It's rare to experience a game rooted in such personal tragedy"

⌄ *The Loss Levels* **has a few arcade difficulty spikes, though you also can't fail since it simply moves you along to the next vignette.**
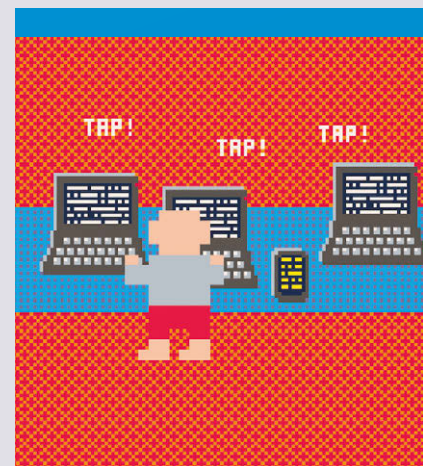
Gallery play

As a visual artist first with works in installation, Hett is especially keen on seeing his games reach wider non-gaming audiences via an exhibition setting. *The Loss Levels* was specifically commissioned by Now Play This, but the arcade cabinet has since toured far and wide, from the Sheffield Doc/Fest to the other side of the world in Argentina. *Closed Hands* is also being planned for a gallery context, with each character represented by an interactive kiosk. While that would mean heavily condensing the material, the aim is that visitors will still have a meaningful narrative that can be experienced in minutes instead of hours.

‹ **Within a minute, the flood of notifications makes** *Sorry To Bother You* **impossible to overcome.**

installations all over Manchester that use data sets to generate poetry – it's a way for him to take his mind off things, as well as put something beautiful back into his city.

INTERACTIVE **NON-FICTION**

The first of Hett's trilogy of games also use words to explore his feelings of loss. *c ya laterrrr*, named after the last message he received from Martyn, recounts in raw detail Hett's experience of the bombing, from the first eruptions of hearsay on Twitter, to the panic and uncertainty the morning after, to the sad inevitability of sitting down with a police officer confirming the worst.

Having 'accidentally' become a game developer, Hett also refers to this piece of interactive fiction as an accident. It began initially as something he just wanted to capture for himself, a habit of his since his angsty teenage years of keeping a live journal. "Speaking to one of my mentors at an artist programme, the advice was to just write it down," he says. "So I ended up initially using just a huge Google Doc on my phone."

As an experiment, he decided to transfer the text over to Twine, a free open-source software he already praises as "one of the best tools created for game developers in the last 20 years." It made a good fit, as besides merely recording a factual account, he found himself ruminating over
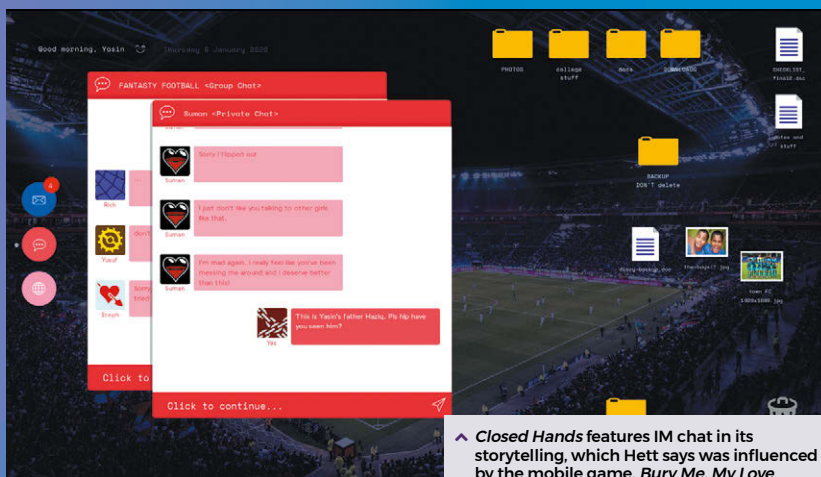
Closed Hands features IM chat in its storytelling, which Hett says was influenced by the mobile game, *Bury Me, My Love*.

Off the *page*

Unlike *c ya laterrrr*, Hett is interested in making *Closed Hands* more visually appealing than just walls of text, so for some characters, you're presented with a fake desktop complete with multiple windows, from emails to IM chat. "I'm trying to tell the stories of these characters in ways that match how this would work," explains Hett. "Our far-right character reflects a lot of the online social media-based reality of the modern far-right, so a lot of his storytelling is done through a Twitter equivalent." An early demo also features a puzzle minigame for the intelligence agent, though he's wary not to include anything too game-y in the final build.

say, 'if I'm building a very pixel-y, distilled, snappy experience, can I present it in a way that is also going to challenge what people expect from video games in other ways?'"

ETHICS IN **JOURNALISM**

As unconventional and cathartic as these games were for articulating Hett's grief, losing a loved one in such violent and harrowing circumstances meant it wasn't just about capturing a personal experience. There were wider issues on Hett's mind too, from how opportunistic individuals exploit terrorist attacks to fuel intolerance against migrant and Muslim communities, to a frenzied media machine hungry for a story, whatever the cost. The latter would become the focus of Hett's next game: *Sorry To Bother You*.

Highlighting the press intrusion he had to endure at the time, the short, web-based puzzle game is designed to be unwinnable as the player controls Hett's distinctly tattooed hands navigating a relentless barrage of messages flooding his phone. Swapping between email and social media feeds, you have to discern whether incoming messages are from people genuinely offering their condolences, which you like, or sneaky journalists harassing you for an interview, which goes in the bin. Make one mistake, or allow the messages to overwhelm the screen, and it's an instant game over.

"It was one of the parts of the experience that made things difficult, but it felt so unnecessary," he says. "There's also the scale as well. When you tell someone, they go, 'Wow, that must've been horrible'. But actually, can you really understand *how* unrelenting it was? It was absolutely horrific." The extra twist is that all the messages you read are in fact real messages Hett received. Other than stripping

out identifying details, the data is taken from his phone verbatim.

Making short snappy throwaway games has always been a draw for Hett since he started running game jams in Manchester a decade ago while also making casual children's games for the BBC. But it's also evident that the ideas he's communicated in this trilogy are anything but throwaway, with an accessibility that allows them to appeal to non-gaming audiences. Indeed, *Sorry To Bother You* attracted the attention of the Hacked Off campaign, who dealt specifically with journalist intrusion in the wake of the phone hacking scandal that hit British tabloids in the 2010s. Recognising the game's simple but effective power, the group commissioned Hett to adapt the game for their own website.

THE BIGGER **PICTURE**

While still clearly taken from Hett's own experience, *Sorry To Bother You* nonetheless marked the beginning of the developer pulling back from the rawness of his own personal grief and refocusing the lens on broader questions. His forthcoming project *Closed Hands* aims to answer the questions he's been quietly pondering since, from the causes of radicalisation that lead to such attacks to how we respond to it as a society. "When everything happened to me, I became one part of this massive tangled web of people who were suddenly pulled into this event," says Hett. "There's just suddenly hundreds of people that make a part of this massively complicated story, and I'm interested in the many stories here that are bigger than my own."

To further distance the game from reality, the terrorist attack that features in the narrative is a fictional one, as is the city it takes place in. It's also told through the perspective of five different characters: a photographer, a journalist,
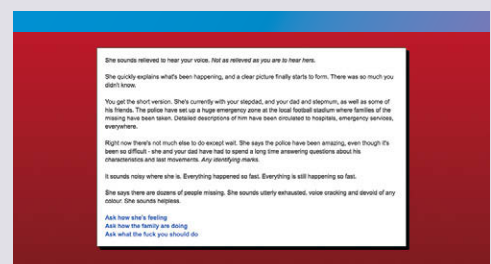
Hett believes interactive fiction is important just to tell different framings of the same story, even if some choices are just putting off the inevitable.

He rounds the corner. The main entrance of the shopping centre is in ruins, a fractal spray of shattered glass fanning out from the ragged hole that was the double-width doorway.

People, grey with dust, stand around, stunned, unable to process how a Saturday shopping trip turned into...this.

A handful of police officers, the ones closest by, are starting to take control of the scene.

This needs to be documented.

But if he could get closer?

Start taking photos.

Check for other entrances.

❮ Twine isn't suited to collaborations, so *Closed Hands* uses Inkle's narrative scripting language Ink, as seen in *80 Days* and *Heaven's Vault*.

⌄ The original cabinet for *The Loss Levels* wasn't designed to move, so Hett ended up rebuilding it before it could be shipped for international exhibitions.

an intelligence agent, the Muslim father of the attacker, and a far-right activist.

Evidently, these are much more challenging perspectives and experiences outside of Hett's own, while the scale of it as a full-length game means he's also collaborating with a team under newly formed studio Passenger Games as its creative director. Besides a producer, designer, and composer, having more writers has been a crucial component, as well as consultation via focus group sessions. "It's being written with quite a large group of people behind it," he explains. "If we're going to write this grand contemporary story that reflects many facets of society, I think it's important for us to not sit in a room alone and do this, but actually go out and run this by people and say, are we getting this right tonally?"

Particular care is being taken with different cultures, with most of the Muslim characters being written by South Asian writer and cultural commentator Sharan Dhaliwal. Hett is similarly wary of not reducing the far-right character – his polar opposite – into a caricature. "I'm not on board with how they do things, but I do recognise that there is a reason they feel this hostility, and it's not something they've come to on their own," he says. "It comes from the press, their environment; there's so much to everybody's story. It would be foolish of me as a person and as a writer to dismiss them as just a ball of hate with no rationale behind them whatsoever."

Certainly, it's the most ambitious of Hett's projects so far, which could do for interactive fiction what *Telling Lies* has done for the FMV game, although Hett is humble about the comparison. By moving away from his previous smaller introspective games into something aimed at challenging different politics and belief systems, he's also conscious that he's straying into potentially 'spirited discussions' – a rather understated way to describe the current state of any online discourse. "I'm probably going to have a rough ride when we release this, but that's not something I'm going to shy away from," he says.

Nonetheless, his short games have yielded positive results, whether it's the people who shared their own personal experiences with him after playing *c ya laterrrr*, or the journalists who rang up to apologise after playing *Sorry To Bother You*. If anything, the depth afforded by *Closed Hands*' scale and structure will allow even more profound insight, especially at a time when we find ourselves in a less nuanced and more polarised world.

Hett may be mostly recognised for games based on a loss more traumatic than any of us could even imagine, but what players and developers alike find in his work is a maturity and depth that pushes the medium into braver territory, whether it's a simple two-minute experience, or a complex, sprawling narrative. ⓦ

"Can you really understand how unrelenting it was?"

c ya laterrrr, The Loss Levels, and *Sorry To Bother You* **are all free to play at danhett.itch.io**.

Clickbait

The rise of idle games

Idle games may have faded from the headlines, but behind the scenes, enthusiastic amateurs continue to innovate

WRITTEN BY **ROBIN WILDE**

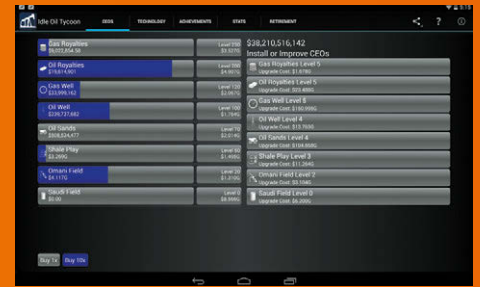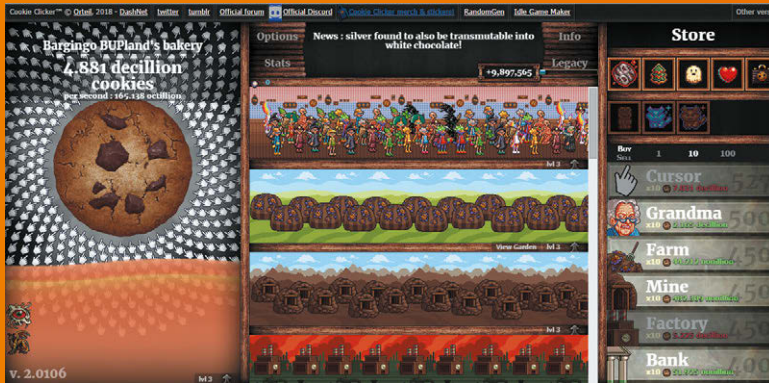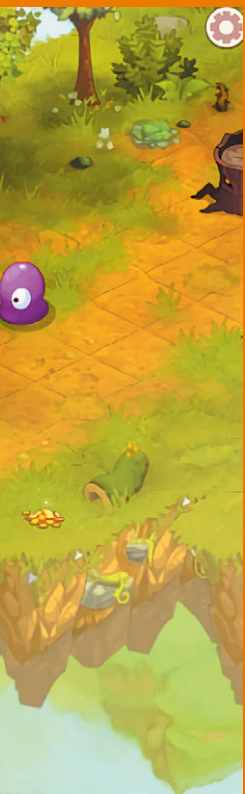*Idle Oil Tycoon* isn't much to look at, but it was one of the first independent idle games to hit Android.

Cookie Clicker kicked off the trend for idle games back in 2013.

The popularity of idle games since the release of *Cookie Clicker* in 2013 is at first glance counter-intuitive. In an industry that values complex player interaction, engaging stories, and exploration, idle and incremental games reject most of these notions. Their core mechanic is based on actions seldom more complex than clicking, with the player's involvement usually one step back from the screen in the form of planning and data crunching. Graphics range between the rudimentary and the non-existent, with many games reliant on basic text output and progress bars. If you're looking for anything but the most basic of excuse plots, look elsewhere.

Their appeal lies in their extreme compulsiveness. Plenty of games concern themselves with making the player's stats increase; the mechanic is at the core of most RPGs, for example. But idle games offer the unfiltered hit of constant increase, with the next milestone, which will unlock even faster advancement, always just over the horizon.

The second trick up the genre's sleeve is a heroic level of potential play time. Where a more complex narrative game requiring significant development time might struggle to last more than 20 hours, idle games can contain content that lasts months, and their slow rates of progress allow developers to lay track ahead of the players with regular content updates.

Now that we've had six years to become familiar with the genre, we can start to think about how this unusual style of game can keep itself fresh – after all, continual progress is what it's all about. For that, we have to start in the past.

Perhaps the first game to fall into the idle genre was *Progress Quest*, a joke game released in 2000.

Here, the 'game' part was completely absent beyond creating a character – once things are set on their way, the player has no input beyond watching the progress bar, signifying ongoing quests, and watching their character's stats slowly increase.

Developer Eric Fredricksen, under his handle Grumdrig, created *Progress Quest* after discussing deliberately absurd game ideas over lunch with colleagues at Frog City Software, a San Francisco-based studio where he worked at the time. "Since there was minimal interaction I decided I might as well implement it, which took me about two evenings for the initial version," he says. "The seminal moment was when I noticed that the one creature in *EverQuest* that was nearby, and not so weak as to not be worth much XP, but not strong enough to harm me much, was the hog. When you looted enough tusks, you went back to town to sell them. When you'd killed enough hogs, your XP bar filled and you levelled up. Not much of a stretch from that to *PQ*, and not much more fun than installing Windows.

"I thought, 'why doesn't this computer just take care of the walks back and forth to town for me, and then I can do something else in the meantime? Why can't it be more like installing Windows?'"

Fredricksen doesn't know if there's a direct link between his game and the idle games which followed over a decade later, but believes the two scratch a similar itch. "My guess is that it really gets at some innate need to move to the next level, or progress along some path, and the little endorphin rush that comes with that," he says. "What we get from graphics and sound might be, on one hand, something else entirely, akin to what you get out of watching a movie perhaps, and/or they might just serve the purpose of making the progress bars seem more important." ➡

> **"It gets at some innate need to get to the next level"**

▲ The repetitive grind of *EverQuest* inspired *Progress Quest*'s automated levelling.

▲ *Tap My Katamari*'s potentially enjoyable gameplay was badly let down by some eye-watering micropayments.

UPGRADES

The upgrade game was an earlier cousin of the idle genre. These were primarily Flash games which focused on accomplishing one task repeatedly and using earned currency to slowly improve the efficiency of the process. Two of the best examples were *Learn to Fly* and *Toss the Turtle*, both of which involved getting creatures airborne via a series of increasingly elaborate ramps and cannons. Though generally lacking the offline progress and gameplay length of most idle games, they still scratch the same addictive itch.

This early sense was built on by *Cookie Clicker*, perhaps the earliest idle game to hit the mainstream and a codifier of many of the genre's early tropes. By first constantly clicking to generate new cookies and then investing them in slowly automating and expanding production, the player builds a commercial empire that soon takes a Lovecraftian turn. But in recent years, the clicking aspect of idle games, while still a part of the genre's DNA (the main subreddit is called Broken Mouse Convention), the goal seems to be more about making the progress bars go up as efficiently as possible.

CLICK AND COLLECT

Taking this philosophy to heart is *Idle Oil Tycoon*, one of the more popular mobile-only idle games, created when the selection for phones barely existed. In it, the player runs an oil company, buying and upgrading utilities to earn ever more money until the counter eventually caps out after several months of play.

According to developer Matt Davis, making *Idle Oil Tycoon* for mobile was a deliberate statement on the state of the industry. "I feel like some of the
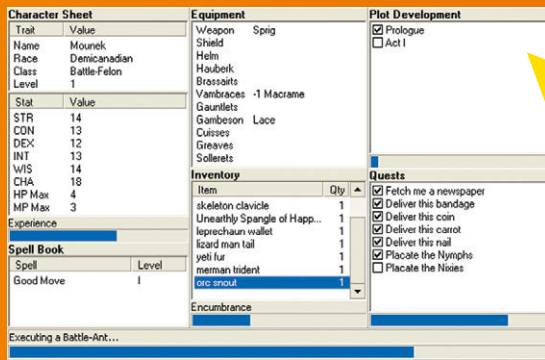
surge in idle game popularity right now is because they're a lot like most mobile games, but more honest about it," he says. "Most mobile games are about going away for a while and coming back to claim your small amount of progress, but they usually try to hide that. In an idle game, though, that's always been the explicit purpose."

Idle Oil Tycoon departs from other mobile idle games which have emerged since 2014 in its lack of micropayments, besides a small charge to remove ads. Other idle games on mobile, meanwhile, haven't given players such freedom. *Tap My Katamari*, a clicker game that represented a low point for an otherwise excellent franchise, has since been removed from app stores, but during its availability sold packs of premium in-game currency for up to $49.99 a pop. Combined with the game's addictive nature, these high-priced boosts can easily stack up to more than the price of a new triple-A title, and the ability to enjoy the content in their relative absence is one of the primary drivers of popularity for indie idle games.

Ivar 'Hevipelle' Kerajärvi, the 22-year-old Finnish creator of independent smash hit *Antimatter*
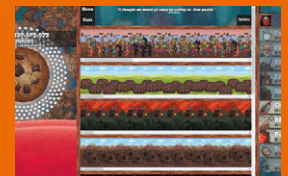
> **"They're a lot like most mobile games, but more honest"**

Character Sheet			Equipment		Plot Development	
Trait	Value		Weapon	Sprig	☑ Prologue	
Name	Mounek		Shield		☐ Act I	
Race	Demicanadian		Helm			
Class	Battle-Felon		Hauberk			
Level	1		Brassairts			
			Vambraces	-1 Macrame		
Stat	Value		Gauntlets			
STR	14		Gambeson	Lace		
CON	13		Cuisses			
DEX	12		Greaves			
INT	13		Sollerets			
WIS	14				Quests	
CHA	18		Inventory		☑ Fetch me a newspaper	
HP Max	4		Item	Qty	☑ Deliver this bandage	
MP Max	3		skeleton clavicle	1	☑ Deliver this coin	
Experience			Unearthly Spangle of Happ...	1	☑ Deliver this carrot	
			leprechaun wallet	1	☑ Deliver this nail	
Spell Book			lizard man tail	1	☑ Placate the Nymphs	
Spell		Level	yeti fur	1	☐ Placate the Nixies	
Good Move		I	merman trident	1		
			orc snout	1		
			Encumbrance			
Executing a Battle-Ant...						

< **What if all the grind of an RPG was made into its own automated game? *Progress Quest* tries to capture just that.**

Dimensions, believes the challenge of funding the games without exploitative microtransactions is one of the biggest bottlenecks for indie developers, and mentions the debate that ran through the community after *Clicker Heroes 2* launched with no microtransactions, opting instead for a permanent $30 price tag.

"Some prefer paid games over the ones with microtransactions, but some people don't want to pay for something they don't know if they'll like," he explains. "Overall, I feel like if you ask for an upfront cost, your audience will be much smaller. My personal preference is permanent bonuses, but judging from the high-production-value incrementals, the most income comes from one-time boosts because they're filled with those."

This divide over funding is one of the issues where Kerajärvi sees a distinct difference between casual and non-casual incremental games. "Casual incrementals would be for example those mobile games which are more polished and have pretty graphics, but perhaps lack depth," he says. "While the more non-casuals are those crude-looking unpolished games which have really deep unfolding mechanics."

There is certainly, as in *Tap My Katamari* and the mainstream hit *Clicker Heroes*, far more of an emphasis on clicking than the more cerebral planning and maths involved in grander-scale idle games (often called incremental games, though the terms are often interchangeable). Kerajärvi sees the strong independent scene as the future of the genre due to its ability to bring in new players obsessed with the depth of some of the current games. "The subreddit community of incremental games is growing all the time when new people discover the genre," Kerajärvi says. "There's always new developers, which make new games for the genre, the tough part is to figure out something that hasn't been done before."

While conceived as games to fiddle with when procrastinating at work, some of the genre's

more recent titles have built impressive levels of interlocking complexity, and it's here that the future may lie. One example is *NGU IDLE*, a recent hit with an uncommon level of technical polish. Starting in standard idle game fashion by filling progress bars to improve a couple of basic stats, the game unfolds into myriad different modes and styles, all of which offer some sort of mutually supporting benefit to the others. At no point, other than when finely adjusting investments of magic or energy power, is there any significant amount of clicking.

THAT'S PROGRESS

The satisfaction is in the slow progress (the game can take well over a year to see most of its content), and the sight of a task which once took hours being completed in a matter of seconds drives the player on to new heights. *NGU IDLE* is also shot through with anarchic humour, rooted in pop culture and memes; indeed, it may be possible to see the future for idle games in its writing (and crudely drawn comedic graphics). While plenty of games in the genre make an effective use of humour, *NGU IDLE*'s sheer popularity means it's the one most likely to have a lasting impact.

As idle and incremental games mature, they may be forced to search for new selling points in the mechanics and features offered by other genres, until what results is almost a hybrid, built around idle principles but with much more to offer. The inverse is also possible – that developers in more established genres, seeing the compelling, bite-sized nature of idle games, will start to implement them into their own titles.

This apparent dilution might rankle with a fan base used to seeing itself on the obscure end of the gaming spectrum, but like all things, genres evolve with time. As idle and incremental games come to resemble traditional genres, and their compulsive energy is captured and used in new and creative ways, the market will surely be richer for it. Ⓦ

Where to Start

Never played an idle game before? Here's a selection of the best:

Cookie Clicker
The original hit. Click to create cookies, and use them to buy upgrades which allow ever-faster production and automatic progress. Things take a dark turn as the game progresses.

Rebuild the Universe
A highly polished browser game which can be beaten in a couple of days. In addition to great pacing and quick progress, it offers some interesting facts about physics and astronomy along the way.

Antimatter Dimensions
A deeply satisfying game based on a logarithmic rather than linear scale, meaning your numbers will be flying upwards in no time. Be warned – there's months of content here.

The Comedians Are Coming…

STEVE MCNEIL

There's room for everyone online. You can't run out of internet!

In case you've been living in a hole for the last few months – which, it turns out, would have been a good idea – it's inconceivable you're not aware of, and entirely affected by, the coronavirus. It's affected every walk of life, including my friends and colleagues in the fields of comedy and presenting, as people watched their entire diaries emptied of bookings, on the basis 'entertaining people in places' is suddenly a very bad idea.

As a result, increasing numbers of them are taking a far more active interest in 'doing stuff online', and so many have started to pick my brains on things like Twitch. Of course, some had already made the leap, with comedians such as Iain Stirling (*Love Island*), James Buckley (*The Inbetweeners*), and Limmy (sketch comedy *legend**) regularly streaming gameplay from their homes, but a large number of new faces are also appearing.

John Robertson, creator of the cult-hit live-action video game, *The Dark Room*, is on there regularly now, as is Paul Foxcroft, with a mix of gameplay and an online version of his live *D&D*-with-comedians show, *Questing Time*. Others, such as The Story Beast, or Richard Herring, have taken a more direct translation of their existing shows onto the platform, and many more are set to follow in the coming weeks, as they get to grips with things like Open Broadcaster Software, Bits, and stream keys.

Having these new faces in our homes, interacting with us in a time of isolation, feels like a big win, and yet already, there is some resistance to this influx of non-internet talent by those who had already discovered the joys of streaming, but this seems counter-productive. If new people make things you don't like, don't watch them. If they make things you like, you win!

Of course, there's a sense that a huge increase of new streamers risks spreading the existing audience thin, but this perhaps underestimates how an increasing proliferation of people using the platform will also bring new viewers, in much the same way that old people ruined Facebook ten years ago.

There's hope, too, that this migration online might help talent take back control of their output, as traditional broadcast media continues to be populated by gatekeepers to creativity, and gaming has never found itself welcomed by television to the extent it should have been. Online's interactivity better lends itself to gaming anyway, so it feels win-win.
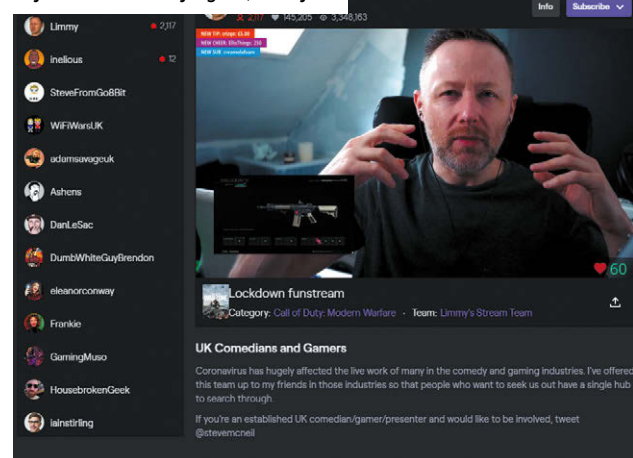
As my own small attempt to help visibility of all this new work, I've set up a 'team' on Twitch, which lists UK comedians and games presenters, to act as a single hub where you can see which of these people are online, and possibly doing a thing you might like to look at with your face. If you're curious, head over to **wfmag.cc/DreamTeam**.

In the meantime, stay safe, and sorry for mentioning coronavirus again. I'm sure by now you're all sick of it.

Which wasn't deliberate wordplay. I wish I was good enough that it was. ⓦ

* I love him so much.

"Gaming has never found itself welcomed by television to the extent it should have been"

⌄ **Now streaming on a small screen near you: sketch comedy legend, Limmy.**

# Toolbox

The art, theory, and production of video games

∧ Remember *Side Pocket*? Recreate
its ball-potting delights in this
issue's Source Code. See page 38.

∨ Make an FMV adventure in the vein of *Her Story*
with our easy-to-follow guide on page 30.

Designing the
sci-fi cities of B.A.T.

Hervé Lange, creator of the classic sci-fi adventures B.A.T. and B.A.T. II, discusses the memorable urban settings of his games
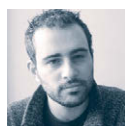
AUTHOR
KONSTANTINOS DIMOPOULOS

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**

Outside the astroport of Terrapolis.

ROMA 2 is a large, opulent city that revels in its excess and Roman influences.

Hervé Lange was the chief creative force responsible for Ubisoft's classic *B.A.T.* and *B.A.T. II – The Koshan Conspiracy* – arguably two of the best adventure games of the 16-bit era. If you've played those games, you'll know Lange is a designer whose mind is constantly exploding with ideas. He's also eager to share his immense experience and knowledge on game design, world-building, and imaginary city crafting, so, without further ado, here's what he has to say about his work...

How did you initially tackle the cities of your games?
In a chaotic manner. I always began with an idea for a setting, and its game mechanics; in the case of *B.A.T.* with an investigation set in an extrasolar cyberpunk open world. Seemingly paradoxically, I approached the design of my cities by ignoring them at first, and focusing on the history and design of their host world. I initially considered the solar system, eventually focused on one planet, moved on to define its ecosystem, continents, history, and populations,

and only then approached its main city. This gave me enough information to form coherent views and draft good reference documents.

For the cities, I created detailed plans for districts and main locations, and coded the interactive rules defining NPC behaviour. I also researched art and music, and created a patchwork of documents and drawings, allowing me to better express the game's ambience and collaborate with the graphic designer.

What was the inspiration behind *B.A.T.*'s Terrapolis?
For me, *B.A.T.*'s main inspiration was *Blade Runner*, whereas graphic designer Olivier Cordoléani was mainly inspired by *Star Wars*; other personal influences included the works of Druillet, Bilal, or Patrito, and the novels of Dick, Gibson, and Vance. My love for the painters Bosch and Bruegel was what steered the game from noir to a more grotesque style.

It was, however, a scientific article on wormholes that triggered this idea of agents sent on missions across solar systems colonised by meta-billionaires. Agents solving the relativistic problems of a sparse universe on behalf of the Bureau of Astral Troubleshooters (B.A.T.). I imagined these meta-billionaires wanting to escape earthly limitations by transforming their cities into vast spaceships able to cross wormholes, and become the capitals of new, inhospitable, rich worlds. These were cities defined by an expansionist ultra-capitalist ideology, and, in the case of Terrapolis, forced to exist under a protective dome.
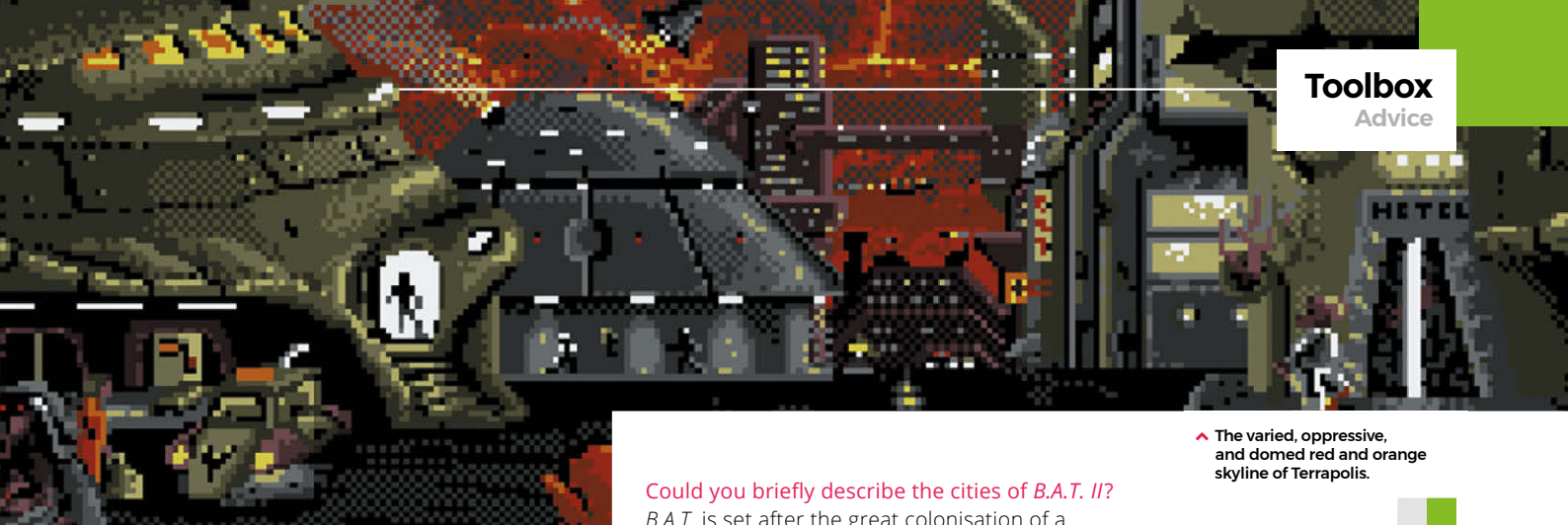
How did you approach the design of the city?

Terrapolis was influenced by Paris with its typical districts, large stations, nightclubs, wide Haussmannian boulevards, and alleys filled with small shops. The game's structure resembles a non-linear noir novel allowing for alternate solutions, and treating its city as a key gameplay element. Furthermore, we wanted the city to be perceived as a living, functioning world; as what we called a biogame. We wanted players immersed in a simulation teeming with life, on top of which our game was crafted. Terrapolis is a dynamic actor, able, for example, to generate NPCs depending on player actions; cops are spawned to hunt violent players, and thieves to prey on rich ones.

What defined Terrapolis?

We wanted to give the cyberpunk impression of a city with imposing, soul-crushing buildings. In most locations backgrounds consist of an oppressive sky of towers under a red dome. To emphasise this, we added an artificial botanical garden; the only place where a blue sky can be glimpsed. The game's scenes introducing players to Terrapolis were an attempt at recapturing the sense of exiting an aeroplane onto an unknown country. We wanted players to start the game a bit disoriented in an astroport, but also to immediately start exploring the city's dark corners. Visiting the astroport toilets is, after all, a gameplay requirement.

Was creating a reactive urban world more of a technical or a design challenge?

Both! On one hand, it was technically difficult to test all combinations given the dynamic nature of the game, and on the other hand, we had to help players understand how the virtual city functioned on a hidden level. Making the AI visible was crucial to making the game intelligible and pleasant. This is an aspect we improved in *B.A.T. II*.

"We want players to start the game a bit disoriented"

Could you briefly describe the cities of *B.A.T. II*?

B.A.T. is set after the great colonisation of a universe resembling a cosmic Gruyère cheese, where wormholes make interplanetary travel rather random. Colonised worlds are thus isolated, and forced to evolve in autonomous, anarchic ways often under the leadership of anachronistic megalomaniacs. *B.A.T.* was built on dystopia and revenge, whereas *B.A.T. II* explored lust and excess, and aptly added Roman elements to its cyberpunk style. It was a combination we described as the 'high-tech paradox'.

For the main city of ROMA 2, we created a large world to represent its excess, introduced distant districts connected by highways, and let players drive air, ground, and space vehicles. These 3D simulators helped support a more convincing feeling of an open world. The visual design was kitschier and less grotesque, and the game even featured a Roman-inspired arena. The 'high-tech paradox' logic influenced the design of neighbourhoods and buildings too. As for *B.A.T. II*'s society, it was more developed, and involved a pre-colonisation population, allowing the game to tackle autochthony, castes, and slavery in a city of intense segregation.

What are you currently working on? Any intriguing plans?

Right now, I'm working at Autodesk as a software architect on entertainment and media tools, and thus staying very close to game creation! One exciting aspect of my work is the proximity to the other disciplines flourishing at Autodesk, and I can see that the more complex games become, the greater their need for specific skills such as those of real-world architects, urban planners, and engineers. This convergence of the real and the virtual is really exciting to me, and as a video game pioneer, I'm happy to see the gaming mindset reach beyond games. Also, I have kids and can see the challenges virtual worlds pose, and the increasing need to balance fun with ethical learning. Games such as *Life is Strange* or *Death Stranding* are indeed motivating. ⓦ

▲ **The varied, oppressive, and domed red and orange skyline of Terrapolis.**

▼ **They're not shown here, but even the toilets were important to B.A.T.**

Making sci-fi cities

"Don't be afraid to take risks, and don't hesitate to work on different aspects of your game: world, history, prototypes, and technologies," Lange says, when asked what advice he had for other would-be sci-fi city builders. "Designing a city is complex, shapes human societies and activities, and, to feel credible, requires the integration of economics, politics, art, etc. Everything influences everything else, and I believe things are even harder for sci-fi cities since we also have to invent future societies, and plausibly imagine how they would function."

Make your own
FMV game with Twine

Insert video into the popular text-based game
engine to create your own interactive movies

AUTHOR
K.G. ORPHANIDES

K.G. Orphanides is a writer, interactive fiction
author, and an award-winning knower of
pointless adventure game trivia.

From *Her Story* to *Black Mirror* episode *Bandersnatch* and Splendy Games' *The Bunker*, video-based narrative games have undergone a renaissance. Once a grainy novelty of the nineties, full-motion video (FMV) has finally come into its own as powerful video compression codecs, accessible camera equipment, large hard disks, and high-speed internet connections make it practical to include flawless footage in games.

Choice-based text game engine Twine might not be the first thing that comes to mind when you want to implement an all-singing, all-dancing multimedia video extravaganza, but its support for HTML5's capable video handling and customisable CSS-based layouts and styling

mean that you can create your own FMV game with just a few lines of code.

We've used Twine 2.3.5 and the Harlowe 3.1.0 programming language throughout this tutorial. Full versions of these demos can be downloaded from **mightyowlbear.itch.io**.

ANALYSING THE EVIDENCE
Sam Barlow's 2015 interactive video mystery *Her Story* was a defining release in the current wave of FMV games. In it, you're tasked with piecing together a mystery from short, searchable, keyword-tagged clips.

While recreating the virtual desktop GUIs of games such as *Her Story* and *Telling Lies* is beyond the scope of Twine, embedding video and adding enough styling to carry it is

⌄ **Prototype UI sketch for *Plan 9 From FMV* and the working game. The latter dispenses with the logo and command bar and adds a nod to Gremlin Graphics' 1992 take on *Plan 9* in the background image.**
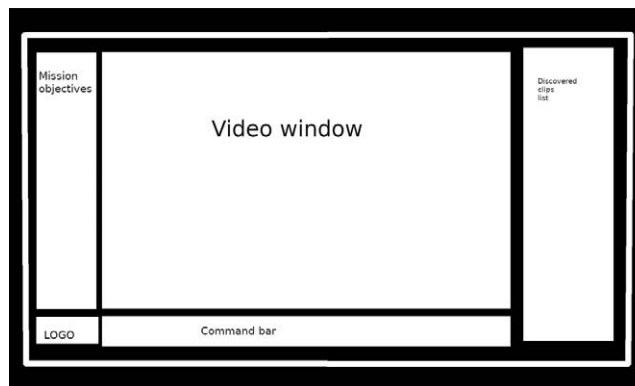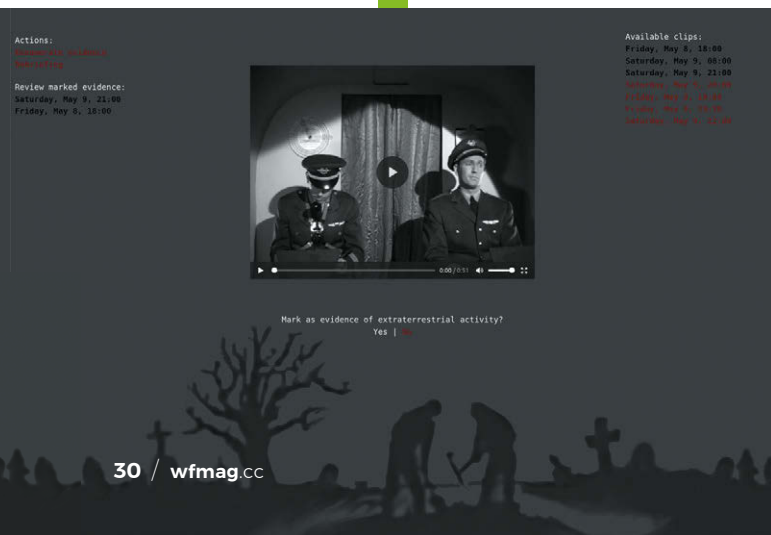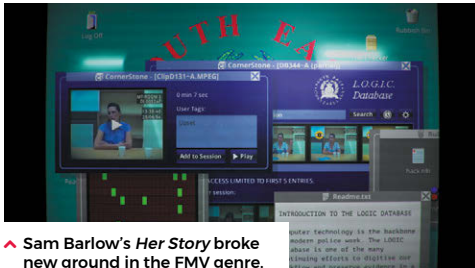
⌄ Sam Barlow's *Her Story* broke new ground in the FMV genre.

fairly simple. In this case, we've grabbed footage for Ed Wood's *Plan 9 From Outer Space*, which is conveniently in the public domain, and cast the player as an investigative journalist who's been granted access to a secret archive consisting of clips from the film. Their objective is to find and tag clips that show evidence of extra-terrestrial activity.

Sidebar styling:

```
tw-sidebar /* left sidebar styling */
{
        position: fixed;
        top: 0;
        left: 0;
        width: 20%;
        max-height: 100%;
        padding: 0 0.5em 0.5em 0.5em;
        text-align: left;
        background-color: transparent;
}

tw-passage tw-include[title="Sidebar"] /*
right sidebar styling */
{
        width: 20%;
        position: fixed;
        right: 0;
        top: 0;
        padding: 0 0.5em 0.5em 0.5em;
        text-overflow: wrap;
}

/* div ids to centre appropriately tagged
content with */
#video {
        text-align: center;
}

#center {
        text-align: center;
}
```
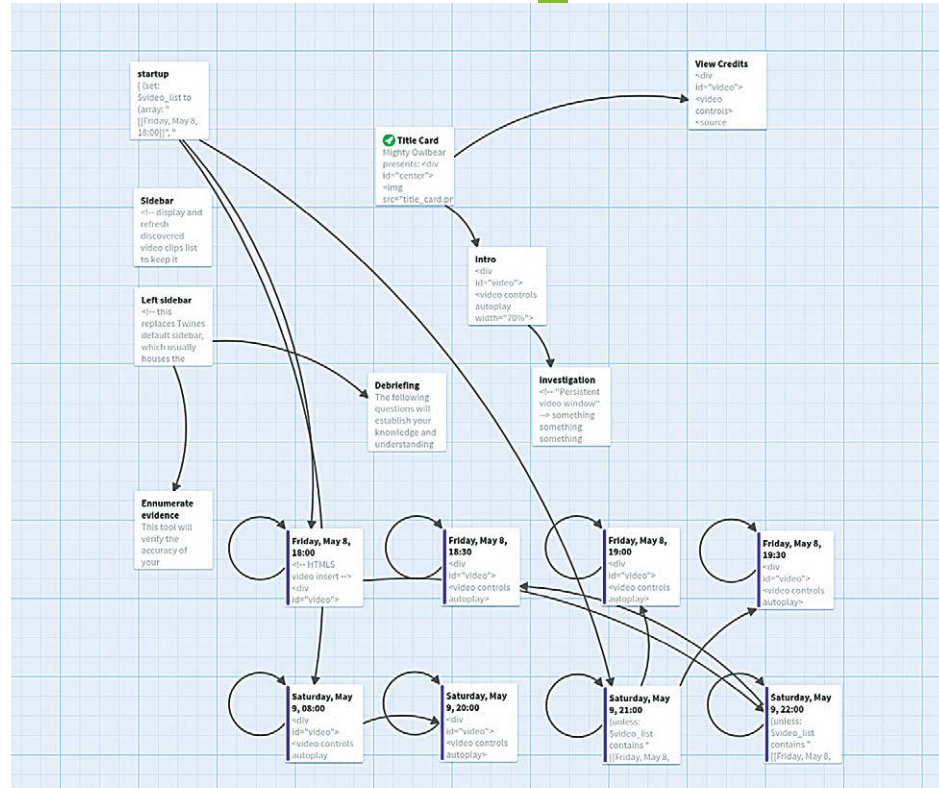

⌄ We implemented a fully functional video discovery and evidence tagging loop for our *Plan 9 From FMV* demo.

To create an interface, we've configured a main window and two sidebars using Twine's Story Stylesheet. Videos, text, and evidence tagging options appear in a large central window; a master list of all discovered videos lives in the right-hand bar, and the player's tagged evidence list is gathered on the left, along with links to a couple of other investigation tools.

Right sidebar passage:

```
Passage name: Sidebar
Passage tags: header

<!-- display and refresh discovered video
clips list to keep it current -->


Available clips:
{(live: 0.5s)[(print: $video_list.
join("<br>"))]}
```

Our style sheet also defines our font choices and colour scheme, and adds a horizontally seamless background image, but the critical bits are the left and right sidebars. ➡

YOUTUBE

If you're creating a web game and the service where you'll be hosting it either doesn't allow for the upload of multimedia files or only provides limited space, you can instead upload your videos to YouTube or any other video service that supports external embeds.

Just paste the YouTube-generated embed code into your passage, format it up using your choice of style sheets or iframe tag attributes, and you're ready to go.

∨ Conversation options are presented as a list below a video loop showing both Gabriel and his interlocutor, often framed in an over-the-shoulder shot.
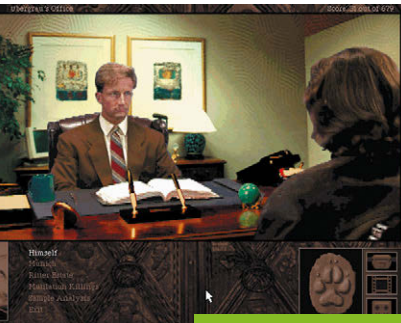
TALKING ANGLES

Gabriel Knight 2: The Beast Within makes good use of simple framing in the dialogue scenes that make up much of its FMV, and it's a technique that's easy to implement in your own original interactive movie footage. Depending on the length of those dialogues, they're variously presented as a single shot or with further shifts in camera angle, position, and zoom.

Left sidebar passage:

```
Passage name: Left sidebar
Passage tags: footer

<!-- this replaces Twines default sidebar,
which usually houses the back button -->
(replace: ?Sidebar)[

Actions:
[[Ennumerate evidence]]
[[Debriefing]]


Review marked evidence:
{(live: 0.5s)[(print: $evidence_list.
join("<br>"))]}


]
```

We create the arrays they display in a passage with a **startup** tag, which Twine will process at the very beginning of the game, before your starting text passage is loaded.

Startup passage:

```
Passage name: startup
Passage tags: startup

{
(set: $video_list to (array: "[[Friday, May
8, 18:00]]", "[[Saturday, May 9, 08:00]]",
"[[Saturday, May 9, 21:00]]"))

(set: $evidence_list to (array:))

}
```

If you want to come even closer to *Her Story*'s features, you can use data maps to implement searchable keywords or flags for individual video clips, and even allow your players to add their own short notes by using the **(prompt:)** macro to spawn a text-entry box, setting that text to a variable and then displaying it when invoked.

PIVOTING TO VIDEO
We're using the HTML5 **<video>** tag to embed our video files. The 'controls' attribute of that tag gives our players the ability to, for example,

pause the video and adjust its volume. You should also add an 'autoplay' attribute so that videos will start as soon as they're loaded.

You can also define the size of a video. We encoded our videos at 640×480, and the **<video>** tag displays them at their native resolution by default. That's small enough that it's unlikely to cause any problems by overflowing other page elements at most screen resolutions, but can look like a postage stamp on larger displays.

For compatibility with the full range of devices that may be used to access a web-based Twine, from elderly smartphones to 4K screens, setting a fluid, percentage-based video sizing makes a

"Note that HTML5 video format support is limited"

lot of sense. In our example, we set the video tag's width element to 70%, which looks decent on most displays, although we should ideally do a bit more tweaking to optimise for ultra-wide monitors.

An alternative approach would be to apply the width setting to the **#video div** defined in your style sheet, which has the added benefit of allowing you to change the percentage of screen real estate occupied by all videos at once.

Sample video passage:

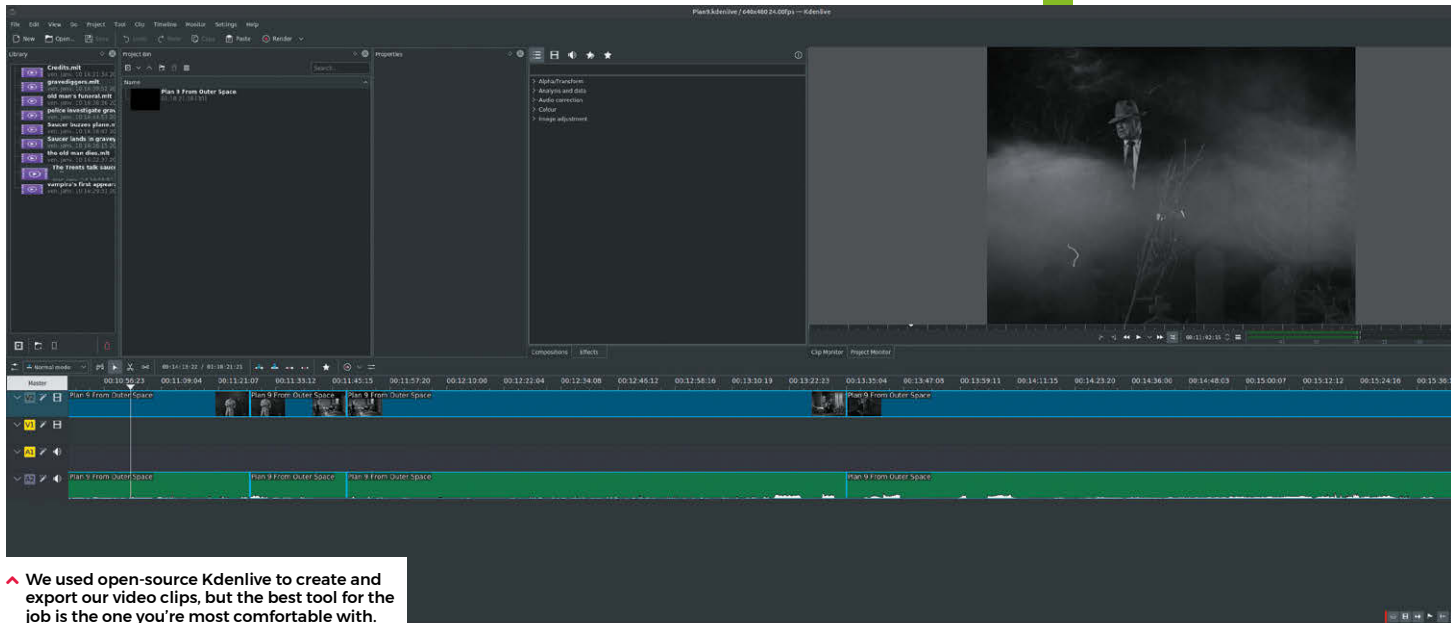```
Passage name: Friday, May 8, 18:00

<!-- HTML5 video insert -->
<div id="video"><video controls autoplay
width="70%">
  <source src="saucer_buzzes_plane.mp4"
type="video/mp4">
Your browser does not support the video tag.</
video></div>

<div id="center">(print: (passage:)'s name)</
div>

<!-- lets the player add this video to their
evidence list -->
<div id="center">Mark as evidence of
extraterrestrial activity?
(link: "Yes")[(print: "Yes")(set: $evidence_
```

^ We used open-source Kdenlive to create and export our video clips, but the best tool for the job is the one you're most comfortable with.

```
list to $evidence_list + (a: "[[Friday, May
8, 18:00]]"))] | (link: "No")[(print: "No")
(set: $evidence_list to $evidence_list - (a:
"[[Friday, May 8, 18:00]]"))]</div>

<!-- adds a related video clip to our master
list, allowing the player to discover new
videos as they go through the clips they have
access to -->
(unless: $video_list contains "[[Saturday, May
9, 22:00]]")[(set: $video_list to $video_list
+ (a: "[[Saturday, May 9, 22:00]]"))]
```
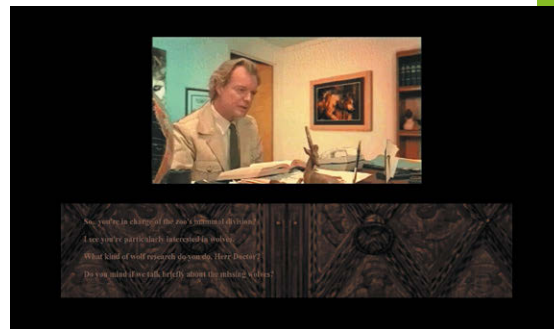


< Classic adventure game dialogue trees are particularly easy to implement, as they're one of the core features Twine was built to do in the first place.

Note that HTML5 video format support is limited, with even fewer formats supported by all browsers, so you'll want use H.264-encoded MP4 files with AAC audio. If you encounter any compatibility issues with the videos created by your editing software, tools such as FFmpeg and HandBrake can re-encode your video to the required standards.

We've put our videos in the same directory as our Twine game HTML file, which makes it easy to zip everything up for upload to online game hosts such as itch.io. However, as long as you include proper paths to your video files, there's nothing to stop you putting them in a subdirectory.

While you can copy your videos into your Twine application's working directory, we prefer to use Twine's Publish to File feature to save the game file to another directory that contains all the multimedia elements we'll be using.

## TRADITIONAL ADVENTURE GAME DIALOGUE

If you're making a dialogue-heavy adventure game, then you won't necessarily want complex UI elements such as sidebars, although an inventory bar is always worth considering, and we suggest using style sheets to create a prettier graphical backdrop than our bare-bones implementation here.

**Startup passage:**

```
Passage name: startup
Passage tags: startup


{
(set: $now_playing to "nothing")

<!-- inventory -->
(set: $wolfprint to "false")
}
```

04:21
07:26
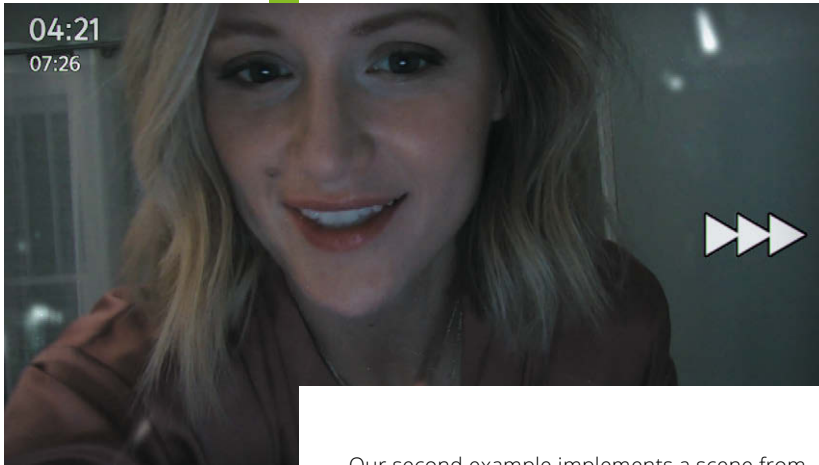
▲ **Sam Barlow's** *Her Story* **follow-up,** *Telling Lies***, is, if anything, an even more immersive FMV experience.**

Our second example implements a scene from Jane Jensen's 1995 FMV classic, *Gabriel Knight 2: The Beast Within*. We've not implemented graphical elements this time, but the structure of the dialogue will be familiar to any point-and-click adventure gamer: a window to show the person we're talking to, and our conversation options in a list below it.

Master conversation passage for Klingmann:

```
Passage name: Herr Doktor Klingmann

<!-- Persistent video window -->

(display: $now_playing)

Herr Doktor Klingmann's office: $now_playing

(link: "So.. you're in charge of the zoo's
mammal division?")[(set: $now_playing to
"So.. you're in charge of the zoo's mammal
division?")(go-to: "Herr Doktor Klingmann")]

(link: "I see you're particularly interested in
wolves.")[(set: $now_playing to "I see you're
particularly interested in wolves.")(go-to:
"Herr Doktor Klingmann")]

(link: "What kind of wolf research do you do,
Herr Doktor?")[(set: $now_playing to "What kind
of wolf research do you do, Herr Doctor?")(go-
to: "Herr Doktor Klingmann")]

(link: "Do you mind if we talk briefly about
the missing wolves?")[(set: $now_playing to "Do
you mind if we talk briefly about the missing
wolves?")(go-to: "Herr Doktor Klingmann")]
```

```
(if: $wolfprint is "true")[(link: "What do you
think of this paw print impression?")[(set:
$now_playing to "What do you think of this
paw print impression?")(go-to: "Herr Doktor
Klingmann")]]
```

As with our *Plan 9 From FMV* example, each video has its own passage, but in this instance, the video code is the only thing those passages contain. Because we want to keep our question list on-screen without having to paste it into every passage where it's needed, each conversation has a single central interface passage, and we use the `(display:)` macro to inject our video passages into it.

Key to this is a variable called `$now_playing`. We use this to tell the game which passage is to be inserted into the dialogue interface. So if, whilst speaking to Herr Doktor Klingmann, the player selects "Do you mind if we talk briefly about the missing wolves?", we'll create a `(link:)` of that name with a `(set:)` command to point `$now_playing` at a video passage of the same name. Finally, a `(go-to:)` macro reloads the Herr Doktor Klingmann conversation passage to display the selected video.

A video container:

```
Passage name: Do you mind if we talk briefly
about the missing wolves?

<div id="video"><video controls>
  <source src="missing_wolves.mp4"
type="video/mp4">
Your browser does not support the video tag.
</video></div>
```

We've even included a basic flag check, so that one conversation option ("What do you think of this paw print impression?") will only become visible if a variable called `$wolfprint` is set as `true`.

SOURCING VIDEO

As discussed, earlier, we've used clips from *Plan 9 From Outer Space*, which has fallen into the public domain as its copyright notices weren't correctly published on release. If you want to work with existing material, there are plenty of movies in the public domain, from *Night of the Living Dead* to film noir classic *D.O.A.*

Ed Wood's infamous *Plan 9 From Outer Space* really is the gift that keeps on giving.
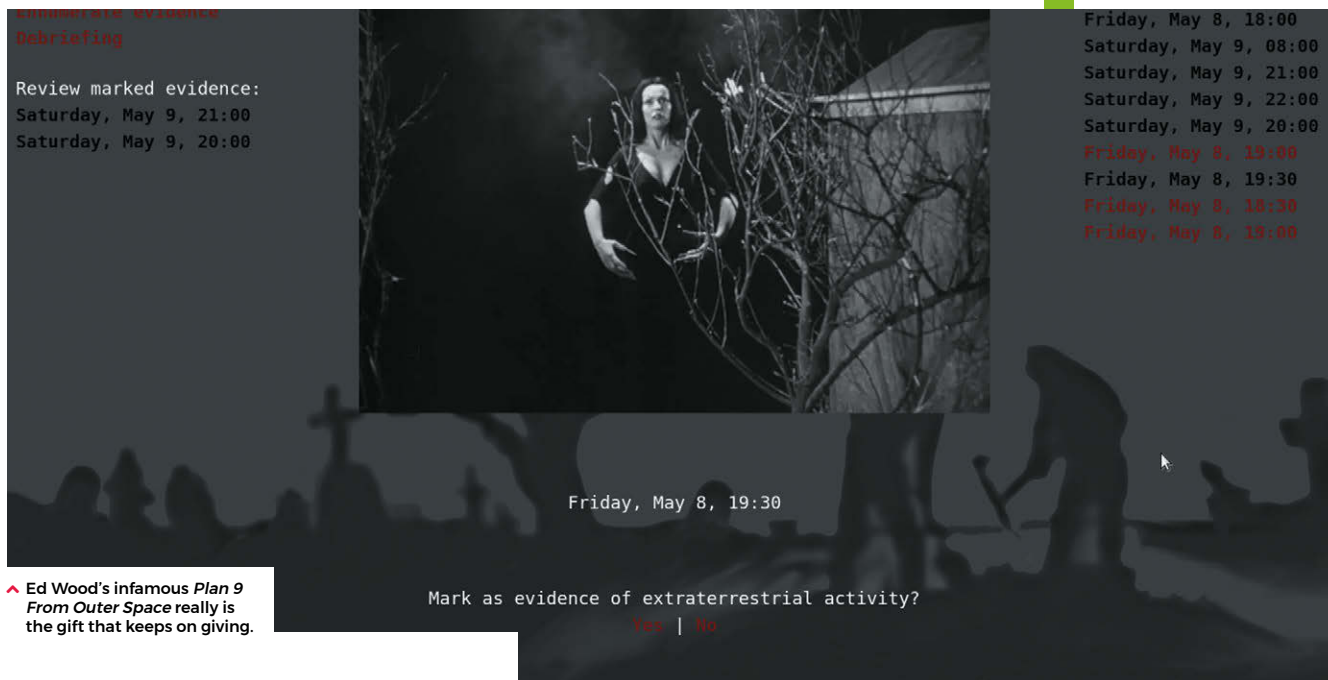
Many worldwide government film and video archives, including NASA space launches and vintage sex education material, are in the public domain. That sadly doesn't including British public information films, whose Crown copyright requires that even non-commercial use of the material must be "re-used accurately", which we can safely presume does not cover using it as a backdrop to your adventure game about nuclear apocalypse.

MAKING MOVIES

If you plan to shoot your own footage, you'll need to learn a bit about cinematic technique. Although that's beyond the scope of this feature, there are plenty of excellent books, articles, video guides, and online courses that cover the basics. We're fond of *The Guerilla Film Makers Handbook* by Chris Jones and Genevieve Jolliffe.

If you're going for a found-footage vibe, you might be able to get away with your average smartphone camera or an action cam of some description. For more traditional video making, you'll want a tripod and probably either a DSLR camera with decent video capabilities or a prosumer digital camcorder.

You don't need to get too ambitious with your shots. Sam Barlow's *Her Story* uses the conceit of archived police interview tapes, which means there are no cuts, zooms, or changes in framing. However, it's very much carried by the acting chops of star Viva Seifert.

Forthcoming FMV gamebook adaptation *Deathtrap Dungeon: The Interactive Video*

Adventure takes a similarly simple approach, with your story superbly narrated by actor Eddie Marsan from the comfort of a luxurious armchair (see our review, page 61).

Whatever you're producing, your script and storyboard will hold everything together, so invest plenty of time in these. It can also be valuable to shoot quick and dirty test footage to insert into your game framework before proper filming begins.

Even if you ultimately use a different engine for your finished FMV game, Twine – and the ease of inserting video into it – can serve as a fast and simple prototyping system to map out the structure of your interactive movie. 🅦

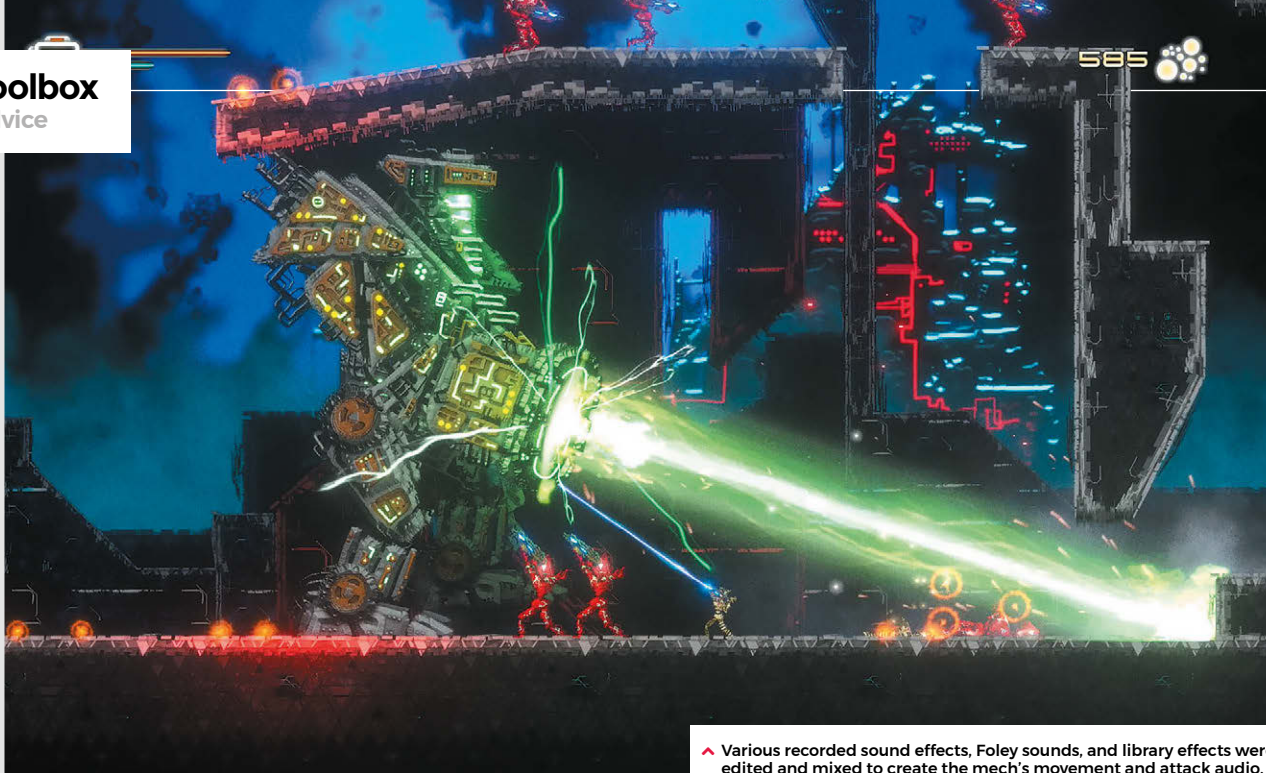Can you make an FMV game as good as *Her Story*?

PUBLIC DOMAIN VIDEO

Public domain status varies from country to country, and some archives hold erroneously uploaded copyrighted videos: commercial cinematic restorations get a renewed copyright, for example. Meanwhile, not all Creative Commons licenses allow you to create derivatives, while others require that your own work with the material be non-commercial. A few useful resources for footage include:

- **publicdomainmovies.net**
- **vimeo.com/creativecommons**
- **archive.org/details/movies**
- **archive.org/details/stock_footage**

▲ Various recorded sound effects, Foley sounds, and library effects were edited and mixed to create the mech's movement and attack audio.

Indie reflections:
Making Anew Part 12

A deep dive into the tools and techniques
of sound design production

AUTHOR
JEFF SPOONHOWER

Jeff Spoonhower is a developer, artist, and college professor who's been working on triple-A and indie games for over 17 years.
anewthegame.com

▼ There's nothing like the punchy sound of automatic laser weapon fire to make you feel powerful.

As a continuation of my previous article on sound design in issue 32, this time we'll dive a bit deeper into the tools and techniques used to create sounds in video games, how different types of sounds can be used for maximum functional and emotional effectiveness, the hardware and software I use to create sounds in my indie game, and tips on starting the sound design in your own project.

SOUND APPROACHES

Before you begin production on your own game sounds, decide who's best suited for the sound design work: you, an internal team member, or an external subcontractor. Remember, sound is equally important as the visuals and gameplay in your game, so don't skimp by cobbling together a bunch of free sounds. If your team has the necessary skills, bandwidth, and interest in tackling your game's sound design, go for it! Otherwise, find the budget to hire an experienced sound designer and implementer. Your subcontractor should be friendly, communicate well, and have a track record of creating and delivering high-quality sounds on time and within budget. Don't be afraid to

privately contact previous clients to obtain an honest, personal account of their performance. Referrals from other indie developers are also an excellent way to find help.

It's best to start early in the sound design process by creating a spreadsheet listing all the sounds you'll need to create. A good place to start is with your player character, as this is central to the gameplay experience. List all the sounds it will need, such as movements (walk, run, slide, jump, climb), attacks (kicks, punches, melee weapons, projectile weapons), health (taking damage, recharging health, death), and vocals (dialogue, grunts, quips). To help generate ideas and make sure you're not forgetting any important sounds, play a variety of games and note the sounds used for the player characters – you'll probably need similar sounds in your own game. Repeat these steps with each of your non-player characters (NPCs), enemies, creatures, bosses, companions, teammates, and other inhabitants of your game world. In your spreadsheet, describe each and every sound these characters will make. The creation and implementation of each sound needs to be carefully tracked during production, so detailed initial planning will pay off in spades.

∧ **Yes, these are all of the individual sounds required to create an epic door-opening sound effect in** *Anew*.

Environmental ambiences are different to player and NPC sounds because they're usually much longer looping pieces that serve to establish mood and setting, instead of being shorter one-offs that accompany specific actions. In your spreadsheet, create a new tab for ambiences, then list each zone, level, or environment you plan to design in your game – i.e. forests, beaches, space station interiors, war-torn village exteriors – as each area will require a unique sonic treatment. For each zone, list literal sounds you would expect to hear as the player, as well as the emotional tone or mood you'd like to establish. Do some research by playing games and watching movies, and noting how their use of sound makes you feel. Be specific with your note-taking, and refer back to your notes as you design your own sounds.

If dialogue is significant in the story and characterisation in your game, I strongly encourage you to hire professional voice actors with experience of working in games, rather than trying to save a few bucks and doing it yourself. You'll notice a world of difference in the quality of their performances, and your characters will become much more believable. Contact indie devs who feature high-quality dialogue in their games, and ask for their advice or referrals on working with voice actors.

> **"I mixed multiple elements together to create new sounds"**

TOOLS AND TECHNIQUES

During pre-production for *Anew*, I played several action-exploration and platformer games and noted how the developers implemented sound effects and ambiences – whether the player characters/NPCs had a wide variety of sound effects, if any sounds seemed repetitive or overused, and whether ambiences felt tonally appropriate for their environments and engaged my emotions. This analysis helped shape my own sound design strategies. In my research, I also screen-recorded gameplay footage using a program called Mirillis Action! for PC. I frequently referred to these videos for reference and inspiration when designing sounds for *Anew*.

For player character/NPC sounds, I used a combination of original sound effects and Foley recordings, plus creatively edited professional sound effects that I purchased. When recording my own sound effects in the field, I brought along my planning spreadsheet, which
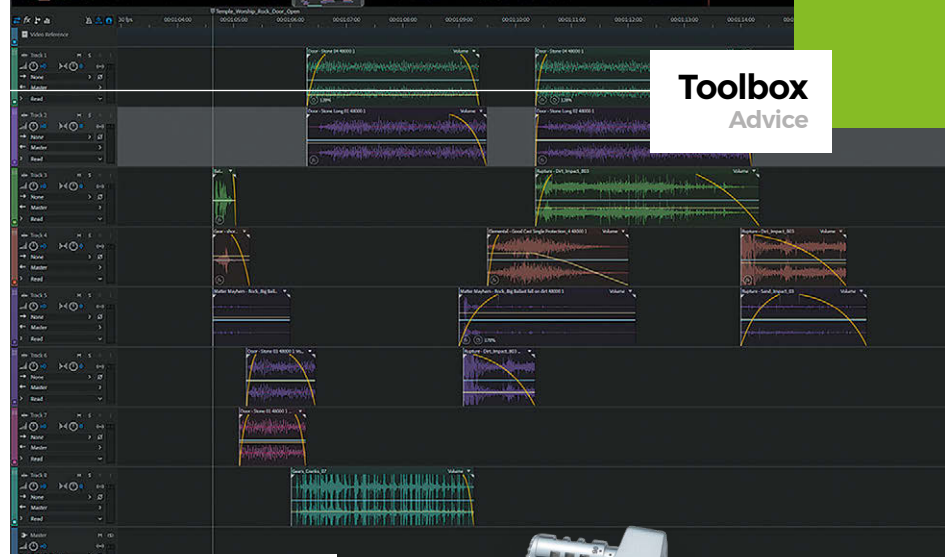
contained design notes and direction on the sounds I needed to record. When recording one-off sound effects, I ensured that my recording environment was as quiet as possible. My preferred recorder was the Zoom H4n. This portable device was inexpensive, easy to use, and captured accurate, high-resolution stereo recordings which were easily manipulatable in post production. Various purchased sound effects enabled me to meet production deadlines. I never dropped these pre-recorded sounds directly into our game engine, Unity, though; instead, I mixed multiple elements together and applied effects to create new sounds that felt unique and appropriate for our game.

To create the environmental ambiences in *Anew*, I mixed various virtual instrumental performances from Ableton Live with edited sounds from several purchased ambient sound effects libraries. I added rich, organic textures and drones recorded from my analogue hardware synths – the Sequential OB-6 and Minimoog Model D. Combined, these sources provided limitless opportunities to create exciting new soundscapes. I processed each of these sonic elements in Adobe Audition for editing, mixing, and output to Unity. If you lack an Adobe subscription, two other excellent options for digital audio workstations (DAWs) are Avid Pro Tools and Audacity (which is free).

Music is a deep, complex subject which I plan to address in a later article. A common challenge with sound and music design is ensuring these two elements don't 'step on each other's toes.' Ambiences with tonal (musical) sonic properties can interfere with music that plays at the same time. You'll want to keep this in mind and plan accordingly as you map out the use of ambiences and musical score in your game world. ⓦ

∧ **The one and only Zoom H4n. A portable, versatile, affordable, high-quality field recorder. Don't leave home without it.**

Audio Exercises

Interested in strengthening your sound design muscles? Watch a few gameplay videos on YouTube with the sound muted, and write down what you *expect* to hear (player and NPC sounds, ambiences, and music). Now, go back and watch the videos again with the sound on. How did you do? Did the sound designers exceed, or fail to live up to, your expectations? Take notes on sounds you missed as well as ways in which the sound designers creatively implemented audio in their games.

Source Code
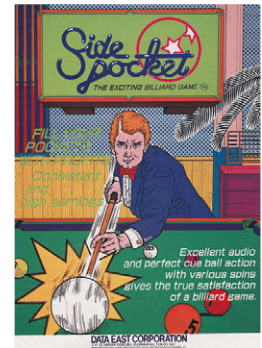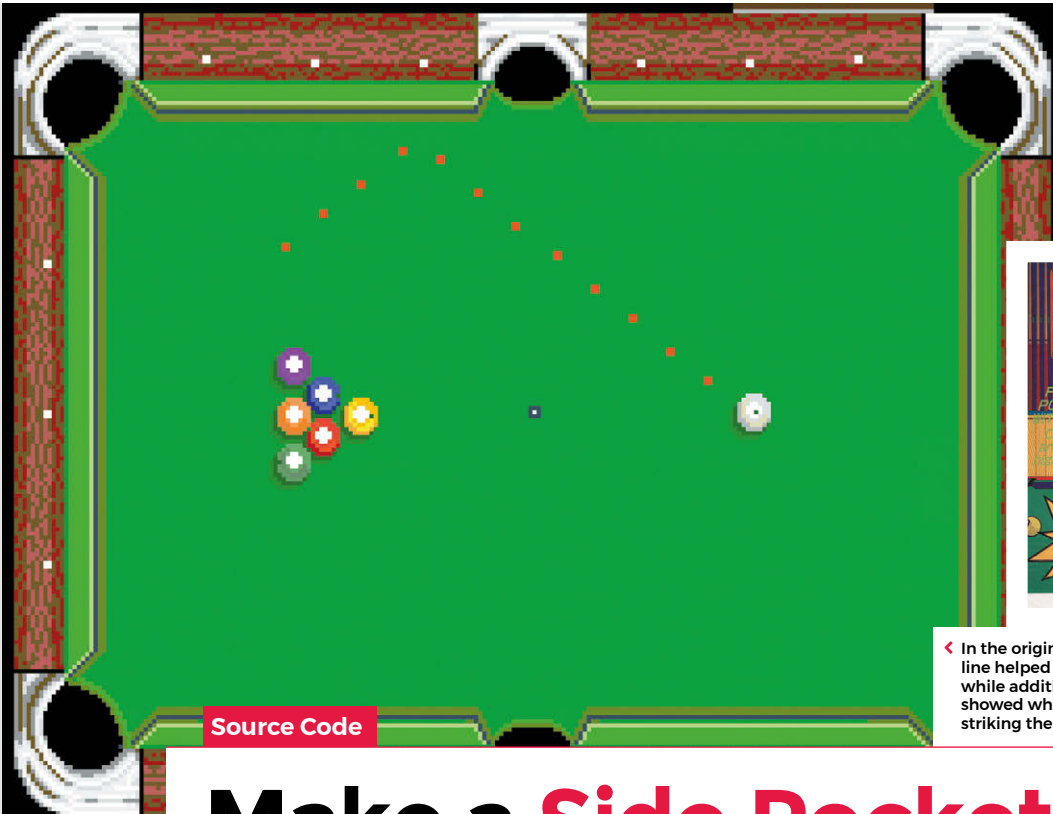
<❮ In the original *Side Pocket*, the dotted line helped the player line-up shots, while additional functions on the UI showed where and how hard you were striking the cue ball.

Make a Side Pocket-esque pool game

Recreate the arcade pool action of Data East's Side Pocket. Mac has the code

AUTHOR
MAC BOWLEY

C reated by Data East in 1986, *Side Pocket* was an arcade pool game that challenged players to sink all the balls on the table and achieve a minimum score to progress. As the levels went on, players faced more balls in increasingly difficult locations on the table.

Here, I'll focus on three key aspects from *Side Pocket*: aiming a shot, moving the balls, and handling collisions for balls and pockets. This project is great for anyone who wants to dip their toe into 2D game physics. I'm going to use the Pygame's built-in collision
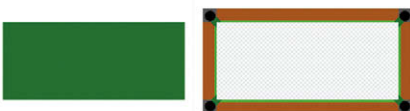
system as much as possible, to keep the code readable and short wherever I can. Before thinking about aiming and moving balls, I need a table to play on. I created both a border and a play area sprite using **piskelapp.com**; originally, this was one

> **"Before I think about aiming and moving balls, I need a table to play on"**

sprite, and I used a **rect** to represent the play area (see **Figure 1**). Changing to two sprites and making the play area an actor made all the collisions easier to handle and made everything much easier to place. For the balls, I made simple 32×32 sprites in varying colours. I need to be able to keep track of some information about each ball on the table, such as its position, a sprite, movement, and whether it's been pocketed or not – once a ball's pocketed, it's removed

from play. Each ball will have similar functionality as well – moving and colliding with each other. The best way to do this is with a class: a blueprint for each ball that I will make copies of when I need a new ball on the table.

```python
class Ball:
    def __init__(self, image, pos):
        self.actor = Actor(image,
center=pos, anchor=("center", "center"))
        self.movement = [0, 0]
        self.pocketed = False

    def move(self):
        self.actor.x += self.movement[0]
        self.actor.y += self.movement[1]
        if self.pocketed == False:
            if self.actor.y < playArea.
top + 16 or self.actor.y > playArea.
bottom-16:
                self.movement[1] = -self.
movement[1]
```

```
            self.actor.y =
clamp(self.actor.y, playArea.top+16,
playArea.bottom-16)
            if self.actor.x < playArea.
left+16 or self.actor.x > playArea.
right-16:
                self.movement[0] = -self.
movement[0]
                self.actor.x =
clamp(self.actor.x, playArea.left+16,
playArea.right-16)
            else:
                self.actor.x += self.
movement[0]
                self.actor.y += self.
movement[1]
            self.resistance()

    def resistance(self):
        # Slow the ball down
        self.movement[0] *= 0.95
        self.movement[1] *= 0.95

        if abs(self.movement[0]) +
abs(self.movement[1]) < 0.4:
            self.movement = [0, 0]
```

The best part about using a class is that I only need to make one piece of code to move a ball, and I can reuse it for every ball on the table. I'm using an array to keep track of the ball's movement – how much it will move each frame. I also need to make sure it bounces off the sides of the play area if it hits them. I'll use an array to hold all the balls on the table. To start with, I need a cue ball:

```
balls = []
cue_ball = Ball("cue_ball.png",
(WIDTH//2, HEIGHT//2))
balls.append(cue_ball)
```

AIMING THE SHOT

In *Side Pocket*, players control a dotted line that shows where the cue ball will go when they take a shot. Using the joystick or arrow buttons rotated the shot and moved the line, so players could aim to get the balls in the pockets (see **Figure 2** overleaf). To achieve this, we have to dive into our first bit of maths, converting a rotation in degrees to a pair of x and y movements. I decided my rotation would be at 0 degrees

when pointing straight up; the player can then press the right and left arrow to increase or decrease this value.

Pygame Zero has some built-in attributes for checking the keyboard, which I'm taking full advantage of.

```
shot_rotation = 270.0 # Start pointing
up table
turn_speed = 1
line = [] # To hold the points on my line
line_gap = 1/12
max_line_length = 400


def update():
    global shot_rotation

    ## Rotate your aim
    if keyboard[keys.LEFT]:
        shot_rotation -= 1 * turn_speed
    if keyboard[keys.RIGHT]:
        shot_rotation += 1 * turn_speed

    # Make the rotation wrap around
    if shot_rotation > 360:
        shot_rotation -= 360
    if shot_rotation < 0:
        shot_rotation += 360
```

At 0 degrees, my cue ball's movement should be 0 in the x direction and -1 in y. When the rotation is 90 degrees, my x movement would be 1 and y would be zero; anything in between should be a fraction between the two numbers. I could use a lot of 'if-elses' to set this, but an easier way is to use **sin** and **cos** on my angle – I **sin** the rotation to get my x value and **cos** the rotation to get the y movement.

```
# The in-built functions need radian
rot_radians = shot_rotation * (math.
pi/180)

x = math.sin(rot_rads)
y = -math.cos(rot_rads)
if not shot:
        current_x = cue_ball.actor.x
        current_y = cue_ball.actor.y
        length = 0
        line = []
        while length < max_line_length: ➡
```

∧ *Side Pocket* was a big hit for Data East in the mid-eighties, and spawned a whole string of ports and spin-offs.

∨ The NES *Side Pocket* was a solid conversion. It was even ported back to arcades as an adult-themed spin-off from the main series.
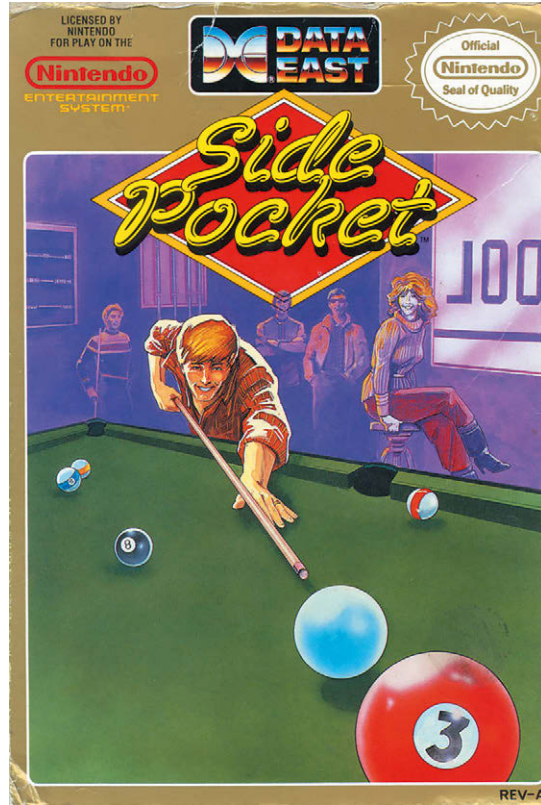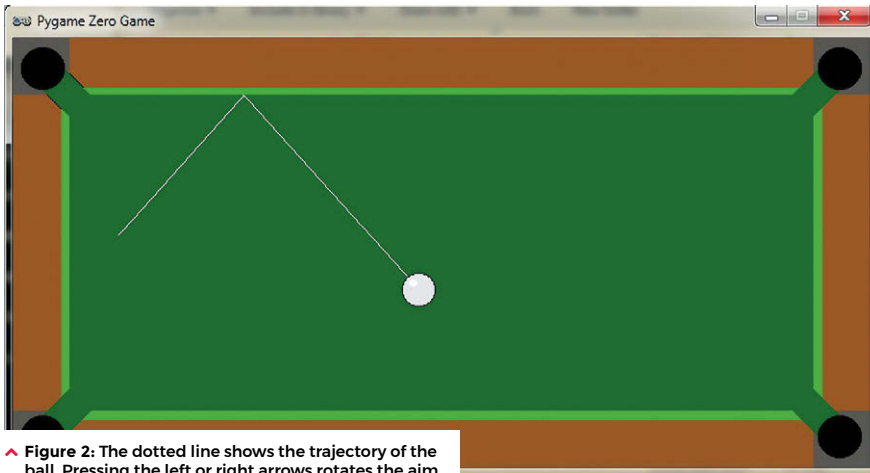
▲ **Figure 2: The dotted line shows the trajectory of the ball. Pressing the left or right arrows rotates the aim.**

"Now for the final problem: getting the balls to collide with each other and the pockets"

```
anchor=("left", "top")))
# I create one of these actors for each
pocket, they are not drawn
```

Each ball needs to be able to collide with the others, and when that happens, the direction and speed of the balls will change. Each ball will be responsible for changing the direction of the ball it has collided with, and I add a new function to my **ball** class:

```
def collide(self, ball):
        collision_normal = [ball.actor.x
- self.actor.x, ball.actor.y - self.
actor.y]
        ball_speed = math.sqrt(collision_
normal[0]**2 + collision_normal[1]**2)
        self_speed  = math.sqrt(self.
momentum[0]**2 + self.momentum[1]**2)
        if self.momentum[0] == 0 and
self.momentum[1] == 0:
            ball.momentum[0] = -ball.
momentum[0]
            ball.momentum[1] = -ball.
momentum[1]
        elif ball_speed > 0:
            collision_normal[0] *= 1/
ball_speed
            collision_normal[1] *= 1/
ball_speed
            ball.momentum[0] = collision_
normal[0] * self_speed
            ball.momentum[1] = collision_
normal[1] * self_speed
```

When a collision happens, the other ball should move in the opposite direction to the collision. This is what allows you to line-up slices and knock balls diagonally into the pockets. Unlike the collisions with the edges, I can't just reverse the x and y movement. I need to change its direction, and then give it a part of the current ball's speed. Above, I'm using a **normal** to find the direction of the collision. You can think of this as the direction to the other ball as they collide.

```
        hit = False
        if current_y < playArea.top
or current_y > playArea.bottom:
            y = -y
            hit = True
        if current_x < playArea.left
or current_x > playArea.right:
            x = -x
            hit = True
        if hit == True:
            line.append((current_x-
(x*line_gap), current_y-(y*line_gap)))
        length += math.sqrt(((x*line_
gap)**2)+((y*line_gap)**2) )
        current_x += x*line_gap
        current_y += y*line_gap
    line.append((current_x-(x*line_
gap), current_y-(y*line_gap)))
```

I can then use those x and y co-ordinates to create a series of points for my aiming line.

SHOOTING THE BALL
To keep things simple, I'm only going to have a single shot speed – you could improve this design by allowing players to load up a more powerful shot over time, but I won't do that here.

```
shot = False
ball_speed = 30

…
    ## Inside update
    ## Shoot the ball with the space bar
    if keyboard[keys.SPACE] and not shot:
        shot = True
        cue_ball.momentum = [x*ball_
speed, y*ball_speed]
```

When the shot variable is **True**, I'm going to move all the balls on my table – at the beginning, this is just the cue ball – but this code will also move the other balls as well when I add them.

```
    # Shoot the ball and move all the balls
on the table
    else:
        shot = False
        balls_pocketed = []
        collisions = []
        for b in range(len(balls)):
            # Move each ball
            balls[b].move()
            if abs(balls[b].momentum[0])
+ abs(balls[b].momentum[1]) > 0:
                shot = True
```

Each time I move the balls, I check whether they still have some movement left. I made a **resistance** function inside the **ball** class that will slow them down.

COLLISIONS
Now for the final problem: getting the balls to collide with each other and the pockets. I need to add more **balls** and some **pocket** actors to my game in order to test the collisions.

```
balls.append(Ball("ball_1.png", (WIDTH//2
- 75, HEIGHT//2)))
balls.append(Ball("ball_2.png", (WIDTH//2
- 150, HEIGHT//2)))

pockets = []
pockets.append(Actor("pocket.png",
topleft=(playArea.left, playArea.top),
```

HANDLING COLLISIONS

I need to add to my **update** loop to detect and store the collisions to be handled after each set of movement.

```
    # Check for collisions
    for other in balls:
        if other != b and b.actor.
colliderect(other.actor):
            collisions.append((b, other))
    # Did it sink in the hole?
    in_pocket = b.actor.
collidelistall(pockets)
    if len(in_pocket) > 0 and b.pocketed
== False:
        if b != cue_ball:
            b.movement[0] = (pockets[in_
pocket[0]].x - b.actor.x) / 20
            b.movement[1] = (pockets[in_
pocket[0]].y - b.actor.y) / 20
            b.pocket = pockets[in_
pocket[0]]
            balls_pocketed.append(b)
        else:
            b.x = WIDTH//2
            b.y = HEIGHT//2
```

First, I use the **colliderect()** function to check if any of the balls collide this frame – if they do, I add them to a list. This is so I handle all the movement first and then the collisions. Otherwise, I'm changing the momentum of balls that haven't moved yet. I detect whether a pocket was hit as well; if so, I change the momentum so that the ball heads towards the pocket and doesn't bounce off the walls anymore.

When all my balls have been moved, I can handle the collisions with both the other balls and the pockets:

```
for col in collisions:
    col[0].collide(col[1])
if shot == False:
    for b in balls_pocketed:
        balls.remove(b)
```

And there you have it: the beginnings of an arcade pool game in the *Side Pocket* tradition. You can get the full code and assets from **wfmag.cc/wfmag36**, and you can find some suggestions for improving and expanding the game in the box on the right. ⓦ

WHAT NEXT?

If you wanted to improve your pool game, there are a few things you could do…

1. Add more balls, and arrange them in challenging ways.

2. Implement a scoring system that increases with each ball being pocketed.

3. Give the player lives; a certain amount of shots before they have to start again.
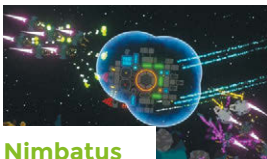
Best of luck and happy developing!
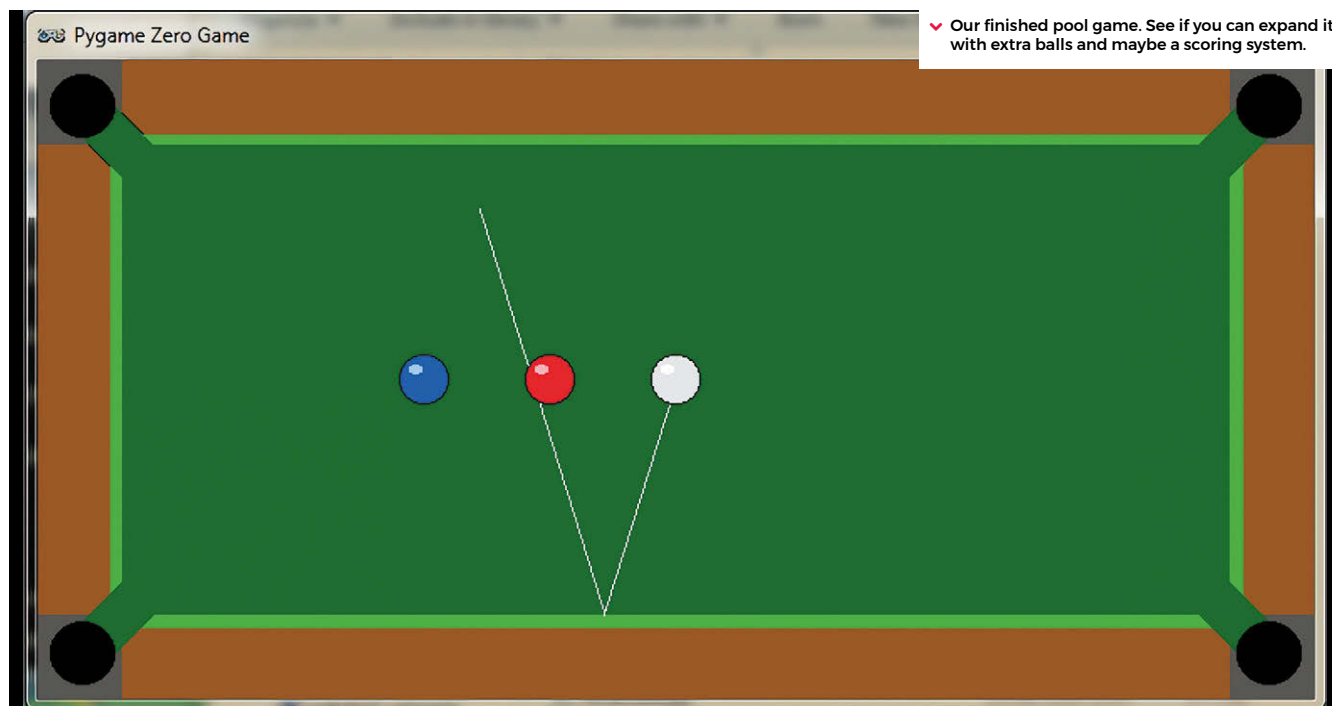
⌄ **Our finished pool game. See if you can expand it with extra balls and maybe a scoring system.**

Show, tell, win

The GWB Game Awards 2020 offers as level a playing field as you can get
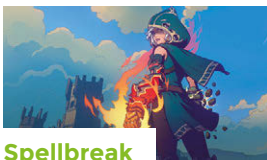
Previous winners

Nimbatus

Won the gold prize in the awards' first run out in 2018, a game we've long been keen to play (see Incoming on page 16 for some details as to why).

Animal Super Squad

Released in 2018, this physics-based adventure brings in community level design alongside daft/actually fun action.

Spellbreak

You may have heard of this one – a magic-based battle royale featured heavily on the Epic Games Store. It won best visuals in the 2019 awards.

SYNTHETIK

A tactical twin-stick shooter roguelike, you say? Why yes, we can probably guess why this won best shooter at the 2019 awards.

Tencent Games has launched the 2020 edition of its Game Without Borders (GWB) Game Awards, a project aimed at highlighting and supporting indie developers in projects big and small, across a variety of stylistic and genre backgrounds. Freeing ourselves from the marketing bumph for a second, what does it mean to you, the intrepid game-maker with a point to prove? Well, big money and big prizes, basically.

In partnership with the Intel Game Dev Boost program, the GWB Game Awards offers indies – of any size, located anywhere in the world – the chance to enter their game for consideration. As long as it's a game that's at least 60% or so complete and is fully playable by judges, it can be entered. From the entries, a shortlist will be selected, and from the shortlist, six main winners will be announced alongside some additional prize winners.

There will be three bronze award winners, two silver winners, and one gold Grand Prize winner, taking home $5000. Additionally, winners at all levels will receive hardware from Intel, and Intel itself will be offering a specific prize for its own category. *Plus* winners will receive promotional support from both Intel and Tencent, meaning your game could be shown off worldwide by a couple of massive organisations. Even indies who don't win a prize will get a bump through promotional channels. Which sounds good.

Fittingly, in these times of uncertainty and more remote collaboration than ever, the GWB Game Awards are held entirely remotely – so not only is there no need to travel anywhere to attend things, there's also no need to cancel plans when the world decides to throw a gargantuan spanner in the works. Submissions are sent over digitally and distributed to judges, and all updates and decisions take place in the virtual realm of telecommunications wiring and video conferencing software. In short: no, you don't have to get dressed to be involved.

Interested in participating? Well, you have until the beginning of June to get signed up and your project in – details are at the bottom of the page. And we've been informed there are more details – including additional partners and prizes – to be announced in coming weeks, so keep your peepers peeled.

You can check out more details on the awards site: **wfmag.cc/GWBGA**. Or you can email **gwbcontact@tencent.com** if you have any questions. And, of course, good luck – and don't forget to read the small print. ⓦ
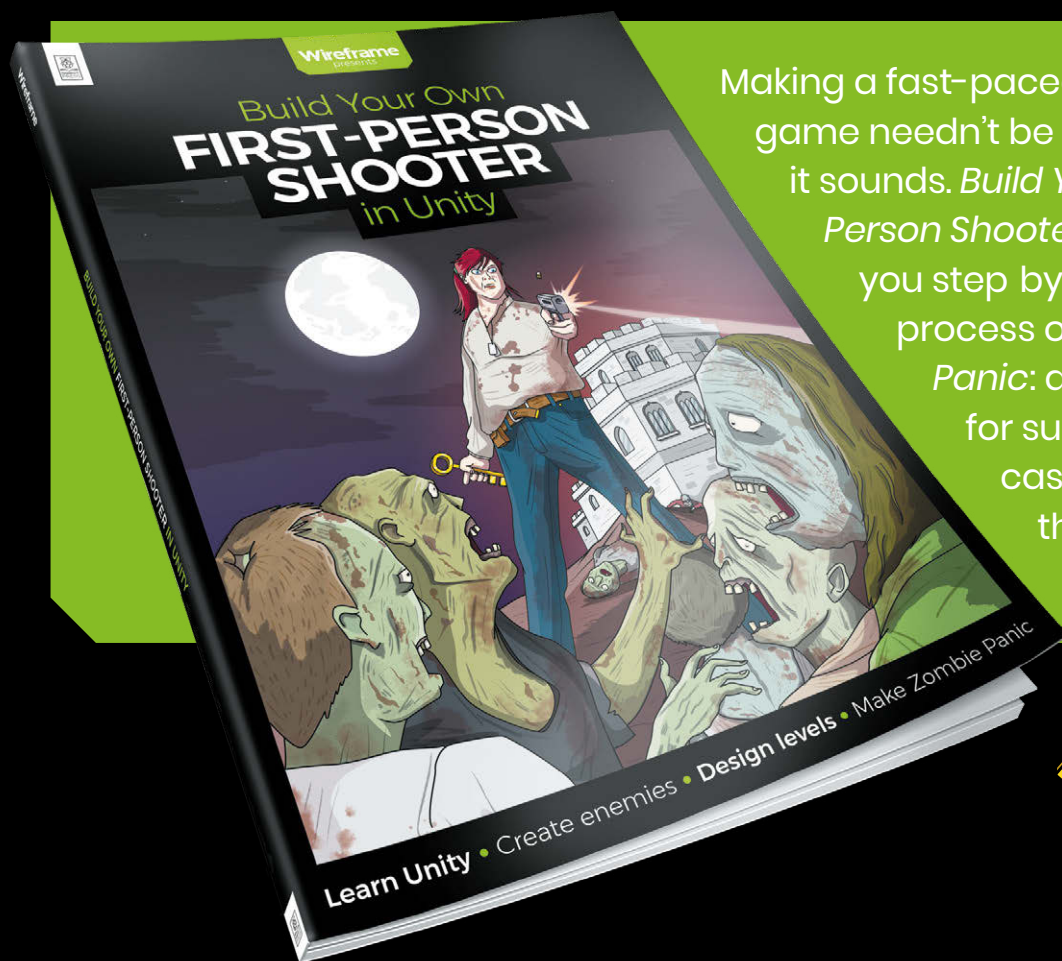
GET INVOLVED

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

GWB Game Awards 2020

ROLL WITH IT
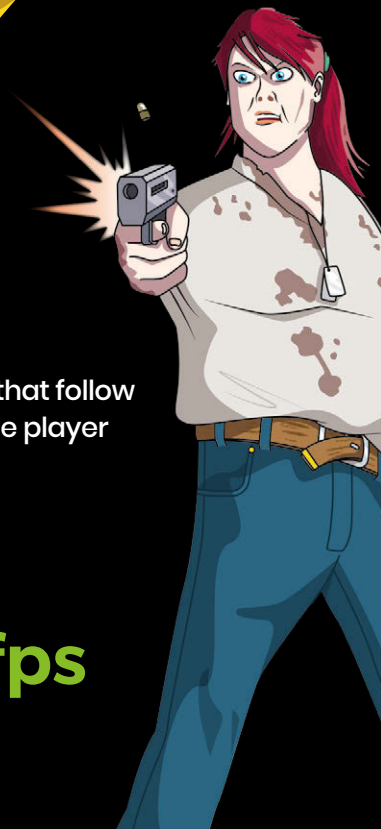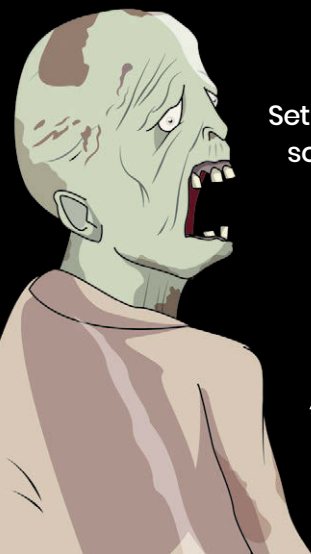
The studios bringing card and dice rules to video games

How developers are bringing the complexity of tabletop games to the digital realm

WRITTEN BY
JEREMY SIGNOR

Video and tabletop games are now more intertwined than ever. With the growing popularity of increasingly complex board games, a wave of video games directly inspired by them have begun to emerge. Paper-and-dice deck-building games like *Dominion* and *Ascension* have spoken to a new generation of developers, and sparked a new sub-genre of video games that wear their tabletop inspirations on their sleeves.

Video games like *Dream Quest*, *Slay the Spire*, *Nowhere Prophet*, *Tharsis*, and *Dicey Dungeons* use cards as part of their user interfaces, and feature virtual dice rolls that you can see and manipulate. It's also important to note *Hearthstone*'s contribution to this growing design trend. Blizzard's digital card game has cast a long shadow, thanks to the cleanliness of its design and the way its complex rules are

largely resolved in the background. Games like *Hearthstone*, and those that have come after it, also share a structure that borrows liberally from the roguelike, an RPG sub-genre whose lineage is closely connected to tabletop games like Dungeons & Dragons.

To find out more, we spoke to a number of video game developers about the ways card and dice games have influenced their design choices.

STARTER DECK

The current renaissance in digital card and dice games follows a similar trajectory to the history of early computer RPGs, which drew heavy inspiration from the seminal Dungeons & Dragons. Introduced in 1974, D&D captured the imaginations of many budding developers in their childhoods. Almost 15 years later, developer SSI published

< *Nowhere Prophet* plays out a lot like *Hearthstone*, except you're juggling two decks instead of one.

⌄ *Slay the Spire* telegraphs every move the enemies are about to make, letting you strategise with perfect information.

"As a lifelong card–game player, using those mechanics just made sense"

Pool of Radiance, the first of its celebrated *Gold Box* series of RPGs. *Pool of Radiance*, and countless other games like it, were the result of said developers growing up and wanting to capture the essence of pen-and-paper RPGs in electronic form.

The same thing happened with card-games in the 1990s. This was the heyday of the trading card game, with Magic: The Gathering and Pokémon staking out equal claims on gamers' attention and wallets. Years later, we're seeing the fruits of this inspiration, with modern developers making such games as *Hearthstone* and, over at Mega Crit Games, the fantasy roguelike, *Slay the Spire*.

For Anthony Giovannetti, developer and co-founder at Mega Crit Games, playing tabletop games was a formative experience, so it follows that they'd inform the way he makes video games. "I grew up playing card-games," he says. "I got started on Pokémon cards as a child and moved on to Magic: The Gathering and then Netrunner. I always loved going down to the card shop and playing against other players in local tournaments. As a lifelong card-game player, using those mechanics in games just made sense."
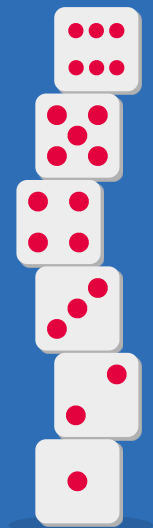
Of course, the developers of these games aren't merely reproducing the games they loved as kids, as they're entirely aware of

the flaws that sometimes emerge in their designs. "I've been playing various card-games on and off, but the format always stuck with me," explains Martin Nerurkar, creative director at Sharkbomb Studios, creators of *Nowhere Prophet*. "But when it came to digital collectable card-games, I always hated what I call the 'arms race'.

"To properly play, you need to compete with everyone, which means you need to build a top tier deck, which means the space of possible decks suddenly becomes very limited. It starts feeling like hard work, with the research and grinding needed. That takes out the fun of deck-building, which to me is best when there's some creativity involved."

The problem of pay-to-win persists in video games even now, which is why some developers are choosing to sidestep the competitive aspect of traditional card- ➡

You play as one of six different characters in *Dicey Dungeons*, all of whom have different ways of manipulating and using dice.

TEAM PLAY

According to Terry Cavanagh, *Dicey Dungeons*' colourful look came about partly through the input of his collaborators. "This shift [in visual style] really started to happen when Marlowe [Dobbe, artist and animator] came onto the project. She's responsible for a lot of the game's enemy designs. The game show suggestion came from Niamh [Houston, musician], and it instantly made a lot of things in the game fall into place. Finally, Holly [Gramazio], our writer, figured out how to make the whole thing actually make sense, and gave the game its sense of humour and lightness with her amazing script."

Dicey Dungeons has you customising a tableau of cards into which you can plug in dice for different effects.

games entirely and make them more about the single-player experience. This is where deck-building video games like *Dominion* and *Ascension* come into play. Although they're also competitive, the way you procure cards, and the way your deck dynamically changes, suits itself well to how a single-player experience scales. And when paired with a structure lifted from roguelikes, you get a rising challenge and a pleasing sense of progression, all in a package that sidesteps the play-to-win bugbears often seen in the genre.

SIDEBOARD

Dicey Dungeons is another game that, at first glance, looks as though it's inspired by tabletop experiences – but according to developer Terry Cavanagh, he didn't have cards or dice in mind at all when he started creating the deck-building roguelike in early 2018. "To be honest, my tabletop game experiences are pretty limited," Cavanagh tells us. "I've played a lot of board games, but I can't say I'd really thought much about dice before starting on *Dicey Dungeons*. The systems in the game were something of an accidental discovery – something I thought might have the potential to be a cool jam game, you

know? But the whole thing ended up being much more of a design rabbit hole than I could have imagined."

As mentioned at the top of this article, developers have often turned to the roguelike genre for inspiration – including games such as *NetHack* and *FTL* – when translating the rules and mechanics of card and dice games. "Roguelike games are some of our favourites, and additionally, I think it makes for a great mechanical pairing with a deck-building game," explains Giovannetti. "The roguelike permadeath framework gives a good reason for why a player would be building different decks every time they play. Roguelikes are also content-focused, which means that we could focus on a game with lots of replay-ability, [something] I think is very important in the current gaming market."

Roguelikes also provide strong frameworks for world-building, adds Nerurkar. "Being a solo dev, I knew I didn't want to do a multiplayer game," he says. And a single-player card-game was something I hadn't really seen much at that time. I knew I wanted to build an interesting world, so I needed some sort of travel system. Combining that with the structure of *FTL* was deeply inspiring to me. I loved how it connected the combat system to the world, and back in 2014 when I came up with the concept of *Nowhere Prophet*, it felt like a perfect fit."

> "I wanted to get away from the dark and serious aesthetic that so many roguelikes go for"

WORLD- AND DECK-BUILDING

Most complex card and dice games have some form of back story to entice players; just look at Magic: The Gathering's fantasy lore. Video games need believable worlds of their own, of course, and for Nerurkar, *Nowhere Prophet*'s story and gameplay were two sides of the same coin. "These things sort of developed in tandem," he says. "I started with the core gameplay and then wanted to build an interesting world where you travel and lead a group of people.

"I loved post-apocalyptic stories, but I wanted something that felt different. Something more colourful and bright. So I looked at my own heritage and ended up mashing a number of different ideas together
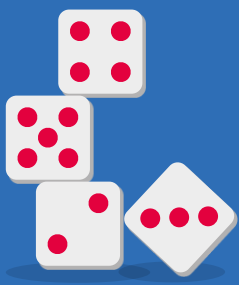
into what would become *Nowhere Prophet*: a story about a people's exodus in search of a promised land."

Standing out from other digital card-games and roguelikes is also an important consideration for the developers we spoke to. "In the early alphas, before I'd really thought very much about this, I basically just used D&D monster ideas as placeholders: goblins and ogres and that sort of thing," Cavanagh says of *Dicey Dungeons*' colourful look. "But I knew from pretty early on that I wanted to do something different for this game. I wanted to get away from the kind of dark and serious aesthetic that so many roguelikes go for. There's nothing wrong with that – I love a lot of games with that aesthetic – but that's not what I wanted to make. I wanted to make something bright, and fun-looking, full of energy and light."

WIN CONDITION

Now six years old, Blizzard's *Hearthstone* continues to set the standard for digital trading card games, thanks in no small part to the strength of its design and presentation. It's a game that developers often turn to, as Nerurkar proves. "*Hearthstone* was an inspiration for the interface," he says. "It set the gold standard of what a digital card-game looks and feels like. Plus it has a lot of players, so using similar conventions in *Nowhere Prophet* makes it easier for those players to find a home here."

When it comes to drawing inspiration from card and dice games, meanwhile, video games also have another advantage: they can take a complex and sometimes intimidating set of rules, and make them more approachable for a broad audience. "I think that card-games actually work really well in a digital format," says Giovannetti. "There are many advantages over a physical version – for example, shuffling is greatly improved and all handled by the game. A big consideration is handling all the text and trying to make it understandable and readable on the card at the same time. Many digital card-games make the game text more vague, knowing that since the engine handles everything they can afford to do so. We wanted to go the other way, however, and tried to make every card explicit."

Nowhere Prophet takes a similar approach to its own cards – according to Nerurkar, clarity is key. "It's about the cards being readable and not too complex – 'reading the card explains the card' is a mantra for a reason," he says. "This means effects that are too complex or complicated are out of the question. But being a digital game allows us to easily copy cards, modify values, and do more complex positioning rules that increase the number of interesting questions."

Traditional tabletop games certainly aren't going anywhere, but then again, it's clear that their mechanics will continue to capture developers' imaginations for some time to come, too. From big-budget releases like *Hearthstone* to smaller indie titles, the best deck-building video games capture the complexity, tension, and sheer unpredictability of card and dice experiences in a convenient, digital form. Ⓦ

⌄ Choosing a route to follow along a map is a common theme among card and dice roguelikes.

⌄ The cards in *Slay the Spire* are the most complicated and synergy-driven among card roguelikes today, allowing for many different strategies.

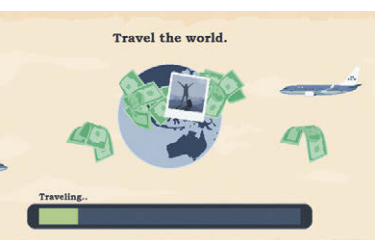**Choose your path.**

Career path available (recommended)

Interactive
Imagine Lifetimes

Developer Tim Bekkers' sim ponders
the meaning of human existence

Imagine Lifetimes was created using GameMaker Studio 2 and free software such as GIMP and Audacity.

Travel the world.

It's the first day of my new job, which involves operating a machine whose purpose is impossible to figure out. One by one, colleagues appear and demand that I type in a sequence of numbers – a simple task complicated by a set of buttons and gauges that have to be constantly attended to and adjusted as they variously flash and move around by themselves. As one colleague disappears, a second one emerges with a new, longer string of numbers to tap into the machine. And as the gauges and buttons flash and demand to be reset ever more quickly, the more impatient the colleagues become. It's an oddly nightmarish minigame, and one that sits right at the heart of *Imagine Lifetimes*, a wryly cynical simulation game about the human condition.

Beginning at the moment of birth, *Imagine Lifetimes* asks you to make a string of seemingly minor choices that will greatly affect the course of your in-game existence: Who will you befriend at school? What will you study? Will you go travelling once you've finished education, or will you go straight into a full-time job? No matter what choices you make, you'll almost certainly encounter that aforementioned disturbing

> **"That inner journey – or existential crisis – is what inspired me"**

minigame; and even if you don't, then the game will always end the same way: with your in-game self quietly shuffling off this mortal coil. If all that sounds a bit downbeat, then rest assured it's intentional. When developer Tim Bekkers began working on *Imagine Lifetimes* at a game jam in 2016, his stated aim was to make "a short, swift, and simple point-and-click experience solely aiming to deliver its message: 'Life is meaningless.'"

"Looking back, I think it had a lot to do with me being in my early twenties," Bekkers says of the game's nihilistic beginnings. "I was growing up, overthinking, and questioning everything. Why am I here? What is my purpose? Do my choices matter? That inner journey – or existential crisis – is what inspired me to create *Imagine Lifetimes*."

After finishing that initial game jam build, Bekkers began thinking of ways to expand and deepen the experience. In the original game, the player's choices didn't make any difference to the final outcome. "It was nothing but a nihilistic analogy," Bekkers tells us. "I loved it, but that's all it really was." Four years on, however, and *Imagine Lifetimes* is a point-and-click sim that features multiple paths, including different

Survive your first day of work.
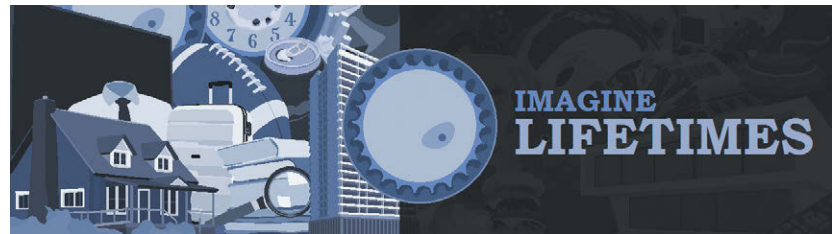

THE BOSS

Hello! You must be our latest recruit.
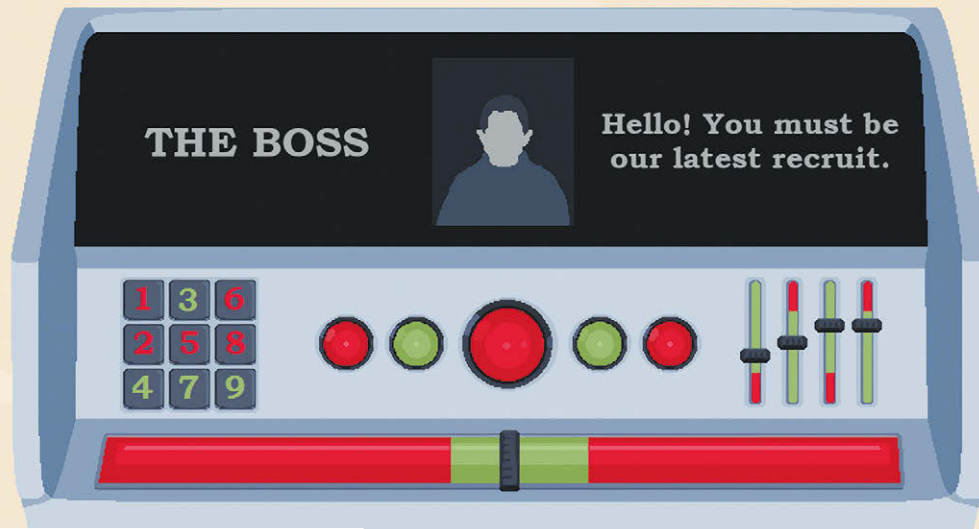
▲ The unsettling job minigame we keep banging on about. "A tedious process that is required to earn your pay cheque," Bekkers says.

Choose your favorite childhood toy.

▲ Your choices of favourite toy, sport, and youthful crush will all have a bearing on the latter stages of your life.

IMAGINE LIFETIMES

careers and life paths. Death is still inevitable, but there's a certain replayability in the process of leading one life, dying, and then looping back to see what will spring from different choices. "Each ending delivers a message," Bekkers says. "The game's filled with thoughts and insights, ranging from existential to nihilistic, sarcastic, wacky, dramatic, and more."

PATHS OF GLORY

The final, commercial build of the game, dubbed the *Deadly Edition*, will feature a total of 19 different endings. According to Bekkers, the process of planning all these different paths and outcomes has involved starting at the end and working backwards to the beginning. "Every single choice you make is stored in a variable," he says. "Based on those variables, other options are locked and unlocked, paths change, and the game changes with it. Some options are randomly generated, while in some cases, a handful of choices might not affect your game at all. But it's that mix of specific consequences and randomisation that makes the game highly unpredictable, and no playthrough will ever be the same… For most of the endings, I've worked my way backwards, starting from the

consequence and then fitting it in to determine the choices that trigger that particular outcome."

A building engineer in the Netherlands, Bekkers has made *Imagine Lifetimes* in his spare time, in the evenings and at weekends. But after four years, he's now at the point where he's working on its finishing touches, including writing the last remaining pieces of the script for the main storyline and the various endings. As the project has developed, it's gradually moved away from the nihilism of that first build; the cynicism and satire are still there, but they're now joined by something just a little more upbeat. "I'm adding incentive and progression to the final build – as the player experiences the game and progresses throughout they will start collecting pieces of the puzzle that is the main storyline," Bekkers tells us. "It'll be a game-changer, not only revealing the meaning and purpose of what the game represents but also providing a conclusion to the experience that is *Imagine Lifetimes*… Players will progress towards this final ending, and it's bound to deliver a light at the end of the tunnel that life can be sometimes. I can't spoil [it] too much, but for those who finish the game: a healthy dose of positivity." Ⓦ

Imagine Lifetimes: Deadly Edition **is due for release on Steam in September.**

DEUS EX MACHINA

As we played through the Early Edition of *Imagine Lifetimes* (which you can download from **imaginelifetimes.com**), we couldn't help thinking about the pioneering 1984 game, *Deus Ex Machina*, a satirical life simulation that its creator, the great Mel Croucher, has written about at length in these very pages. So was Croucher's game an influence on *Imagine Lifetimes*, we wondered? "I've never heard of this before!" Bekkers says. "I guess because I was born a decade after its release. I've been reading up on it today, and it's ridiculous how similar the concepts are. The game seems to be leaning more towards surrealism, but this is definitely a great example of a game that could have been a potential source of inspiration. I'm a fan of games that aren't easily identified as 'games', but instead feel more like an experience or artistic expression."

Jaleco

For a brief period in the 1980s and nineties, the Japanese studio put out some derivative but entertaining action titles

I n the rankings of eminent Japanese game companies, Jaleco was pretty far from the top. Even at its peak, it didn't define genres like Capcom or Konami, or push the boundaries of arcade technology like Sega. But at the same time, the firm did make some pretty cool 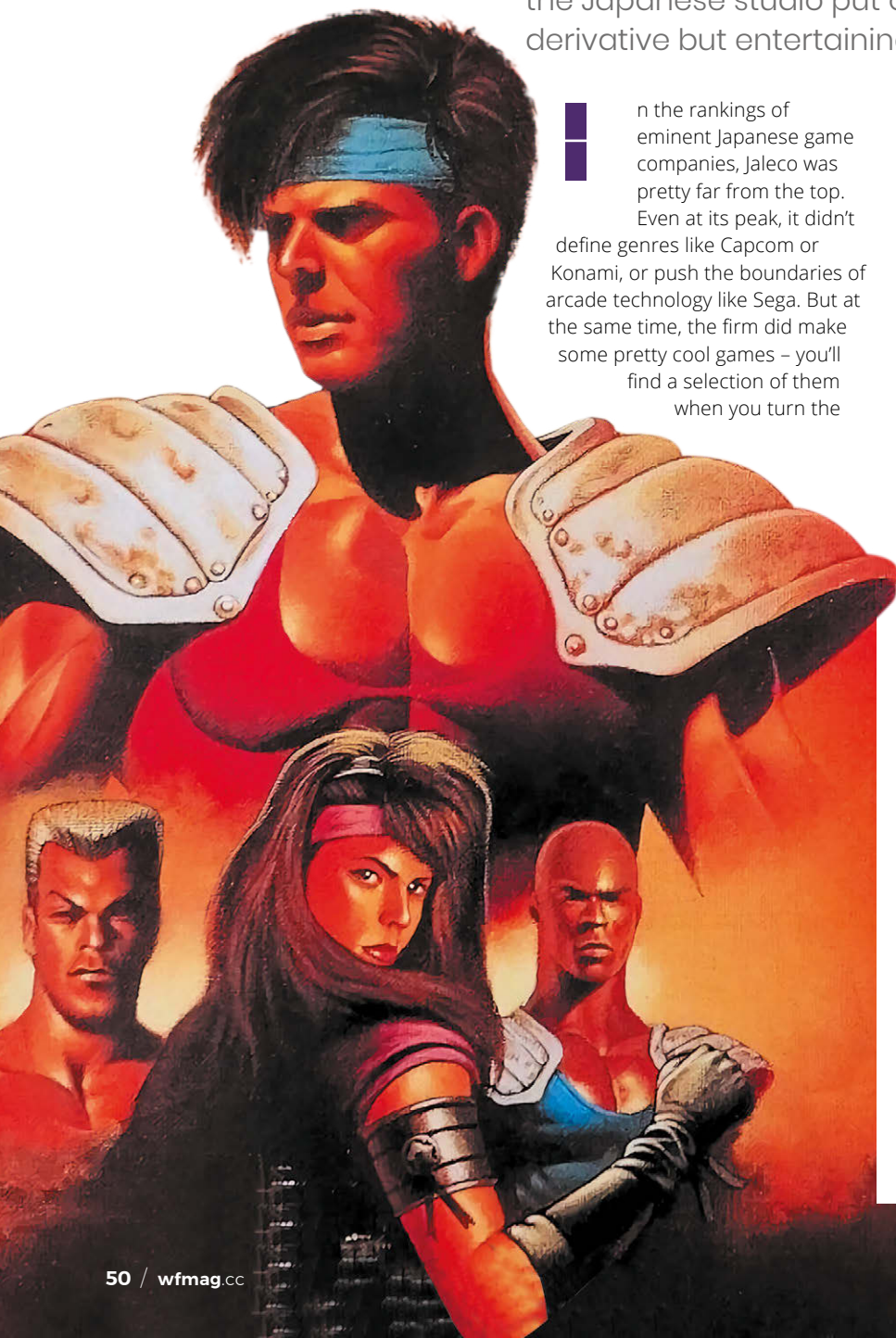games – you'll find a selection of them when you turn the page – and its history is studded with some fascinating business decisions and personal stories.

By the late eighties, Jaleco – founded under the more long-winded moniker Japan Leisure Company in 1974 – had hit its stride. It was making or publishing well-received sports games like *Bases Loaded* for the Nintendo Entertainment System, while such titles as *Big Run* and *Saint Dragon* were doing perfectly respectable business in arcades. Behind the scenes, though, Jaleco was somewhat shambolic.

Senior staff, who'd worked on the studio's earlier arcade hits like *City Connection* and *Formation Z*, had already left as the decade neared its end, and the new, younger developers brought in to replace them were surprised to discover just how small and thinly stretched the company was. Where rival companies had separate, dedicated sound departments for consoles and arcade games, for example, Jaleco had to make do with one person working in both areas.

"When I joined Jaleco, there was no one else working in-house on music, so I had to somehow figure out how to do everything myself," recalled composer Tsukasa Tawada, in a Japanese magazine interview translated by shmuplations. com. "While there, I was involved in almost all our in-house developed consumer and arcade games."

Similarly, one Jaleco developer, A-Kun, recalls that older programmers would often reminisce about the times they'd

Jaleco stopped making games in the 2000s, but its output still appears on modern systems: the 1995 shooter, *The Game Paradise!*, was ported to PS4 and PC in 2017.
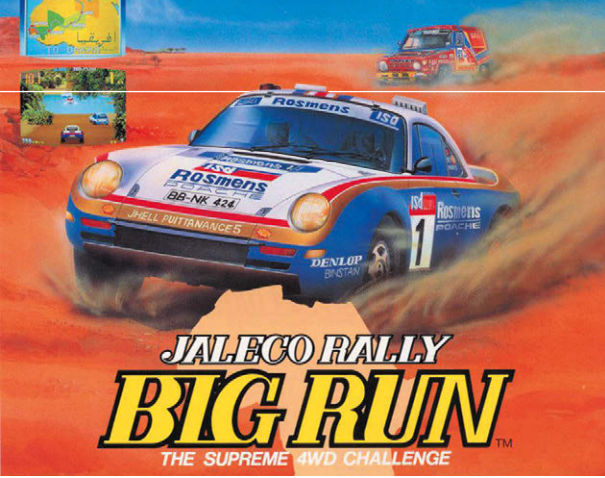

have to design the PCB hardware for the arcade game they'd just written. "When I think back on it now," Tawada said, "the fact that we had no [boss] or anyone else to explain the work to us really forced us to discover things for ourselves. And I think it's precisely because of this that we came up with interesting ideas and techniques."

"It leant all our games a real 'handmade' feel," concurred programmer Akihiro Yoshida.

TRENDING

If there's one thing that unifies most of Jaleco's output in the eighties and nineties, it's that it tended to follow trends rather than set them. *Big Run* was a perfectly serviceable racer, but hardly better than the ones Sega was putting out at the time (funnily enough, the team that created it were all ex-Sega staff). According to A-Kun, the side-scrolling shooter *Saint Dragon* came about because the company's boss, Yoshiaki Kanazawa, had seen Irem's *R-Type* and challenged developer NMK (who made several games under the Jaleco banner) to make something equally as eye-catching.

Then there were Jaleco's forays outside game development: the

company began selling aquarium equipment in the late eighties under the subsidiary JAQNO (short for 'Jaleco Aqua Technology'), while A-Kun recalls programming a piece of stock trading software for the Japanese NES around the same time.

"I had to somehow figure out how to do everything myself"

Jaleco was a curious company, then, and one ill-equipped to weather a brutally competitive and ever-changing video game market. Its finances dwindled with the dying arcade scene in the late nineties, and was acquired by a larger company, PCCW, in 2000, before finally vanishing altogether in 2014. But while its games were far from original, they at least had charm and personality – perhaps because, as Yoshida observed, they were made by small, close-knit teams all desperately scrambling to figure things out as they went along. Ⓦ

Many of Jaleco's more obscure arcade releases were Japan-only, but some did seep out to the west: porcine battle royale *Butasan* came out in the UK as *Psycho Pigs UXB*.
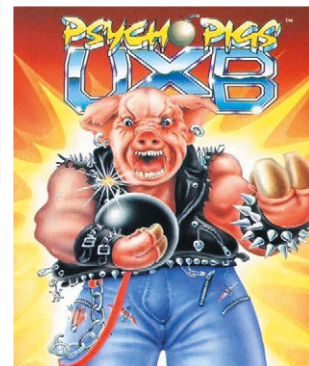
One of Jaleco's better releases, at least in the US, was *Bases Loaded* on the NES, adapted from the arcade game by developer TOSE.

Extra Life

The Jaleco name may be a distant memory these days, but its games are still doing the rounds thanks to a company called City Connection, which now owns the rights to its properties. Named after one of Jaleco's early arcade games, City Connection is dedicated to reissuing Jaleco's increasingly obscure titles on modern systems. Thanks to them, you can now play the arcade/Sega Saturn shooter *The Game Paradise!* on the PlayStation 4, and the Japan-only *Ninja JaJaMaru-kun* series of platformers on the Nintendo Switch.
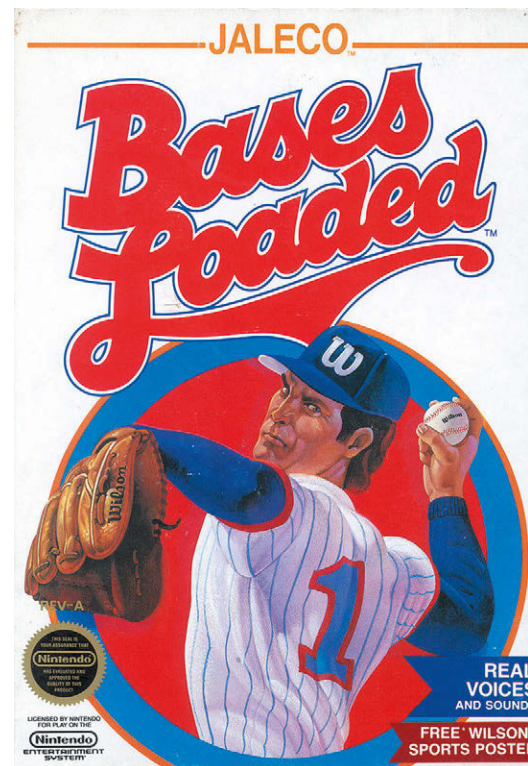
The joy of Jaleco
## 10 action highlights from the developer's heyday

01

Blue Print
Arcade / Atari 2600 / 5200 / C64 − 1982

We had to include this, since it was developed by the UK's Ashby Computers and Graphics – later known as Ultimate Play The Game – and published by Jaleco in Japan and Bally Midway in the US. *Blue Print* was another post-*Pac-Man* arcade maze game, but it's possible to see the polish and design ingenuity of Ultimate's later works, like *Jetpac* and *Knight Lore*.
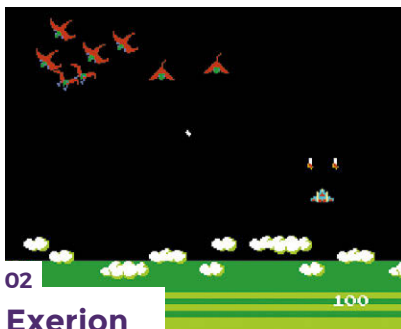
02

Exerion
Arcade / MSX / Famicom / SG-1000 − 1983

Just about every developer in Japan was making its own response to *Galaxian* and *Galaga* in the early eighties, and Jaleco's *Exerion* is distinguished by a bit of sprite-scaling and a truly eye-popping pseudo-3D effect. You're still killing 2D aliens as usual, but the background shifts and rolls smoothly beneath you as the mayhem unfolds.
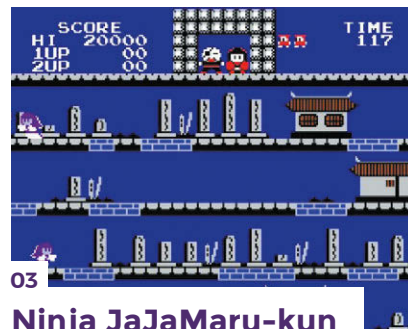
03

Ninja JaJaMaru-kun
Arcade / NES / MSX − 1985

This Japan-only action-platformer felt a bit antiquated even on release, particularly compared to *Super Mario Bros.*, put out for the NES around the same time. Choppy and simplistic though it is, there's still a certain charm to running around, offing enemies with ninja stars, and collecting their ghosts for extra points.
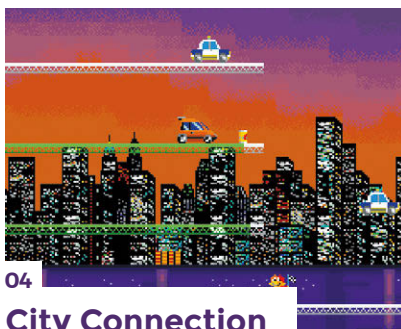

04

City Connection
Arcade / NES − 1985

It's hard to figure out how Jaleco came up with the idea of a 2D platformer where you paint roads with a tiny Honda automobile, but the result is a charming arcade hybrid. You traverse platforms, colouring them as you go, and earn points for throwing oil cans at the cop cars on your tail. The arcade version is a breezy romp; the NES port is a bit rough around the edges.
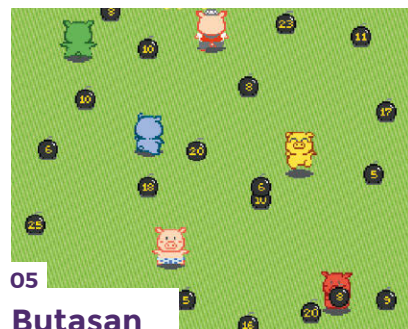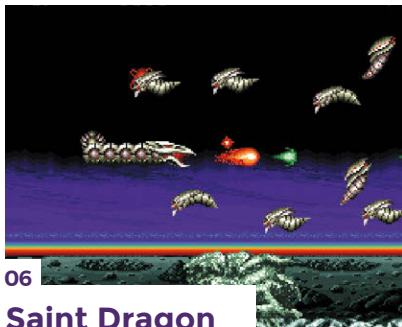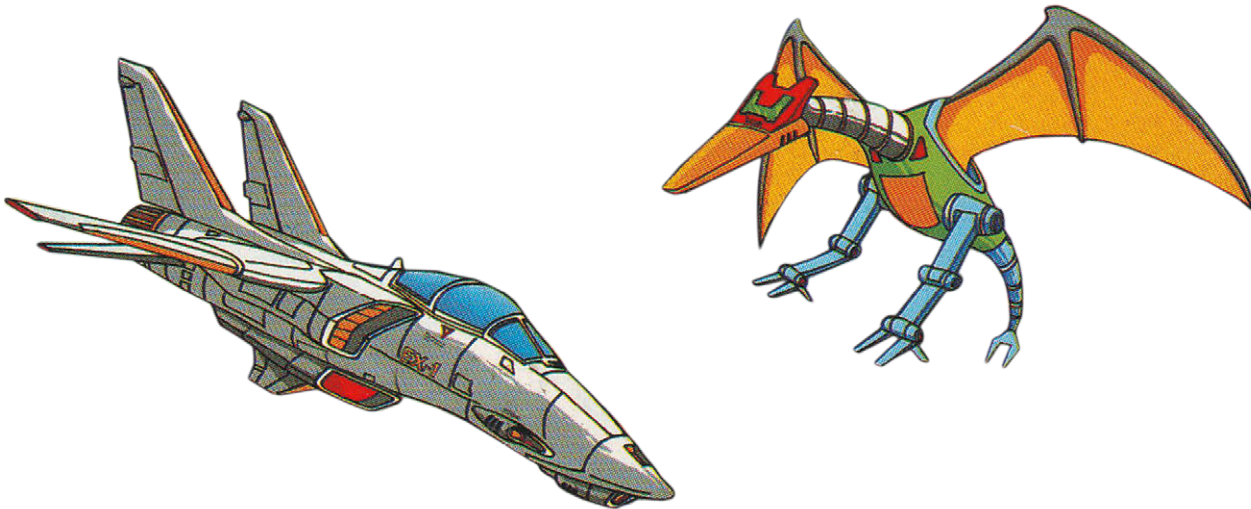

05

Butasan
Arcade / various − 1987

Forget *PUBG*, here's a last-player-standing murder fest from decades earlier. You play as one of a handful of pigs that throw bombs around the screen while avoiding explosions. Less tactical and deep than *Bomberman*, *Butasan* was ported to the west as *Psycho Pigs UXB*, but it's something of a forgotten curio these days.

06

Saint Dragon

Arcade / PC Engine / various – 1989

Irem's 2D shooter *R-Type* was a technical marvel in 1987, so Jaleco scrambled its regular collaborator, NMK, to make an answer to it. In its own way, *Saint Dragon* is an impressive feat, too: its enemies are all cyborg animals of various kinds, and they're nicely designed and animated. The hovering robot bull is a particular highlight.
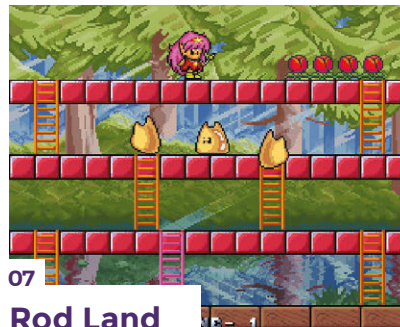
07

Rod Land

Arcade / various – 1990

Jaleco's answer to fixed-screen platform games like *Bubble Bobble*, *Rod Land* was one of the company's most widely ported titles, appearing on home computers as well as the NES. This one really comes to life in two-player co-op, where grabbing enemies with magic wands and then repeatedly bashing them on the ground becomes a gleefully fun diversion.
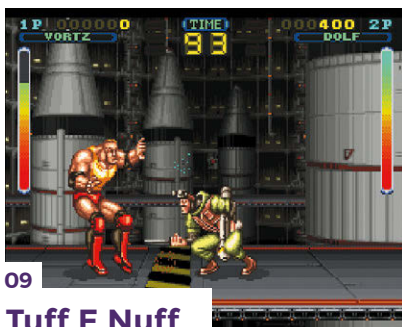

08

Cisco Heat

Arcade – 1990

You're probably spotting a theme here by now: a rival studio makes a popular game, Jaleco responds. This racer was clearly modelled on the likes of Taito's *Chase H.Q.*, which also had a law enforcement theme. But with ex-Sega developers working on *Cisco Heat*, it actually emerged as one of the better arcade driving experiences of its era.
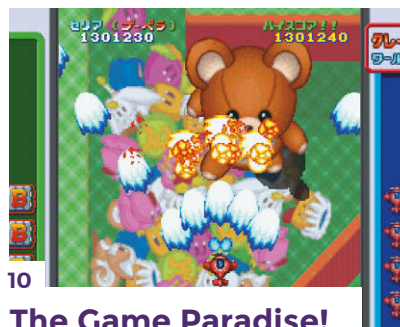

09

Tuff E Nuff

SNES – 1993

Just as Jaleco hopped on the shoot-'em-up bandwagon with *Saint Dragon*, *Tuff E Nuff* (or *Dead Dance* in Japan) was its response to the competitive brawler craze triggered by *Street Fighter II*. Again, this is a rock-solid fighting game. It suffers in comparison to *SFII*, but the action still packs a rugged, hearty thwack just where it's needed.

10

The Game Paradise!

Arcade / Sega Saturn / PS4 / PC – 1995

This vertical shooter served as a last curtain call for games from Jaleco's past: there are nods to *City Connection*, *Butasan*, *Exerion*, and more besides. Japan-only on its original release, *The Game Paradise!* got a wider boost in 2017 when it was ported to PS4 and PC – allowing a new generation to enjoy its laser-strewn, aubergine-collecting delights.

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HIGHLIGHT

Doomguy's room in the Fortress of Doom ship/hub is a pleasant little bundle of references, collectables, and jokes. It's genuinely interesting to potter about in there for five minutes between the carnage, and when you figure out how to unlock *DOOM II* on the old PC… *well.*

ight, I've landed the first part and am now clinging to a wall – scope the area out, looks like that's my next target (given it has a bright green light on it, very subtle). I'll need to double-jump then air dash at least once, try to collect the mid-air power-up to recharge my dashes, hit that pole to vault myself a bit further, then dash carefully and quickly to avoid a couple of traps before landing on the platform below. Then back to the regularly scheduled ripping and tearing. *DOOM Eternal* is an odd one.

Because yes, *DOOM*'s second outing of this, the modern era, brings with it a whole host of platforming sections. You jump, you cling, you dash, you plummet – it's all present and correct. And shockingly, it's all pretty good too, with a crispness of control that echoes the game's return (elsewhere) to tight, satisfying combat. Adding in platforming to an FPS has been seen as a negative since even before *Half-Life* polluted the waters with its Xen section in 1998, but that hasn't stopped id. And fair play to them – I find it hard to accept that platforming really *fits* in a *DOOM* game, but progress makes a fool out of all of us, right?

The core of the experience in *DOOM Eternal* does, of course, stick to the tried and tested elements that made 2016's reboot so impactful and brilliant. While those platforming sections do add a bit of change, a bit of depth, to what you're doing in your downtime, the main game is still ostensibly a series of monster rooms. They're just bigger this time, you're facing more enemies, they're smarter and more aggressive, but you do have a few more boomsticks and other techniques to take them on with.

So while you might see yourself being overwhelmed by the addition of waves of irritating, quick-moving gargoyles and their hellbeast brethren, there's plenty that's been added on the other side to make sure you're able to cope. There's a definite feel of pinging about the place, with Doomguy displaying more agility than one might assume of a large ball of meat carrying a gun. What this leads to is many combat encounters where you actually spend very little time on the ground, instead flinging yourself about the mini-arenas with abandon,

▾ **Since the council went bankrupt, Northampton's potholes have got a bit out of hand.**
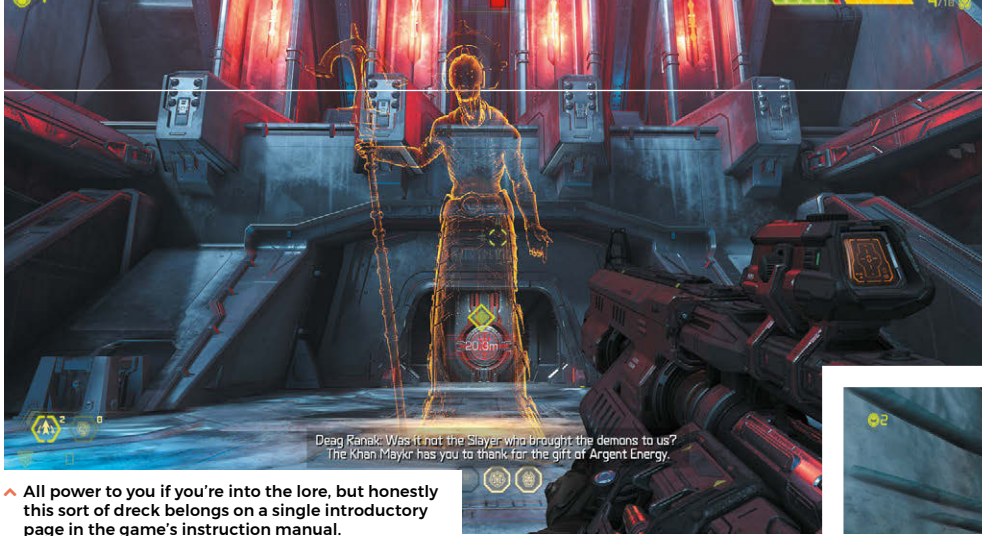
^ **All power to you if you're into the lore, but honestly this sort of dreck belongs on a single introductory page in the game's instruction manual.**
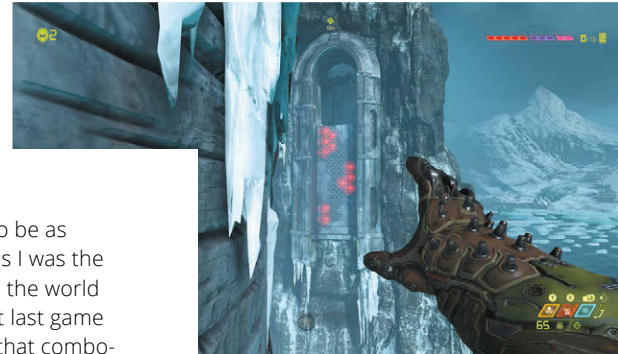
^ **id appears to have smeared platforming all over my *DOOM* game. But the most shocking thing is… it works pretty well.**

peppering Satan's frontline workforce with lead, energy blasts, or the odd violent stabbing session in order to top up your health using the returning glory kill system. Said system, rewarding players for being on the front foot as much as possible, also includes topping up your ammo and armour, and I'm delighted it's returned as it is the most perfectly *DOOM* thing id could have brought to the series' modern incarnation. Basically, *DOOM Eternal* is big and dumb and silly and Not An Art Game, but it's also big and dumb and silly and *utterly exhilarating*.

The game's big dumb silliness does get away from it a bit when it comes to the lore of *DOOM Eternal*, though, with an emphasis on storytelling – and unironically making you listen to soliloquy-spouting demon priests – getting in the way of the better features both new and old. It's a taste thing, and it's probably a tradition thing – the original *DOOM* didn't really have a story, with a lone page tale retconned into being after the game eventually received a commercial release (and a manual to go with it). Now we have vast quantities of codex entries, fine, but a wave of grandiose villains and their villainy being villainous at our mute hero does have the tendency to rip and tear you out of the experience, in a way it's hard to justify to all but the most evangelical of the lore society. It's rarely *too* long an imposition, but it *is* an imposition, and that doesn't work well in a *DOOM*-shaped situation.

There's also, dare I risk turning what is meant to be a roundly positive review into one full of needling issues, a seemingly huge reliance on bitty little upgrades and extra powers to unlock. It's another aspect that dilutes and leaves you feeling things are a mite less pure than they were before, and while making your new shoulder-mounted cannon's ice grenades more impactful is a thing you'll probably want to do, would any of us really have missed it if there weren't yet another upgrades screen to figure out? I'd hazard a guess at: no.

I don't think I was ever going to be as enamoured with *DOOM Eternal* as I was the 2016 reboot, given how shocked the world collectively was at how great that last game was. It's impossible to live up to that combo-weight of both expectation *and* relief. What few would have predicted, though, is that one of the sequel's real areas of innovation (for this series alone, of course) would be in smart, skilful use of platforming sections. I still don't think they actually fit – it jars almost every time the aerial navigation comes to the fore – but it's fun to do them and, bar one or two grab-the-wall glitches, the sections work well. Equally few would have predicted *DOOM Eternal*'s slide into the realm of unskippable, endless-feeling sections of lore-heavy exposition – and that's an area it does start to feel like not only has id diluted the *DOOM* experience, but it's done so in a distinctly non-positive fashion. So a mixed bag? Not really, no: *DOOM Eternal* is still brilliant; relentless and genuinely adrenaline-pumping, adhering to a purity of moment-to-moment design that will always shine through, regardless of the experiments and trinkets adorning its extremities. I'd just ask, next time, please less *blah* from people while you have to stand there and listen. ⓦ

> **"You jump, you cling, you dash, you plummet"**

VERDICT

A loss of simplistic innocence doesn't stop *DOOM Eternal* from giving you a thoroughly superb time. Bar that emphasis on story, at least.

80%

^ **Death can come with relative ease in most encounters if you forget to harvest the enemies around you, which someone may have done here.**

HIGHLIGHT

It's incredible just how much *Necrosphere* manages to pull off with two buttons. The platforming here, when it's at its best, is unbelievably good. You're never struggling to remember complex combos or worried your fingers are in the wrong place, and on a mobile phone, that's some accomplishment.

Those fiery blobs are moving across the screen.

Review

How do you get across that gap without a jump button?

Necrosphere

A hardcore platformer that'll leave you dead inside

VERDICT

Necrosphere really nails its platforming, but the structure it adopts is just too mean.

56%

Necrosphere squishes a Metroidvania into a palm-sized venue, and while it has some brilliant ideas, and offers up some fiendishly difficult challenges, it relies on an overarching structure that doesn't suit the pace of its play. The game sees you sprinting around pixel art levels, controlling a recently deceased special agent. You're in the titular realm of the dead, and you need to find a portal back to the land of the living.

Unlike other mobile platformers, *Necrosphere* follows the less-is-more school of control scheme thought. You can press on either side of the screen to move in that direction, and to begin with, that's all you've got. As you progress, you'll unlock moves that let you double-tap to jump and dash short distances, as well as power-ups that let you bypass obstacles that at first seem impossible. Not that the new skills make things much easier – *Necrosphere* is one of the cruellest platformers on the App Store right now. Even when you've got everything you need to complete a section, it's far from guaranteed that you're going to nail it on your first try. Or your thousandth.
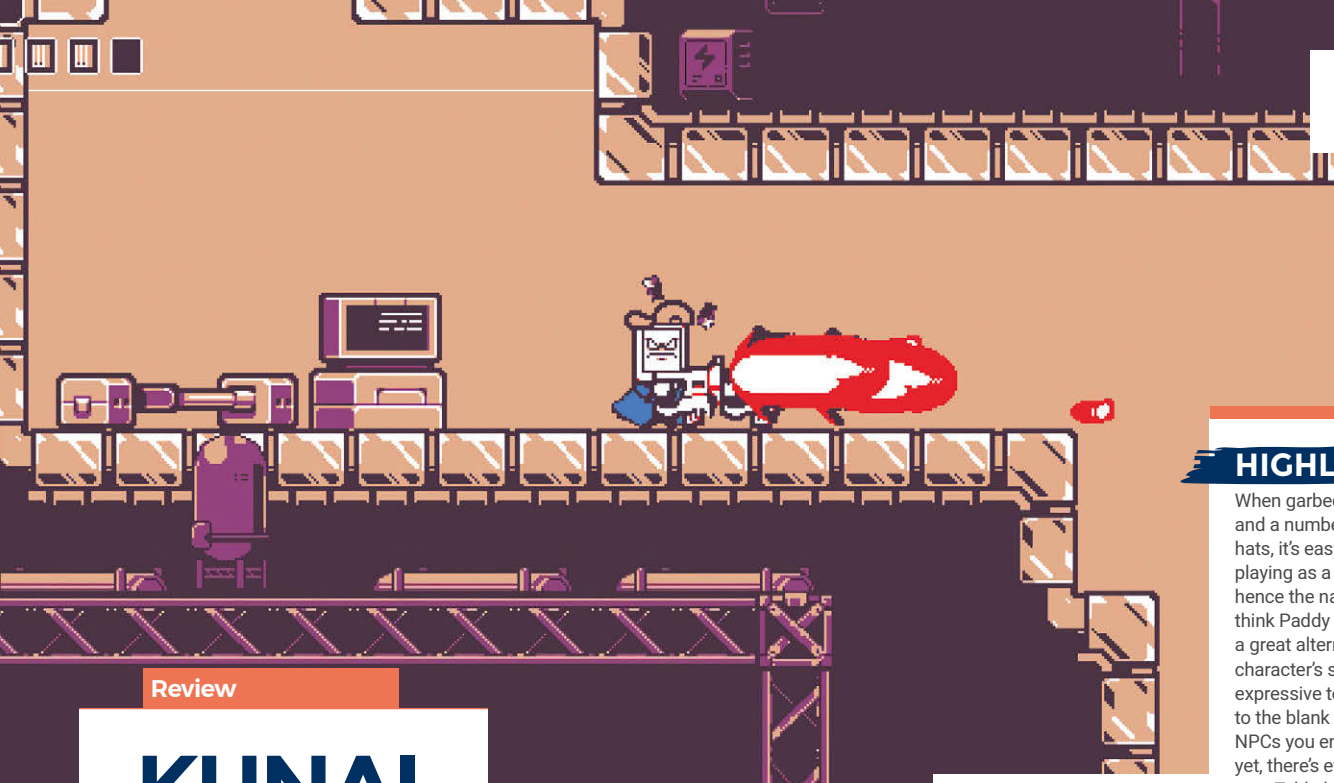
This isn't down to the simple controls – it's down to the level design. Timing is key here, and if you're not up to the challenge, you're going to be putting *Necrosphere* down pretty swiftly, even though its checkpoint system rarely drops you more than a few steps back. Bounce bubbles send you careening into spikes; walls of fire wave along the screen and tempt you to a flaming end.

Everything here is either trying to kill you or put you in a position where death is inevitable. While these core mechanics are brilliantly implemented, the scope of the game is its ultimate undoing. It's frustrating to get stuck on a section, but once you've completed it, you feel like you've moved forwards – and then the game sends you back to the same places, leaving you to get frustrated all over again.

The sharp edges of the gameplay aren't complemented by the game's structure, making the whole experience feel more like an experiment in advanced gaming annoyance than a series of challenges and successes. Even when you know where you're supposed to go, getting there is an exercise in repetition, and you're repeating sections you hoped you'd never see again.

When a single wrong turn can leave you having to traverse massive sections of the map just to get back to where you were, things can quickly get stodgy – you're not just going to feel challenged, you're going to feel beaten. The 'a-ha!' moments, where previously inaccessible areas are opened, end up feeling more like 'oh no!' moments, when you realise where you need to go to use your newly unlocked skills.

Necrosphere could have been a wonderful mobile platformer – strip away the Metroidvania trappings and the actual leaping around is slick and addictive – but the meanness of its design doesn't let up for a second. In the end, the reward you're offered for your frustrations, screams, and expletives doesn't feel like it's quite enough. ⓦ

What's the saying – don't bring a katana to a gunfight?

Review

KUNAI

Knives out

When your genre is already a portmanteau of two games, it's always going to be a challenge to find ways to avoid being derivative. Incidentally, *KUNAI*'s first weapon, the katana, liberally borrows from *Hollow Knight* with its bouncing, downward-slash attack. That said, if I hadn't relied on this bouncing tactic too much early on, I would've realised that the katana can also deflect bullets. Now that's something you don't usually see in a Metroidvania.

Developer TurtleBlaze does its best to mix things up, starting the moment you acquire the kunai themselves. These dual weapons make for invaluable traversal tools, and behave much like grappling hooks. They auto-target attach points in the environment pretty reliably, so swinging along ceilings or scaling up walls feels effortless. Mapping respective kunai to the left and right triggers makes traversal particularly satisfying, as you zip up tunnels with alternate trigger presses.

The action isn't solely centred on the kunai, though. As you progress through the post-apocalyptic world – taking in a story I found little motivation to pay attention to – you'll find plenty of other gadgets. Some, such as the shuriken, adhere closely to the ninja aesthetic; others, such as an overpowered rocket launcher, not so much. You'll recall abilities like double-jumps and dashes from other games, but there's still the occasional novelty, like firing downwards with a pair of machine guns to keep you hovering in the air.

The pixel artwork has a retro vibe, but with its own distinctive twist: the fanciful explosions and expressive animations recall the sprites of *Metal Slug*, while its mostly monochromatic palette recalls the Game Boy Color. The stern challenge is retro, too, with some decent bosses, though some set-pieces involve defeating waves of enemies, which isn't as fun. The difficulty mostly stems from the lack of health recovery items, and sometimes it can feel like you've been wandering around for an age on low health, only to get taken down by an unexpected enemy – or worse, caught by the odd insta-killing environmental trap, which boots you all the way back to the last save point.

There are flashes of ingenuity and more than a few niggles here, but *KUNAI*'s mostly a capable entry in an increasingly oversaturated genre. If you're a fan of Metroidvanias, you'll lap it up for the few hours it takes to reach the endgame, before facing a walloping in its late difficulty spike, then happily moving on to the next thing. ⓦ

> ## "There are flashes of ingenuity and a few niggles here"

Don't underestimate Tabby's default cutesy expression – they can look mean when they get violent.

HIGHLIGHT

When garbed in ninja robes and a number of cosmetic hats, it's easy to forget you're playing as a sentient tablet, hence the name Tabby (I think Paddy would've been a great alternative). The character's surprisingly expressive too, compared to the blank monitor-faced NPCs you encounter. Better yet, there's even an app that puts Tabby's interactive face on your own phone or tablet.

Info

GENRE
Metroidvania

FORMAT
Switch (tested) / PC

DEVELOPER
TurtleBlaze

PUBLISHER
The Arcade Crew

PRICE
£15.29

RELEASE
Out now

REVIEWED BY
Alan Wen

VERDICT

KUNAI might not push the Metroidvania subgenre forward, but it has a few novel touches that make it just fine.

69%

▲ The ocean has lots of beautiful sights to discover.

Info

GENRE
Narrative adventure

FORMAT
PC (tested)

DEVELOPER
Paralune LLC

PUBLISHER
Paralune LLC

PRICE
£11.39

RELEASE
Out now (PC)

REVIEWED BY
Joe Parlock

VERDICT

A short but complex character-driven experience that manages to feel relaxing and impactful at the same time.

84%

Review

Mythic Ocean

Somewhere beyond the sea, the gods are waiting for me

There's been something of a backlash against the concept of a 'wholesome' game of late. Games that are about compassion and kindness have become popular thanks to the likes of *Undertale*, *Stardew Valley*, and *Night in the Woods*, but criticism has been growing that these games feel overly saccharine or cutesy, and miss the driving conflict needed for a story. It'd be easy to lump *Mythic Ocean* in with this trend at first glance, yet doing so would mean you miss out on a stellar storytelling experience that carries more darkness than you might expect.

Mythic Ocean defies any meaningful description. Its closest cousin is probably the dating simulator, but without any romance, but there's also a hint of the walking simulator and a dash of existential horror. You form relationships with a diverse cast of mysterious aquatic gods and help them decide who will build the next world; the trouble is, they all have very different approaches to life that will impact the new universe they come to create. Along the way, you can help them become better people by resolving conflicts, or stir the pot and cause trouble for the sheer fun of it.

There's a hefty dose of exploration on top of this conversational base. Right from the first frames of the game, *Mythic Ocean* is absolutely gorgeous, feeling like a dream or a fairy tale as you fly through the water. As you explore the depths of the ocean, you'll discover other citizens and secrets that help uncover the history of this

bizarre god-choosing ritual that you've become a part of.

It isn't all chilling with a ludicrously cute otter god, though. While it certainly never strays into *Bloodborne* territory, the elements of cosmic horror at play in *Mythic Ocean* successfully help balance the sweetness and fun fishy times – there are tough decisions that will decide an entire world, and some surprisingly creepy moments help hammer home the significance of the relationships you're building.

All of this adds up to a massive number of potential endings. Not only do you have to choose who will become the new god, but the impact you had on them during your time together will also help decide if it's a world run by their whims or one they genuinely try and make prosperous. How much you helped the other gods will also decide how much conflict there is between them in the new world, and so fully exploring the cast and getting to know them all is the best way to find a happy ending.

Mythic Ocean manages to tell a story about personal growth and forging meaningful connections with others without feeling too… *Disney*. It's a game about understanding people's flaws rather than attacking them, but it doesn't shy away from the difficulties of growing and developing as a person, either. We all have things about us we need to work on, whether we happen to be an adult, child, otter god, or hyper-intelligent eel. *Mythic Ocean* explores all this expertly. ⓦ

> **"It isn't all chilling with a ludicrously cute otter god, though"**

Combat battles are at once both fabulous and frustrating, requiring the temperamental fortunes of a dice roll to get you through unscathed. But my goodness, does Marsan pull you in. His snappy summaries keep you fully immersed as you keep tapping that mouse, desperately trying to secure that elusive double-six…

Choose the Potion of Fortune
Choose the Potion of Strength
Choose the Potion of Skill

⌃ **Yeah, he's smiling now, but that's because he knows every one of these choices is going to eff you up in the next scene.**

Info

GENRE
RPG Adventure

FORMAT
PC (tested)

DEVELOPER
Branching Narrative Ltd

PUBLISHER
Branching Narrative Ltd

PRICE
£7.99

RELEASE
Out now

REVIEWED BY
Vikki Blake

Review

Deathtrap Dungeon

A D&D adventure for people with no D&D friends

That screenshot up there? That's it, my friend. That's all you'll see as you work your way through *Deathtrap Dungeon*. There are no shiny cinematics or tense QTEs. No convoluted item management or crafting. It's just you, that guy, and that immensely comfortable-looking chair of his.

The weirdest bit? You don't *need* anything else. And yes, that bit surprised me, too.

There's a temptation here to think that *Deathtrap Dungeon* has limited appeal – it's based on Ian Livingstone's *Fighting Fantasy* series, and it's incredibly faithful to this source material – but shake that off now, adventurer. Even if you've never heard of the series nor stumbled into the world of *Dungeons & Dragons* before, this is an immensely enjoyable FMV branching adventure story. You don't need oodles of experience to get to grips with the simple RPG mechanics, either; just a little luck.

Which is something I didn't have a lot of, actually. The first time I spotted something of note (a wristband, that's all it was; it's not like I was trying my luck for a gigantic sword), I had four Skills points shaved off because it was cursed. Another time I peeked into a backpack and a Black Widow spider promptly chomped off six – six – Stamina points. It's all Random Number Generation – dumb luck, in other words – and while it often feels as though the odds are stacked against you, persevere. Your progress

through the *Deathtrap Dungeon* might depend on the fickle mood of Lady Luck, but at least there are savepoints here.

The atmosphere is astonishing. Yes, I mean it. It's extraordinary. Gentle soundscapes kick in at key points throughout your adventure, and occasionally you'll be blessed with the original book's line drawings of whatever denizen stands in your way. Narrator Eddie Marsan is a bona fide storytelling wizard, and quite possibly the world's best Dungeon Master, the gentle timbre of his words a warm, familiar companion as you pick through the dungeon, his smiling eyes always teasing of secrets yet to be discovered.
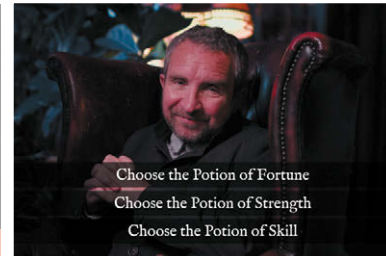
Sadly, it's not a very long experience, and while the combat sequences are wonderfully written and a blast to play, you'll sometimes hear Marsan repeat the same statements in protracted battles. It's presently only available in Early Access, so it's a little rough, but not prohibitively so. You can't stop or pause the game – a nightmare, given it's a story-dense game that requires your full concentration – and there's no option to rebalance the ambient sounds against the volume of the narrator, for instance, or activate subtitles. The UI overlays the dice rolls, too, so you can't always see the dice land in real time.

I'm being picky, though. I'd have said instinctively *Deathtrap Dungeon* was definitely not my kind of thing, but it turns out I'm entirely wrong. I love it. Maybe you will, too. ⓦ

> **"Eddie Marsan is a storytelling wizard, and possibly the world's best Dungeon Master"**

VERDICT

A brilliant, if brief, branching adventure story.

73%

Spinner

Yaga the bony, Yaga the great...

⌄ The game's painted art style is gorgeous, both in its cutscenes and during gameplay.

⌃ Between each level, the crones debate your fate as they narrate the story.

Review

Yaga

Strike it lucky

Info

GENRE
Action RPG

FORMAT
Switch (tested)
/ PC

DEVELOPER
Breadcrumbs
Interactive

PUBLISHER
Versus Evil

PRICE
£15.99

RELEASE
Out now

REVIEWED BY
Ed Nightingale

VERDICT

Despite flaws in combat, *Yaga* thrives on its unique presentation and charming storytelling.

67%

The folk tales of Eastern Europe are an unusual subject for a video game. And that makes *Yaga* a unique experience, even if it does take liberties with the source material. It tells the tale of Ivan the Blacksmith, a lowly commoner tasked with various quests by a cruel tsar who's been cursed by the witch Baba Yaga. It's presented through gorgeous hand-painted visuals, with dialogue spoken in rhyming couplets, lending it all a whimsical feel.

Ivan, though, suffers from chronic bad luck, and it's here that rogue-lite gameplay and story collide. On his journey through each procedurally generated level, Ivan receives blessings from witches and priests who provide perks, or use their magic to duplicate items. Doing so, however, gradually increases Ivan's bad luck. When that reaches its peak, his items or equipment will break at random.

What initially seems like a frustration turns out to be an interesting method of forcing you into crafting and experimenting with different weapons. Being a blacksmith, Ivan can craft new weapons from ore and enemy parts he collects, which offer varying powers to mix up the combat. It certainly makes you change your play style, but the combat never capitalises on this.

Ivan can swing his hammer, throw it Thor-style, and roll to dodge. Along the way, he'll pick up some extra items that can be used in combat and to find secrets. Boil it down, though, and you're only ever button-mashing your way through, no matter what creative enemies you may be fighting – from trolls to vampires and more otherworldly creatures.

They don't pose much of a threat, either, which means the bad luck feature – so integral to Ivan's character – proves more hassle than it's worth.

What *Yaga* does have in its favour is its character. Through each conversation, you're presented with multiple dialogue choices, from aggressive to righteous to selfish. Not only does this develop branching narratives, but it also ties into the perks system, where you choose them based on your dialogue choices. It allows you to customise Ivan your way, though choosing an option that's out of character increases your bad luck.

As your bad luck constantly increases, even during conversations, the game has a sense of urgency that means you'll race through rather than taking your time to explore – not that there's much incentive to explore in the first place. *Yaga* looks beautiful, but the characters are too small for the Switch to properly render in handheld mode, and some long loads and restart-forcing bugs don't help the experience.

Yet the bucolic folk setting is so engaging you'll return for multiple playthroughs. And as the story shifts with your choices, you'll begin to question the authenticity of the folk-tale you're telling – and its hero. ⓦ

⌄ The levels are sizeable but full of dead ends that offer little reward for exploration.
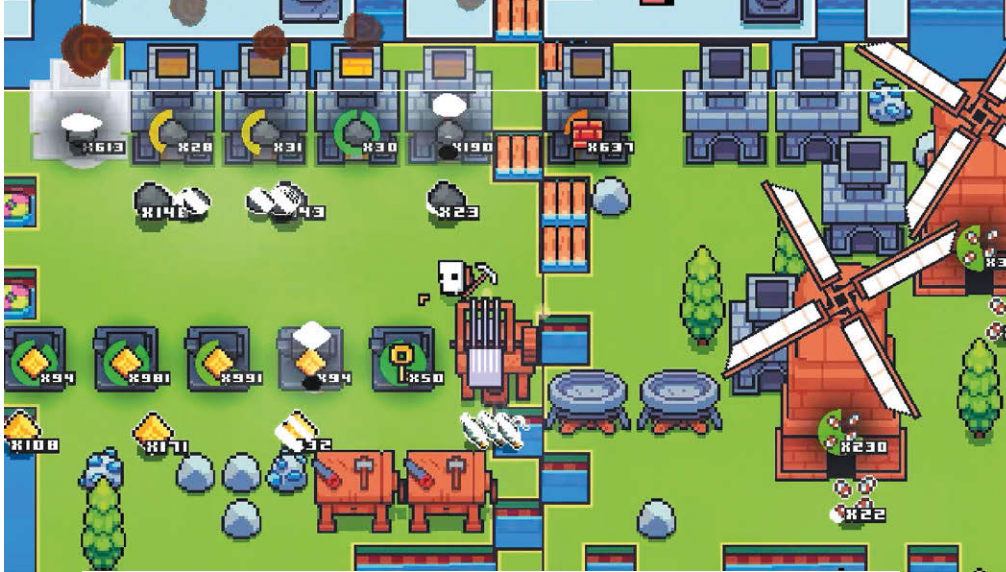
Embracing the daily grind

Sheer momentum makes Forager's crafting hugely absorbing, Ryan writes

I've grown weary of the grind. The kind of games that ask you to break blocks for hours to scrape together a handful of resources, or ask you to endlessly bash the same low-level creatures to boost your XP. The older I get, the more my spare time seems to slip through my fingers, and as a knock-on effect, I've become more keenly aware of games that think I have hours and hours to grind away. The kind of games that think players are a rat in an experiment, pressing buttons to release the occasional dopamine-triggering treat.

What a refreshing surprise, then, to stumble on *Forager*: an open-world adventure that features lots of resource gathering, crafting and, yes, grinding, but somehow doesn't feel like an endless time sink. You play a pale little humanoid, trapped and alone on a tiny 2D island. Armed with little more than a pickaxe, you idly tap away at rocks and trees dotted around the place, which in turn yield resources, which in turn can be formed into useful structures such as furnaces and forges, which in turn can be used to make tools such as shovels, shields, and hammers.

It's familiar stuff, but the difference in *Forager* is the sheer speed at which everything unfolds: it takes a handful of minutes to start crafting your first forge rather than hours; new resources are constantly spawning all over the place, so you're seldom hunting

"For now, I'm happy playing the rat in an experiment"

for the raw materials you need for too long, either. *Forager*'s pacing means there's always something new to keep you interested. I love that new parts of the island are simply there, veiled in shadow and waiting to be unlocked by crafting and spending coins. Each chunk of land-mass, once purchased, opens up the game with light puzzles to solve, chests to unlock, more resources, and – later – new biomes and dungeons to explore.
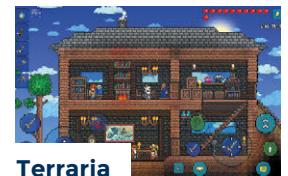
The skill tree system is bewitchingly simple, too: levelling gives you points to spend on new skills, divided along the axes of economy, industry, foraging, and magic. Spending skill points in one area will unlock more skills further down the tree, and it's easy to tell at a glance exactly what benefits a new skill will provide: unlocking the craftsmanship skill unlocks the ability to craft the hammer, among other things, while unlocking carpentry means you'll use less wood when you make new structures.

Yes, it's all still repetitive, and grinding is undoubtedly a key part of *Forager*. But at the moment, I'm finding *Forager*'s momentum absorbing in a way I didn't expect. Admittedly, I'm only a few hours into the game, and I've read that the general lack of purpose becomes more glaring as you progress. For now, though, I'm happy playing the rat in an experiment again, pressing those buttons and enjoying those sweet, sweet dopamine-triggering treats. ⓦ

Wireframe Recommends

Terraria
SWITCH, MULTI
You're spoilt for choice when it comes to dinky survival games on the Switch. *Terraria*'s almost a decade old now, but its suite of crafting and exploration is still charming.

The Escapists 2
SWITCH, MULTI
Mouldy Toof Studios and Team17 cleverly mix things up with an RPG where you're crafting stuff to escape a prison rather than, say, batter an orc. Fabulous.
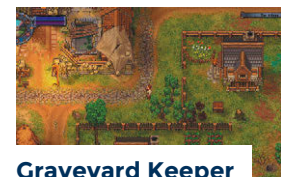
Graveyard Keeper
SWITCH, MULTI
Another crafty game with a clever twist, *Graveyard Keeper* is an indie delight: engrossing, varied, and packed to its grimy stone walls with macabre humour.

Backwards
compatible

WRITTEN BY RYAN LAMBIE

Ship building

We like making things at Wireframe Towers. We also like retro games. And putting physical memorabilia on our shelves. What could possibly unify all these pleasures? Retro game-themed model kits. Given the sheer popularity of model-making in Japan, it's unsurprising that there are all kinds of kits dedicated to video games in one form or another, from miniature consoles and arcade machines to scale replicas of ships and characters from the games themselves.

One of the finest makers of video game-themed kits is arguably PLUM – a small company based in Nagano that specialises in, among other things, recreating ships from old shoot-'em-ups. The first one I bought was their R-9A Arrow-Head – a 1/100 scale reproduction of the ship from Irem's shooter, *R-Type Final* (below and right). Measuring about 150 mm long once built, it's beautifully detailed, from the little markings and panel lines on the craft itself to the clear plastic used on the Force – that

shield-like device which can be attached to the front or rear of the ship in the game. Search around online, and you'll find some skilful makers have wired the Force, cockpit, and engines with tiny LED lights, giving them a pleasing sci-fi glow.

PLUM appear to produce their kits in short runs, which means the R-9A sold out quite a while ago; keep an eye on sites like HobbyLink Japan, though, because PLUM is doing a new run of the kit this May, priced 5,500 yen (roughly £41, depending on the exchange rate). Elsewhere, PLUM also released a similarly detailed Vic Viper kit (see above) – that's the svelte, dart-like craft from Konami's *Gradius* series – in February this year. Other manufacturers have made Vic Viper kits in the past, but their age means they're pretty scarce (and expensive) on the second-hand market; PLUM's kit, based on the version of the Vic Viper from *Gradius IV*, will set you back about £31, excluding shipping and import duties.

If those aren't obscure enough for you, then PLUM have reached even deeper

into the action game archives to unearth some pretty deep cuts: some of their past kits have included the SA-77 ship from *Silpheed*, a couple of Silver-Hawk ships from Taito's *Darius* series, and the imposing AS-5E3 mecha from Masaya's nineties cult classic, *Assault Suit Leynos* (released in some parts as *Target Earth*). Many of these are now out of print and rising in price, though, so be prepared to hunt around if you really want one.
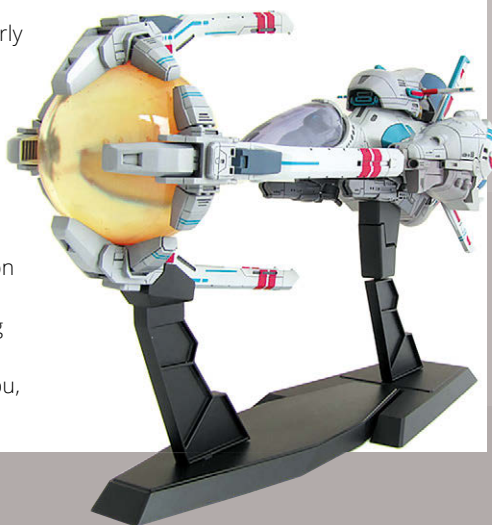
Classic Minis

If it's truly miniature hardware you're looking for, then Bandai's recently started what we're hoping will be a long series of dinky, console-related model kits. The first one's a scale replica of the original Sony PlayStation, which is so unfathomably detailed that it even reproduces the printed circuit boards inside the console and its accompanying controller. The second is a tiny Sega Saturn, which, like the PlayStation model, has a functioning lid and a cookie-sized compact disc to plonk inside. Again, these kits are ideal for casual builders, since they don't require painting – their coloured plastic means they look remarkably close to the original consoles, right down to those blue buttons on the Saturn's joypad. We'll have to wait and see what other console-related kits Bandai has planned in the Best Hit Chronicle line; for now, the PlayStation and Saturn are priced at 2,750 yen, or about £20 before other charges are added on top.

For anyone after something quintessentially Japanese, we've just about enough space to mention model manufacturer Wave's *Taiko no Tatsujin* model kit (above). It's a 1/12 scale model of Namco-Bandai's machine, which is a common sight in Japanese arcades. Like the real thing, it has a pair of huge drums on the front, but unlike the real thing, it won't take up your entire living room.

Aphex TwinBee

If you're after a more whimsical slice of retro gaming history, PLUM still has you covered. Back in 2017, it released the first of three kits based on Konami's *TwinBee* series of pastel-shaded cartoon shoot-'em-ups; the two accompanying bulbous, sentient craft, WinBee and GwinBee, came out the following year. Like many of PLUM's other kits, they're ideal for the less dedicated model-maker, since they're moulded from accurately coloured plastic and look pretty good even if you don't bother painting them. Fun fact: PLUM's an acronym for Pretty Lovely Unique Mechanism. Just thought we'd mention it.

New Wave

While you're at it, you could also check out Wave's other video game-themed kits: they also sell a few other replica arcade cabinets, including *Ultra Street Fighter*, Sega's *Hang-On* (the motorcycle-shaped machine you could sit on) and more besides. Wave even has its own stable of craft from old action games, such as the Solvalou ship from Namco's seminal *Xevious* (right), and a slightly odd-looking interpretation of the player ship from *Galaga* (above left). We haven't sampled these ourselves, so we don't know how they compare to PLUM's efforts, but they appear to require a bit more painting and all-round modelling skill from what we can tell. The best-looking Wave kit we've seen is the SV-001 tank from *Metal Slug* (above right). Spend a bit of time on one of these, and you too could have a piece of gaming history gathering dust on your shelf.

The Legend of Zelda: Ocarina of Time

You can't overstate how important its open world was

NINTENDO EAD / **1998** / **NINTENDO 64**

Some point to *Hydlide* as the first 'proper' open-world RPG. Others look back to text adventures such as *Colossal Cave Adventure* for the first chance to go where you wanted in a video game. There are those pointing to *Elite* and its universe of opportunities. *Raid on Bungeling Bay* let you fly where you wanted in pursuit of more chopper-based combat. *Ultima I: The First Age of Darkness*? It's probably that, isn't it? That's probably the first recognisable open-world game, realistically speaking. But it's not the point at hand here.

Open worlds had indeed been doing the rounds in some form or another for well over a decade by the time *The Legend of Zelda: Ocarina of Time* made itself known to the world. But before Nintendo's all-time classic hit the N64, there had been no other moment so widely shared as the reveal of Hyrule Field. This wasn't the first – not by a long shot – but *Ocarina*'s open world was arguably the most important in gaming history. It made that idea of freedom mainstream, and immediately created millions of converts to a cause still being pushed to this day: that of going where you want, when you want.

Obviously, there are still plenty of titles releasing that offer a linear experience, limiting the boundaries and often making

> **"Before Nintendo's all-time classic, there had been no other moment so widely shared as the reveal of Hyrule Field"**

for a more finely honed experience as a result. Bespoke, rather than plentiful. But there's no doubting the move towards more openness, towards more mindless exploration, towards more *freedom* in our video games, came about off the back of the collective gasp of delight we all shared with *Ocarina of Time*. Backed up by the many *Elder Scrolls* reveals – Seyda Neen in *Morrowind*, getting out of the sewer in *Oblivion*, seeing the dragon flapping off into the distance in *Skyrim* – we've become a world full of people who want to see that horizon, then set off towards it.

The mere inclusion of an open world has been used as a marketing stick with which to beat us over the head, of course, with some titles boasting hundreds of square kilometres of space for you to... do nothing in, because they're empty. It's a concept we've seen misused, basically. But if we go back to that *Ocarina* example – not only was it not the first, it certainly wasn't the biggest. Hyrule Field actually feels a bit like just that: a field. A bit of grass with some places to go in and around it. I'm trying to avoid writing it, but here we go: size doesn't matter, it's what you do with it that counts. *Ocarina of Time* proved that far better than any open world had done prior to its release, and we're still feeling the effects of that particular killer feature to this day. ⓦ

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