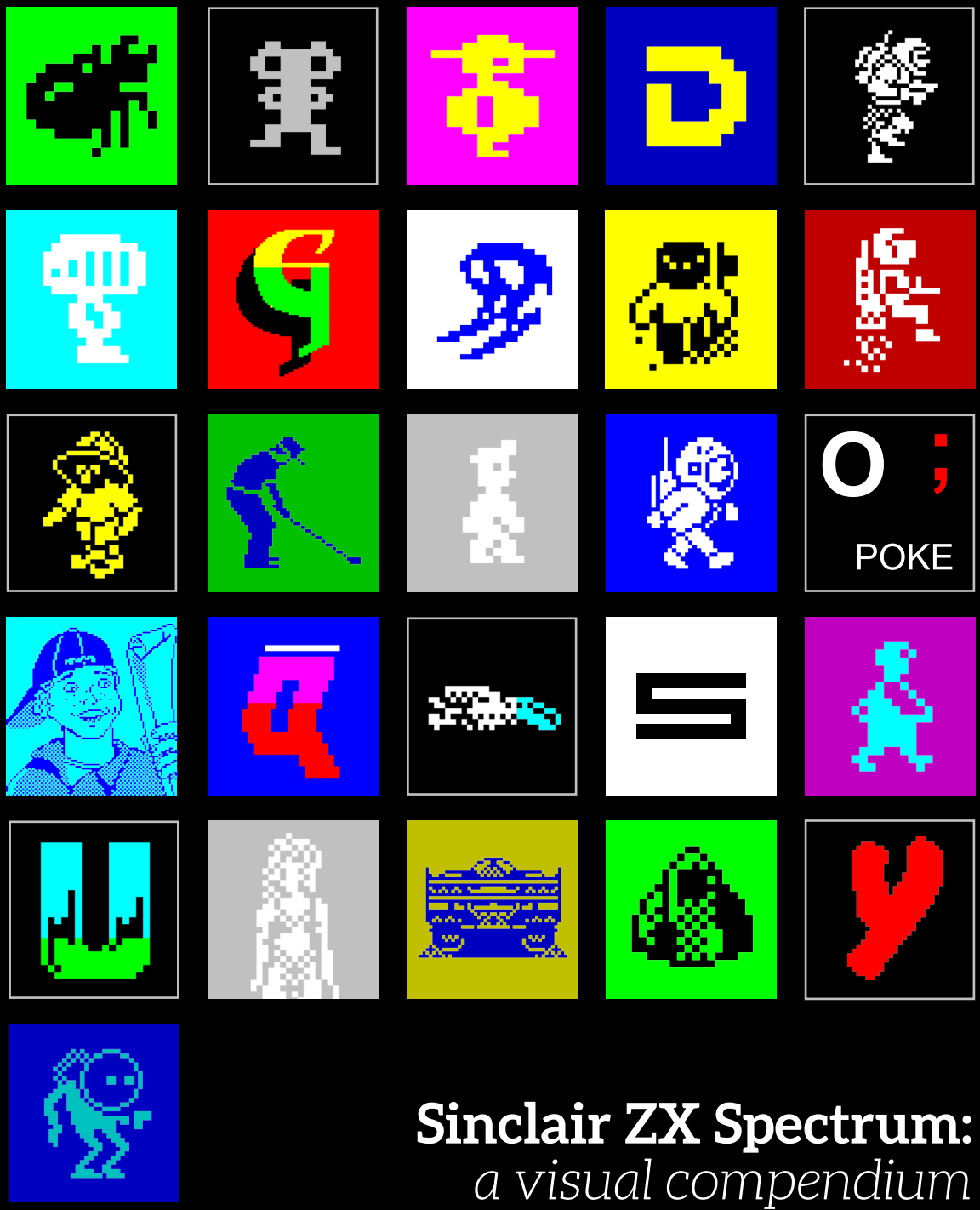
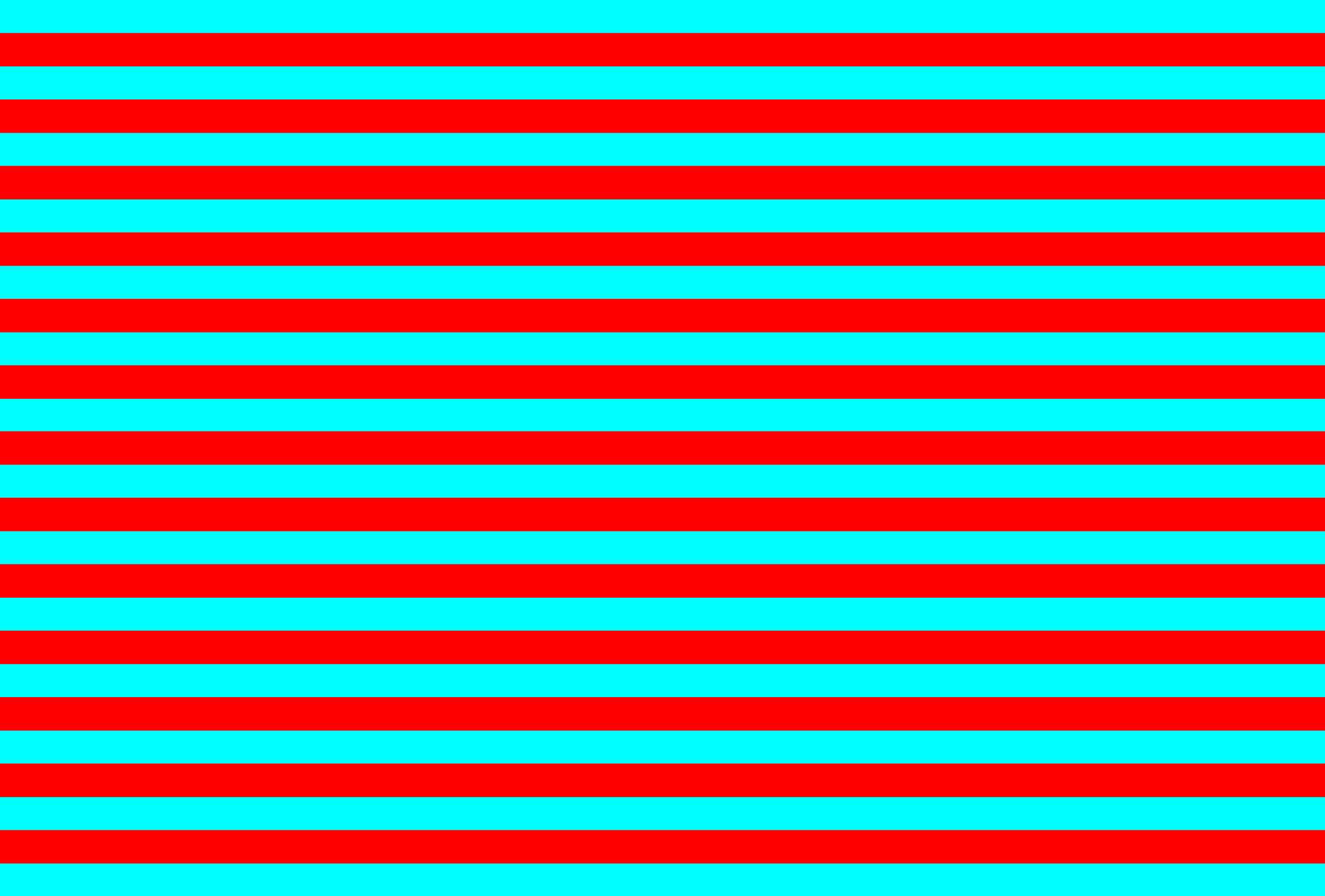


Sinclair ZX Spectrum:
a visual compendium



Sinclair ZX Spectrum: a visual compendium

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Developed by Sinclair Research Ltd., the ZX Spectrum was released on April 23rd 1982. Created by a dedicated team of hardware engineers including Richard Altwasser and Steve Vickers, the machine was encased in a sleek, minimalist housing designed by industrial designer Rick Dickinson. The iconic rainbow stripes would herald the arrival of colour graphics, while the increase in memory was a quantum-leap forward when compared to its predecessor, the ZX81.

Despite its quirky silicone rubber keyboard and primitive audio capabilities, the Spectrum's attractive price tag – less than half that of the Commodore 64 – would ensure the machine's commercial success. Over the next ten years, the ZX Spectrum 16K and 48K models were followed by numerous design and hardware evolutions including the ZX Spectrum+, ZX Spectrum 128 and ZX Spectrum +2 and +3.

The ZX Spectrum brand was eventually sold to Amstrad in 1986 and officially ceased production in 1992, but not before the machine had sold in excess of five million units and influenced a generation of programmers, artists, musicians, journalists and hardware designers. Indeed, the Spectrum's phenomenal success would later earn Clive Sinclair a knighthood for his services to British industry.

This book has been created to celebrate the visual side of the ZX Spectrum. It features page upon page of classic games, showcasing the Spectrum's inimitable graphic style and laced with memories and anecdotes from programmers, artists, reviewers and enthusiasts.

We certainly hope you enjoy this book as much as we enjoyed putting it together.

Bitmap Books, 2015

A huge thanks to all the contributors to this book

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*Quote used from "A Gremlin in the Works" by Mark Hardisty (www.agremlinintheworks.co.uk)
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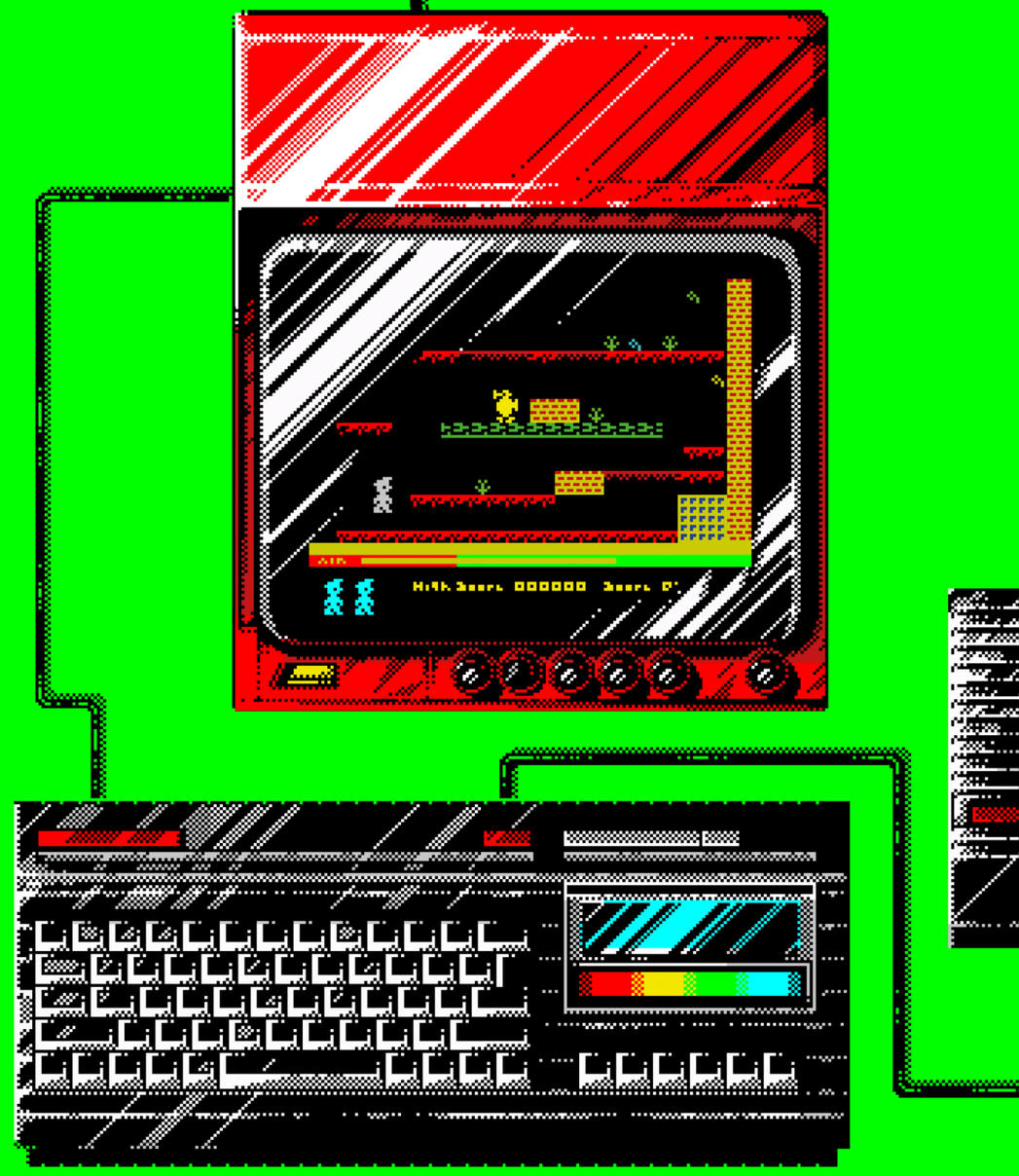
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ZX Spectrum +2 by Craig Stevenson / 2015



Foreword by Ste Pickford

I don't like pixel art.

I don't like the modern trend for indie games, pop videos and adverts aimed at 30-somethings to be drawn in a fake, chunky, fat-pixel art-style that's all spindly legs, deliberately wonky outlines and millions of shades of pastel colour. It's a weird nostalgia for a graphic style that never existed.

Pixel art came from video games that were made for primitive arcade machines and home computers where screen resolutions were low, there was rarely more than a handful of colours, and memory was measured in kilobytes if you were lucky. The artists on these games weren't making pixel art; they were making the most realistic images they could within incredibly restrictive limitations, often without any tools more sophisticated than a sheet of graph paper and some felt-tip pens.

The most limited of all the 8-bit computers had to be the ZX Spectrum. There was nowhere to hide when you drew graphics for a Spectrum game; the pixels were big and bright and in-your-face, and every single one of them had to earn its place on that tiny 256x192-pixel screen.

A 16x16-pixel sprite could take hours of careful plotting and unplotting, just to somehow suggest a left foot or a right arm on a tiny animated body. A font could take days to get right, avoiding confusion between C and G, O and D while remaining stylish and readable. A loading screen could take a week or more, with every single pixel individually plotted by hand and every attribute square agonised over.

Spectrum artists had it tough!

And yet, despite these limitations, Speccy artists produced some of the most original, inventive and iconic video game art ever made. They weren't trying to draw ironically awkward characters inhabiting artificially blocky backgrounds. They were trying to create whole worlds in a measly little chunk of 48K. And, more often than not, they succeeded.

Enjoy the beautiful images presented in this book, wallow in a bit of nostalgia for a graphic style that actually did exist, and admire some real pixel art.

Ste Pickford, graphic artist
August 2015

Ste Pickford portrait by Craig Stevenson / 2015



The Creation of a British Icon

A masterclass in minimalism, the ZX Spectrum was designed by Rick Dickinson, graduate of Newcastle Polytechnic and in-house industrial designer for Sinclair Research Ltd. To this day the ZX Spectrum remains a true icon of British design; indeed few could ever have predicted just how iconic that rubber keyboard would become.

"We had no thoughts about the impact the Spectrum was to have on the industry and people's lives. It turned out to be an extraordinary experience. The Spectrum was a neat and colourful little package with plenty of worthwhile advances over the ZX81 yet still at an amazingly affordable price. The demand was far stronger than our wildest hopes and we just couldn't make them fast enough. The high street stockists were a frenzy on Saturday mornings with people queuing up in hope of getting one before they ran out that day."

"I was amazed at the fondness people had for the Spectrum, and despite the critics there seemed to be one in every home and was so often the topic of conversation. The Spectrum triggered a massive following and aftermarket of programmers, games writers and also hardware peripherals suppliers, and the whole industry was electric with excitement and anticipation which seemed to last forever. Something I find gratifying today is how the Spectrum also launched so many careers, unlike most products which generally have little influence, die and become forgotten."

"On the drawing board and early handmade models I spent ages getting the curves just right, and then translating that into production. I sometimes felt something was missing or not quite right, so I'd go over everything again and always came up with the same answer. With Sinclair products everything was new, so there was nothing similar with which to get a reference from on how it might or should look, so it was like flying solo and in the dark."

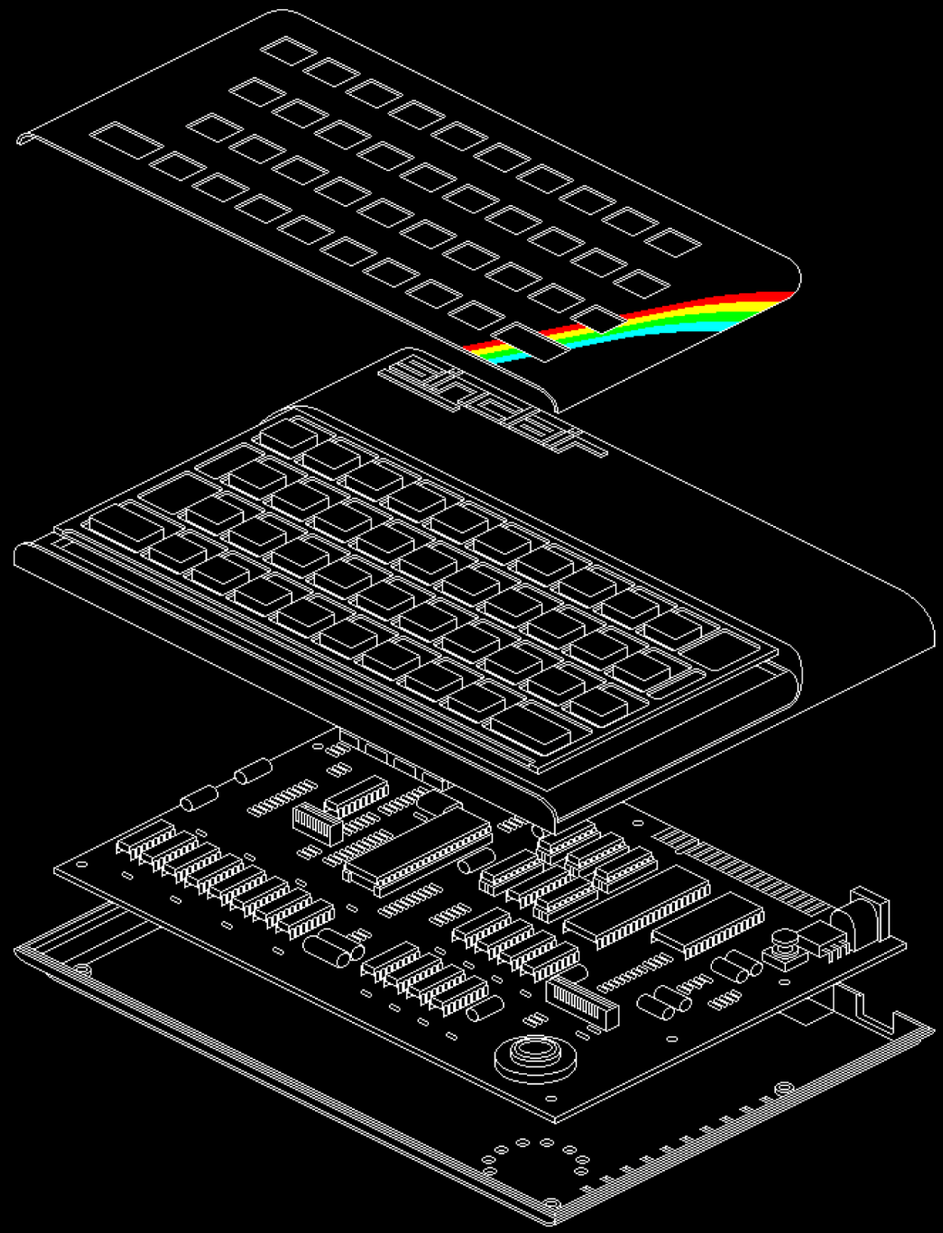
"A conventional full moving-key keyboard would have pushed the Spectrum into the next price bracket so we had to come up with a cheaper way of achieving moving keys and tactile response. It would also have made it bulkier, and less attractive and closer in appearance to everything else on the market, simply because the keys dominate such a large proportion of the product's top surface. The use of silicone rubber was clever because the material offered many features just through its make-up if shaped appropriately. It also offered a whole keyboard with just one component, except for the switching circuit."

"Clive was immersed in every aspect of the organisation, including the industrial design of his products. He took this very seriously and has an extremely keen eye for all design matters and aesthetics and how things should be, and certainly how they should not be. I would work initially with sketches but probably not show them for review, but wait until I'd made a model. A model leaves no doubts regarding interpretation of the design intent whereas a sketch can look good as a sketch but not as a finished product because a sketch can be anything, and is usually wildly inaccurate."

"Clive frequently sought me out to bring news or ideas that might improve the design, either a change to an internal part or layout that would improve the aesthetics, or a new material or manufacturing method we could utilise. He and I shared the Bauhaus aesthetic of minimalism, and still do today, which was at odds with all Japanese products at the time. We had a very good working relationship and it was a fantastic time, and I think I made the most of it and appreciated it."

Rick Dickinson, Industrial designer
August 2015

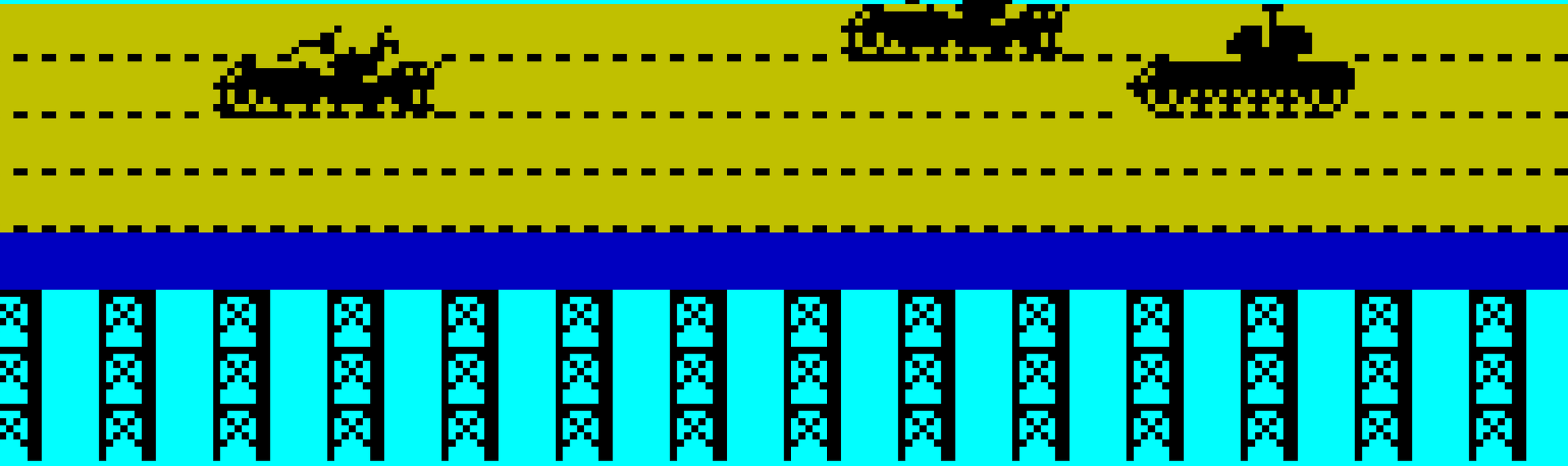
Tiers of Joy – The ZX Spectrum by Craig Stevenson / 2015





“We had no thoughts about the impact the Spectrum was to have on the industry and people’s lives. It turned out to be an extraordinary experience.”

Rick Dickinson





Released
1982

Genre
Shoot 'em up

Developer
Don Priestley

Publisher
DK'Tronics

3D Tanx

"You can tell that the enemy tanks trying to cross the bridge are rotters from the way they ruthlessly blast their partially-disabled comrades out of the way. This makes it all the more grimly satisfying watching your shells arcing through the sky to find their targets. 3D Tanx (or just Tanx, depending on whether you believe the cassette inlay or the title screen) puts you right at the heart of the action, although its rather sparse graphics were comprehensively surpassed in Don Priestly's later games, like The Trap Door and Flunky."

Jonathan Davies



The Hobbit

"You wait. Time passes. Thorin sits down and sings about gold. I'll come clean: I never completed The Hobbit. It was one of the first cassettes I slotted into my tape deck and loaded onto my Speccy, but I failed to reach the end of this iconic adventure game. That doesn't mean it had any less impact on my home computing experience: I still loved it. Despite the naive graphics and animated colour washes, The Hobbit was really all about interactive storytelling – the same kind we're still attempting today (only without the colour clash). The hideous troll eats you. You are dead."

Dean Johnson

"The Hobbit's inhabitants were created using a sequential list of actions for each character then using a randomiser to choose where in that list of actions each NPC would start. Many years later I started reading about chaos theory, specifically how complex behaviour could be explained by a few very simple rules; it was then I realised that I'd created a similar effect in The Hobbit. It's so easy to create a complicated system that never feels lifelike or absorbing, but creating something that appears simple and watching it generate complex-looking behaviour is extremely powerful. I believe that's what made The Hobbit lifelike and compelling."

Veronika Megler

Released
1982

Genre
Text adventure

Developer
Beam Software

Publisher
Melbourne House



Released
1982

Genre
Sports

Developer
Kevin Toms

Publisher
Addictive Games

Football Manager

"I always felt this was the purest version of Football Manager. I converted the ZX81 version to the Spectrum in just six weeks on the dining table of my one-bedroom flat in Milton Keynes, including the 3D match graphics. At the time I wrote the game I was still holding down a full-time day job as a computer programmer. When WHSmith ordered copies of the game for the first time, the order was worth more than my annual salary! Needless to say, I quickly switched to writing games full-time."

Kevin Toms

Sinclair User magazine

The longest running Spectrum magazine, ECC Publications' Sinclair User made its debut in the spring of 1982. Originally aimed at the more serious Spectrum enthusiast, the magazine would later shift its focus towards the burgeoning Spectrum games market. Sinclair User was sold to EMAP in 1984, merged with Crash magazine in 1992, and finally closed its doors in 1993.

Tony Dillon

"It was the people that made the magazine – and the industry in general – a very special place to be. I joined the magazine while I was still at school, so I was happier than a pig in the proverbial, getting paid to play games all day. The industry was still pretty young, and there was a real sense of being at the forefront of something incredible. Whether you were being taken through the latest title in U.S. Gold's plush Birmingham offices, or sat in a developer's bedroom in Swansea, you always felt like you were part of a very select bunch of people."

Andrew Hewson

"One day the phone rang and the chap at the other end asked if I would like to write a technical helpline column for a new magazine called Sinclair User as I had written books about the ZX80 and ZX81. I agreed, and was very impressed when a photographer came all the way from London to Oxfordshire to take a picture of me clutching my ZX81 book. For the next ten years or so I received and dutifully read about 30 letters each month from readers who wanted to know a bit more about what went on 'under the hood' of the ZX81 and ZX Spectrum."

Chris Jenkins

"I'd previously worked on various magazines for Scot Press. After the company folded, Scot Press survivors David Kelly and Graham Taylor employed me as a freelancer on Sinclair User from around 1986-1988. Although I was never on staff, I contributed lots of editorial, including reviews, letters pages and features, as well as grunt work like screen grabs and game maps. I think I invented the universally-hated nerdy character Wayne Kerr, and since I was into synthesisers and multi-tracking, I also produced a remix cover cassette of David Whittaker's Glider Rider music."

"Press launches always provided a welcome diversion; gaming was quite sexy then, so the industry throbbed with juicy PR girls and models. The office was also a hotbed of sexual tension, which probably distracted us somewhat from the work. The competition with Your Sinclair and Crash stimulated everyone to greater efforts, and there was some fantastic work done, with the amazing cover artwork of the Kamikaze Bear period helping Sinclair User stand out on the shelves. By the time I progressed to video magazines, 8-bit games magazines were in decline, but the fact they're so fondly remembered suggests how well they captured their audience."

Bill Scolding

"In April 1982 Sinclair User was born above an antique shop on Islington Green. It started life as a magazine for hobbyists, with acres of hardware adverts ('Build your own ZX-81!') and pages of program code to enter line-by-line including a computerised knitting pattern for a woolly hat. I was originally the magazine's designer, so I suppose I'm to blame for those early 'iconic' covers featuring Users of the Month that included conjurors, preachers and even morris dancers. By the time I was promoted to editor in February 1984, computer games were fast becoming the main reason for buying a Spectrum."

"At its height, Sinclair User was one of the biggest-selling computer magazines in the UK, selling more than 102,000 copies per month. All this was achieved by our small team of hacks, banging out software reviews on electric typewriters (not a wordprocessor in the house!) while the art department sized-up the galleys on grid sheets that were rushed to the typesetters by leather-clad motorbike couriers. No Photoshop or InDesign, no email or internet!"

Sinclair User magazine masthead by Craig Stevenson / 2015















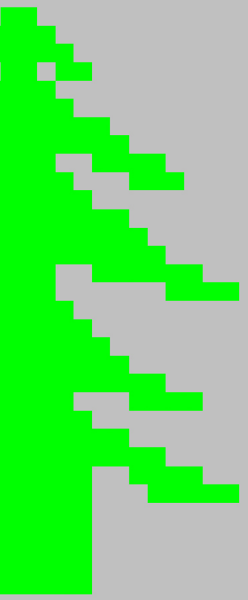




Horace Goes Skiing

"You can't design an icon by committee. Nobody could have predicted that a round blue guy with massive eyes would become synonymous with the gaming memories of a generation. Maybe it's because we love an underdog, but Horace is instantly recognisable by any Spectrum owner, and we all loved guiding him safely through his adventures. Horace Goes Skiing was the best of the bunch, marrying a Frogger clone with a simple-but-fun skiing section. Simple? Yes. Fun? Absolutely. Although to this day there are millions of people who twitch involuntarily at the memory of a magenta ambulance."

Paul Morrison





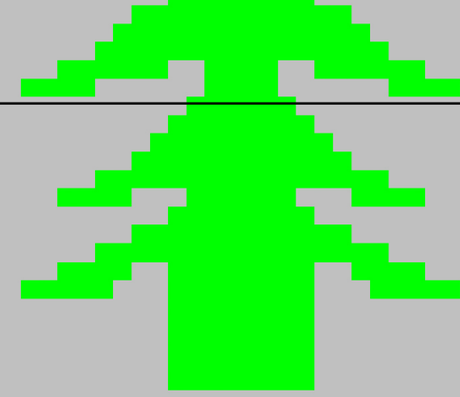


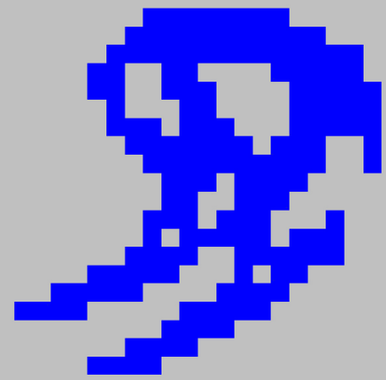
Released
1982

Genre
Action

Developer
Psion Software

Publisher
Sinclair Research









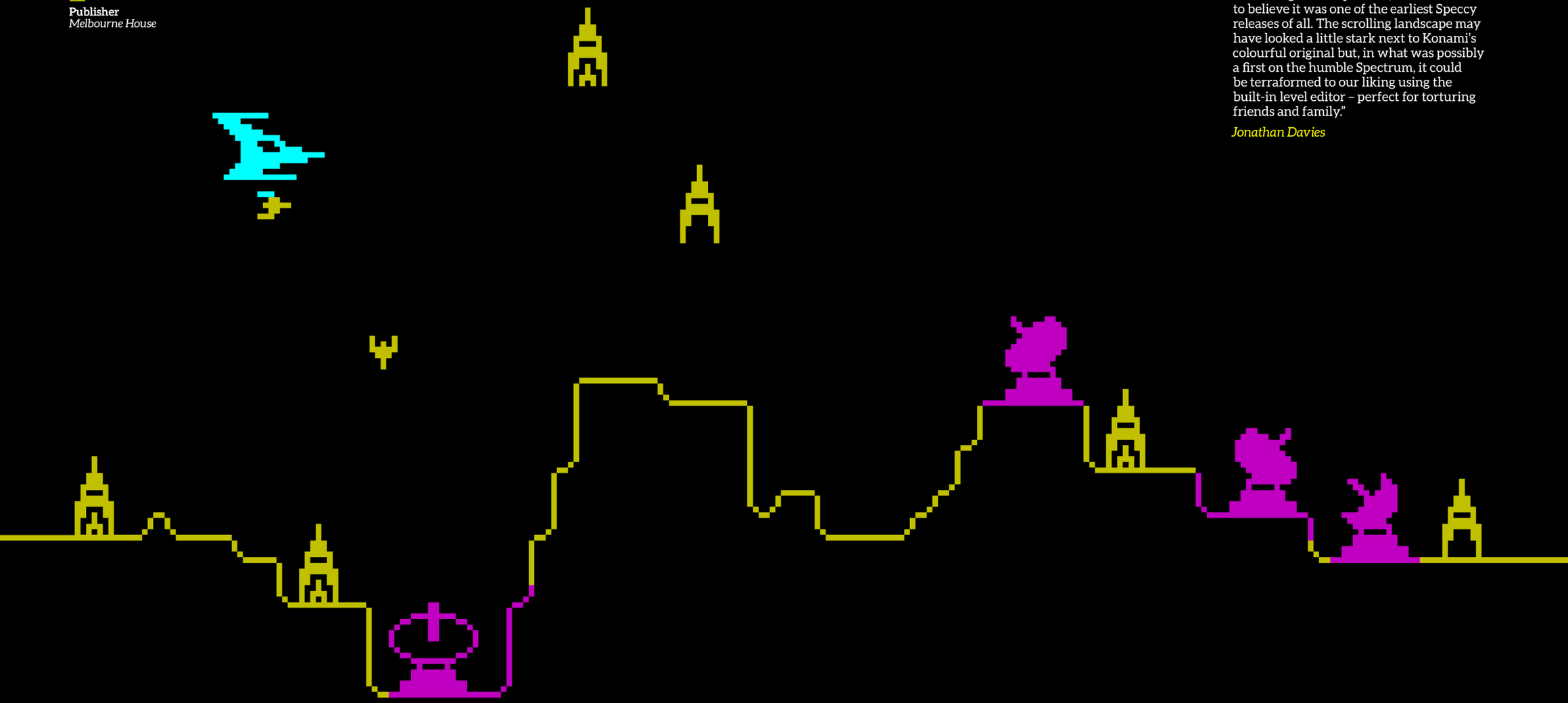


Released
1983

Genre
Shoot 'em up

Developer
Beam Software

Publisher
Melbourne House



Penetrator

"Bursting with lovely touches, from its opening firework display to its zingy sounds effects, Penetrator was arguably the Spectrum's best Scramble clone (against no shortage of competition) and it's hard to believe it was one of the earliest Speccy releases of all. The scrolling landscape may have looked a little stark next to Konami's colourful original but, in what was possibly a first on the humble Spectrum, it could be terraformed to our liking using the built-in level editor – perfect for torturing friends and family."

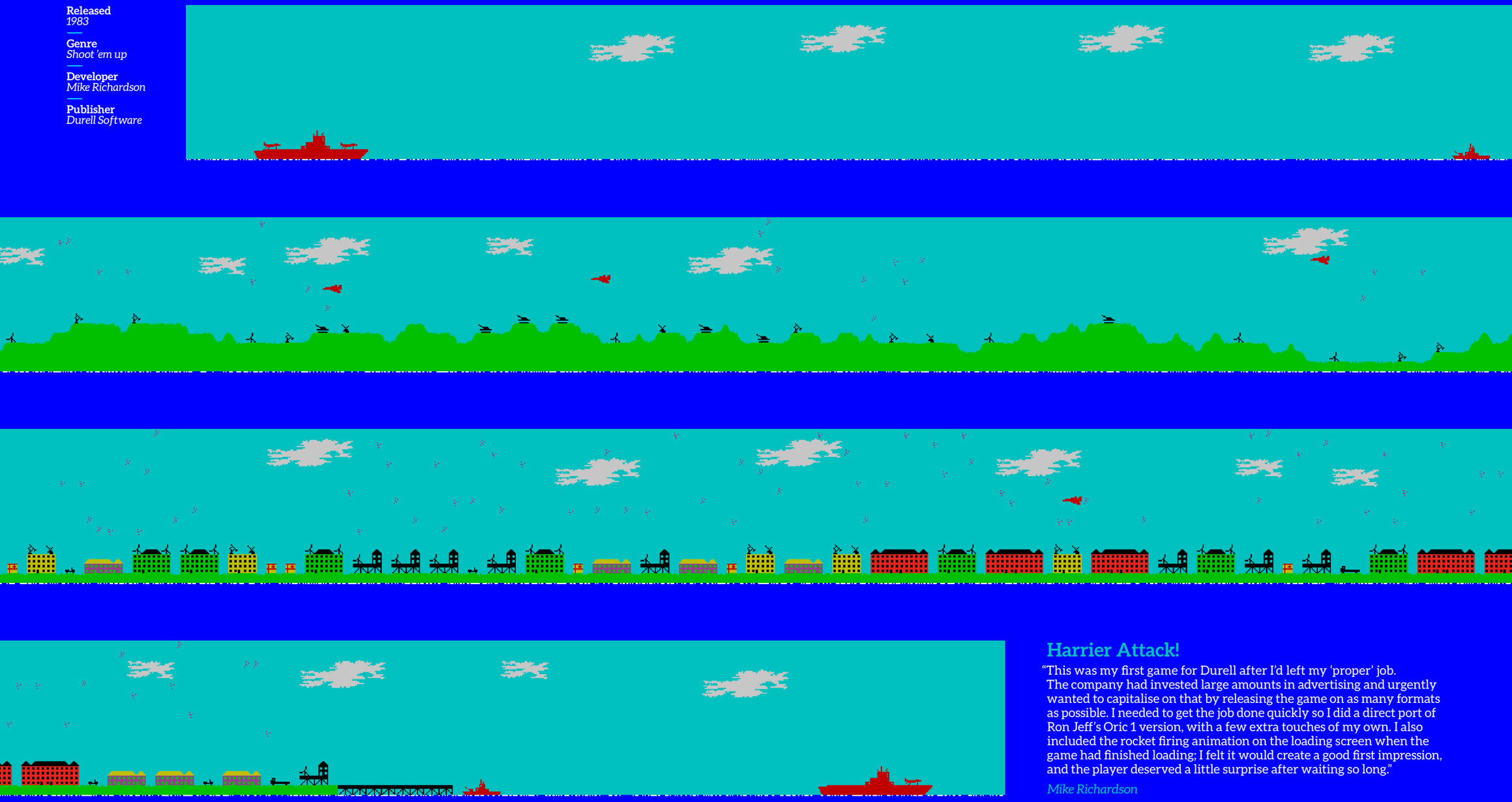
Jonathan Davies

Released
1983

Genre
Shoot 'em up

Developer
Mike Richardson

Publisher
Durell Software



Harrier Attack!

"This was my first game for Durell after I'd left my 'proper' job. The company had invested large amounts in advertising and urgently wanted to capitalise on that by releasing the game on as many formats as possible. I needed to get the job done quickly so I did a direct port of Ron Jeff's Oric 1 version, with a few extra touches of my own. I also included the rocket firing animation on the loading screen when the game had finished loading; I felt it would create a good first impression, and the player deserved a little surprise after waiting so long."

Mike Richardson

ULTIMATE PLAY THE GAME

Ultimate Play The Game was an independent UK developer and publisher based in Ashby-de-la-Zouch (from which the company Ashby Computers & Graphics derives its name). Originally established in 1982 by brothers Chris and Tim Stamper, the founding team also comprised artist Carole Ward and programmer John Lathbury.

The Stampers began their career in the arcade industry, producing numerous coin-op games for companies such as Midway, Atari and Jaleco. Learning to craft tight and engaging arcade games, they also developed a mastery of the Zilog Z80 processor, which would soon become the beating heart of the Sinclair Spectrum. As the advent of Laser Disc and other new technologies began to push up coin-op development costs, the Stampers and Lathbury astutely jumped ship, and Ultimate was born.

Armed with considerable expertise – and a state-of-the-art development system – which set them apart from the typical 1980s bedroom coder, Ultimate's games were not only playable, they were technically and graphically flawless. From 1983 until 1987, the enigmatic British powerhouse released a string of seminal classics including Jet Pac, Sabre Wulf and Knight Lore, cementing its status as undisputed master of the Spectrum and forcing the fledgling games industry to seriously up its game.

Ultimate's initial output was profuse, releasing its first five games in just six months. In the Spring of 1983, Jet Pac made its debut to considerable critical acclaim, indeed, the game would go on to sell over 300,000 copies. From the '1UP' and '2UP' score displays, to the pure, no-nonsense gameplay, the company's coin-op experience shone through; few developers could ever hope to pack such a slick game into just 16K.

Home Computing Weekly called Jet Pac "an entertaining and addictive game," while Crash thought the graphics and presentation were "of the highest standard."

The delightful interstellar gardening simulator Pssst followed, marking the debut appearance of Ultimate's Robbie the Robot character. Simple game mechanics and twee aesthetics combined to produce an absorbing arcade-style experience, which Crash called "a wonderful game with Ultimate's usual magnificent graphics." Pssst was soon followed by Tranz Am, a post-apocalyptic driving game which owed a debt of gratitude to Midway's Rally-X. Popular Computing Weekly called it "a very well-written and addictive game," further boosting Ultimate's fast-growing reputation.

"Armed with considerable expertise – and a state-of-the-art development system – which set them apart from the typical 1980s bedroom coder, Ultimate's games were not only playable, they were technically and graphically flawless"

The company's next game – and its final 16K title – was Cookie, another splendidly unpretentious arcade experience bursting with personality. Despite concerns over the game's longevity, Sinclair User praised the game's arcade-quality graphics, while Crash branded Cookie "addictive and highly recommended."

Ultimate's first 48K game was Lunar Jetman, the highly anticipated sequel to Jet Pac. Stranded on a strange moon with only a Bigtrak for company, Jetman's goal was to wipe out the alien bases, a task made ever more difficult thanks to the sparse instructions (something of an Ultimate hallmark). A frantic blend of resource management and scrolling shoot 'em up, Crash awarded the game 95%, calling it "the most maddening and excitingly frustrating game Ultimate has come up with."

Despite an already impressive legacy, Ultimate did not rest on its laurels, wrapping up 1983 with a knockout punch in the form of Atic Atac. A sprawling arcade adventure that would redefine the genre, the game featured three playable characters to choose from, each taking a different path through the game. The praise was gushing and unanimously positive: "one of the best arcade games I have seen in a long time," said Crash magazine, while C&VG called Atic Atac "the best yet from Ultimate."



Atic Atac / *1983*



Jet Pac / *1983*



Tranz Am / *1983*



Knight Lore / *1984*



Underwurlde / *1984*

“Ultimate’s initial output was profuse, releasing its first five games in just six months”

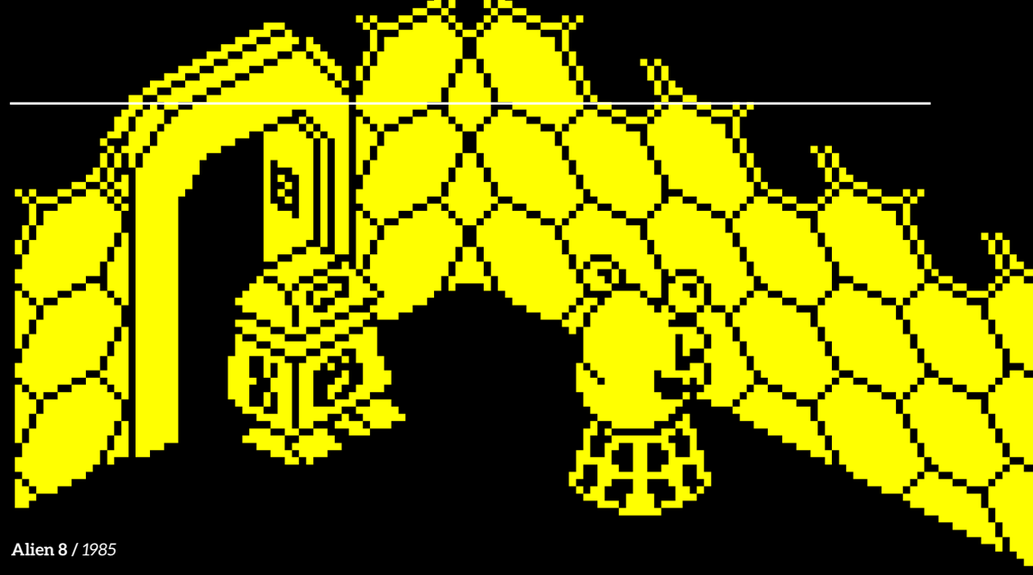
Ultimate’s next release came in the form of Sabre Wulf, the first in what would become the Sabreman series of games. A flick-screen arcade adventure at its core, Sabre Wulf’s fast-paced gameplay and epic 256-screen map set it apart from a deluge of Atic Atac clones. Despite Ultimate’s bold decision to increase the price of its games to discourage casual piracy, the game went on to sell over 350,000 copies. Personal Computer Games praised Sabre Wulf’s “incredible attention to detail,” while Crash gave Ultimate its first ‘Smash’, simply calling it “a software masterpiece”.

The company’s next two games, Underwurlde and Knight Lore, were released simultaneously at the end of 1984. The second game in the Sabreman series – and over twice the size of its predecessor – Underwurlde was an epic flick-screen affair offering three possible ways to finish the game. Slapping a ‘Smash’ on its review, Crash declared Underwurlde to be “Ultimate’s best game yet.” Popular Computing Weekly was similarly enthused, calling it “an ingeniously imaginative and well implemented game concept.”

Despite its successes thus far, few people anticipated the significance of Ultimate’s next release, Knight Lore, a truly epoch-making digital masterpiece, which would change the gaming landscape forever. Presented in isometric 3D – Ultimate’s ‘Filmation’ system – the game was a glimpse of the future and had a profound effect on gamers and developers alike. At the time, Knight Lore was described as “sheer perfection”, “a spell binding triumph”, and “technically awesome,” while Edge magazine would later dub the game as “the greatest single advance in the history of computer games.”

Naturally, any developer would have had a difficult time following in the footsteps of Knight Lore. Indeed, Ultimate’s next game, Alien 8, would be unfairly touted by many as ‘Knight Lore in space’. Despite sharing the same engine, however, Alien 8 took significant steps forward from its predecessor in terms of structure and challenge. Crash called Alien 8 “compelling and exciting to play,” awarding the game a hefty 95% and another ‘Smash’ award for Ultimate’s mantelpiece.

“Despite Ultimate’s bold decision to increase the price of its games to discourage casual piracy, Sabre Wulf went on to sell over 350,000 copies”



Alien 8 / *1985*

“Once considered elusive and mysterious, Ultimate’s core team was, in reality, incredibly dedicated and focused on its craft”

For its next two releases, Nightshade and Gunfright, Ultimate used an enhanced version of its ‘Filmation’ engine which allowed for scrolling environments and a much more fluid style of gameplay. Although some were disappointed that neither title was a pivotal gaming landmark like Knight Lore, both were slick, solid, and accomplished. Nightshade earned another Crash ‘Smash’, with Your Computer calling it “very pretty” and “technically brilliant.” Similarly, Gunfright – effectively Red Dead Redemption years ahead of its time – also scooped a ‘Smash’, while Your Computer called it “a witty and welcome change to the wizard-dungeon type of arcade adventure.”

By the time Pentagram was released in early 1986, the Spectrum scene was awash with isometric 3D. Essentially victims of their own success, expectations of Ultimate were often unreasonably and unfairly high. Although Pentagram – one of three planned sequels to Underwurlde – was complex, absorbing, and undoubtedly the most sophisticated ‘Filmation’ title to date, the game polarized opinions in the press. “Sabreman fans can’t afford to miss this one!” enthused Crash, whereas C&VG succinctly summed up their disenchantment with “Ultimate are going down.”

Thankfully, redemption came in the Summer of ’86 with the release of shoot ’em up Cyberun. Fast, furious, and technically accomplished, the game was, in many ways, a spiritual successor to Lunar Jetman and Jet Pac. Your Computer called Cyberun “tough, addictive, fast and colourful,” with Your Sinclair adding, “I’ll eat my rubber keyboard if it ain’t one of the best plays around.”

In 1987, with the Stampers focused on their new company Rare, U.S. Gold would publish Ultimate’s final Spectrum titles Martianoids and Bubbler, both of which utilised the enhanced ‘Filmation II’ engine. While both games received favourable reviews, it was evident that the elusive Ultimate magic had long since faded. In 1988, Ultimate released its Speccy swan-song, the coveted ‘Collected Works’ compilation.

Once considered elusive and mysterious, Ultimate’s core team was, in reality, incredibly dedicated and focused on its craft; continually pushing the boundaries of what a computer game could and should be, it always let their games do the talking. Outnumbered but never outgunned, the Ultimate name remains synonymous with the Spectrum to this day.

Ant Attack

"It's hard to convey how much of an impact the first glimpse of Antescher had on unsuspecting players once the tape had stopped loading some 30 years ago; their brains scrambled to understand this new and unique isometric viewpoint while they struggled to coordinate their fingers around the dozen or so keys needed to navigate the world. And yet, within the beautiful complexity of its gameplay, Ant Attack packed in so much life and detail that it made players care deeply about the characters and their plight, entrancing them long enough to discover that it didn't just look revolutionary, it was also a marvel to play."

Henrique Olifiers

"A Jiffy bag arrived in the post one morning at Quicksilva's offices in Southampton. There was no game inside, just a VHS videotape sent from Scotland by Sandy White. Our technical manager, Paul Cooper, loaded it into a VCR and watched the gameplay recorded on the tape. Realising the game's potential, Paul quickly showed it to Caroline Hayon, Rod Cousens and myself. Rod's immediate response was, 'Get on the phone and get Sandy on a plane to Southampton!'. When Sandy realised we were serious, he flew to Southampton with his girlfriend and signed on the dotted line. From Jiffy bag to signing in under 24 hours!"

Mark Eyles

Released
1983

Genre
Action

Developer
Sandy White

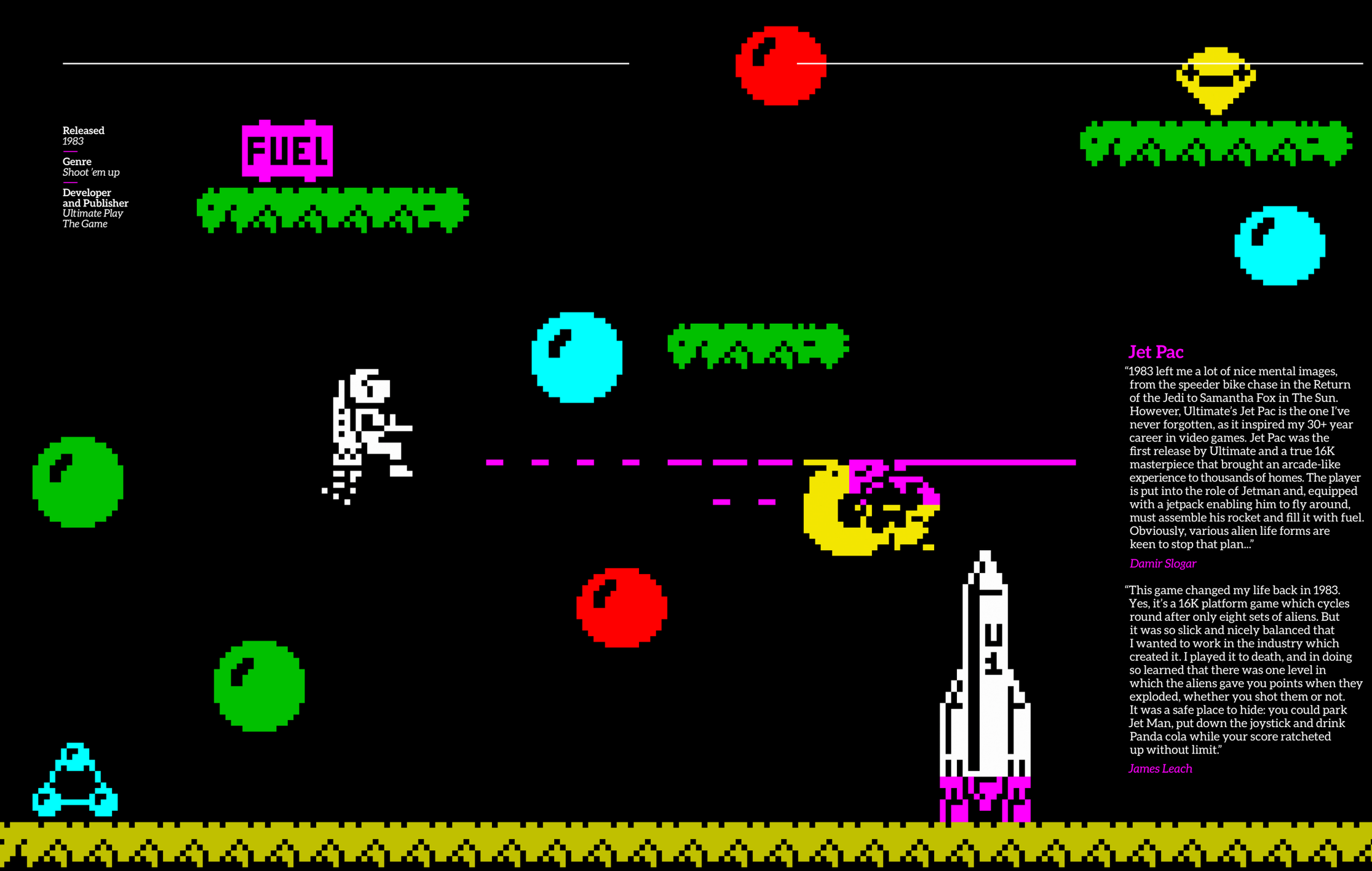
Publisher
Quicksilva



Released
1983

Genre
Shoot 'em up

Developer and Publisher
Ultimate Play The Game



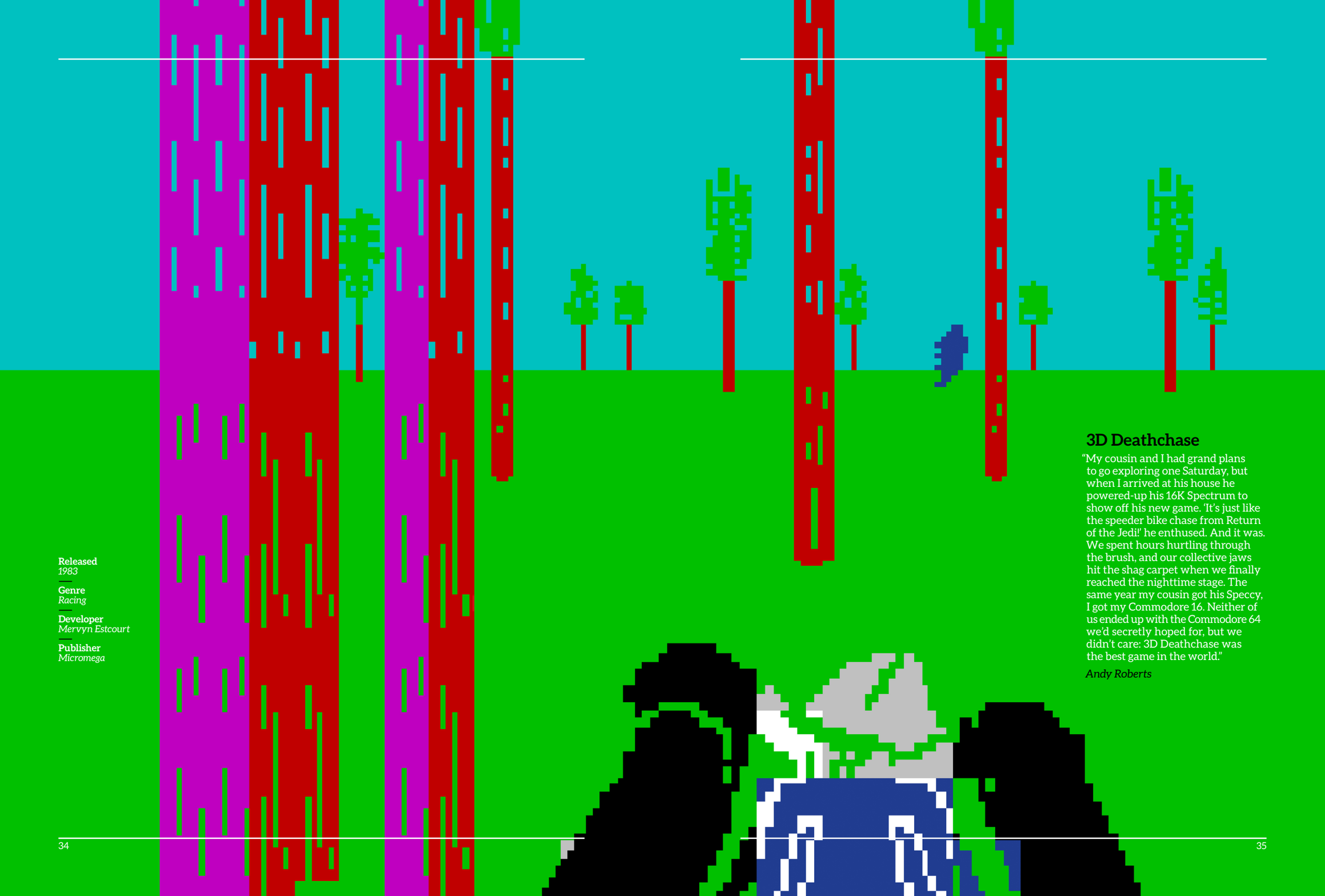
Jet Pac

"1983 left me a lot of nice mental images, from the speeder bike chase in the Return of the Jedi to Samantha Fox in The Sun. However, Ultimate's Jet Pac is the one I've never forgotten, as it inspired my 30+ year career in video games. Jet Pac was the first release by Ultimate and a true 16K masterpiece that brought an arcade-like experience to thousands of homes. The player is put into the role of Jetman and, equipped with a jetpack enabling him to fly around, must assemble his rocket and fill it with fuel. Obviously, various alien life forms are keen to stop that plan..."

Damir Slogar

"This game changed my life back in 1983. Yes, it's a 16K platform game which cycles round after only eight sets of aliens. But it was so slick and nicely balanced that I wanted to work in the industry which created it. I played it to death, and in doing so learned that there was one level in which the aliens gave you points when they exploded, whether you shot them or not. It was a safe place to hide: you could park Jet Man, put down the joystick and drink Panda cola while your score ratcheted up without limit."

James Leach



Released
1983

Genre
Racing

Developer
Mervyn Estcourt

Publisher
Micromega

3D Deathchase

"My cousin and I had grand plans to go exploring one Saturday, but when I arrived at his house he powered-up his 16K Spectrum to show off his new game. 'It's just like the speeder bike chase from Return of the Jedi!' he enthused. And it was. We spent hours hurtling through the brush, and our collective jaws hit the shag carpet when we finally reached the nighttime stage. The same year my cousin got his Speccy, I got my Commodore 16. Neither of us ended up with the Commodore 64 we'd secretly hoped for, but we didn't care: 3D Deathchase was the best game in the world."

Andy Roberts

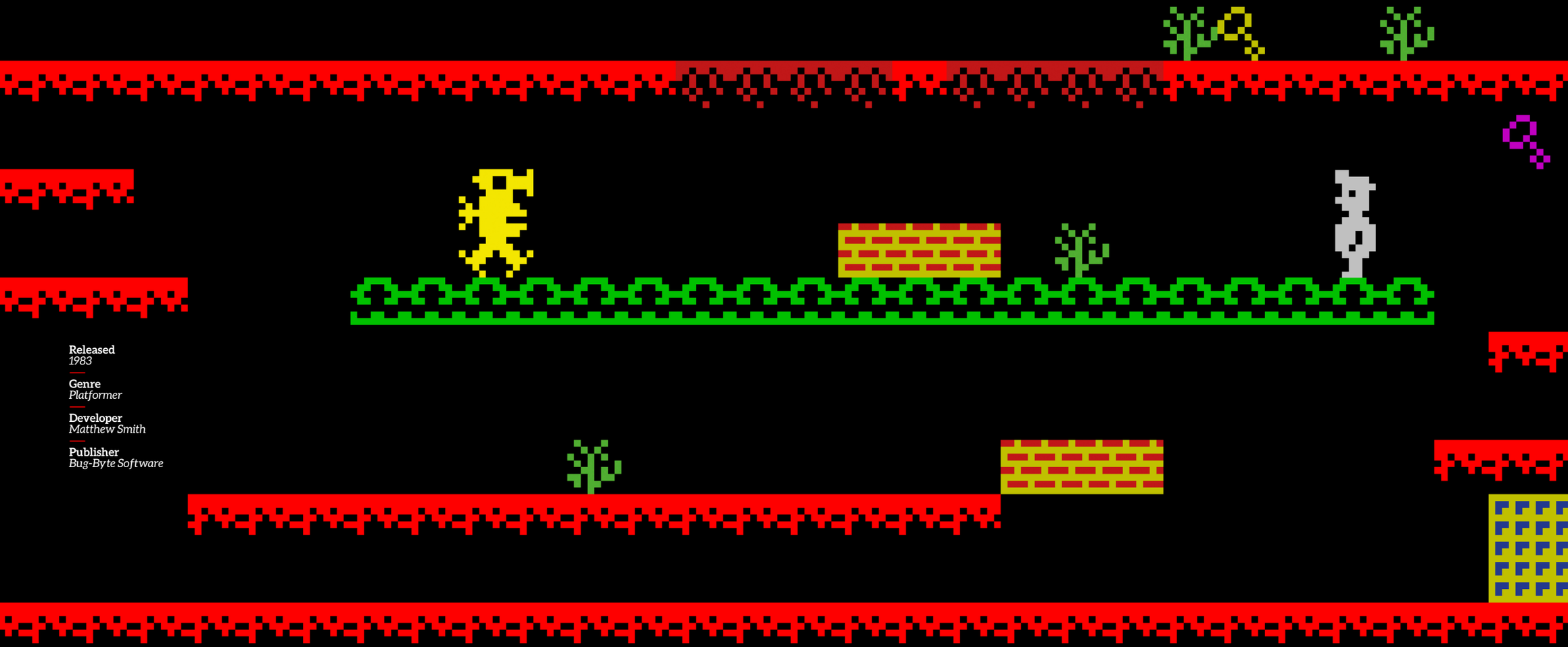
Manic Miner

"The name Manic Miner triggers instant recollections of endless joyful nights pushing those rubber buttons we all loved to hate. Interacting with the perfectly-timed digital wonderland of Matthew Smith's imagination was pure magic, keeping me mesmerised in front of the television screen for hours on end. Every detail of the game oozed quality and perfection (though admittedly you had to be a bit warped to enjoy the music). Revisiting Manic Miner some 30-odd years later, I am currently stuck at the frustratingly difficult Solar Power Generator level. With perseverance and split-second timing, victory will be mine…"

Björn Bergström

"With the proceeds of Styx I went on a skiing holiday to Italy with Patrick, the son of a family friend who had the same wacky sense of humour as me. I bought a red notebook in which I drew all the screens for Manic Miner – when I returned home, I spent eight weeks programming the game. I programmed mainly at night because my TRS-80 development machine crashed every time anyone put the kettle on. Nobody had heard of spike suppressors or uninterruptable power supplies. And Patrick? He's now a hypnotherapist in Kingston-Upon-Thames."

Matthew Smith



Released
1983

Genre
Platformer

Developer
Matthew Smith

Publisher
Bug-Byte Software

Knot in 3D

"The early months following the Spectrum's launch were a period of wild experimentation by developers eager to explore its new technology, with many strange and unique creations emerging like a sort of gaming equivalent of Those Magnificent Men in Their Flying Machines. Malcolm Evans' Knot in 3D was one of the oddest: a mind-bending, three-dimensional, first-person take on the Light Cycle bit from Tron. Its abstract graphics took a while to get one's head around, but once in the zone it became fiercely compelling and really quite scary as the knot grew ever knottier."

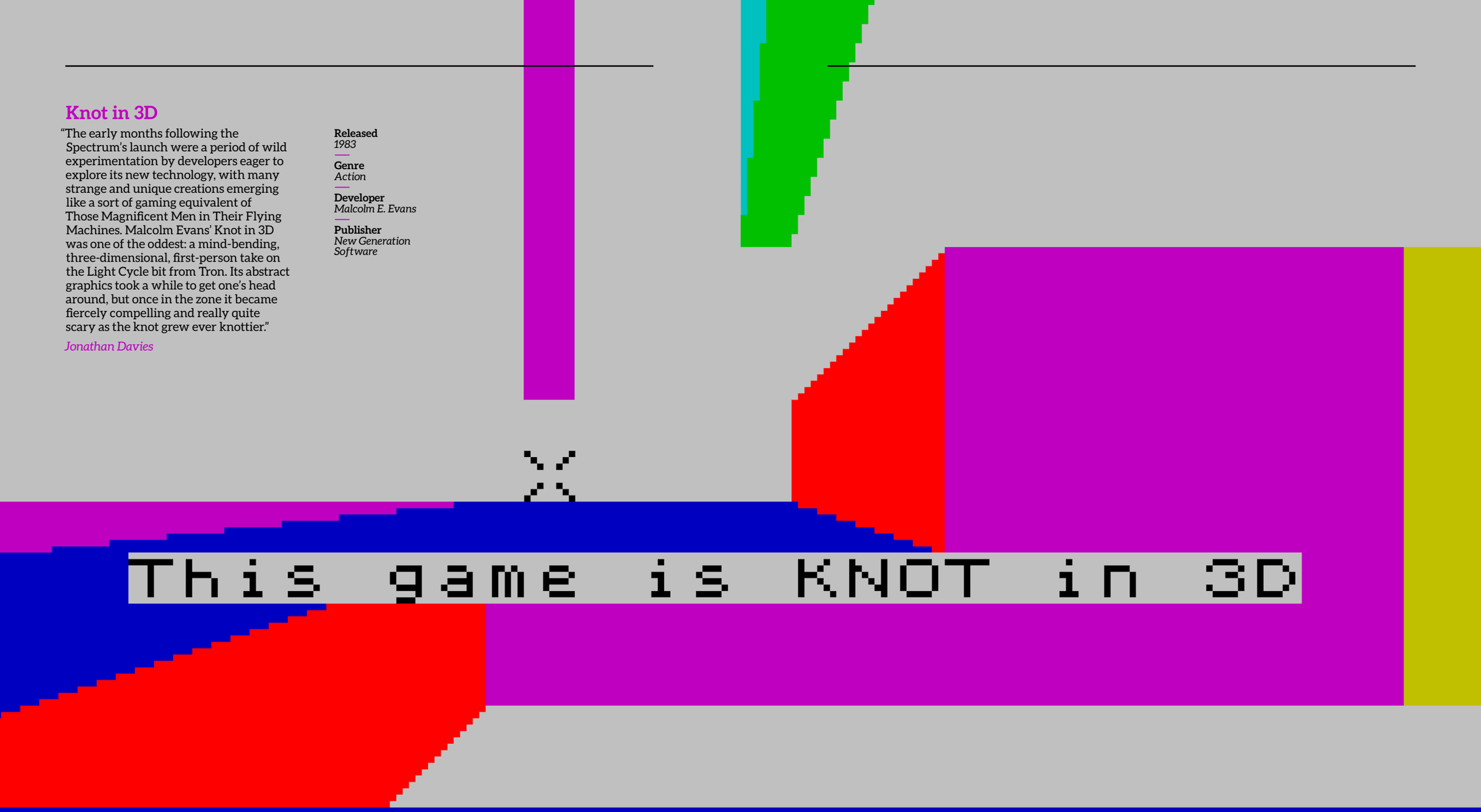
Jonathan Davies

Released
1983

Genre
Action

Developer
Malcolm E. Evans

Publisher
New Generation Software



An interview with Ray Owen

A graphic designer by trade, Ray Owen's pixel art graced some of the Spectrum's most iconic and best-loved budget games. After founding Procom Software with his father (Albert) and later teaming up with David Jones, they produced numerous classic games for Mastertronic, including Finders Keepers, Spellbound, Knight Tyme and Stormbringer.

How did you first get interested in art?
I remember copying cartoons from newspapers and magazines at a very early age. I found Andy Capp (a British comic strip created by cartoonist Reg Smithe) a fascinating character to draw because he always had his cap pulled over his eyes in every pose. I was later obsessed with drawing Spider-Man. My father was also an avid collector of art books from all over the world, so finding a source of inspiration was never difficult.

> *"My father was an avid collector of art books from all over the world, so finding a source for inspiration was never difficult"*

Did you take any formal art training or education?
I left school at 16 and decided to not go down the university route, but instead took a two-year college course in Graphic Design for print. I was always keen to get into the industry as fast as possible and gain experience, although I never enjoyed the prospect of working in a large design agency.

How did you first get interested in computers?
We had a family video rental business, and when things got tough we stocked the shop with the latest range of computers including Atari, Commodore, Amstrad, Dragon and Spectrum. We sold more Spectrums than any other computer because the majority of games were written for the 16K and 48K models.

How did your career in games get started?
It was really by accident that I started working in the games industry. Not content with selling bundles of computer games in our video shop, my father had the idea of creating his own range of games for the Spectrum. So after I had worked for two years in London doing technical drawing and graphic design, my father and I formed Procom Software. At this point it was easy to design ideas for game themes because the industry was so young and unexplored.

What was your first Spectrum game?
Bonkers, an arcade-type game produced in 1983 for the 16K ZX Spectrum. I also produced the illustration for the cassette inlay.

You worked on several games with David Jones. How did you meet, and what was the working relationship like?
David Jones was approached by a member of staff from a Tandy store in London and asked to contact my father who was looking for programmers. He bought David a useful interface for his Video Genie (a Tandy clone) from John Campbell of Campbell systems and in return David would help us with our projects on both a programming and consultation level and our relationship grew from there.

How did you end up working for Mastertronic?
David and I were approached by Mastertronic to help them produce a series of games, but from time to time this proved to be quite a challenge as the pressures of tight deadlines soon became very apparent.

What did a typical day in front of the computer look like?
A Spectrum plugged into a television and a tape recorder was about as technical as it got!

Which programs did you use to create your Spectrum art?
There was no off-the-shelf graphics software on the market at the time, so I often had to rely on David to write code that would enable me to easily integrate the graphics.

Was that the inspiration behind Dynamic Graphics / The Graphics Creator?
Yes, David created a piece of software that I could use for my own work and eventually bring to market as a stand-alone product.

Did you use any custom tools that weren't available commercially?
Everything was custom-made. I can't ever recall using any commercial graphics software because such tools weren't readily available.

What were the best and worst aspects of creating art for the Spectrum?
I never enjoyed creating the loading screen for each game. They took hours to complete because of the limitations of pixel manipulation on the Spectrum – each pixel had to be drawn with the arrow keys and filled-in with solid colours. This could only be done if there was an enclosed area, so you had to go around searching for a gap in the shapes and plug them with a pixel to avoid filling most of the image with unwanted colour!

What was your process? Did you plan on paper, or jump straight in?
For loading screens, I would create a basic outline on clear acetate, which was then taped to the TV screen. This was used as a guide for drawing each pixel using a combination of keys on the Spectrum's keyboard. Once the basic outline was created the real fun would begin: adding in the detail and filling the areas with the limited colour palette.

How did your process change throughout your career?
Graphics software eventually became more sophisticated with the advent of the Apple Mac in the late 1980s. This was coupled with the ability to scan photos and line drawings inexpensively, which could then be used as an aid to create more realistic graphics.

What was the development time for a typical game?
A timeframe of around two months from concept to finished product was usually the norm. Any longer than that and we ran the risk of another games company producing something similar.



Finders Keepers / *1985*

> *I used to buy all the magazines and flip through the pages looking for any mention of us or the games before actually sitting down to read them properly*

Did you receive much artistic direction, or did you have complete freedom?
David and I would discuss the basic storyline and, after a few brainstorming sessions, I would go away and create the graphical elements on a piecemeal basis.

When it came to Spectrum art, which aspect did you most enjoy?
Creating Magic Knight as a small 16x16 pixel animated character sprite was the most enjoyable memory. Like most simple animations, the initial design process could be quite tedious but quite pleasing when you saw the end product move around the screen.

Did you have much input in terms of game design?
It was very much all hands on deck when creating the games. I even remember helping David with the laborious task of checking some of the code for bugs the night before it was submitted to Mastertronic for previewing.

Did you pay much attention to magazine reviews?
It was very important to get a good review as critics certainly had an influence on sales. Quite often wholesalers would order those titles that had maximum exposure and positive reviews.

If you had the chance to revisit any of your games, what would you change?
I always believe that old games should never be reinvented!

Was there anyone in the industry whose work was inspirational to you?
Ocean Software, based in Manchester, was our main rival and I was always envious of the quality of their games.

What Spectrum games impressed you, or had an influence on your work?
I began to lose interest in the games industry when the market became flooded with poor titles brought to market by software houses that had huge financial backing.

Outside of games, what were your biggest artistic influences?
The Star Wars franchise, of course, and Close Encounters of the Third Kind. These films were way ahead of their time and undoubtedly helped kickstart the CGI revolution.

Of all the games you've worked on, which are you most proud of and why?
Finders Keepers, as it was the first animated adventure game that I had worked on. I was also equally proud of the star character in the game, Magic Knight. Completely by accident we created an icon that is still well known throughout the games industry to this day.

Were there any Spectrum games you worked on which never saw the light of day?
None that I can remember. In those days games rarely got cancelled.

What was your final Spectrum game? What made you leave the machine behind?
Probably Stormbringer. There was a point in time when Mastertronic wanted to bring in their own graphics guys to work on the latest ideas. I didn't have any issues with that as I wanted to move on so I could take on more print graphic design projects.

Was there a Spectrum game you would have loved to have created the graphics for?
Not really. I was quite content with supplying David with his graphic requirements. At the time, I don't think I was ambitious enough to approach other programmers.

What was your favourite game?
I was always inspired by early arcade games such as Space Invaders. Such a simple concept but truly additive.

If you had to choose one title to include in your portfolio, which would it be?
Dynamic Graphics – because I also created the artwork for the inlay card. I was a keen airbrush artist at the time and I remember setting up my own studio in my bedroom to produce the artwork. I still have the original piece that I'll get framed some day!

What comes to mind when you think back over your career on the Spectrum?
When I left college in 1980, home computers had only just started to enter the market, so when I was asked to create graphics from scratch everything was self-taught. There were no extensive instruction manuals, no CGI training courses, and no fellow artists you could call in your hour of need. Everything was a new experience and at the time it felt special that we could be considered as pioneers in the computer games industry.

Any stand-out memories from the Spectrum era?
I can always remember the fun times we had exploring the complete unknown: producing my very first animated sprite, or exhibiting at our very first computer show with only a table cloth, a wallpaper table and some free giveaways. Seeing the games in the magazines was always gratifying, too – I used to buy all the magazines and flip through the pages looking for any mention of us or the games before actually sitting down to read them properly! And of course, seeing the games on the shelves in shops.

Why do you think the Spectrum is remembered so fondly?
The Spectrum was the first of its kind, a compact, well-engineered piece of art. The rubber keys and the way you controlled the key functions was unique. A programmer could think of a game concept and start writing code straight away, more often than not on the ZX Spectrum itself. Most, if not all of the best games were written for the 16K and 48K Spectrum.

Do you still own a Spectrum?
No, but I would really like to see and hold one again. I recently bid for one on eBay but I forgot the finish time and lost out! It had the original box as well!

What are you up to these days?
I'm currently a self-employed graphic designer and have been for 30 years now. Apart from my usual job activity, I also specialise in footwear photography for a number of shoe companies.

> *The Spectrum was the first of its kind, a compact, well-engineered piece of art*



Stormbringer / *1987*

Released
1983

Genre
Action

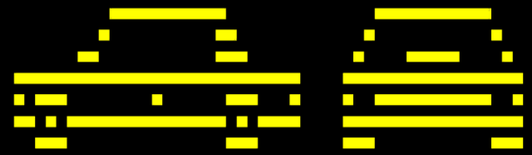
Developer and Publisher
Microsphere

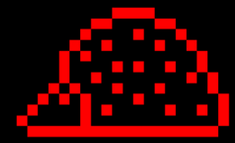


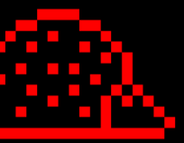
Wheelie

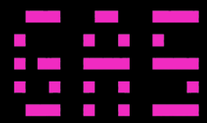
"Once Wheelie was loaded into the Speccy, I jumped on my Zedexaki 500 and entered a nightmare set inside a mysterious cave-like system filled with bouncing hedgehogs, tiny double-decker buses, random ice patches and a 'Ghost Rider' who rode carelessly through the scenery with scant regard for road safety. The simple enjoyment of thrashing a performance motorbike up and down ramps and over-revving on a jump was stellar entertainment, and Wheelie remains a unique game that created a dark, tense, and claustrophobic atmosphere. Proper edge-of-the-seat stuff."

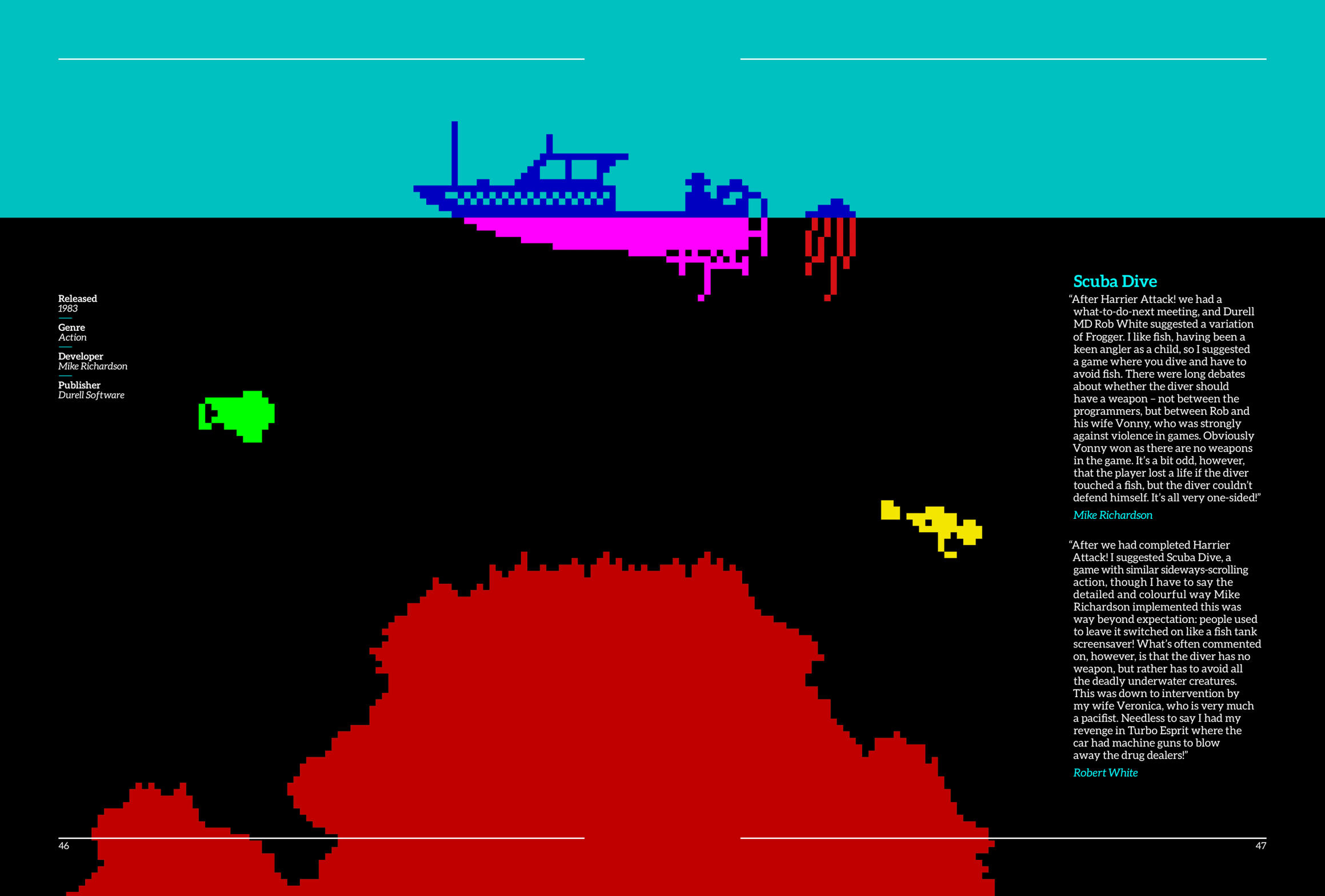
Matt Wilsher











Released
1983

Genre
Action

Developer
Mike Richardson

Publisher
Durell Software

Scuba Dive

"After Harrier Attack! we had a what-to-do-next meeting, and Durell MD Rob White suggested a variation of Frogger. I like fish, having been a keen angler as a child, so I suggested a game where you dive and have to avoid fish. There were long debates about whether the diver should have a weapon – not between the programmers, but between Rob and his wife Vonny, who was strongly against violence in games. Obviously Vonny won as there are no weapons in the game. It's a bit odd, however, that the player lost a life if the diver touched a fish, but the diver couldn't defend himself. It's all very one-sided!"

Mike Richardson

"After we had completed Harrier Attack! I suggested Scuba Dive, a game with similar sideways-scrolling action, though I have to say the detailed and colourful way Mike Richardson implemented this was way beyond expectation: people used to leave it switched on like a fish tank screensaver! What's often commented on, however, is that the diver has no weapon, but rather has to avoid all the deadly underwater creatures. This was down to intervention by my wife Veronica, who is very much a pacifist. Needless to say I had my revenge in Turbo Esprit where the car had machine guns to blow away the drug dealers!"

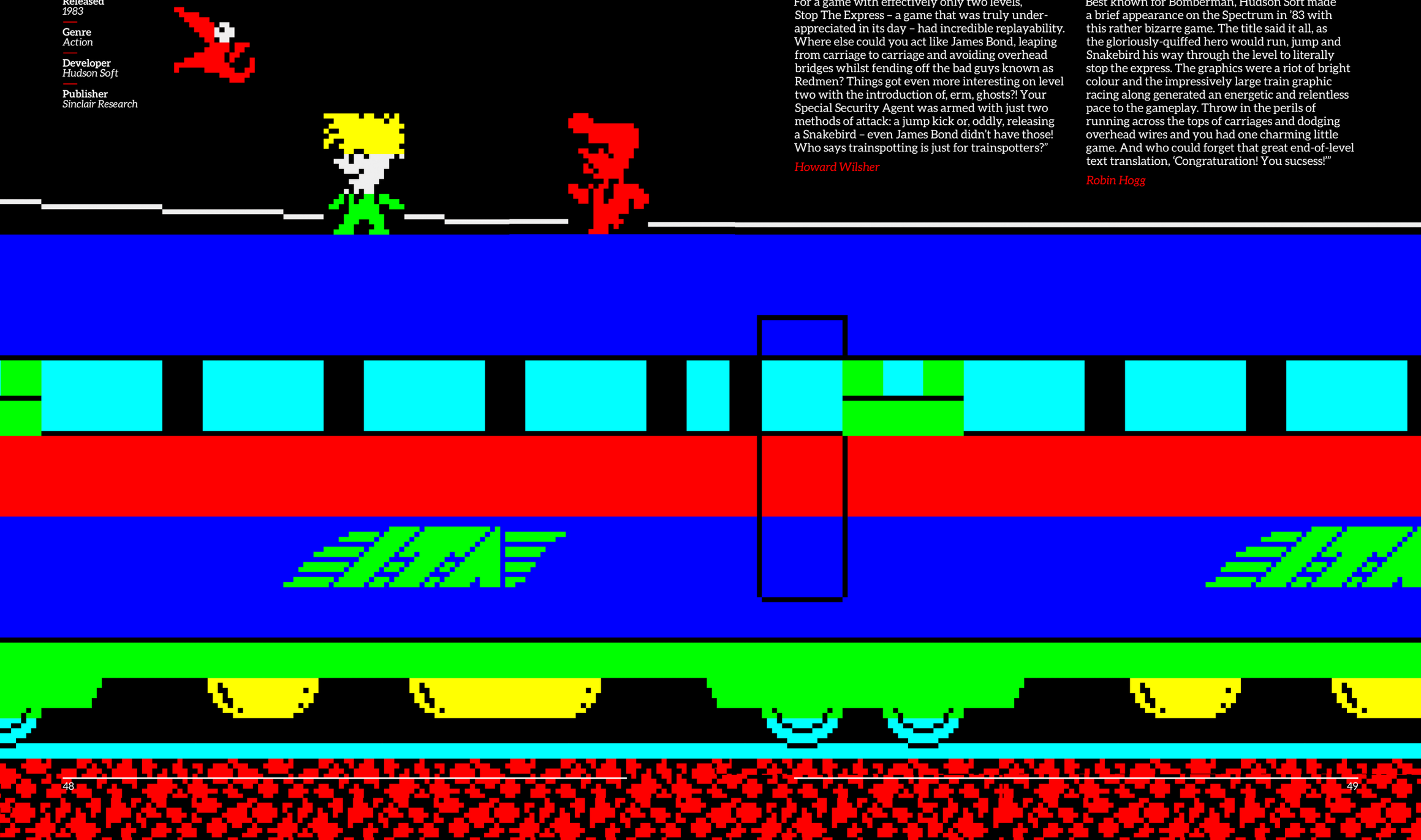
Robert White

Released
1983

Genre
Action

Developer
Hudson Soft

Publisher
Sinclair Research



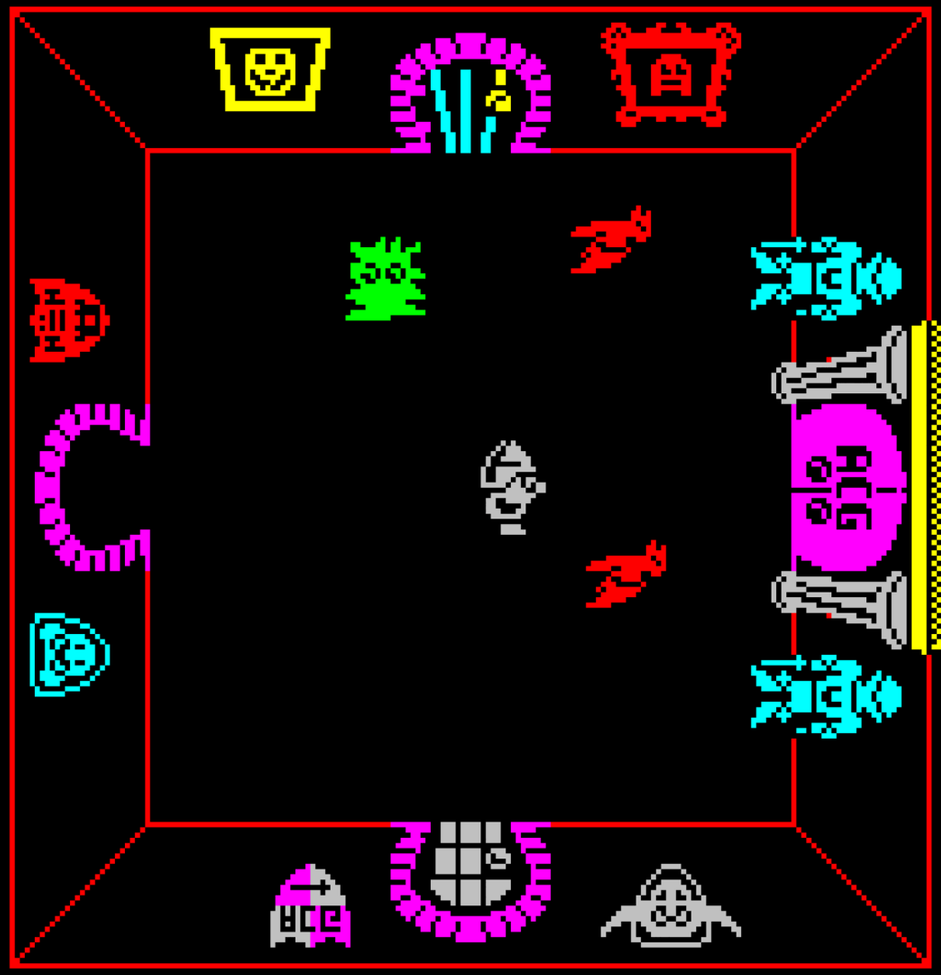
Stop The Express

"For a game with effectively only two levels, Stop The Express – a game that was truly under-appreciated in its day – had incredible replayability. Where else could you act like James Bond, leaping from carriage to carriage and avoiding overhead bridges whilst fending off the bad guys known as Redmen? Things got even more interesting on level two with the introduction of, erm, ghosts?! Your Special Security Agent was armed with just two methods of attack: a jump kick or, oddly, releasing a Snakebird – even James Bond didn't have those! Who says trainspotting is just for trainspotters?"

Howard Wilsher

"Best known for Bomberman, Hudson Soft made a brief appearance on the Spectrum in '83 with this rather bizarre game. The title said it all, as the gloriously-quiffed hero would run, jump and Snakebird his way through the level to literally stop the express. The graphics were a riot of bright colour and the impressively large train graphic racing along generated an energetic and relentless pace to the gameplay. Throw in the perils of running across the tops of carriages and dodging overhead wires and you had one charming little game. And who could forget that great end-of-level text translation, 'Congraturation! You sucsess!'"

Robin Hogg



Released
1983

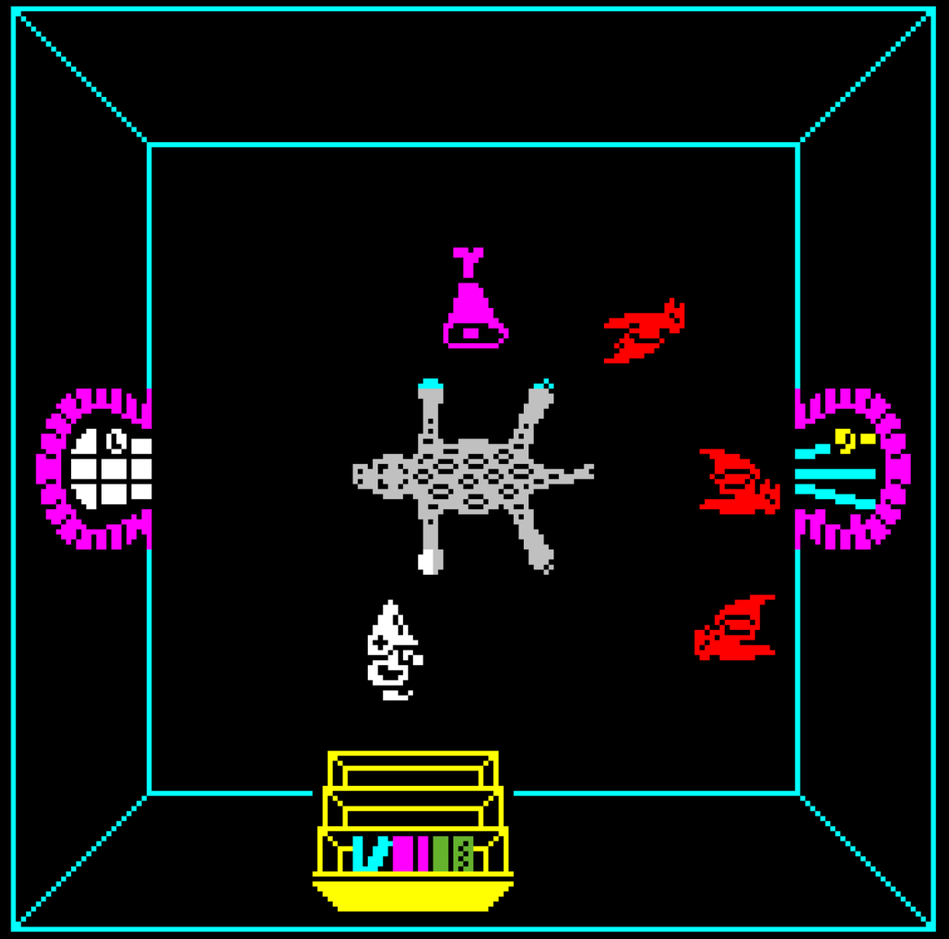
Genre
Adventure

Developer and Publisher
Ultimate Play The Game

Atic Atac

"We had and still have the most loyal fans. As soon as we released one game, we would receive orders (and even payments) for 'The Next Ultimate Game', even before any announcements had been made! It was very gratifying, but it caused our sales team all sorts of headaches not knowing which game each customer had just played and which game they wanted next! We often sent out free posters or other Ultimate merchandise as a thank you to those fans waiting in anticipation for the next release."

The Stamper Brothers



Copyright Stamper Brothers



"Nothing breeds ingenuity like restriction, and this ingenuity spawned a whole industry of very clever young people."

The Stamper Brothers

Text: copyright Stamper Brothers

Released
1984

Genre
Action

Developer
Costa Panayi

Publisher
Vortex Software

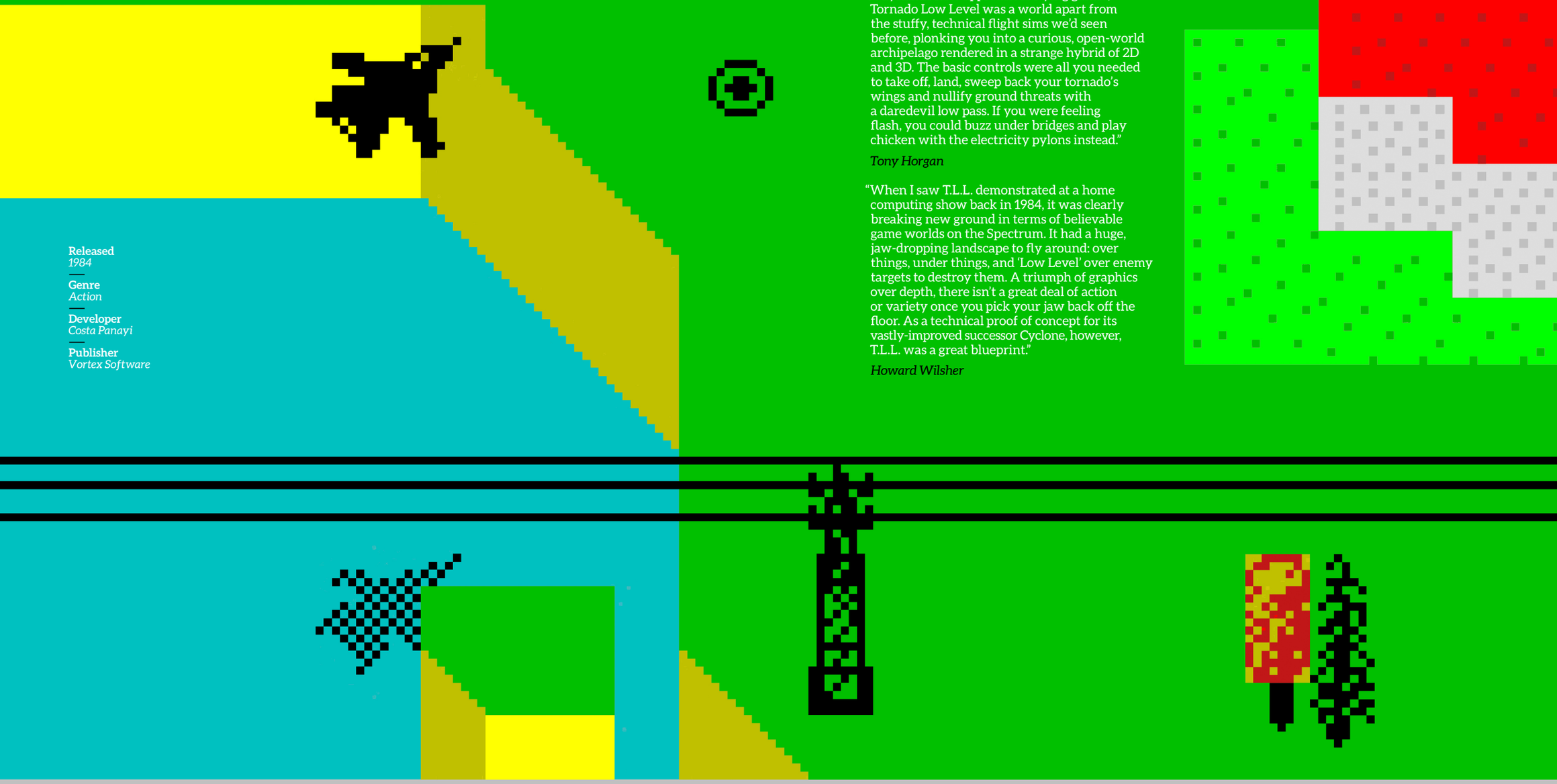
T.L.L.

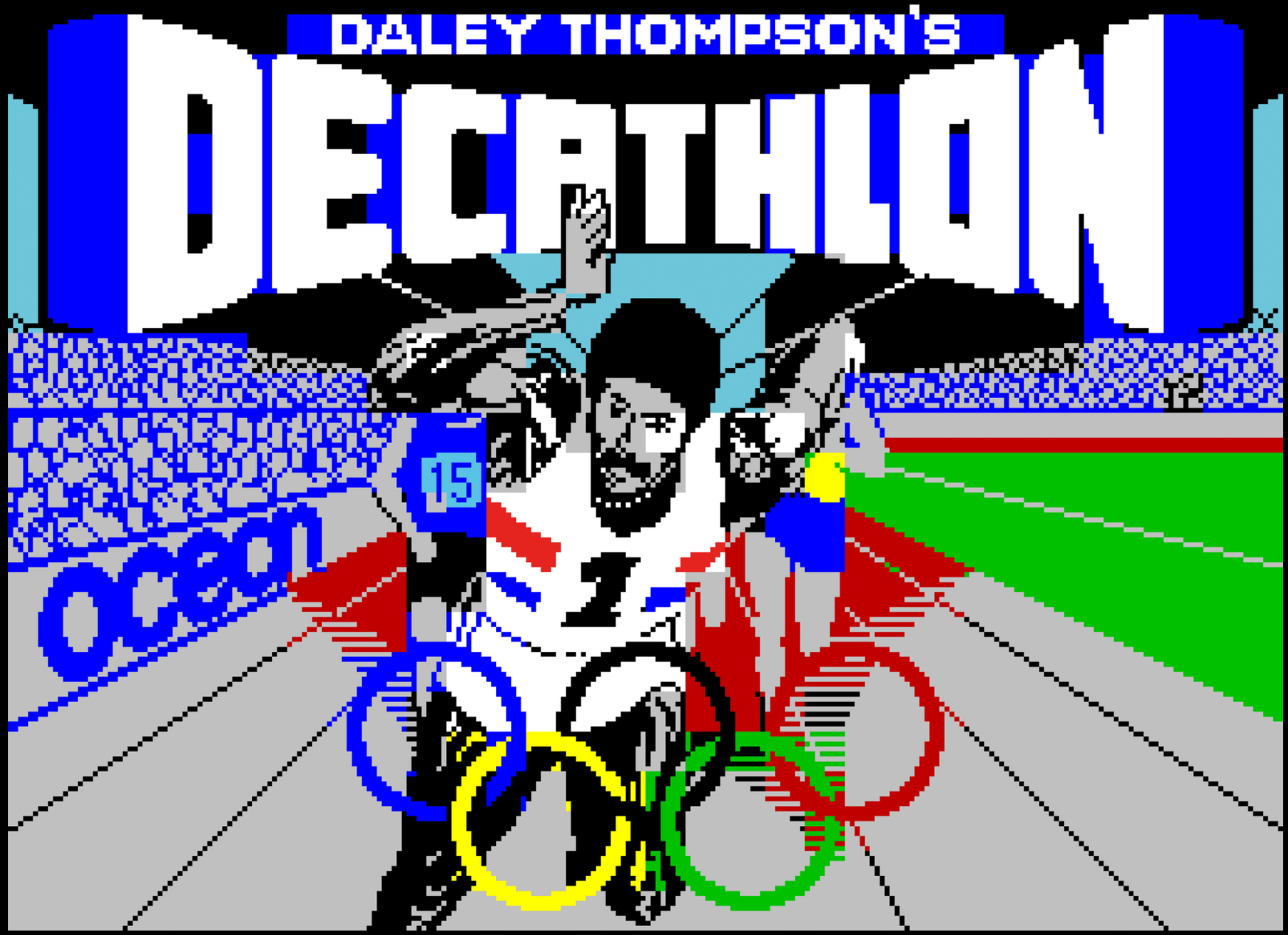
"A dynamic new approach to flying games, Tornado Low Level was a world apart from the stuffy, technical flight sims we'd seen before, plonking you into a curious, open-world archipelago rendered in a strange hybrid of 2D and 3D. The basic controls were all you needed to take off, land, sweep back your tornado's wings and nullify ground threats with a daredevil low pass. If you were feeling flash, you could buzz under bridges and play chicken with the electricity pylons instead."

Tony Horgan

"When I saw T.L.L. demonstrated at a home computing show back in 1984, it was clearly breaking new ground in terms of believable game worlds on the Spectrum. It had a huge, jaw-dropping landscape to fly around: over things, under things, and 'Low Level' over enemy targets to destroy them. A triumph of graphics over depth, there isn't a great deal of action or variety once you pick your jaw back off the floor. As a technical proof of concept for its vastly-improved successor Cyclone, however, T.L.L. was a great blueprint."

Howard Wilsher





Daley Thompson's Decathlon

"If there's one game that conjures up childhood memories of the ZX Spectrum it's this joystick-waggling classic. With music by Martin Galway and ten amazing events to compete in, it's easy to see why this won a Crash 'Smash' (and many other accolades) at the time. As well as the amazing game design, this was addictive, competitive, and the closest you could get to competing in a decathlon in your bedroom. In 1984 it also gave us something unique: a sports game. This was arcade gaming at home, and we loved it."

GamesYouLoved

Released
1984

Genre
Sports

Developer and Publisher
Ocean Software



Released
1984

Genre
Platformer

Developer
Chris Hinsley

Publisher
Mikro-Gen

Automania

"The idea for the Wally character was a team decision – not that it was a big team at that time – but we wanted to create a character that could be used in several games. To have a mechanic building cars was pretty much my idea, but it wasn't anything great by later Wally-game standards, just a very basic collect-and-return game. It was quite nice to see the cars take shape as you placed pieces on the build ramp, but I don't think anybody thought this was a major event in game design!"

Chris Hinsley

The Lords of Midnight

"I'd only ever play this late at night. It was an epic saga: clashing armies, personal quests, a massive, ever-changing map to explore. It was effectively The Lord of the Rings, and took several delicious hours to complete. As I played it, my imagination did all the work; it was simply enough to see the landscape change as the armies flooded across the plains. It fired up my fantasy-loving soul. And the genius of everywhere and everyone important having unique names lent it a whole new dimension. It felt deep and massive."

James Leach

"With its innovative graphic style and pseudo-3D environment, Lords of Midnight brought open-world adventuring to those of us who yearned to do more than type 'Go North'. While most adventure games required you to progress in a linear fashion, The Lords of Midnight was groundbreaking in that you could roam through the landscape with complete freedom. The ultimate aim was to defeat the evil witch king Doomdark, either by destroying his Ice Crown or capturing his Citadel, and although the game featured no sound, as night fell you'd swear you could hear the sounds of battle – and Doomdark's mocking laughter."

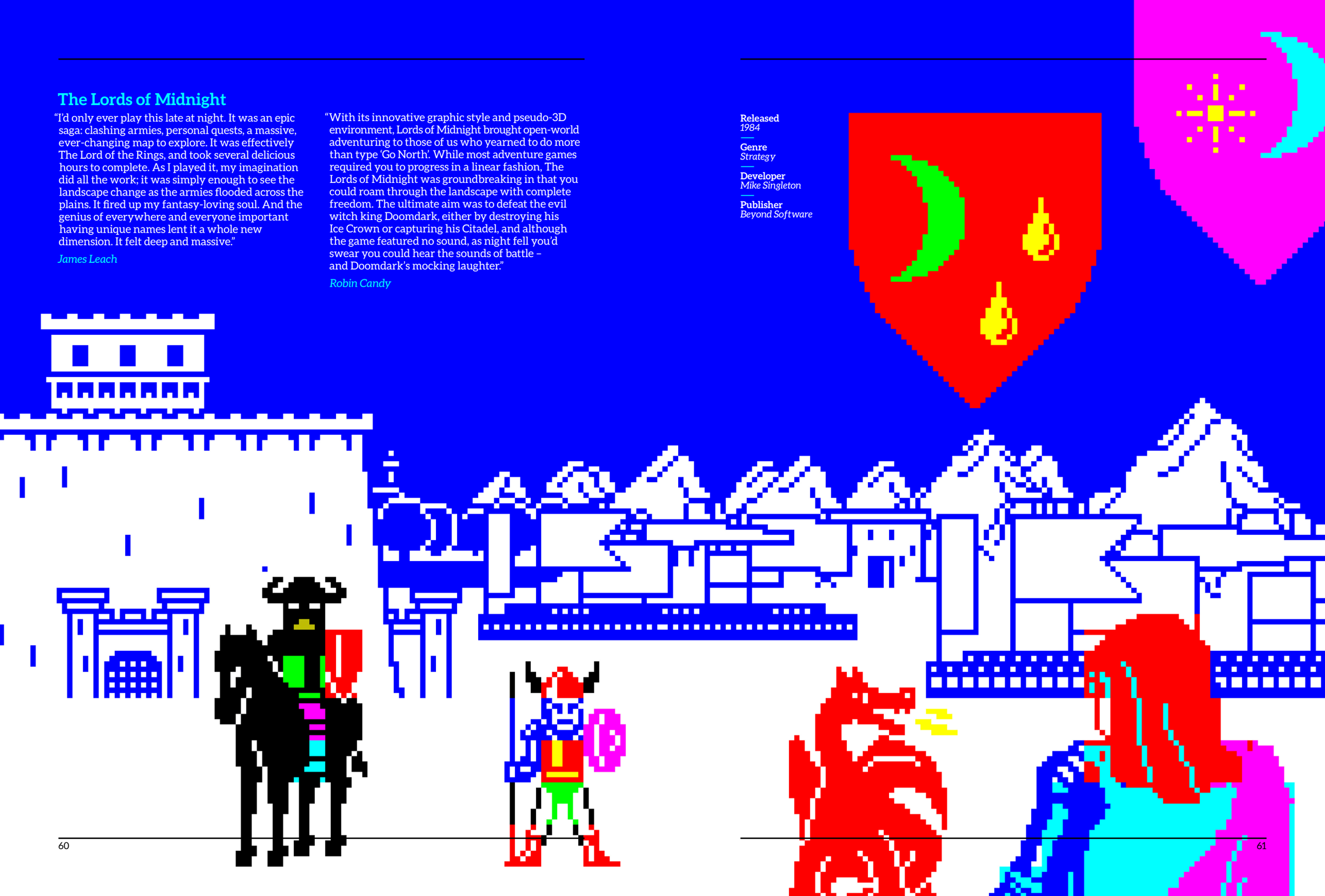
Robin Candy

Released
1984

Genre
Strategy

Developer
Mike Singleton

Publisher
Beyond Software



Sabre Wulf

"Back then, all the graphics were drawn on tracing paper. It was one of the most exciting things to imagine a character, draw it, pixelise it, decode it into hexadecimal, type it in, and finally see it animate on screen. It may have only been a few pixels, but what it represented was far more than the dots on the display: characters from another world were given a magical breath of life. If the character was an adventurer, we shared in his adventures; he may have only had a pixelated sword, but when he fought the dragon, that sword became real and we became sucked into the world."

The Stamper Brothers







Released
1984

Genre
Adventure

Developer and Publisher
Ultimate Play The Game

Copyright Stamper Brothers

Deus Ex Machina

"Deus Ex Machina was my deluded attempt to make the first ever interactive movie, played in real time to a synchronised soundtrack. I wanted it to generate real emotions in the player and, according to a few, it did. The fact it had Doctor Who and knobs in it probably didn't do any harm. The Spectrum it was written on stayed in its box until 2014, when an Australian Dutchman received it as a Kickstarter reward. I cleaned that Spectrum until it looked almost new, then signed it with a gold pen because I'm funny that way. But I couldn't bring myself to plug it in again before sending it off: some things are best left in read-only memory."

Mel Croucher



Released
1984

Genre
Simulation

Developer
Mel Croucher

Publisher
Automata UK

ZX Spectrum Memories

Between 1982 and 1992, in excess of five million ZX Spectrum machines found their way into living rooms, bedrooms, and offices around the globe, touching the lives of millions and kickstarting the careers of thousands of budding programmers, artists, and musicians who affectionately remember where it all began.

Kevin Toms

"The Spectrum was the machine that first allowed me to put the complete Football Manager experience together, combining all the strategy elements of running your team with the match action highlights. There was very little copy protection on the game, and many people have since told me they that broke into the game, looked at the code, and used it to learn how to program. Many people have also written to me and told me that the game was a huge part of their childhood, and how they used to play the game along with their friends or even their dad."

Mark R. Jones

"Getting my ZX Spectrum on my 14th birthday back in 1984: I was so excited when I saw it hiding between the sofa and armchair in a big carrier bag! I had a best mate at school who, thanks to a rich step-father, always had the newest releases. During English lessons he would flash his latest purchase at me, which had been hiding in his blazer pocket. As I only lived a short walk from school, he would let me borrow games over the dinner break so I could go home and run off a copy for myself."

Steve Wetherill

"Personally, what stands out most is the period immediately before I got my first programming job at Software Projects: still living in Yorkshire, I had several programming epiphanies during that period, hacking away late into the night, trying to master assembly language on the Spectrum, with a black and white TV and cassette player. Even the most primitive development tools we have today far eclipse what was readily available for Spectrum development back then. You really felt like a pioneer on a new horizon."

Mev Dinc

"The Speccy was such a simple and clever design: it had no hardware support for sprites or smooth scrolling and just a simple beep sound. However, this allowed us to experiment in almost limitless ways within a limited environment – this freedom was a wonderful feeling. On Last Ninja 2 I squeezed every last ounce out of the machine's 48K memory; when I was finished, I told System 3's Mark Cale that I had about three bytes left and asked him if there was anything else he would like me to add to the code!"

Steve Turner

"The Spectrum's iconic black design with its little logo flash in the corner really impressed me, and the keyboard was a vast improvement over its predecessor. It was a thrill getting the first objects moving around the screen. We used to flash the border colour to measure how long the code took to process; by seeing the speed of the processor, we could move software sprites around more efficiently and construct games with a true arcade feel."

> *"I had a best mate at school who, thanks to a rich step-father, always had the newest releases. During English lessons he would flash his latest purchase at me, which had been hiding in his blazer pocket."*
>
> *Mark R. Jones*

Rewind to Side A – ZX Spectrum Memories by Craig Stevenson / 2015



“I'll admit I was never quite as big a Speccy fan as I was the C64, but it played just as big a part in the course my life was about to take, and for that I owe the machine a huge debt of gratitude.”

Steve Jarratt

David Perry

“I remember my grandmother telling me that she was getting really old and all she would be able to leave the family was some furniture and silver teapots. She then took me aside and gave me the money I needed to buy a ZX Spectrum. By the time she eventually passed away, that Spectrum had already changed my life, enabling me to pursue a career as a game developer that has lasted over 30 years.”

Dave Bradley

“Friends would come over to mash the keys in Daley Thompson’s Decathlon until eventually I hid the game so they’d be forced to play something else: perhaps Batty or Match Point for that multiplayer thrill. I wouldn’t have got into the business I’m in without those weekends lying on the carpet staring into the flickering glare - my break in journalism came reviewing games for computer mags. Thanks, Sir Clive.”

Mike Richardson

“I have great memories of sitting in my attic studio working on the Thanatos animations, often with the Steve Hillage track Frame by Frame playing in the background. Very apt. To this day I’m still very proud of those animations, and I’m particularly fond of the big cats and the knights on horseback. I also put a little tribute to Roger Dean in the game: in the background scenery there’s an image on the horizon of the island bridge that’s part of his painting, Pathways, from Yes’ Yessongs album.”

James Leach

“The ZX Spectrum was my machine. The simple, helpful BASIC, the bright colours, the cute games. I started with a 16K model – surely that would be enough? – and naturally a year later upgraded to 48K. A Sony tape recorder did a perfectly good job of loading the games and saving the stuff I made. And I did make things, not just type them in from magazines: in the heady summer of ’84 I wrote a U-boat submarine-hunting program; it was pretty poor, the graphics were dire, but it was mine. We had a true relationship, the Spectrum and I.”

Mel Croucher

“Ah, the power, the power! When I first got involved with computerised entertainment in the ’60s, I had a few bytes to play with, and even when I started publishing commercially in 1977 I still had a 1K restriction. But when the Spectrum gave me 48 of the buggers, that was a joy unbound. And then the realisation that to double the memory, all I had to do was ask people to flip the cassette over and reload. I loved the feel of the keyboard tickling my fancy – so much more intimate than what had come before.

Tim Closs

“When I migrated from cassette-based storage to the ZX Microdrive, it was a giant leap forward for productivity. Previously, any crashes during development (which were many) meant rebooting the Spectrum, loading the assembler tool from cassette (a couple of minutes) followed by the game code itself (another couple of minutes). Towards the end of my final Spectrum game, my Microdrive tape drive broke; I had no backup of the source code, only the binary image, so the last two weeks of development involved patching the binary machine code by hand.”

Colin Jones

“I look back on the Spectrum as a really well-designed and quite unique computer. I remember being able to save up enough money to buy the 48K version, so it was reasonably attainable compared to most of the other computers around at that time. The sheer variety of games which became available was staggering too, from an industry which seemed to blossom from out of nowhere incredibly quickly.”

Andrew Hewson

“The ZX Spectrum was not the first games machine in the UK, but it was a major turning point for the UK home computer market and was instrumental in bringing gaming into the mainstream. Before it arrived, we were an embryonic industry serving a growing niche of enthusiasts. Machines like the ZX80 and the ZX81 had taken us to that point, but their wider success was still tempered by their clunky design and rudimentary performance. When the ZX Spectrum came along we reached a tipping point.”

“There it was: a black bar of eight glorious pixels. I felt like I had cracked The Matrix. It was all going to be easy from then on. It wasn’t!”

Nick Bruty

Brian Beuken

“It was always a pretty simple machine to code, just a processor with some memory and everything accessible. I liked that. When I started coding I used a tape-based compiler: it was a slow process but a lot of fun. When I got my first coding job I was introduced to the concept of development machines which blew me away. Being able to do our coding on one machine and run it on another was a massive saving in time and energy. In the last years of the Spectrum I think we were doing things that were almost unimaginable in its early days.”

Andy Craven

“When Domark’s Star Wars eventually went into production I got a call in the middle of the night saying there was a problem, so I drove to who-knows-where to try and fix the issue. A stray colour attribute right in the middle of the screen was being set to white at random intervals. I was so tired that the only way to fix it was to add a line of code to our 50Hz interrupt routine that changed the attribute to black, so the chances of seeing the white flash before it was set to black again were minimal!”

Simon Butler

“There are several things that immediately spring to mind: Melbourne Draw, The Never Ending Story, Knight Lore… and the terrible loading noises. I probably spent as many hours gaming on the Speccy as I did developing game graphics. I loved the boldness of the visuals and the funny bleeps and bloops that passed for sound effects. Maybe some patriotic part of me loved it because it was British; it was ours. That little box of wonders was the doorway to a world of magic and imagination. It was lightning in a bottle and we’ll never see its like again.”

Alberto J. González

“I used to buy ZX Spectrum magazines whenever I had the money, just to see the games. Because of that I knew about the attribute clash problem long before owning the computer, and when I eventually started doing graphics I found it more of a challenge than a problem. It was very rewarding to solve the puzzle of making the graphics colourful while maintaining the shape of the objects and hiding the attribute clash. Despite its limitations, I loved the ZX for its square pixels and decent resolution.”

Jonathan Davies

“My bedroom’s woodchip wallpaper was covered from floor to ceiling with Spectrum posters. I used to write off to publishers and blag them. Most kindly replied with a cardboard tube of goodies, but best of all were Ultimate Play The Game – not just because their distinctively mysterious artwork looked amazing above my bed, but also because they carried on sending me posters for ages afterwards, and I even got a Christmas card every year signed by Chris and Tim.”

Clive Townsend

“The original Saboteur! code was written on an actual Spectrum so everything – the source code, assembler program, and object code – had to be in memory at the same time. I’d work on a routine, compile it, then save it. To test it, I’d reset the Spectrum and load the newly compiled routine along with other necessary code, graphics and data. After testing, I’d reset the Spectrum again and re-load my source code and the assembler program. All from cassette! Nightmare!”

Tony Dillon

"Spending night after night chasing pirates in Elite. Losing weeks of my life to management games like Tracksuit Manager or adventure games like The Hobbit. We had so little to work with, but I do look back with fondness at the investment you needed to make as a player. Modern games feed everything to you on a plate. Back then, it took effort to turn a random collection of blocks into a sports car drifting through the streets of Detroit, and your investment was paid back in spades."

Steve Jarratt

"My memories of Sinclair computing begin when I borrowed a school mate's ZX81. Plugged into my faithful Ferguson portable black and white telly, I mucked about with a bit of BASIC, and maybe played one or two simple games. But when a friend from work bought a ZX Spectrum, that was to be a pivotal point in my life. We sat in his parents' living room playing Psion's Flight Simulation, and – despite the fact that it was little more than a tilting horizon – I was blown away. That was the point I realised, this is it: computers were going be massive and computer gaming would become a lifelong passion."

Andrew Ellard

"Spectrum games were tough: the lack of saves, the limited lives. Charlie and the Chocolate Factory had a unique way of handling this problem: side one of the tape had four mini-games – complete all four to win a code. Side two was the real game, and through repetition and countless lost lives, I eventually reached a final door. To enter, just type in the code… which I never got – the first half of the game was just too difficult. But I got to play *the whole game* thanks to a rare, generous quirk that still makes me choke on my everlasting gobstopper."

Iain Lee

"I never owned a Spectrum. I was saddled with a Dragon 32 and then a BBC Micro because it was 'educational'. I did get to play a lot of ZX games though because my mate Michael Hall had one and he lived just up the road. There was something magical about this unbelievably thin box. It just seemed incredible that something that weighed little more than a Frisbee, could produce such wonders: Horace Goes Skiing, Ghostbusters, Airwolf – these were just marvels, and you played them on your telly! I will always have a very soft spot in my heart for the ZX Spectrum."

Jas Austin

"I was about to buy Automata's game Can of Worms via mail order when I noticed their offices were just down the road from me in Portsmouth. I figured it would be easier to simply pop along, so I rocked up at their offices in the high street. The place had a great atmosphere, and I remember meeting Mel Croucher, Christian Penfold and Carol Ann Wright. I kept in touch, and they eventually released my first game, Bunny, in 1983. It's pretty safe to say without Mel and the gang it's doubtful I'd have gotten into gaming and had the honour of writing games for Sir Clive's ground-breaking machine."

Phil South

"The loading times. I frequently load games into Spectrum emulators in real time to experience the wait. (Crazy? Me? Why I banana that trouser press, how dare you imply such piano.) Someone asked me the other day why I do that, and I told them: instant gratification is the death of commitment. Waiting for the game to load is a crucial and desperately-missing part of the experience. These days we have such short attention spans; instant loading means an instant discarding of things which don't deliver instantly."

"The screech that accompanied loading a game became a soundtrack to summer evenings, echoing round our home like the shrill chatter of wartime radio static."

Dave Bradley

Jason Falcus

"In the summer of 1988, while on holiday in the UK with my brother and a friend, I managed to get a meeting with Codemasters at their Southam HQ. We slept in the car overnight in a car park in Daventry, and then I went in to meet with David Darling the next day. The outcome was extremely positive: I left with a PC running a new cross-platform development kit (enabling us to develop on Spectrum and Amstrad simultaneously), and a contract for our studio, Optimus Software, to make four Spectrum and Amstrad games for Codemasters."

Robert White

"I formed Durell in November 1983 with £100 share capital split 50/50 with my wife, and used the income from some contract work to keep us solvent while Mike Richardson and Ron Jeffs finished Harrier Attack!. I am categorically not a gambler, but was so confident that I remember booking £25,000 worth of advertising. Who knows what I'd have done if the game hadn't sold, but it went like hot cakes and Durell was £40,000 in profit by the end of that first year."

Chris Hinsley

"I managed to convince my mum to buy me a ZX81 when it first came out, and my first goal was to recreate the arcade games I'd been spending my dinner money on. I did everything by writing out codes on paper and then typing them in raw using my first hand-coded assembler. Then I moved on to the ZX Spectrum and coded several games including Laserwarp, Paradroid, and Missile Command. I bumped into a chap called Paul Denial who was a sales rep for Mikro-Gen – he offered me fame and fortune and took my games on."

Keith Warrington

"I wanted Skool Daze to look as if you were looking up at the top floor, straight-on at the middle floor, and down at the ground floor. I limited my ambitions slightly and tried to incorporate the same shapes and patterns into the different floors, and programmer Dave Reidy – a genius by any standard and well ahead of his time in my opinion – managed, by compressing and reversing and sectioning or whatever he did, to work his magic and make my graphics possible on the screen."

Neil Adamson

"I'd just been given my first job as a freelance artist by Codemasters when I was asked to work on Treasure Island Dizzy. The Oliver Twins provided me with detailed plans and illustrations of what they wanted and I added my own style to the characters they suggested. I drew lots of rocks, trees, beaches etc, and they made some wonderfully creative maps from these. We lived at opposite ends of the country, so when I finished a batch of graphics I had to save them on a cassette and send them through the post, hoping they wouldn't get damaged!"

Tony Horgan

"I had a Casio VL-Tone at the time, a tiny battery-powered synthesiser. I used to work out melodies and notes on the VL-Tone and then program music on the Spectrum. For example, I made a gratingly abrupt version of the Chariots of Fire theme as an intro to an awful athletics game I wrote. I never made any in-game music because, due to the original Spectrum's lack of a dedicated sound chip, everything had to stop whenever a 'beep' was emitted, and I wasn't at a sufficient level of skill to interleave snippets of sound into the action like Manic Miner did."

"I always doff my cap to Joffa Smith and his amazing skills with sprites and scrolling, he showed me so many clever ways to get more out of the Spectrum's graphics."

Brian Beuken

"I loved the feel of the keyboard tickling my fancy – so much more intimate than what had come before."

Mel Croucher

"That little box of wonders was the doorway to a world of magic and imagination."

Simon Butler

Released
1984

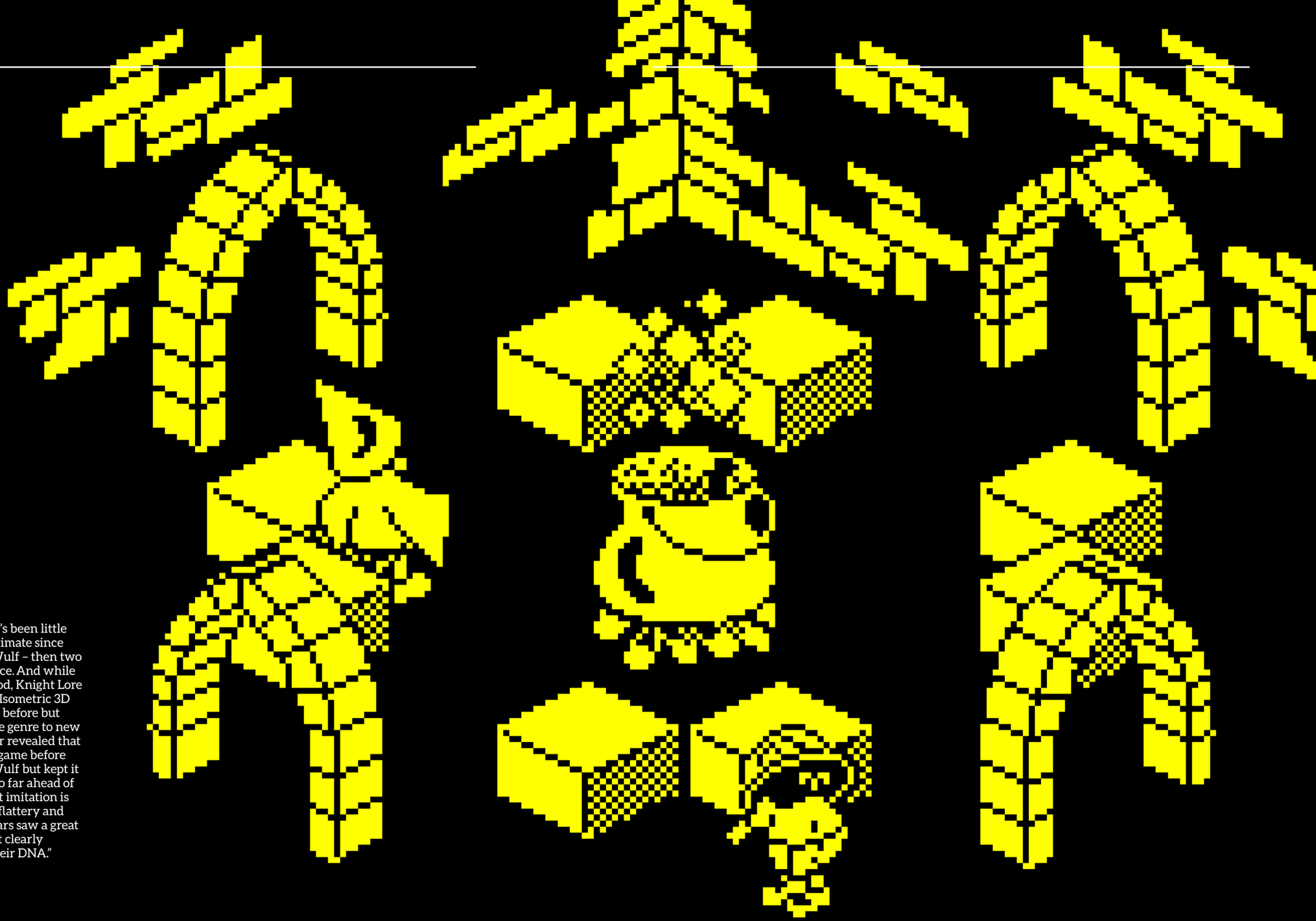
Genre
Adventure

Developer and Publisher
Ultimate Play The Game

Knight Lore

"Christmas 1984: there's been little forthcoming from Ultimate since the release of Sabre Wulf – then two releases turn up at once. And while Underwurlde was good, Knight Lore was the real stunner. Isometric 3D games had been done before but Knight Lore raised the genre to new heights. Ultimate later revealed that it had completed the game before the release of Sabre Wulf but kept it back because it was so far ahead of its time. They say that imitation is the sincerest form of flattery and the next couple of years saw a great number of games that clearly had Knight Lore in their DNA."

Robin Candy



Match Day

"I remember there being a plethora of Speccy football games around at one point, but this has always been the one that set the standard for others to be measured by – even its own sequels. Sure, it was hard to tell who was playing for which side whenever players got close together on the pitch and clashed all over each other, sure the pace of the game wasn't exactly exhilarating as your teammates gently strolled around the pitch, but for the Spectrum it was a mighty achievement and more than playable enough to lose a Saturday or three with your mates."

Tony Dillon

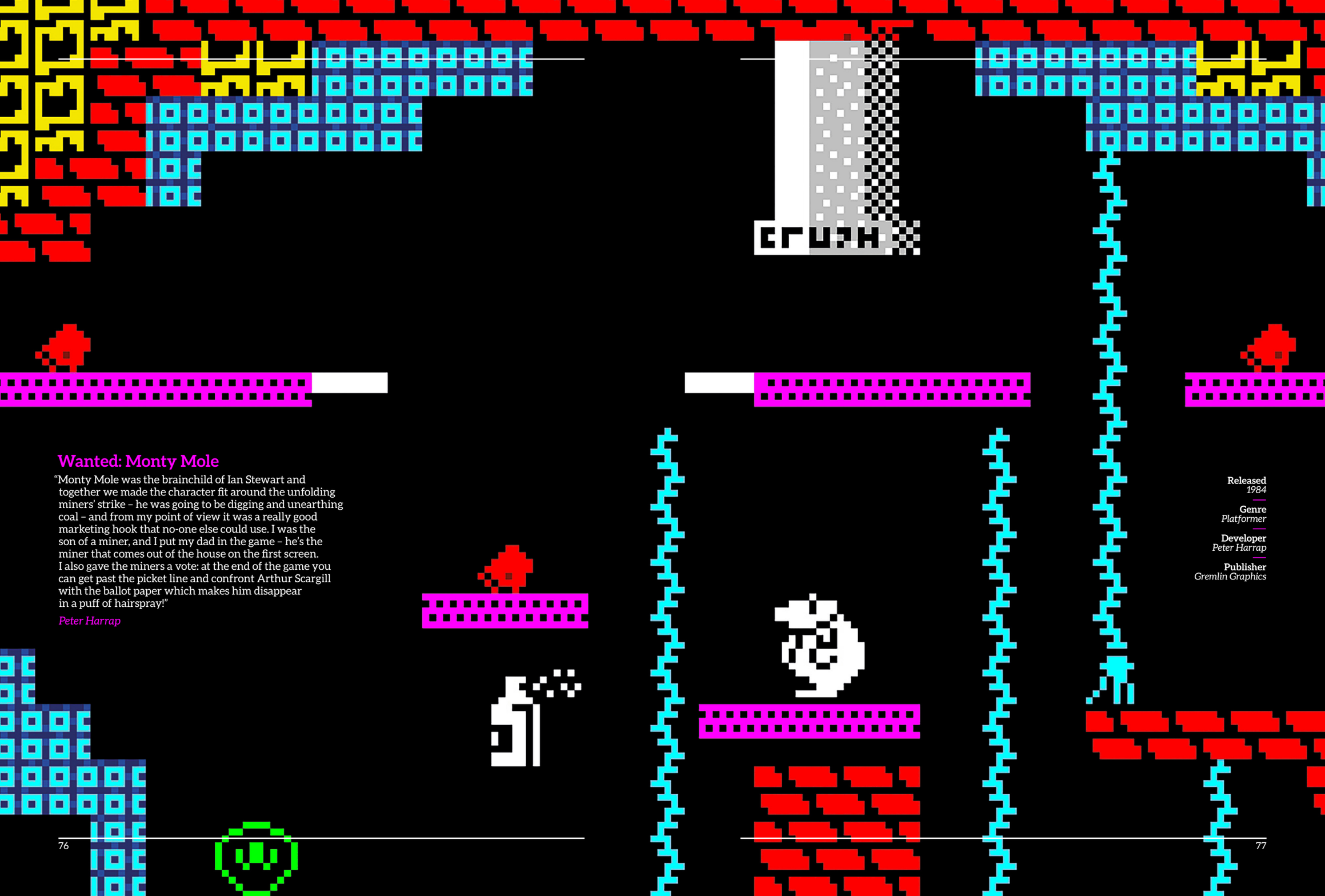


Released
1984

Genre
Sport

Developer
Jon Ritman

Publisher
Ocean Software



Wanted: Monty Mole

"Monty Mole was the brainchild of Ian Stewart and together we made the character fit around the unfolding miners' strike – he was going to be digging and unearthing coal – and from my point of view it was a really good marketing hook that no-one else could use. I was the son of a miner, and I put my dad in the game – he's the miner that comes out of the house on the first screen. I also gave the miners a vote: at the end of the game you can get past the picket line and confront Arthur Scargill with the ballot paper which makes him disappear in a puff of hairspray!"

Peter Harrap

Released
1984

Genre
Platformer

Developer
Peter Harrap

Publisher
Gremlin Graphics

Jet Set Willy

"Take Matthew Smith's quirky sense of humour, fiendish level layout and precision jumps, then spread it out across a sprawling mansion and you had a worthy successor to the iconic Spectrum phenomenon Manic Miner. The task of tidying up the huge mansion and getting past the fearsome Maria seemed insurmountable at first, especially with disaster a mere mistimed jump away, but it still drew you in each time with its thoroughly addictive gameplay as you explored deeper and deeper. I must have spent hours waiting forlornly at the water's edge to go to the 'island'. This game took no prisoners and quite rightly so."

Robin Hogg

"I was forced to be a night coder as my TRS-80 would crash any time anyone put the kettle on, and my mum was working from home. I'd drink and smoke during the day; my sister was at college, so she'd come back at lunchtime with her friends for a drink and a smoke, too. Well, it *was* art college. When they left, I got on with it. I didn't sleep much at all back then; you're running on testosterone in your teenage years."

Matthew Smith

Released
1984

Genre
Platformer

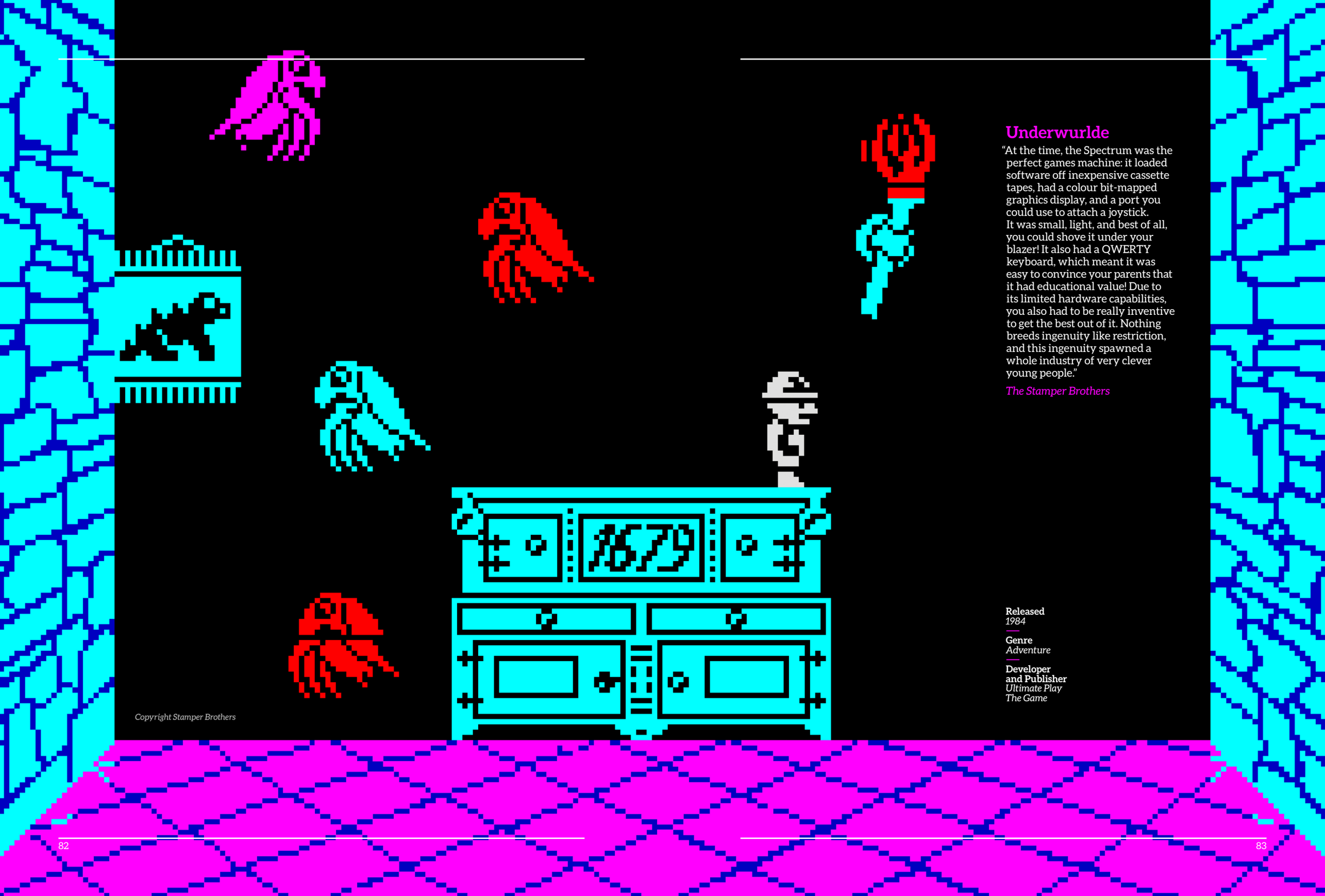
Developer
Matthew Smith

Publisher
Software Projects



“The ZX Spectrum was the first machine for a lot of people and they became attached to it for that reason.”

Bo Jangeborg



Copyright Stamper Brothers

Underwurlde

"At the time, the Spectrum was the perfect games machine: it loaded software off inexpensive cassette tapes, had a colour bit-mapped graphics display, and a port you could use to attach a joystick. It was small, light, and best of all, you could shove it under your blazer! It also had a QWERTY keyboard, which meant it was easy to convince your parents that it had educational value! Due to its limited hardware capabilities, you also had to be really inventive to get the best out of it. Nothing breeds ingenuity like restriction, and this ingenuity spawned a whole industry of very clever young people."

The Stamper Brothers

Released
1984

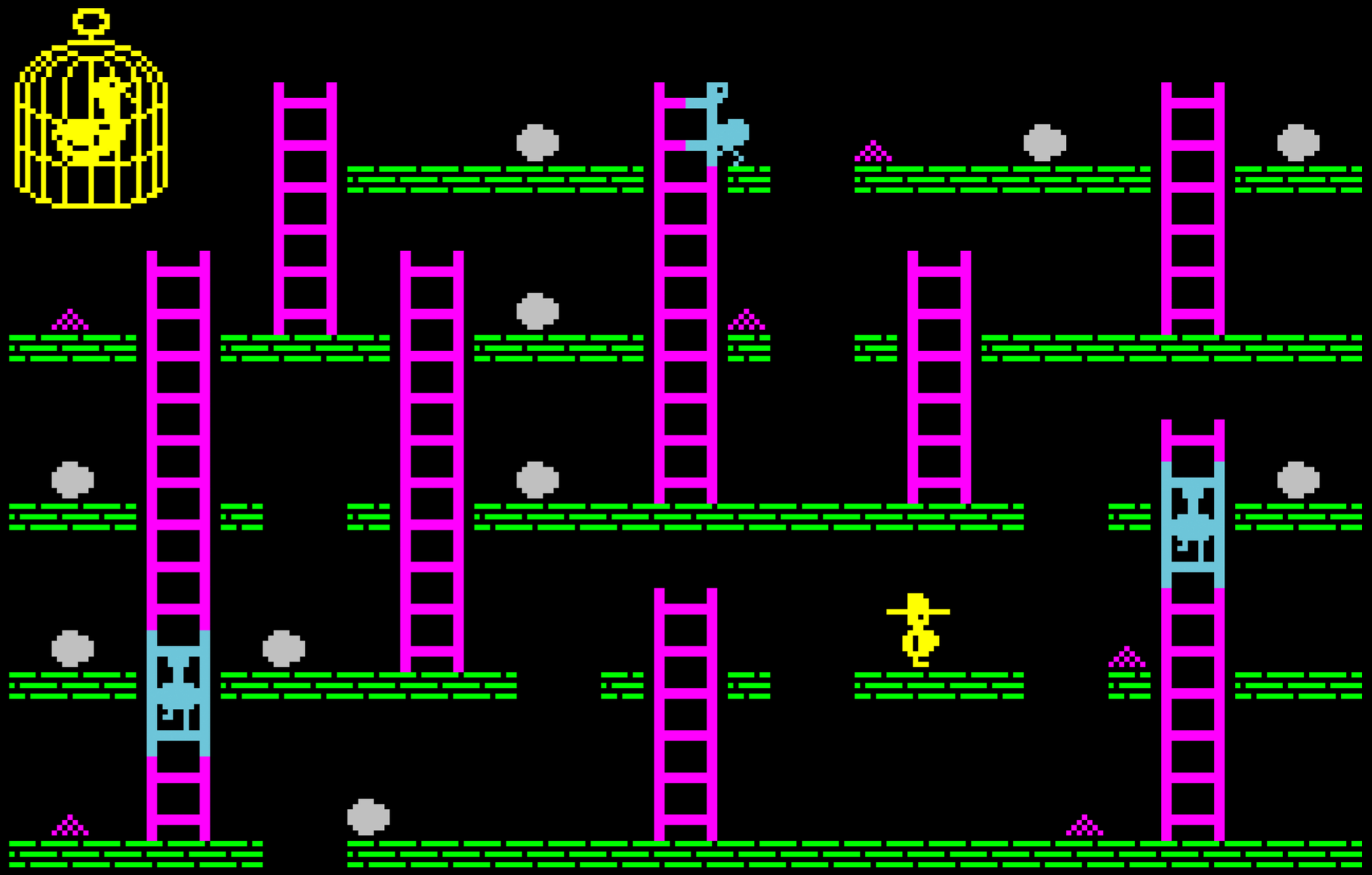
Genre
Adventure

Developer and Publisher
Ultimate Play The Game

Chuckie Egg

"With a tip of the ten-gallon hat to Donkey Kong and Space Panic, this classic Spectrum game thrusts you into the role of farmer Hen-House Harry, whose job is to collect eggs while avoiding the angry hens that guard the roost. Get to level nine and suddenly there's a giant duck flying after you, adding a fun twist to the game. Created in the fledgling days of the platform genre, Chuckie Egg featured fast animation and excellent gameplay. To this day it remains enormous fun to play – I still crack it open every now and then."

Tiago Epifânio



Released
1984

Genre
Platformer

Developer
Nigel Alderton

Publisher
A'n'F Software

Crash magazine

Crash was the debut title from fledgling publisher Newsfield and first hit newsstands in 1984. The magazine's unique review style, youthful tone and iconic Oli Frey cover art helped establish Crash as arguably the biggest Spectrum magazine of all time, selling in excess of 100,000 copies per month at its peak. Crash was eventually sold to EMAP in 1992 and merged with Sinclair User.

Roger Kean

"I was proud of our first Crash cover; naturally Oliver Frey painted it, but it came from my suggestions and the insistence that the figure must stare out and engage the would-be reader from the newsagents' shelves. And in an important way it set the tone for Crash: deadly serious about games and what they meant, but with a sense of irreverent fun; in this case, an alien playing Space Invaders, as though practicing for the invasion of Earth."

"If there was any genius behind Crash, it was the decision to use local Ludlow schoolboys as reviewers. Many of the pool we employed had already cottoned on to the reality of a mail order company selling Spectrum games on their doorstep, which meant they could ring the doorbell and get their hands on games long before those who had to rely on the mail. It was using the talents of the target market for those early computer games that put Crash on top so quickly with its honest, unvarnished opinions from real players rather than the London magazines' reliance on professional journalists."

"Crash kept faith with youth, even when the magazine gained ground and started becoming 'professional' itself. When Midlands ITV News came to film a segment about a publisher of a computer games magazine operating from the 'sleepy market town of Ludlow in rural Shropshire' the crew encountered a bunch of teenagers – 'the writers who could make or break a software house'. I'm proud that Newsfield managed to take in so many youngsters and turn many of them into fine journalists over the years."

Nick Roberts

"I remember the rigmarole we had trying to get screenshots from the Spectrum. Crash Towers had a back room that was completely blacked out. It was like an Aladdin's cave, the walls lined with review cassettes. I just wanted to play them all! This was where Cameron Pound worked, the photographer who took pictures of the screen while the reviewers played. There was no instant feedback: Cameron had to develop the films in his lab next door to see what we had captured. Sometimes they would come out all blurry and we would have to start all over again."

"In my time on Crash from 1987-1991 I witnessed the boom in 8-bit game development. Every day a new game to play, wonderful new ideas, you could feel the frontiers of gaming being pushed back all the time, from the early adventure games like Dizzy to the hardware-pulverising Freescape 3D games. Then, the feeling of sadness that the machine had given all it could and it was time for everyone to move on (stands, silent, cap in hand)."

"I remember coming in to the Crash offices after school and treating the place like my personal arcade. Of course it helped that we were a bunch of young lads (and an occasional lady) all working together for a common deadline goal. Young, not so dumb and full of cider. The Spectrum definitely made me the man I am today. God bless you Sir Clive, Roger Kean, Oli Frey, Franco Frey, The Oliver Twins, the Darling Brothers, Raff Cecco, and all of those that tried to take me on at the Crash Challenge!"

Crash magazine masthead by Craig Stevenson / 2015













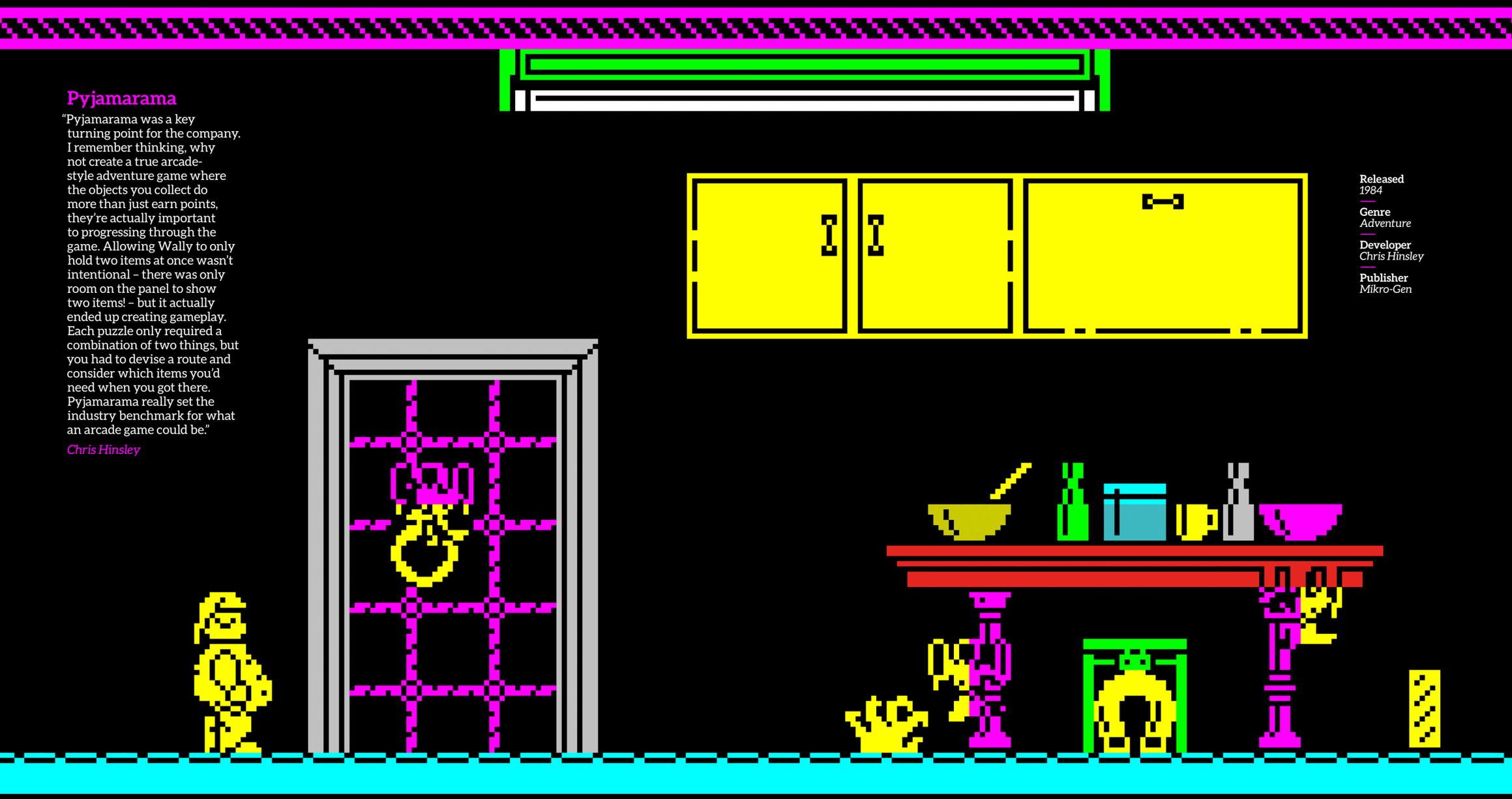




Pyjamarama

"Pyjamarama was a key turning point for the company. I remember thinking, why not create a true arcade-style adventure game where the objects you collect do more than just earn points, they're actually important to progressing through the game. Allowing Wally to only hold two items at once wasn't intentional – there was only room on the panel to show two items! – but it actually ended up creating gameplay. Each puzzle only required a combination of two things, but you had to devise a route and consider which items you'd need when you got there. Pyjamarama really set the industry benchmark for what an arcade game could be."

Chris Hinsley

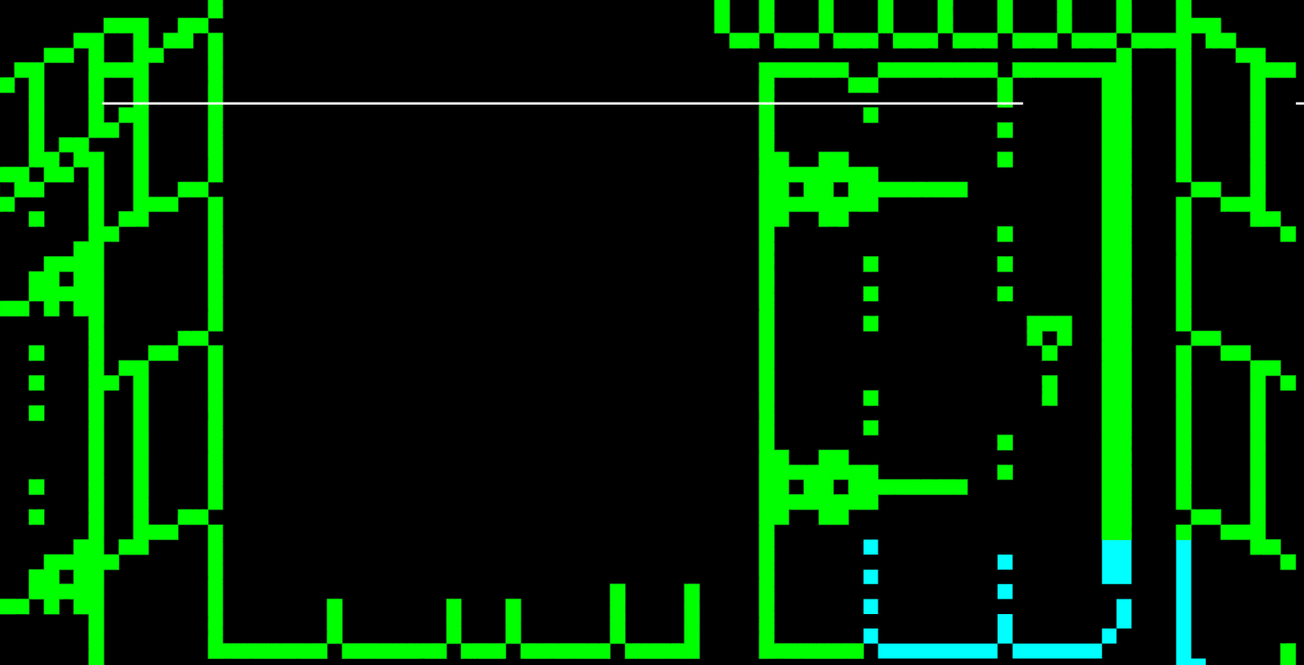


Released
1984

Genre
Adventure

Developer
Chris Hinsley

Publisher
Mikro-Gen



Avalon

"This was a real breakthrough game for me, as though all my previous games were just leading up to this. I modelled the wizard in Plasticine and then drew him from eight directions on sheets of A4 squared paper. The viewpoint was unique at the time, and was based on the way a theatre's stage set is designed (I even gave the display a proscenium in the form of a colourful border). I was really pleased with the combination of adventure and arcade elements; Ultimate's Atic Atac was an inspiration, and by systemising the adventure elements I realised I could squash a massive game into the Spectrum."

Steve Turner

"Ambitiously subtitled 'The 3D Adventure Movie', Avalon combines the qualities of an adventure game, an RPG and an arcade-style exploration game. You control the astral projection of Maroc the wizard as he hunts for Avelach, Lord of Chaos. First challenge: discover that movement itself is one of many spells you'll need to learn on your quest through Avelach's dungeon. Overcomplicated? Maybe, but there's a genuine sense of progression – 16 levels of magic to learn means you're rewarded for exploring deeper and deeper. '3D movie' is hyperbole but nonetheless it's one of the cleverer Spectrum titles with haunting music and a creepy fantasy vibe."

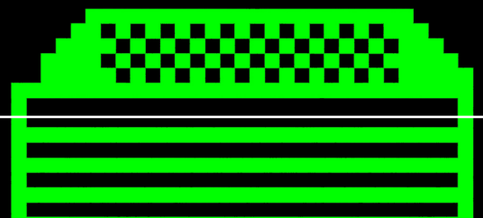
Dave Bradley

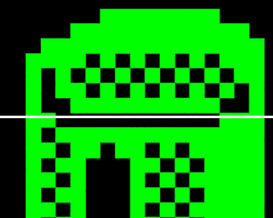
Released
1984

Genre
Adventure

Developer
Graftgold

Publisher
Hewson Consultants





The Art of the ZX Spectrum

With its distinctive rainbow-coloured palette and now-legendary attribute clash, the ZX Spectrum was capable of producing outstanding visuals when placed in the right hands. Far from crippling creativity, the hardware limitations prompted programmers and artists to think outside the box and spawned some incredible and often ingenious results.

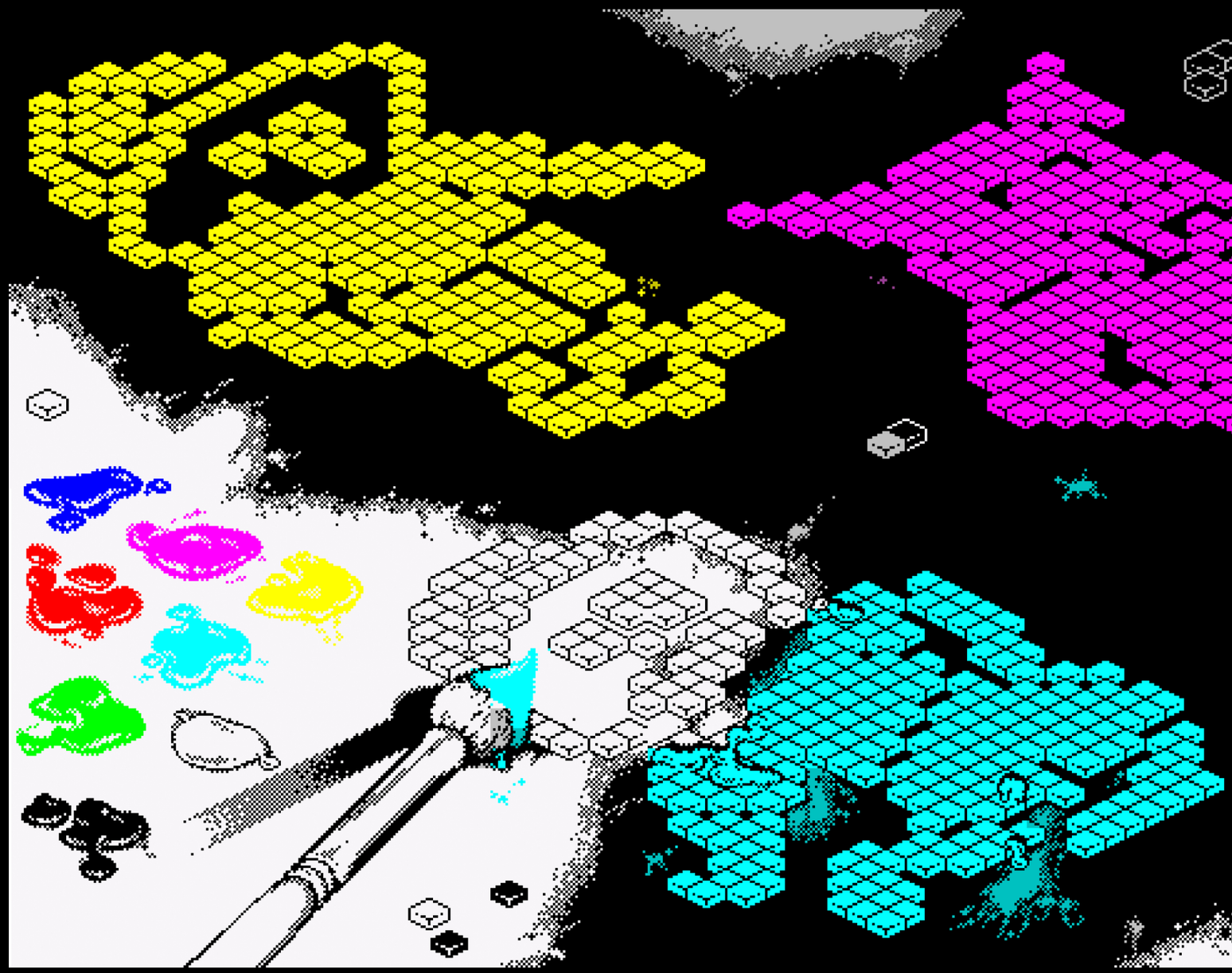
Colin Jones

"I thought that the screen resolution was excellent, really crisp. It's interesting to see the progression in graphics as artists and programmers squeezed every ounce out of the machine; games started out very monochromatic, but later became more colourful with much more detailed backgrounds. There were a few ways of dealing with the infamous attribute clash when sprites moved over background blocks: you could either keep the background colour and make the character change colour (which is what I did on Slightly Magic), or change the colour of the background as your sprites moved over them."

Tony Horgan

"To many gamers, the Spectrum's colour clash probably seemed to be a random glitch. Having spent the previous year programming the ZX81, I was already used to a screen divided into 8x8-pixel blocks, so the addition of the Ink, Paper, Flash and Bright attributes was a real bonus. The simple games I created at home used redefined text characters to transform the more obscure symbols into stick men, spaceships and lasers, which were moved around the screen in single character steps. The Flash attribute was a treat because you could just set that and the square would blink away all on its own without you having to do anything."

> *"Watching a sprite moving on the screen as if it was alive seemed like magic to me."*
>
> *Alberto J. González*



Every Pixel mATTRs – ZX Spectrum Graphics by Craig Stevenson / 2015

Melbourne Draw by Philip Mitchell / 1983



Teoman Irmak

"Mike Woodroffe called a meeting, and we gathered around to look at the artwork produced by MARVEL Studios. 'Can we get the graphics to look as good as this?' Mike asked. The traditional draw-and-fill system for complex scenes and characters would be very slow, and we didn't have floppy disks or a large amount of memory. Then someone hit upon the idea of using redefined characters to display the images and a solution was found. It was for a brief moment a way of drawing on a computer that will probably never be attempted again. Artists today don't know what they are missing!"

"Getting that little bit extra out of the machine was a strong motivator. I was doing it myself, and in a sense I guess that's how I got into programming, trying to do things a little bit faster or in a little bit less space."

Bo Jangeborg

Simon Butler

"A Spectrum game – even if you didn't know the specific title – could be spotted from 100 paces. I loved the clarity of the Speccy's graphics. Due to the simple fact that it had fewer colours, developing game graphics on the Spectrum was more akin to actual drawing. Obviously the artists of the time had to be creative in their tasks, but the simple fact that you were putting a black dot on a white (or off-white) background or vice versa gave you a greater control over the end-result; the creative process on the Spectrum simply felt more intuitive and natural."

Jim Bagley

"Because of the lack of a decent sound chip on the 48K Spectrum, it forced developers to concentrate on the gameplay, which I think made for better games. The lack of hardware sprites meant we weren't locked to a specific sprite size like the Commodore 64 guys had to suffer with, and although it didn't have the skin tones of the C64, the Speccy at least had decent primary colours. One major issue we had to contend with was attribute clash: some people didn't like it, but I think it's part of what the Spectrum is famous for – it made you think of ways to work around the restrictions."

Jonathan Davies

"The Spectrum was basically just a fast CPU and some memory – it had none of the dedicated graphics or sound chips of its rivals, and its oft-mocked colour clash issues meant programmers had to be incredibly resourceful to get the most out of it. You could basically have smooth sprite movement in monochrome, like Head Over Heels, or go full-colour and move everything character-by-character, like Trap Door: anything in between risked colour clash chaos, and scrolling introduced a whole new set of headaches. But where there was a will there was a way, as proved by Bob Pape's amazing R-Type conversion."

Chris Hinsley

"Some of the Spectrum's technical challenges, like the old attribute problem, were handled rather blatantly. My approach on Pyjamarama was to simply let Wally carry around a block of colour with him and to heck with it. I didn't think it would matter, and most of the reviewers didn't care when it came down to it. Also, when drawn to scale the background graphics and objects looked spindly and rather crap; drawing everything large and colourful worked much better. So we simply said everything was large and freaky because Wally was having a nightmare and the object of the game then became to wake him up!"

Phil South

"You would think that having just 16 colours, only being able to display two colours in any 8x8 pixel square, no hardware sprites, and a sound card which would be hilariously underpowered even in a wristwatch, would hold the Speccy back. On the contrary, it was that rare thing in modern gaming, a set of limitations that presented a challenge to coders: make a playable and addictive game on this sucker and you can pretty much make one on anything. Almost all of the developers that didn't go insane later went on to code masterpieces on machines with more grunt."

Alberto J. González

"I'd had a fascination for video games ever since I saw one for the first time; watching a sprite moving and doing things on the screen as if it was alive seemed like magic to me. Soon I tried making my own games on my first computer, a Casio PB700. Years later I traded it for a Spectrum +2 and lots of tapes. Among the tapes there was a graphic editor from Melbourne House and I started drawing my first computer graphics with it. When I did my first animations I had to draw the sprites on a single screen and guess how they would look when played in sequence."

Jas Austin

"Programming the Spectrum had its fair share of challenges. The two major factors were the limited memory and lack of any real hardware support. We had to keep the code size small while making it run as fast as possible, and thus the majority of games were written in Z80 machine code. I used many unusual techniques. In Tarzan I opted to use a widescreen view, which meant less screen data to update, but more importantly, the unused areas held a hidden secret: I used this screen memory to actually store and run code, sneakily hidden from the player using black attributes!"

"I preferred to work on a black and white television as the pixels were sharper than on a colour TV."

Neil Adamson

Neil Adamson

"I started off doing graphics on a rubber-keyed Spectrum using a program called Melbourne Draw. I preferred to work on a black and white television as the pixels were sharper than on a colour TV. Not being able to see the colours wasn't really a problem as there weren't many to choose from anyway! My favourite part of making a game was the loading screen and I had a nifty trick for creating them: I used to draw the image on cling film first, stick it on to the screen and draw around it, then peel off the cling film and fill in the details!"

Keith Warrington

"For Skool Daze, I drew the sprites on graph paper by colouring the squares in and then stared at them from the other end of the room to see if they looked effective. I based the characters on distinctive teachers from my own school days, including my absolute favourite, the über-cool Mr. Sykes with the moustache, who ultimately became Mr. Withit. I found the teachers more satisfying than the boys as there were more grown-up features you could incorporate, like Mr. Wacker's beard or Mr. Rockitt's spectacles."

Tony Dillon

"Of course, the initially jarring colour-clash. Not one of Sir Clive's greatest moments, but something that ultimately made Spectrum games unique. I think the problems associated with colour clash meant that artists had to be particularly inventive when coming up with illustrations and, as the many spectacular loading screens showed, it was possible to come up with some impressive artistry if you planned out your screen well – just look at Thanatos or Trap Door."

Mark R. Jones

"Having only seen a ZX81 before, the Speccy's first impressions were amazing. I remember the early screenshots of Tir Na Nog in Crash magazine made our jaws drop during an English class at school; previously you had main characters that were one or two characters tall, and yet there was Cuchulainn a staggering eight characters high! Another jaw-drop moment was seeing the robot head from Sandy White's I, of the Mask. I bought it straight away, not realising there was virtually no gameplay. Still, it looked fantastic, and I probably spent more time watching the attract mode than playing the game!"

Tim Closs

"The most memorable aspect was the attribute clash issue: the Spectrum only had a monochrome frame buffer paired with a coarse colour map, which allowed just two colours within each 8x8 pixel area. This forced both developers and graphic designers to get particularly creative in order to create multi-coloured imagery. Of course, games such as Knight Lore took a different approach, opting for monochrome graphics within the main gameplay area to allow for the isometric 3D."

Steve Wetherill

"I got on well with the Spectrum because I like to really dig in and understand what is happening at the lowest level. On the Spectrum, especially in the period between 1987 and 1988, I felt that I really had a good handle on how to get lots of smooth movement on-screen, leading to the scrolling shooters Sidewize and Crosswize which scrolled at 50 and 25 frames per second respectively – Crosswize used the slower update rate to allow for more complex graphics and gameplay."

Mel Croucher

"The fact I suddenly had a rainbow palette was a bit of a distraction, to be honest; I would have loved a load of subtle sepias and umbras, instead of those juvenile rainbow colours. But the pixel resolution was brilliant compared to the blobs of earlier systems. I remember drawing up a whole fantasy village on graph paper, complete with a turning windmill, pecking crows and a swinging gibbet, followed by the miracle of seeing it come alive in a horizontal tracking shot on a bloody great Sony monitor. I still have that graph paper somewhere."

Mev Dinc

"The Spectrum's colour map was character-based, not pixel-based, something which I assumed to be a cost saving decision on the part of Sir Clive Sinclair. The way the screen was drawn was just crazy and very difficult to code efficiently, but ultimately this pushed the programmers and artists to come up with some amazing techniques and fully stretch their talents. Although it was impossible to make Spectrum games as colourful as their Commodore and Amstrad counterparts, even with the monochrome look the graphics on the Speccy looked amazing!"

Steve Turner

"The Spectrum had a very simple graphics display which made it easy to program and gave Spectrum games a characteristic look. Within each 8x8 pixel square you could display a maximum of two colours from the Spectrum's palette of rainbow colours, and the fineness of the pixels made it possible to create detailed graphics. With careful planning, this limitation could be minimised, enabling you to create full-colour graphics."

James Leach

"I knew the machine and its capabilities well: eight colours, but you could apply brightness to all of them to get sixteen, and only two colours allowed in a single eight-by-eight block of pixels. Yes, it lagged behind the other computers around at the time, but on a decent TV the graphics were bright and crisp, not chunky like the Commodore 64. They looked sharp but cuddly and I was young enough at the time to like that. As much as I loved seeing them for the first time, however, I don't think I'll ever miss the line-by-line loading screens, the noise of which I still hear in my sleep."

Andrew Hewson

"The restriction of just two colours per character square was an obvious issue from the outset. Steve Turner cleverly disguised the problem in Avalon, and he and other programmers continued to do so with the likes of Ranarama, Dragontorc, Quazatron, Exolon, Cybernoid, Zynaps and Stormlord. I remember being impressed with the Wally Week series from Mikro-Gen because the creators just ignored the problem. For them the game worked and that was all that mattered. The success of the series proved that they were right."

"This forced both developers and graphic designers to get particularly creative in order to create multi-coloured imagery."

Tim Closs

"For Skool Daze, I drew the sprites on graph paper by colouring the squares in and then stared at them from the other end of the room to see if they looked effective."

Keith Warrington

Clive Townsend

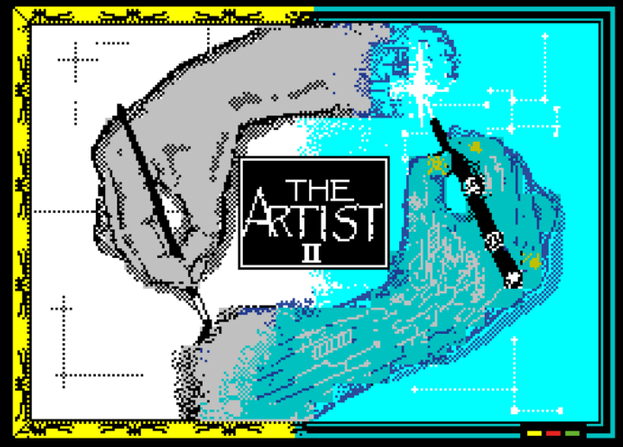
"I grew up on DC Comics, so creating graphics using the primary colours of the Spectrum felt a bit like making comic artwork. Saying that, I was lucky to be making a Ninja game that used black sprites on a black-and-something background, so I managed to avoid colour clash issues. To this day I'm impressed by artists and programmers who used the attributes cleverly or wrote fast scrollers. I think the Speccy's processor speed and graphical limits pushed developers to invent cunning techniques – and that's never a bad thing."

Mike Richardson

"I found I really enjoyed animating, and probably spent as much time doing animations as programming. I used to draw graphics by filling in the squares on graph paper, converting each block of eight squares to hexadecimal in my head, and typing them in to the assembler. The great thing about low-res ZX Spectrum graphics is that there are a relatively finite number of options of where to fill a pixel to get the best-looking sprite. If the Spectrum had had a higher resolution screen, I would have had no hope of producing anything decent!"

Nick Bruty

"At first it was exciting and I felt I could do anything. My imagination ran wild, envisioning epic Star Wars scenes with X-wings for everyone! Then I very quickly ran out of memory and speed. Dreams dashed. Then I realised it was about being clever: you couldn't have total artistic freedom with this machine, but you got something else instead. You could outdo a better artist by being smart and crafty. You also gave yourself bonus points if you managed to use every colour on a single screen without it being a garish blinding mess."



The Artist II by Bo Jangeborg / 1986

Bo Jangeborg

"The Artist II was developed simultaneously alongside Fairlight II. The point-and-click interface was included to create a much more accessible control system. It was intuitive and I like that – you shouldn't need to be a technical wizard to be able to operate a program, the simpler the better basically. And that was the whole point of the Macintosh. I loved that idea. I love the user-friendliness of what Apple had been doing in general."

Backpackers Guide to the Universe

Released
1984

Genre
Platformer

Developer and Publisher
Fantasy Software

Artwork
Oliver Frey

Everyone's a Wally

Released
1985

Genre
Adventure

Developer and Publisher
Mikro-Gen

Artwork
Oliver Frey



Dun Darach

"Once in a while a game made you stop in amazement and Dun Darach (and its predecessor Tir Na Nog) did just that. Gargoyle Games knew how to exploit the Spectrum's capabilities with full-size graphics and that stunning walking animation which was weirdly relaxing. Although sound was minimal, Dun Darach was marked out from the competition by the graphical splendour of the characters and the detail of its many streets. On top of the lavish aesthetics, the game itself was an engrossing adventure rich in atmosphere which made me want to explore and get lost among the many streets and back alleys."

Robin Hogg

Released
1985

Genre
Adventure

Developer
Carter Follis Software

Publisher
Gargoyle Games

Marsport

"Gargoyle Games made graphic adventures before it was cool or, let's be honest now, even fully possible. Their side-scrolling games like Tir Na Nog and Dun Darach – and this later spacey version – were graphically rich, simple to understand, and yet full and oozing with nuance. They were what I recall Jez San coined at the time 'Short, hot and deep'; that's to say, easy to grasp, classy looking, yet containing hidden depths. Not perhaps as flashy or complex as Head Over Heels, it had a large map and one you had to sketch as you played if you wanted to win. An underrated classic."

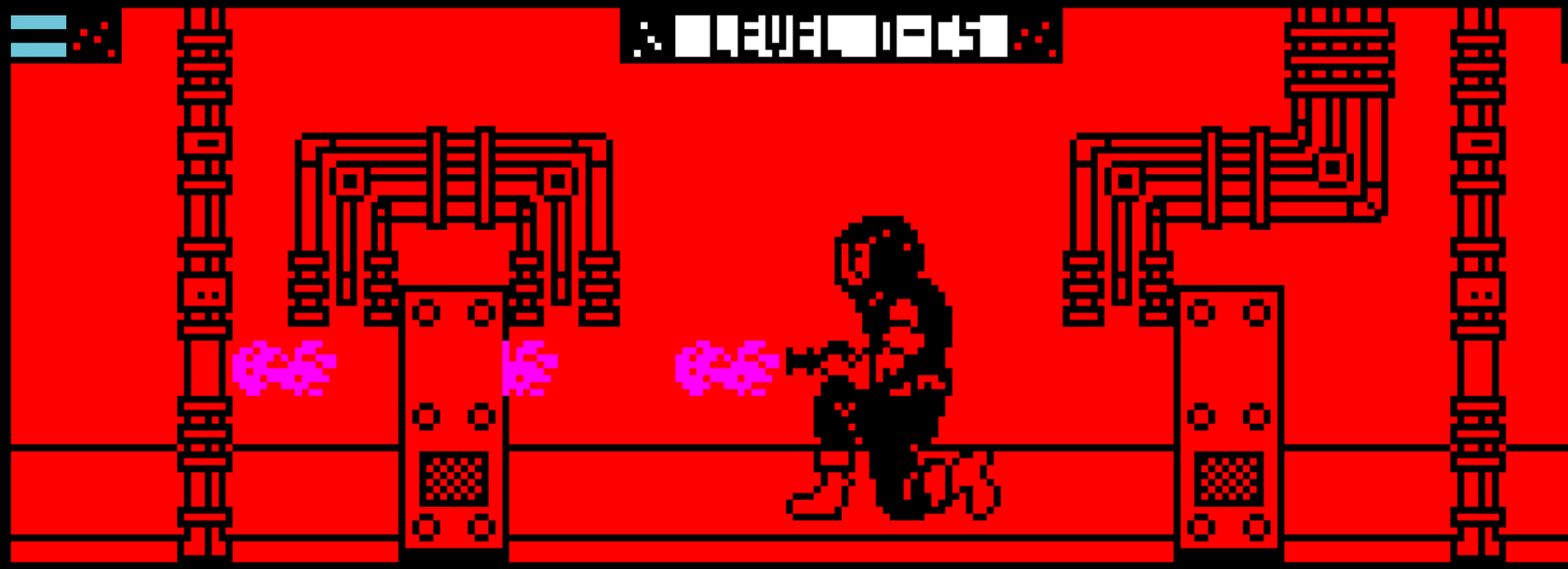
Phil South

Released
1985

Genre
Adventure

Developer
Carter Follis Software

Publisher
Gargoyle Games



Released
1985

Genre
Adventure

Developer and Publisher
Odin Computer Graphics

Nodes of Yesod

"Nodes of Yesod was not only Odin Computer Graphics' debut title, it was also the first original game I worked on, so it was something of a personal milestone for me. Nodes was a very pretty-looking game thanks to the fantastic pixel art by Colin Grunes, and it has some nice audio touches, too: the speech at the start of the game saying, 'Welcome to Nodes of Yesod from the Odin Computer Graphics team!' was actually Mark Butler, and was exclusive to the Speccy. I remember we had some irate calls from Commodore 64 owners asking why there was no speech in their version!"

Steve Wetherill

Highway Encounter

"This isometric puzzle shooter is a perfect example of what the Spectrum could do really well. The neat, high-res graphics evaded the colour clash of more visually complex titles, but the clever gameplay – where you cleared a path for your four Auto-Vortrons to push a bomb toward the enemy base – was sublime. I have fond memories of playing this with my mate Ian, taking it in turns to battle our way along the roadway, reconnoitring the enemy formations ahead and figuring out our strategy – usually before losing yet another life! Highway Encounter is a wonderfully clever and immensely satisfying game."

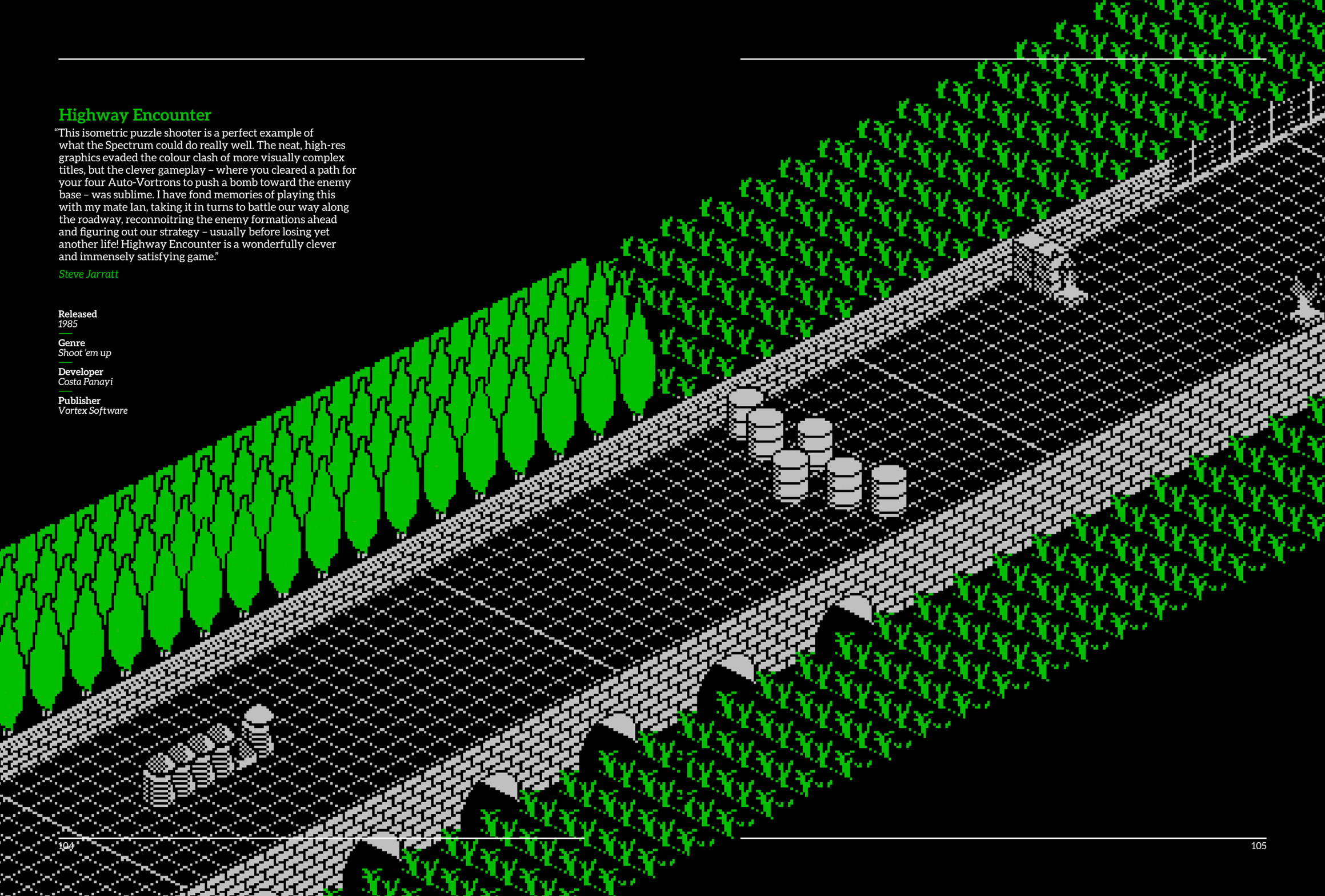
Steve Jarratt

Released
1985

Genre
Shoot 'em up

Developer
Costa Panayi

Publisher
Vortex Software



Back to Skool

"The closest I ever came to finishing Back to Skool as a nine-year-old was to knock out a few teachers with water-filled school trophies. And that is why I love this game: tormenting the likes of Mr Withit, Mr Whacker and the rest of the faculty with my lack of attendance at class; simply standing up and walking away from assembly; stealing a furtive kiss from my squeeze at the girls' school during break... The game is essentially a school-age anarchy simulator and it stands up as well today as it did when it was released."

Douglas Gibbons

"When I look back at the great technical achievements of Spectrum gaming, this has to sit firmly in the top five. It might be glib to describe it as a forerunner to modern open world games (Bully, I'm looking at you) but this game had it all. Even now, it's staggering to think just how much there was going on in 48K: desks to search, blackboards to write on, bikes to steal, teachers to evade, and all in a world where the regular school day was being played out all around you. Mould-breaking in every way."

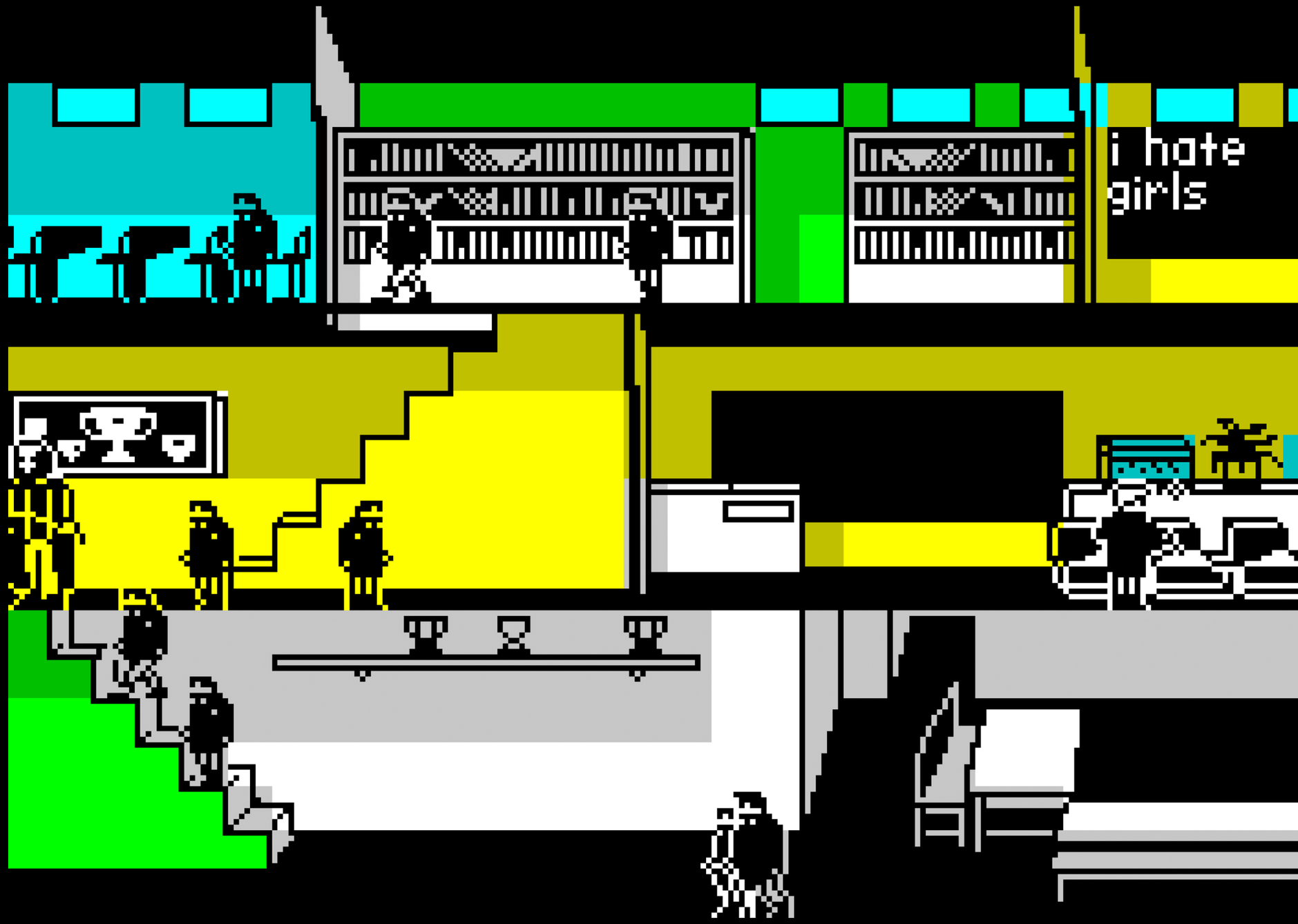
Tony Dillon

Released
1985

Genre
Adventure

Developer
David Reidy

Publisher
Microsphere



DURELL

Durell Software was an independent UK developer and publisher founded in 1983 by Robert Durell White. Originally a one-man operation, the company's core team would later expand to include Ron Jeffs, Mike Richardson, Clive Townsend and Nick Wilson. The publishing rights to Durell's back catalogue were eventually sold to Elite Systems in 1987, and the company switched to developing administration software for insurance and finance brokers.

In 1983, Robert White was working as a CAD specialist designing hospitals for Oxford Regional Health Authority. Fascinated by the wave of 'cocktail'-style arcade cabinets which had begun to appear in pubs, he was determined to find out how games were made. After teaching himself to program the Oric-1, White began selling games via mail order and, when demand outstripped supply, he advertised for programmers in the local paper and Durell Software was born.

Between 1983 and 1987, Durell's output was impressive, the company producing some of the Spectrum's best-loved games including Scuba Dive, Thanatos, Turbo Esprit and the Saboteur! series. Imaginative, unique, and technically accomplished, each Durell game was a labour of love crafted by some of the most talented developers in the business.

In 1983 Durell released its debut Spectrum title Harrier Attack!, based on an idea by Robert White to create a Scramble game featuring the Harrier Jump Jet (which had been instrumental in the recent Falklands War). Durell had advertised the game heavily – a significant risk for any fledgling company – but the gamble paid off: written in just three weeks, the game would go on to sell over 250,000 copies. Crash praised the game's "fast responses and first rate graphics," while Home Computing Weekly thought it "a very professional program throughout."

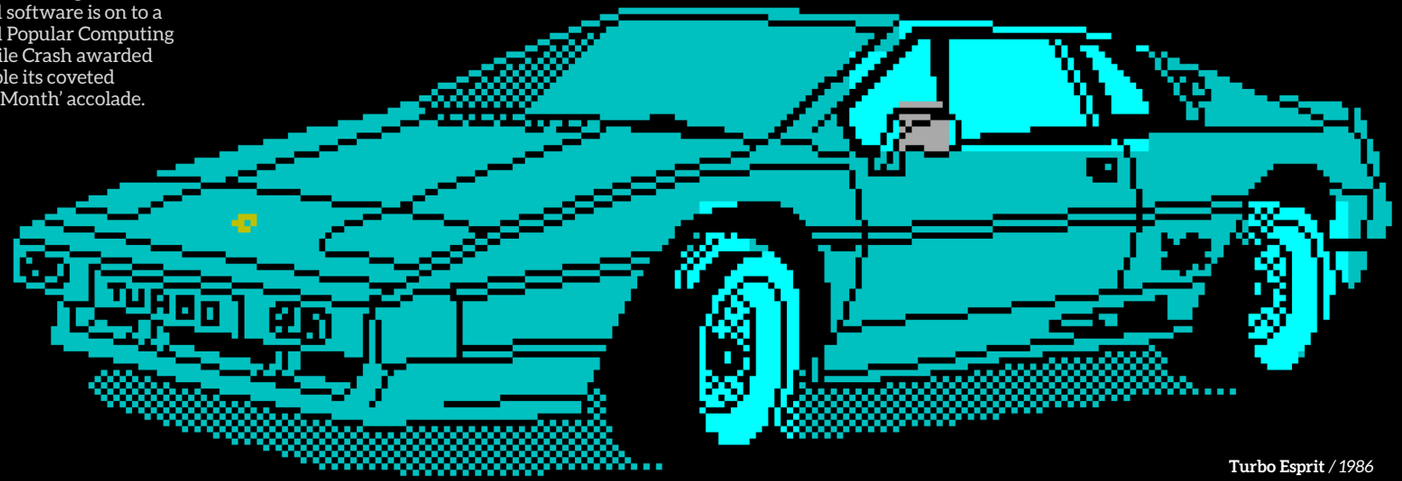
Next out of the Durell stable was Jungle Trouble, a delightfully humorous platform game in the Pitfall mould which programmer Mike Richardson had created in his spare time prior to joining the company. Despite its simplistic appearance, the gameplay was fast, funny and packed with innovative touches such as the player's axe becoming dull over time. "Durell software is on to a winner," said Popular Computing Weekly, while Crash awarded Jungle Trouble its coveted 'Game of the Month' accolade.

"Each Durell game was a labour of love crafted by some of the most talented developers in the business"

Durell wrapped up 1983 with the release of Scuba Dive, a tense, atmospheric journey into the dark depths of the ocean to retrieve pearls from the clutches of snap-happy clams. Boasting a procedurally-generated landscape years ahead of its time, Durell's controversial decision not to arm the player with a weapon ultimately amplified the sense of tension and isolation. Popular Computing Weekly praised the game's "superb graphics and animation," while Personal Computer Games called it "very, very special."

In 1984, the gaming press was awash with Durell's iconic advertisement for Combat Lynx, a combat simulation based on the British-made Westland Lynx helicopter. Part simulation, part shoot 'em up, the game boasted a surprising amount of depth, as well as state-of-the-art vector graphics and randomly-generated landscapes. Crash gave Durell its first 'Smash' award, calling Combat Lynx "an engaging and challenging game," while Home Computing Weekly said "if you want a challenging, complex strategy game then this is a must."

Arriving at the tail-end of 1985, Critical Mass marked the Spectrum debut of self-taught programming prodigy Simon Francis. As with previous Durell games, Critical Mass was a simple concept slickly executed, with a myriad of innovative touches like the ability to eject from the ship when the going got rough. Your Spectrum said "the graphics and playability of this game are superb," while Crash slapped a 'Smash' on the game calling it "fast, fun, and furious."



Turbo Esprit */ 1986*

Harrier Attack! / *1983*



Durell would wrap up the year with the release of Saboteur!, a flick-screen adventure whose stealth-based gameplay was years ahead of the curve. Programmed by Clive Townsend, Saboteur! was loosely based on Ninja Darkness, a game he'd been developing in his spare time. Branded by some as Impossible Mission with fisticuffs, the game's original concept, moody aesthetics and tense gameplay hit the spot. C&VG called Saboteur! "an addictive, exciting, and challenging game." Crash were similarly enthused, awarding a 'Smash' and branding it "the best release yet from Durell."

After almost a year in development, Mike Richardson's follow-up to Combat Lynx, the eagerly-awaited Turbo Esprit, appeared in 1986 to considerable critical acclaim. Effectively GTA years ahead of its time, players explored a living, breathing city as they attempted to thwart the plans of a dastardly gang of drug dealers, and offered a tantalizing glimpse of what open-world sandbox games would become. Your Computer described the game as "absorbing" and "a breath of fresh air," while Sinclair User declared "Turbo Esprit is a spectacular simulation which handles like a sophisticated 3D arcade game."

Durell's next title was the fantasy adventure Thanatos, arguably one of the most original and iconic games of the 8-bit era. Assuming the role of Thanatos the Destroyer, a massive dragon that occupied almost a quarter of the screen, players were taken on an epic magical journey to rescue the sorceress Eros. Steeped in mysticism and crafted with Mike Richardson's signature blend of humour and ingenuity, Thanatos quickly won its way into reviewers' hearts. "A technical triumph," said Popular Computing Weekly, awarding the game 'Pick of the Week', while Crash called it "an excellent and rather different arcade adventure," earning Durell its fourth 'Smash' award.

1986 was a fantastic year for Durell, which concluded with the release of Fat Worm Blows a Sparky, a surreal and quirky arcade adventure set deep inside the bowels of the Spectrum. One of the first games to use solid 3D vector graphics effectively, the game was written by youngster Julian Todd during his school holiday before heading off to university. Despite its impressive technical merits, the game received mixed reactions: "Odd isn't quite the right word," said C&VG, while Crash awarded the game a 'Smash', calling it "as revolutionary as Ant Attack was in its day." Indeed, Crash's 95% rating made Fat Worm one of the magazine's highest rated games ever.

1987 kicked off with Durell's second flight simulator Deep Strike, in many ways a spiritual successor to Combat Lynx. Taking control of a World War One biplane, players would attempt to safely guide a squadron of four bombers deep into enemy territory.

Despite the attractive visuals and technically impressive landscape engine, Deep Strike walked a fine line between arcade and simulation, which garnered mixed reviews. "It's just not epoch-making," said Crash magazine, adding "(it's) too simple for a flight simulator and too slow for a good shoot 'em up."

Poignantly, Durell's next release, Sigma 7, was also Mike Richardson's swan-song for the company (his final game Spitfire would be released on Elite's Encore label). A bold quest to infiltrate the seven war factories of the Sigma Empire, the game was a slick and challenging mix of game styles delivered with Richardson's usual polish. "This is a fabulous game," said Your Sinclair, awarding Sigma 7 its coveted 'Megagame' accolade, while Sinclair User called it "really rather good."

"Durell's eclectic catalogue includes some of the most original, charming, innovative, and technically accomplished games to grace any home computer"

Capitalising on the success of Saboteur! – one of Durell's best-selling games to date – Saboteur II: Avenging Angel hit the streets in the Spring of '87. One of the first games to feature a female protagonist, the game was even bigger and bolder than the original (the map alone weighed in at over 700 screens). "This is a fine sequel," said Your Sinclair, "but possibly more important, it's a fine game in its own right." Crash was similarly enthused, calling it "a superb follow-up with great depth of content."

By late '87, games were taking longer to produce, advertising costs were increasing, and retailers were imposing risky sale-or-return policies. Astutely spying the end of the road for the Speccy, Durell sold the publishing rights to their back catalogue to Elite Systems and invested the money into developing software for the finance and insurance industries. Durell's final Spectrum titles, Chain Reaction and Spitfire, would ultimately be released by Elite.

Durell remains one of the great British success stories from the 1980s; indeed, its eclectic catalogue includes some of the most original, charming, innovative, and technically accomplished games to grace any home computer. As C&VG once said, "Always expect the unexpected from Durell."



Combat Lynx / *1984*



Critical Mass / *1985*



Saboteur! / *1985*



Thanatos / *1986*



Released
1985

Genre
Adventure

Developer and Publisher
Odin Computer Graphics

Robin of the Wood

"Robin of the Wood was the brainchild of Paul Salmon, who came up with the original concept and created the majority of the graphics. Paul's art style was very distinct from that of Colin Grunes and Stuart Fotheringham, which helped give Robin of the Wood a fresh new look. Despite the obvious comparisons to Sabre Wulf, the game's biggest influence was probably the much-loved 1980s television series Robin of Sherwood starring Jason Connery."

Steve Wetherill

Way of the Exploding Fist

"While The Way of the Exploding Fist wasn't my first game, it was my first original title. I still remember the day it went from something nobody had seen to what was effectively a two-player game. I was so pleased that it actually worked, I went to make a coffee, only to find a queue of people waiting to play the game when I returned! Looking back on it now, I'd say the most enduring features were the pixel-accurate collisions combined with bone-crunching sound effects. Mind you, the thing most people seem to recall is the blood-curdling scream during the tape load!"

Gregg Barnett

"I was commissioned by Melbourne House to produce the cover for Way of the Exploding Fist. I remember being impressed watching TV footage of martial arts experts smashing though thick wooden planks with their feet or fists and head-butting stacks of roof tiles. This formed the basis of my explorations to create an image for the cover. I guess they liked it, as I was later commissioned to produce art for Fist 2: The Legend Continues. I don't recall what the Japanese letters mean; in moments of self-doubt, I still hope that they don't say something like 'No translation found' – or worse!"

David Rowe

Released
1985

Genre
Fighting

Developer
Beam Software

Publisher
Melbourne House

Dynamite Dan

"There are few better games than Dynamite Dan to celebrate the visual style of the ZX Spectrum. Along with Jet Set Willy – and endless clones – it's one of those platform games where the programmer went wild! Each screen is filled with a crazy array of objects: toilets sit next to cheese, an airship hangs in the air, robots dance and jiggle while you wonder what to do with the trampoline just past the boiled egg. Dan is pretty nondescript with his pot belly and quiff, but I guess they needed a character that would stand out among the craziness."

Nick Roberts





Released
1985

Genre
Platformer

Developer
Rod Bowkett

Publisher
Mirrorsoft

Tau Ceti

"It's apt that a book about the ZX Spectrum should feature Tau Ceti, which celebrates its 30th anniversary this year. Three decades ago mobile phones were the size of a ZX Spectrum and the DVD wasn't even thought about. And yet, Tau Ceti, this visionary game, existed on this simple platform and ran in a mere 48K of memory. In many respects it is as seismic as those other inventions; many of today's modern games owe a debt of gratitude to Tau Ceti, a clever combination of strategy and shoot 'em up which kept the player coming back time and time again."

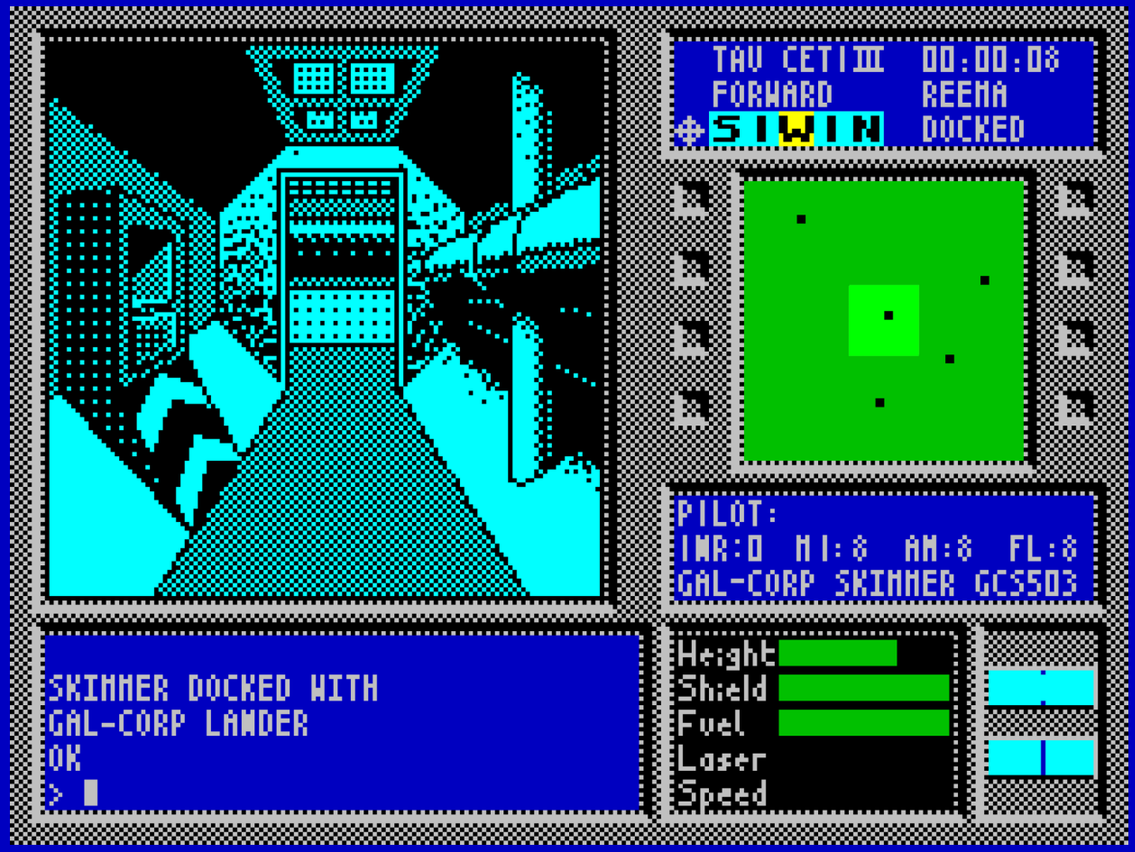
Peter Sherwood

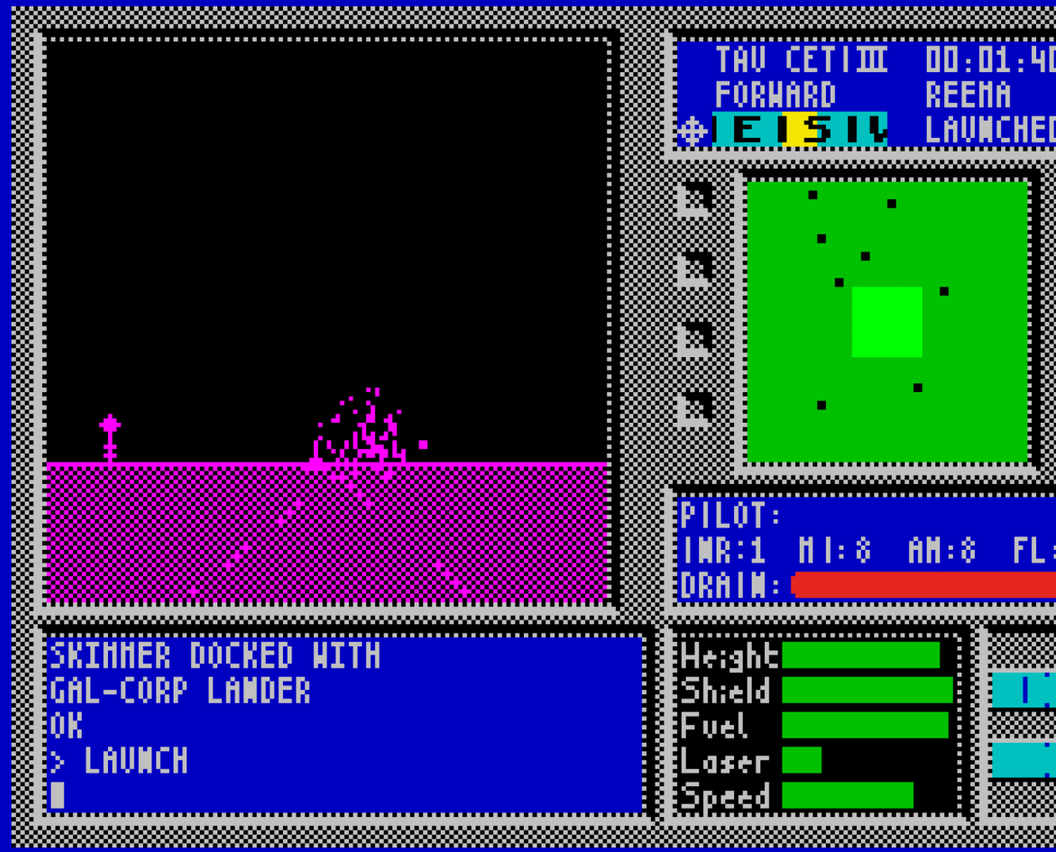
Released
1985

Genre
Shoot 'em up

Developer
Pete Cooke

Publisher
CRL Group







Cyclone

"Subtly prettifying the two-and-a-half-D scrolling landscape he'd created for T.L.L., Costa Panayi toned down his earlier game's adrenalin-fuelled, spade-to-the-back-of-the-head difficulty level (those power lines!) in favour of a more humanitarian quest to retrieve refugees and supplies from the path of an approaching storm. Cyclone's colourful tropical archipelago is an uplifting place to explore and your mission is tough while achievable. Well, so long as you keep an eye on the position of the storm, the terrain height, your collision warning system, the fuel gauge…"

Jonathan Davies

Released
1985

Genre
Action

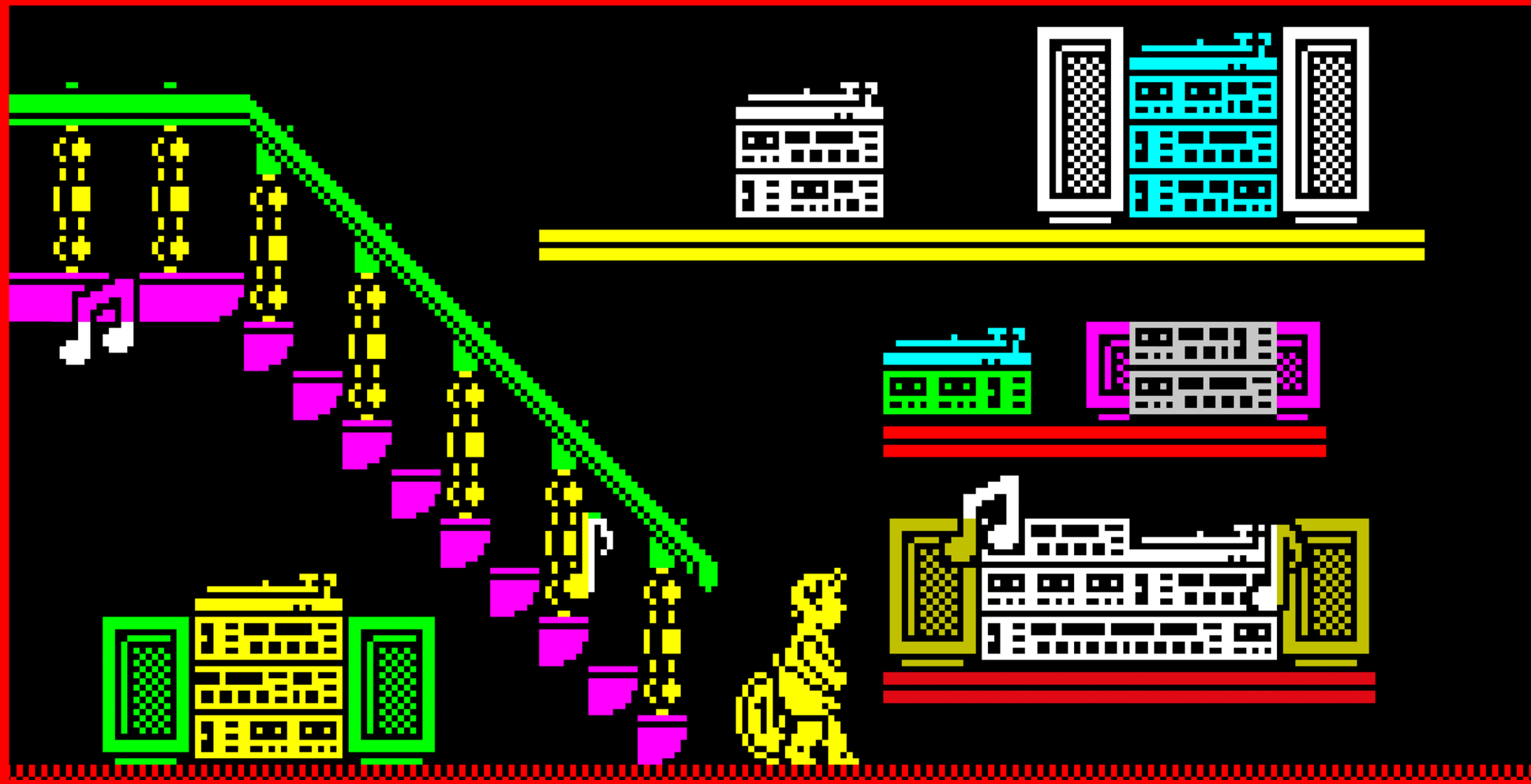
Developer
Costa Panayi

Publisher
Vortex Software

Herbert's Dummy Run

"This was the last game in the Wally Week series, which also included Pyjamarama, Everyone's a Wally, and Three Weeks in Paradise. The game was actually played in real time: Herbert was lost in a department store and you had four-and-a-half hours to solve the various puzzles and find your parents. Looking back, I seem to recall the artwork was actually done by Mikro-Gen's head of marketing! Let's just say it was a big mistake to make a game starring a baby. I actually made the same mistake some years later when Shiny Entertainment made Messiah!"

David Perry



Released
1985

Genre
Adventure

Developer
David Perry

Publisher
Mikro-Gen



“Even the most primitive development tools we have today far eclipse what was readily available for Spectrum development back then.”

Steve Wetherill

Fairlight

"I went over to England to deliver The Artist to Softechnics and saw that they were working on isometric 3D games because they had been impressed by Alien 8 and Knight Lore. However, they couldn't work out the basic technique and how to get it to work. I had my own idea, and went back to my hotel room and knocked up a little demo. When I showed it to them the next day their jaws dropped! After that I actually stayed on in England for seven months to complete the project and that became the first Fairlight game."

Bo Jangeborg



Released
1985

Genre
Adventure

Developer
Bo Jangeborg

Publisher
The Edge

Saboteur!

"From the moment a friend loaned me a certain Erik Van Lustbader novel, I knew I had to make a ninja game. My first scrolling platformer (called Ninja Darkness) was too slow, so it became the flip-screen game we know as Saboteur! Using static backgrounds also meant that I could focus the Spectrum's power on having large sprites for the main characters. Oddly enough, reading Lustbader's book, The Ninja, again 30 years later, I now realise that the half-finished building from the book must have subconsciously influenced the design of the map."

Clive Townsend

"Clive Townsend joined the company in 1985 to help out with graphics, and showed us a demo in which you could manipulate a ninja warrior. Mike Richardson helped him develop a routine for flipping from one room to another and, voilà, Saboteur! was born. This game was probably Durell's second best seller after Harrier Attack!, and its sequel Saboteur II: Avenging Angel did almost as well. Clive was a real character with great imagination and a penchant for Pot Noodle. He loved drawing incredibly convoluted cave systems populated by rabid dogs, motorcycles and helicopters!"

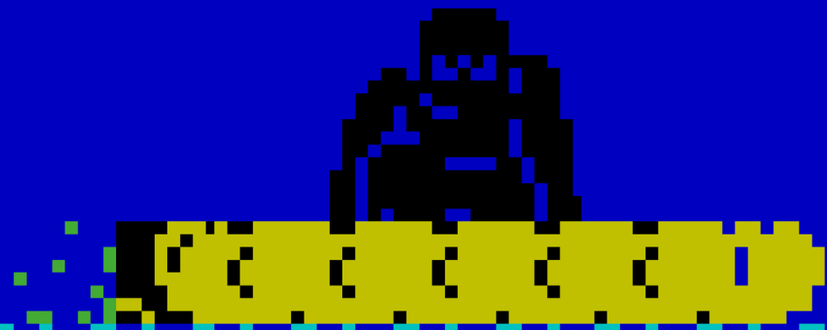
Robert White

Released
1985

Genre
Action

Developer
Clive Townsend

Publisher
Durell Software



Spy Hunter

"Spy Hunter was one of those perfect Spectrum games that was simple in execution, bare-boned as an arcade conversion, and yet insanely addictive. I've always considered it a perfect example of how to execute a subtly increasing difficulty level – with practice you could always get a little further each time. Sure, some of the uncontrollable ricochets that occasionally bounced you off the other cars and into the fields were a little frustrating, but that didn't stop me from losing weeks of my life on this one."

Tony Dillon

Released
1985

Genre
Arcade

Developer
Denton Designs

Publisher
U.S. Gold





Hyper Sports

"It's 1985, a year after Ocean released the stick-smashing Daley Thompson's Decathlon. With a deal to convert Konami's coin-ops in the bag, the Manchester games giant turned out this gold-plated conversion – the perfect 'sequel' to its own take on Track and Field – under its newly acquired Imagine label. Surely it was no coincidence that, during the conversion to the Spectrum, the main athlete was tweaked to look exactly like Daley's real-life decathlon rival Jürgen Hingsen?"

Tony Horgan

Released
1985

Genre
Sports

Developer
Jonathan Smith

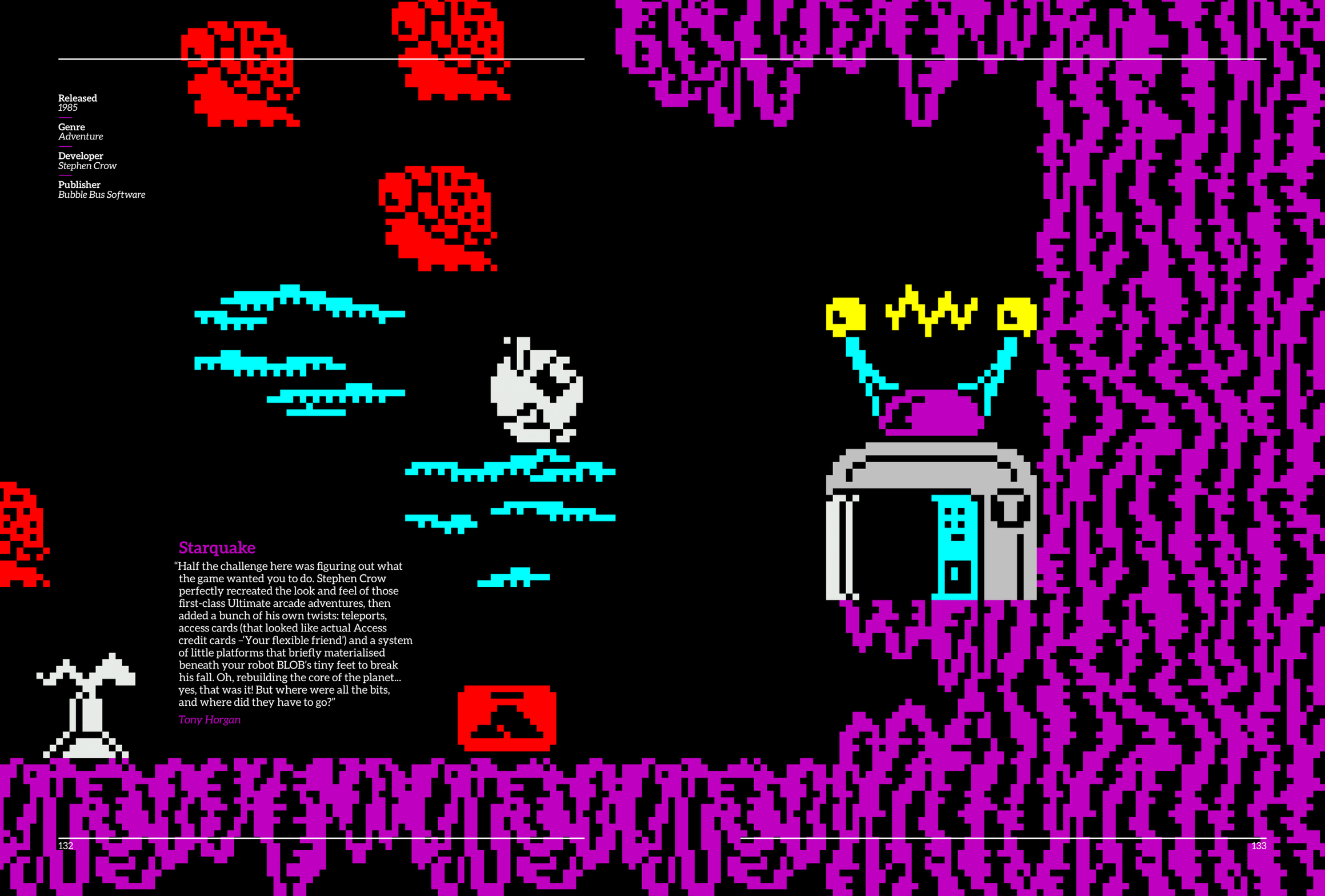
Publisher
Imagine Software

Released
1985

Genre
Adventure

Developer
Stephen Crow

Publisher
Bubble Bus Software



Starquake

"Half the challenge here was figuring out what the game wanted you to do. Stephen Crow perfectly recreated the look and feel of those first-class Ultimate arcade adventures, then added a bunch of his own twists: teleports, access cards (that looked like actual Access credit cards –'Your flexible friend') and a system of little platforms that briefly materialised beneath your robot BLOB's tiny feet to break his fall. Oh, rebuilding the core of the planet... yes, that was it! But where were all the bits, and where did they have to go?"

Tony Horgan

Rocky/Rocco

"Finding itself in the ring against a tough opponent – Elite's officially-endorsed Frank Bruno's Boxing – Rocky suffered an early knock-down when legal wranglings over a certain film ended in deflected litigation and was subsequently renamed Rocco. Sporting superior graphics to Elite's counterpart, Rocco simplified the artform somewhat with frantic stabs to left and right, plus attack and defend. Regardless though, it was great fun slugging it out against Cimbel-Lin, Ted Matare, Jansen Sino and Fighter Bull on the way to lifting the World Championship belt."

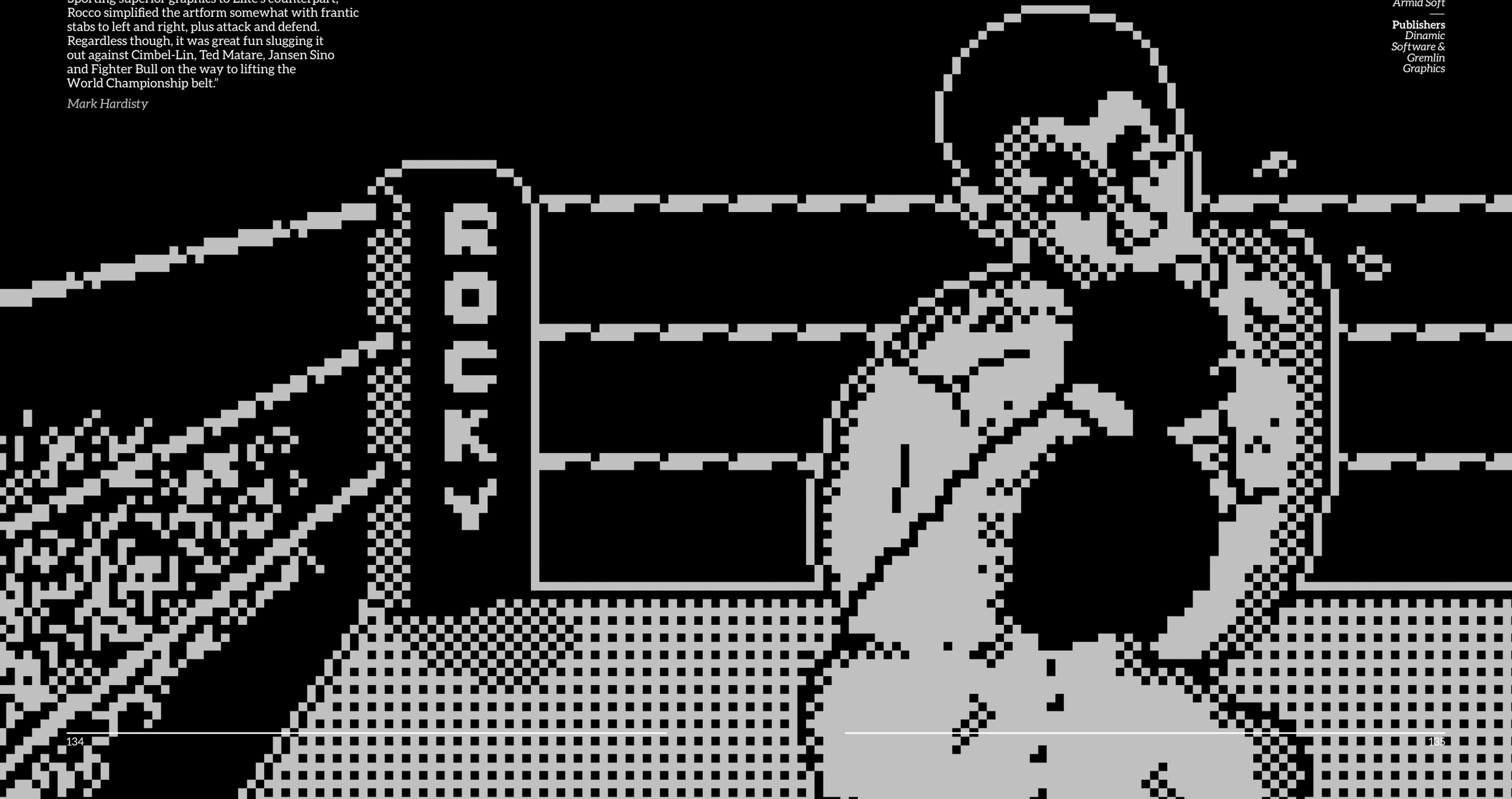
Mark Hardisty

Released
1985

Genre
Sports

Developer
Armid Soft

Publishers
Dinamic Software & Gremlin Graphics



I, of the Mask

"I remember eagerly buying my copy of I, of the Mask for £9.99, taking it home and spending hours exploring the huge 3D maze. The filled 3D graphics and speed of the gameplay never failed to impress me, but I ended up thinking I must be doing something wrong as I wasn't getting very far and my attention started to wane. It was only 30 years later when I met Sandy White that he told me he'd spent so much time on the graphics routine he'd omitted to include a proper game. So it wasn't just me, then!"

Mark R. Jones

Released
1985

Genre
Action

Developer
Spaceman

Publisher
Electric Dreams Software



Finders Keepers

"Finders Keepers was, as far as I know, the only platform game that also had some mazes thrown in to mix things up a bit. I was quite pleased to be able to do that, but getting the mazes to scroll smoothly was difficult and I was never fully satisfied with how it turned out. But from Spellbound onwards I was happy with how I'd designed my 'Windimation' system, allowing the player to build up detailed instructions without having to remember a list of words as was necessary for more traditional text adventures."

David Jones



Released *1985* / **Genre** *Adventure* / **Developer** *David Jones* / **Publisher** *Mastertronic*

Spellbound

"As much as I enjoyed Finders Keepers it wasn't until David Jones' sequel, Spellbound, that I really fell in love with the series. For me it was the powerful drop-down command window ('Windimation') that combined the complexity of a text adventure with the simplicity of an arcade game. Even better was the madcap story, where Gimbal the Wizard has imprisoned himself whilst making a rice pudding! The craziness would continue in Knight Tyme, where you find yourself on board a starship in the future, and Stormbringer, where you must find your evil clone the 'Off-White Knight'."

Paul Driscoll



Released *1985* / **Genre** *Adventure* / **Developer** *David Jones* / **Publisher** *M.A.D.*

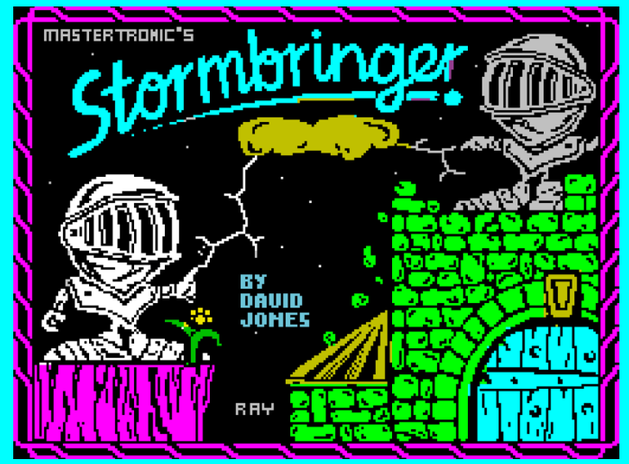


Released *1986* / **Genre** *Adventure* / **Developer** *David Jones* / **Publisher** *M.A.D.*

Knight Tyme

"When it came to designing Knight Tyme, I took a fairly relaxed approach by today's standards: I'd have a few ideas for puzzles and room layouts and then I'd say to Ray Owen something like, 'This one's set on a space ship. Please give me ten screens full of graphics for the inside of space ships, a transporter pad, and a view screen like the one on Star Trek with two crew members sitting in seats.' When the graphics were ready, I'd put them in the game and that would spark a whole load of new ideas. It was a much more dynamic process back then."

David Jones



Released *1987* / **Genre** *Adventure* / **Developer** *David Jones* / **Publisher** *Mastertronic*

Stormbringer

"Ray Owen created all the graphics for all the Magic Knight games, and the entire saga started from an idea that Ray's father Albert had. The image of Magic Knight as seen on the various Spectrum loading screens is very close to the picture that Albert first showed me and I was immediately taken with the idea, particularly as the majority of games at the time seemed to be based around heroic characters in the future, soldiers, or combat vehicles of some sort."

David Jones



“I think the problems associated with colour clash meant that artists had to be particularly inventive when coming up with illustrations.”

Tony Dillon



Three Weeks in Paradise

"This was my first game as a full-time programmer for Mikro-Gen. Another title in the Wally Week series, the game was supposed to ship with the Mikro-Plus hardware device, giving me 64KB of memory to play with instead of 48KB. I could not have been more excited! Unfortunately, Mikro-Gen decided to kill the Mikro-Plus at the 11th hour, so I had to cram my entire game into just 48KB. My first review was 98%, so I learned a good development trick: make more game than you need, then choose the best bits!"

David Perry

Released
1986

Genre
Adventure

Developer
David Perry

Publisher
Mikro-Gen

The Great Escape

"'It'd be good in 3D.' If it wasn't for that throwaway comment by a Mirrorsoft executive during an early pitch, The Great Escape may well have ended up as a 2D scroller. But Ocean got the deal and a few months in we had a visit from David Ward to check on our progress. I showed him the main character walking over a black background, but I could tell he wasn't that impressed, so I wandered over to the only finished graphic we had – the prison hut. I muttered something like 'The good thing about this system is…' as I casually guided the character behind the hut. That did the trick, and Mr. Ward smiled."

John Heap

"It's impossible to imagine a modern WWII game where killing is not the key to success. Denton Designs did, however, and The Great Escape was probably the most gripping and atmospheric Spectrum game as a result. Stealth was the key as your POW snuck around the castle raiding supply rooms, scampering along tunnels, and dodging searchlights. The monochromatic graphics really set the scene for a tense but oh-so-exciting quest for freedom as you raced around trying to advance the escape while following the POW routine of roll call and meal times. Being a prisoner of war certainly was a full-time occupation."

Robin Hogg

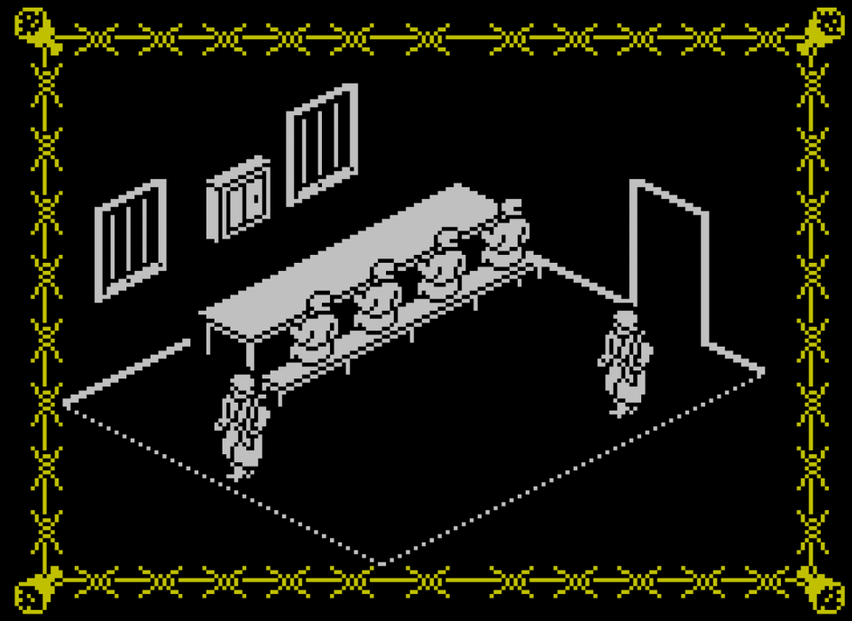
Released
1986

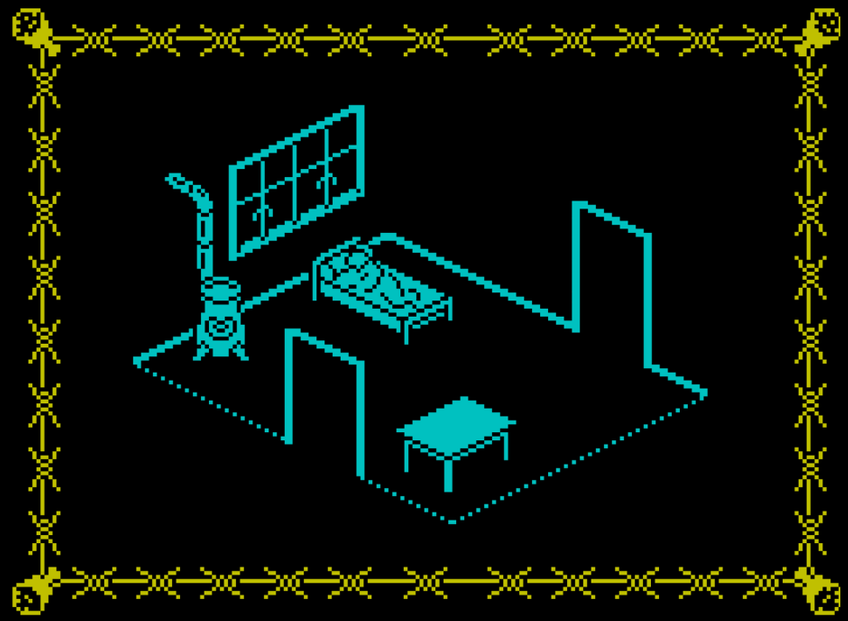
Genre
Adventure

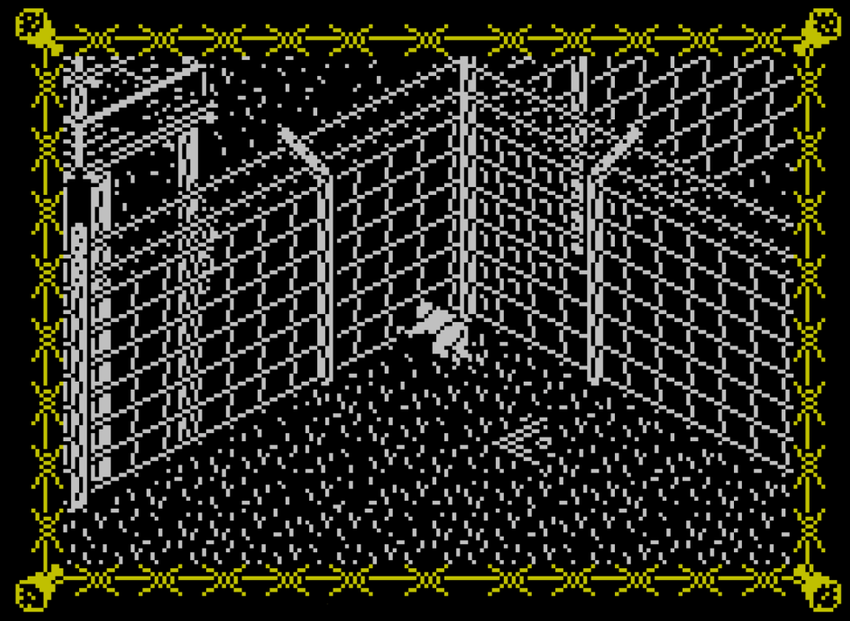
Developer
Denton Designs

Publisher
Ocean Software









An interview with Dawn Drake

Dawn Drake is one of the most fondly-remembered graphic artists from the Spectrum era, and one of just a handful of women working in the games industry at that time. After learning her craft under the mentorship of veteran artist Simon Butler, she went on to work with Mike Lamb at Ocean Software, producing classics such as Target: Renegade, RoboCop, and Batman: The Movie.

How did you first get interested in art?
My mother says I was an artistic child, always drawing (especially on the walls!). At primary school I loved drawing and would even make my own magazines, so my love of art began at an early age. After I finished school I went to Southport Art and Technology College to study foundation and graphics. I loved it and met several wonderful people including Martin McDonald (whom I later worked with at Ocean Software). My first experience working artistically on a computer was at Canvas Software – it was a giant leap from one extreme to another.

How did your career in games get started?
After college I had several jobs, including graphic artist for an advertising company. After a couple of years I decided I wanted more of a challenge, so I responded to an advert for a board game artist at Canvas Software in Crosby. I was interviewed by Simon Butler and the late Steve Cain; they told me that the board game vacancy no longer existed, but there was an opening for a computer game artist and I could learn in-house. One of the directors of Canvas cautioned Simon and Steve that I could be a distraction. Despite that, I got the job – and yes, I was a distraction!

It took a lot of patience and hard work to begin with, and dealing with programmer limitations, tight deadlines, attributes, colour clash, and blocky pixels was initially incredibly challenging – it felt like I wouldn't be able to produce anything worthwhile. However, I eventually managed to get to grips with the Spectrum.

What was your first Spectrum game?
Unfortunately I can't remember what my first Spectrum game was – these days they all seem to melt into one! During my time at Canvas, however, I remember working on Road Runner, Wizard Warz, and Charlie Chaplin.

How did you end up working for Ocean?
Troubled times at Canvas led to a few of us jumping ship in early '88. I was lucky enough to get an interview with Gary Bracey and Steve Wahid at Ocean Software. The early years at Ocean felt like being part of a family, and it's an experience I will always remember fondly. The social scene was also second to none – you could fill a book with some of the antics!



Target: Renegade / *1988*

“One of the directors of Canvas cautioned Simon and Steve that I could be a distraction. Despite that, I got the job – and yes, I was a distraction!”

You worked on several games with Mike Lamb; what was the experience like?
After I joined Ocean I was thrown in at the deep end to help complete Target: Renegade after the previous artist had left. I was partnered with Mike, and had to pull my socks up pretty quickly. Mike was quiet and passionate about his work and this rubbed off on me as I really valued his opinion. I think this ultimately created a good working relationship between us.

What did a typical day in front of the computer look like?
I'd start off with a cup of tea to make me human, then get to work on the day's tasks. There'd be the odd interruption here and there for a chat, but as our office was one of the few with a door (and not in an open-plan area) we could focus better on the work. By the end of the day my eyes were usually pink and screen-shaped!

Which programs did you use to create your Spectrum art?
I used a combination of a custom bitmap editor and Melbourne Draw. Initially I had to use the fiddly micro-drive cartridges, but when I worked on RoboCop I upgraded to the Spectrum +3 which felt much more robust.

> *RoboCop surprised everyone by becoming the first game to gross a million pounds, and spent 18 weeks at No. 1 in the charts*

What were the best and worst aspects of creating art for the Spectrum?
The worst aspect was definitely the attributes. Ugh! No matter how you tried to work around them, you eventually ended up not bothering. The best aspect was being able to create images that looked right – or at least, passable – and didn't end up giving you nightmares!

What was your process? Did you plan on paper, or jump straight in?
I usually did some research, followed by a few sketches, and then ploughed straight in. After that, I'd either pull my hair out in frustration when things went wrong, or scream and purr when things went right!

How did your process change throughout your career?
My methods changed in later years, but not so much on the Spectrum. Later on I digitised the odd image, but generally it was a combination of sheer determination and a good eye.

What was the development time for a typical game?
The games were usually needed yesterday, and some deadlines were incredibly tight. For example, I worked on Supercycle with the late Ian Weatherburn and the entire game was developed over a continuous 48-hour period. I think this was the shortest development cycle ever – at least, it was for me!

Later games such as RoboCop and Batman: The Movie were almost as bad, due to the rush to get them out so we could piggy-back on the hype and media frenzy surrounding the film's release.

Did you receive much artistic direction, or did you have complete freedom?
At Canvas, once a strategy was decided we pretty much had free reign under Simon Butler's guidance. At Ocean, it was generally a case of keeping to the chosen film sections, with the odd storyboard and creative meeting thrown in. However, artwork would occasionally get cut if the programmer accidentally deleted or omitted it; I still twitch involuntarily when I think back to the many lost images!

When it came to Spectrum art, which aspect did you most enjoy?
For me, it was definitely sprite work, simply because it was more of a challenge. Background work was simple, but I usually found it quite monotonous.

Did you have much input in terms of game design?
In the early years at Canvas it was basically a team effort, but Simon Butler was art director so we always had some guidance even after we had all tried to add our two pennies' worth! At Ocean, it was mainly Mike Lamb and I – we had regular creative meetings with upper management, but generally the programmers and artists drove the game from inception to completion.

Did you pay much attention to magazine reviews?
Reviews in magazines such as Crash and the like were often taken with a pinch of salt, but I was really pleased with most of the comments, especially those which gave constructive criticism I could learn from.

If you had the chance to revisit any of your games, what would you change?
Definitely Charlie Chaplin – I didn't like my graphics and would have loved more time to be creative. In retrospect, I'd also change some of the graphics in Batman: The Movie and possibly implement more perspective gameplay, as I really liked those sections.

Was there anyone in the industry whose work was inspirational to you?
Simon Butler was generally my go-to-guy if I had an artistic problem, he was a great mentor and friend during my time at Canvas and Ocean, as was the late Martin Holland whom I worked with at Canvas and Software Creations. I'd also include other Ocean artists like Bill Harbison, Steve 'Jolly' Thomson, Martin McDonald and Ray Coffey – all fantastic artists!

What Spectrum games impressed you, or had an influence on your work?
Usually the other guys in the office played the games and the rest of us gathered round to take notes. I did like The Sacred Armour of Antiriad on the Spectrum – it had lovely graphics and ignored the attribute boundaries wonderfully.

Outside of games, what were your biggest artistic influences?
A couple of my favourites included Preston Blair's animation instructional books, and The Human Figure in Motion by Eadweard Muybridge for its invaluable action reference. I was also a huge fan of movies and fiction, especially horror, thrillers and full-on action.



Batman: The Movie / *1989*



The Games - Summer Edition / *1988*



Road Runner / *1987*

Of all the games you've worked on, which are you most proud of and why?
RoboCop would definitely be my favourite; it surprised everyone by becoming the first game to gross a million pounds, and spent 18 weeks at No. 1 in the charts. I'm still waiting for my BAFTA Lifetime Achievement Award!

Were there any Spectrum games you worked on which never saw the light of day?
As far as I can remember, all of the Spectrum games I worked on were published. It was a different story in later years, however!

What was your final Spectrum game? What made you leave the machine behind?
It was Batman: The Movie. After this, Mike (Lamb) and myself were given the opportunity to work on Darkman for the Game Boy. In many ways it was just like creating graphics for the Spectrum, so for me it was an easy transition.

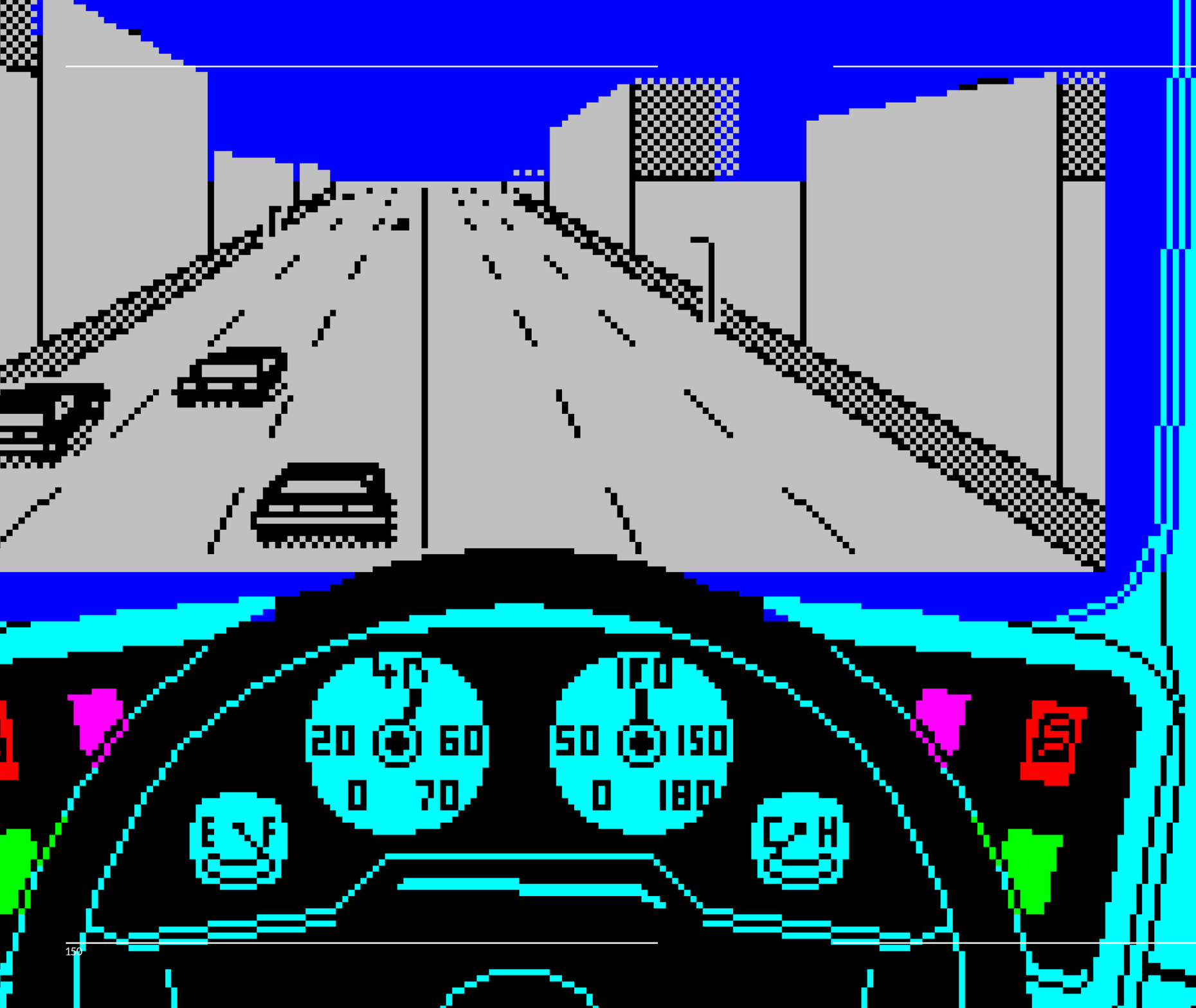
Any stand-out memories from the Spectrum era?
I received many wonderful letters from my international fan club in the early days, which were a great morale booster and offered plenty of feedback and suggestions for games. Bless! I also have a vague memory of Ocean programmer Paul Hughes helping me out by simulating RoboCop's walk up and down the corridor!

Why do you think the Spectrum is remembered so fondly?
For me, what stands out the most is the creative challenge; the demand for Spectrum games was overwhelming and this inspired countless home-grown programmers and artists. The Spectrum seemed to unleash a new wave of talent, creating its own niche in the games industry.

> *By the end of the day my eyes were usually pink and screen- shaped*

Do you still own a Spectrum?
I never actually owned one, mainly because I lived at work and then partied hard afterwards!

What are you up to these days?
I'm a Building Control Officer and Surveyor. Although I've retired from games, my son Max hopes to follow my footsteps into the games industry, and I occasionally attend retro gaming events and hook up with the old Ocean crew for a chinwag.



Turbo Esprit

"I used to pride myself on eliminating all known bugs before a game was released, but in Turbo Esprit there is one that I just couldn't get to the bottom of. Every once in a while, a computer controlled car would drive down the wrong side of the road and cause a traffic jam. I spent hours trying to figure out why, but eventually I gave up, figuring that players would probably imagine this had been programmed on purpose! To this day Turbo Esprit remains one of my proudest achievements."

Mike Richardson

"For Turbo Esprit I wanted to move away from 2D and suggested to Mike Richardson that he could create the illusion of a 3D city from just a simple memory map of heights. The memory map could include roads, cars and people, which could then move around in real time. However it's one thing to have an idea and a completely different one to implement it, which Mike did brilliantly. Harrier Attack! was written in around three weeks whereas Turbo Esprit took him ten months. The association with Lotus was just marketing – there was no actual technical assistance, but it certainly gave the game extra appeal."

Robert White

Released
1986

Genre
Action

Developer
Mike Richardson

Publisher
Durell Software



Green Beret *Imagine*



Firelord *Hewson Consultants*



Cybernoid *Hewson Consultants*



Myth: History in the Making *System 3*



Operation Wolf *Ocean Software*



Pang *Ocean Software*



Xeno *A 'n' F Software*



Batman *Ocean Software*



The Great Escape *Denton Designs*



Fairlight *The Edge*



Fantasy World Dizzy *Codemasters*



Exolon *Hewson Consultants*



Last Ninja 2 *System 3*



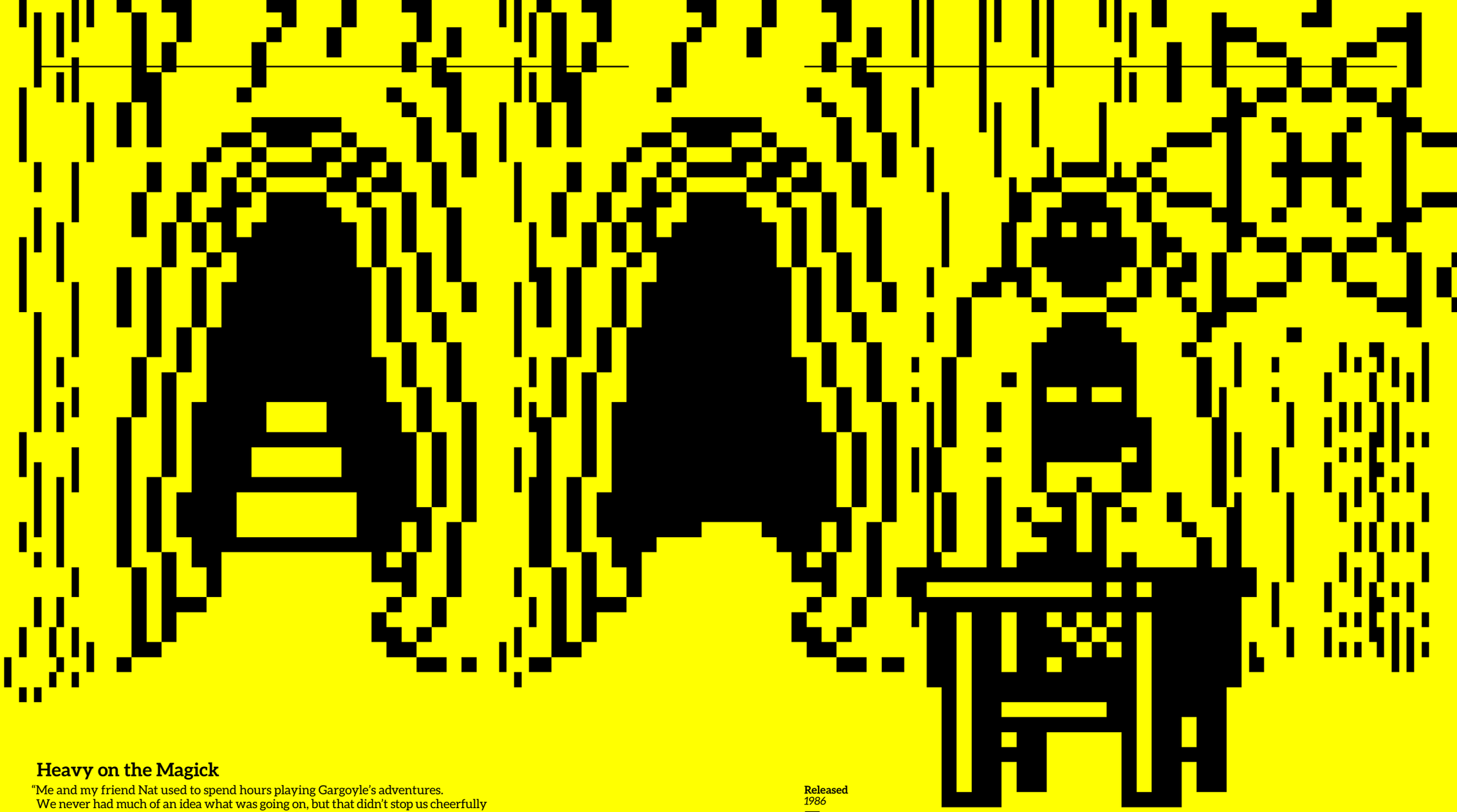
Implosion *Cascade Games*



Gryzor *Ocean Software*



Battle Command *Ocean Software*



Heavy on the Magick

"Me and my friend Nat used to spend hours playing Gargoyle's adventures. We never had much of an idea what was going on, but that didn't stop us cheerfully stomping around the streets of Dun Darach and Marsport, mapping our progress on bits of sellotaped-together graph paper. Heavy on the Magick was the most atmospheric of them all, with a new text interface and unique 'blown up' sprites that allowed loads of animation frames to be crammed into the Speccy's memory. The manual promised expansions and sequels but sadly this was the last of its line."

Jonathan Davies

Released
1986

Genre
Adventure

Developer
Carter Follis Software

Publisher
Gargoyle Games

Movie

"Isometric 3D seemed so futuristic when it first hit the 8-bit home computers. 'What? It's in 3D? You're joking?!' Well, kind of. Movie is a great example of the isometric genre, following in the footsteps of greats like Fairlight and Knight Lore. Despite the game's inexplicable title, Movie's detailed monochromatic visuals and sinister speech-bubble dialogue superbly managed to recreate a New York gangster atmosphere. Working out the puzzles was enjoyable enough, but the game's innovative icon-driven control system often made getting a shot out first a tough challenge!"

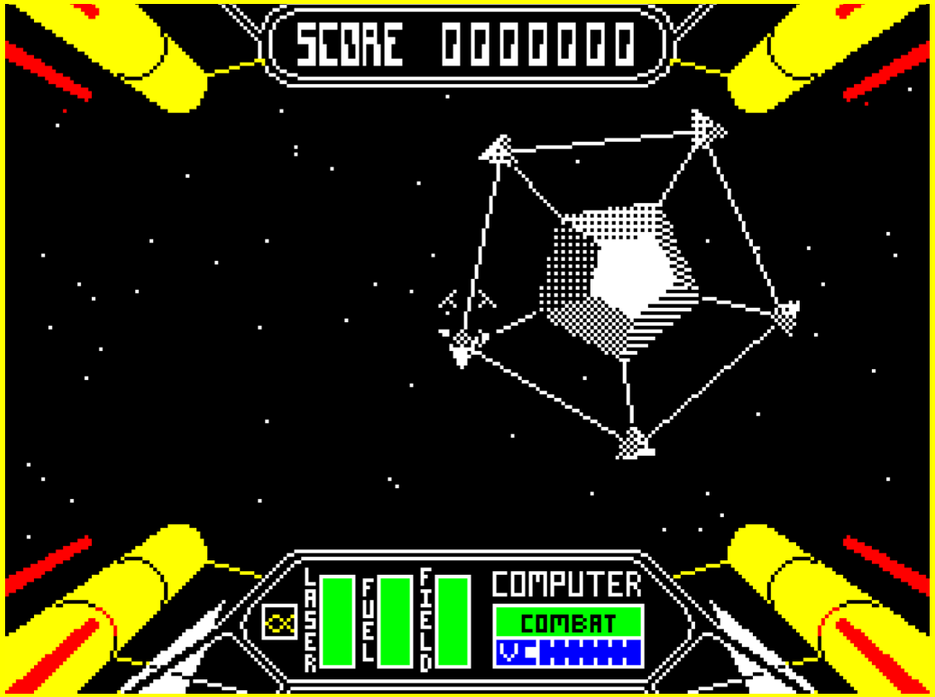
Nick Roberts



Released
1986

Genre
Adventure

Developer and Publisher
Imagine Software



Starstrike II

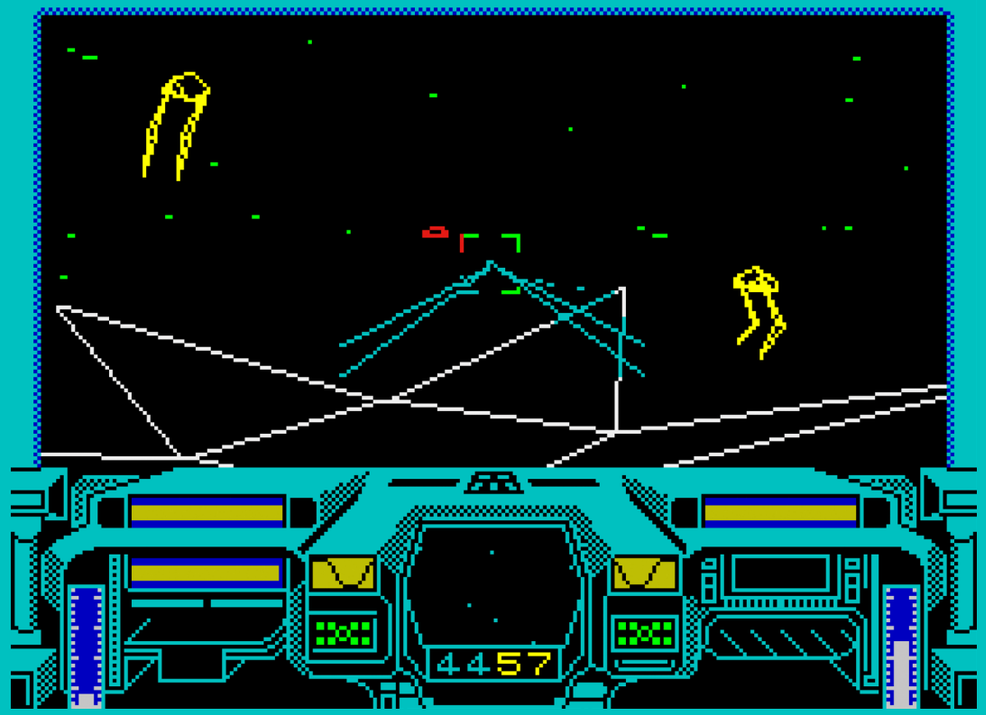
"Another impressive feat of 3D crammed into the tiny, cramped cell that the 48K Spectrum offered adventurous coders. They even had space for a few impressive sound effects, which, as I believe I noted at the time, saved me the all-too-frequent shame of being caught adding the sound effects orally. Although pigeon-holed at the time as merely a retool of Elite with solid graphics, the game was similar but by no means the same. Absorbing and entertaining, it was a gateway drug, along with other titles like Tau Ceti, and the genesis of many sci-fi gamers' lifelong addictions."

Phil South

Released
1986

Genre
Shoot 'em up

Developer and Publisher
Realtime Games Software



Starglider

"My allegiance to the C64 was always shaken when the Speccy hosted a 3D game. The likes of Elite, Star Wars, Starion and Driller always ran better on the Z80A processor. And so it was the case with Jez San's Starglider, the glorious vector-graphic shooter which looked almost as good as its 16-bit counterparts. With a realistic 3D environment, swooping arcade combat and animated characters that span and flapped and stomped around, it was a thoroughly engaging shoot 'em up. It may never have won any prizes for storytelling, but the action was so compelling, you just didn't care."

Steve Jarratt

Released
1986

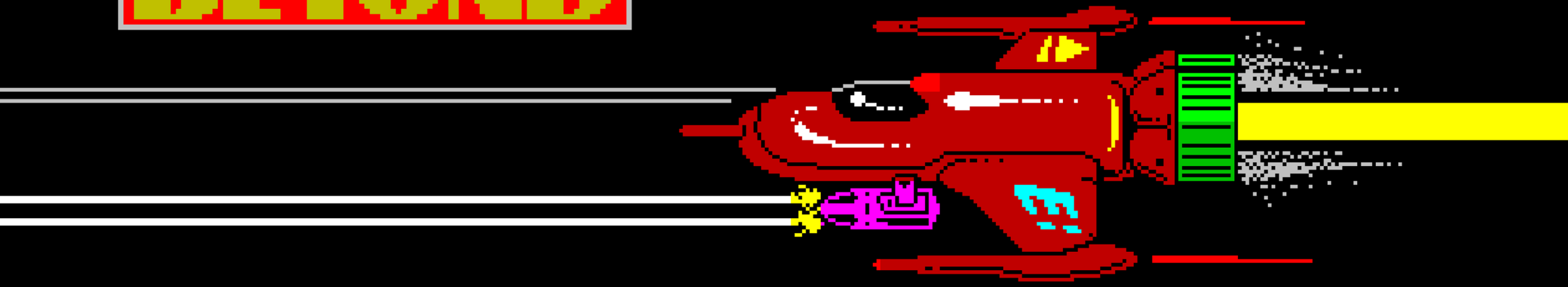
Genre
Shoot 'em up

Developer
Realtime Games Software

Publisher
Rainbird Software

BEYOND

Shadowfire / *1985*



Beyond Software was a UK computer game publisher originally established in 1983 by EMAP, the publishing giant responsible for numerous computer magazines, including C&VG and Sinclair User. The Beyond label was eventually sold to Telecomsoft in 1985 for a reputed six-figure sum, and ultimately merged with the Firebird software label.

Beyond was originally headed up by Terry Pratt, founding editor of C&VG. It was Pratt's tenacity in pursuing Mike Singleton to develop a game for the fledgling publisher that would prove to be instrumental to the company's success: Singleton's seminal The Lords of Midnight would ultimately lead to a publishing deal with US developer First Star, as well as attract talented developers such as Denton Designs to the label.

Between 1983 and 1987, Beyond was responsible for some of the Spectrum's best-loved games, from eccentric offerings such as Shadowfire and Enigma Force, to The Lords of Midnight and Doomdark's Revenge (arguably two of the most significant and influential computer games of all time).

Like many companies, Beyond started out by releasing a number of relatively simple games which would belie the depth and complexity of its later titles. The company's debut was Space Station Zebra, a simple space-based shoot 'em up which tasked players with protecting the aforementioned space station from hordes of aliens. Despite the impressive graphics, gameplay was lackluster by comparison. "The graphics are very good," said Crash, "it seems a shame that the game itself doesn't really live up to them."

"Between 1983 and 1987, Beyond was responsible for some of the Spectrum's best-loved games"

Not to be confused with Mastertronic's Magic Knight trilogy, Spellbound arrived hot on the heels of Space Station Zebra in the Summer of '84. Programmed by Pat Norris, Spellbound was, like many games at that time, a clone of the arcade game Q*bert, albeit clad in a Hallowe'en theme.

Despite the game's relative simplicity, Popular Computing Weekly thought Spellbound was graphically superb, while Personal Computer Games called it "a wonderfully innovative development of the Q*bert theme."

It would be the arrival of Psytron that would begin to set the bar in terms of quality and complexity for future releases. Created by Tayo Olowu and Paul Voysey, two engineers who had learned to program the Spectrum in just a matter of weeks, Psytron was a complex, involving, and absorbing arcade strategy game. The profundity of the gameplay, exemplified by the game's 20-page manual, was unparalleled; Crash called Psytron "breathtaking and overwhelming," and gave Beyond its first of many 'Smash' awards.

Beyond's final release of 1984 was the groundbreaking The Lords of Midnight, an epoch-making adventure game written by former English teacher Mike Singleton. A meeting in late '83 with Beyond's Terry Pratt spawned a number of ideas, one of which was Singleton's concept for his 'landscaping' engine that would allow a vast game board with over 32,000 possible viewpoints to be squeezed into the Spectrum's humble 48K memory.

After a brief R&D period, during which Singleton wrote the novella and developed his 'landscaping' engine, The Lords of Midnight was finished in early '84 having taken just six months to write. A masterclass in procedural programming, The Lords of Midnight was to adventure games what Lord of the Rings was to fantasy novels.

"THE game for the spectrum. There is absolutely no doubt about it," said Personal Computer Games, awarding the game 10/10, while Crash slapped a 'Smash' award on its review and called it "Probably the best thing that ever happened to the Spectrum."

After the considerable commercial success of The Lords of Midnight, Beyond and Singleton did not waste any time getting to work on the sequel, Doomdark's Revenge, which arrived in shops just in time for Christmas 1984. Bigger, more challenging, and with five different ways to complete the game, Doomdark's Revenge once again proved to be a unanimous hit with reviewers. Crash gave the game a 'Smash' award, noting that it improved on The Lords of Midnight "in all the right ways," while Personal Computer Games gave the game 10/10, calling it "a far greater challenge than its predecessor."

“Beyond left behind an incredible legacy of groundbreaking games that few companies could ever hope to equal”

The Lords of Midnight was a pivotal success for Beyond in more ways than one: completely enamored with the game, fledgling developer Denton Designs – a small band of talented ex-Imagine programmers and artists – approached Beyond with a concept for an original game.

That game turned out to be Shadowfire, a unique strategy-adventure hybrid which arrived in the Summer of 1985 to considerable acclaim. Charged with saving the world in just 100 minutes, players would guide the eclectic Enigma Force to victory using a truly unique icon-driven interface. Sinclair User gave the game a ‘Classic’ award and called it “a fast and innovative game.” Crash was similarly impressed, calling Shadowfire “state of the art without doubt” and adding another ‘Smash’ to Beyond’s burgeoning collection.

A couple of months after its release, Shadowfire was followed by the Shadowfire Tuner. A cheap and innovative mail-order only product, the Tuner allowed players to load in their Shadowfire saved games and tinker with them to their heart’s content, such as moving objects and characters, locking or unlocking doors, and changing enemy patrol routes. Sinclair User praised its layout and simplicity, while Popular Computing Weekly commented “If, like me, you are one of those people who raved about Shadowfire… here comes the cavalry.”

In 1985, Beyond signed a deal with First Star Software to bring some of the US publisher’s games to the European market. The first title under that deal was Spy vs. Spy, an endearing game of strategy, wits, and one-upmanship based on the infamous MAD magazine comic strip. One of the first games to offer simultaneous two-player action, Spy vs. Spy was an instant classic. “I can’t remember when I’ve had so much fun playing a game,” said the Crash review, earning Beyond its fifth consecutive ‘Smash’ award.

Beyond wrapped up the year with the release of Sorderon’s Shadow: The Legend of Elindor, an absorbing adventure game which took Mike Singleton’s groundbreaking ‘landscaping’ engine and blended it with a text parser typically seen in text-based adventure games. “A true successor to the realms of Midnight,” said Sinclair User, slapping a ‘Classic’ award on their review. C&VG were similarly impressed, calling Sorderon’s Shadow “An extremely clever and sophisticated piece of programming.”

1986 kicked off strong with the release of Enigma Force, the highly-anticipated sequel to Shadowfire. More accessible and streamlined than its predecessor, Enigma Force would draw inspiration from both Shadowfire and Denton Design’s other recent smash-hit, Frankie goes to Hollywood. Sinclair User called it “An excellent game – certainly easier to play and more attractive than Shadowfire,” while Crash thought it “very addictive and immediately playable.”

Aside from Romper Room, an educational alphabet-learning program licensed from First Star, Beyond’s final release that year would come in the shape of Bounces, a sports simulation which one magazine described as “a futuristic squash on elastic bands.” Despite its initial simplicity, the game was favourably received. “One of those games you can keep on coming back to,” said ZX Computing, while Sinclair User called Bounces “An original game with admirably simple rules.”

Sadly, Bounces would be Beyond’s final release for the Spectrum. Numerous titles which were originally destined for the Beyond label, including Mike Singleton’s Dark Sceptre and First Star’s Superman, would eventually be released under the Firebird name, while the eagerly awaited third installment in the Lords of Midnight trilogy, The Eye of the Moon, would ultimately never appear.

A publisher driven by a tenacious desire to be innovative and original, Beyond Software left behind an incredible legacy of groundbreaking games that few companies could ever hope to equal. Indeed, to this day there’s no telling how many Spectrums were snapped up by teenagers eager to explore and conquer the lands of Midnight.



Enigma Force / *1985*



The Lords of Midnight / *1984*



Doomdark’s Revenge / *1984*



Dark Sceptre / *1987*



Released
1986

Genre
Adventure

Developer
Mike Richardson

Publisher
Durell Software

Thanatos

"I was keen to make the game as interactive as possible, so I gave the dragon the ability to grab rocks and characters with its claw, which could then be dropped onto other characters on the ground. One thing I found particularly satisfying was, after running out of dragon breath, to land near the tethered maiden and wait for the knight on horseback to attack. The knight could then be grabbed from the horse's back and dropped onto the horse, eliminating both. It was then just a leisurely return flight to go back and eat the maiden. A good afternoon's work."

Mike Richardson

"Without doubt Mike Richardson was, and still is, one of the most gifted programmers I've ever met. Quiet and unassuming, he is also a talented musician and a real artist. Thanatos in my mind has some of the best graphics ever for the Spectrum, and it's amazing he did it with just 48K of RAM. In fact Thanatos was pure Mike Richardson from beginning to end, with lovely details like the fire-breathing dragon that wades into the sea. Mike's impressive repertoire also included Jungle Trouble, Harrier Attack!, Scuba Dive, Turbo Esprit and Combat Lynx. Durell would not have gained its reputation without Mike."

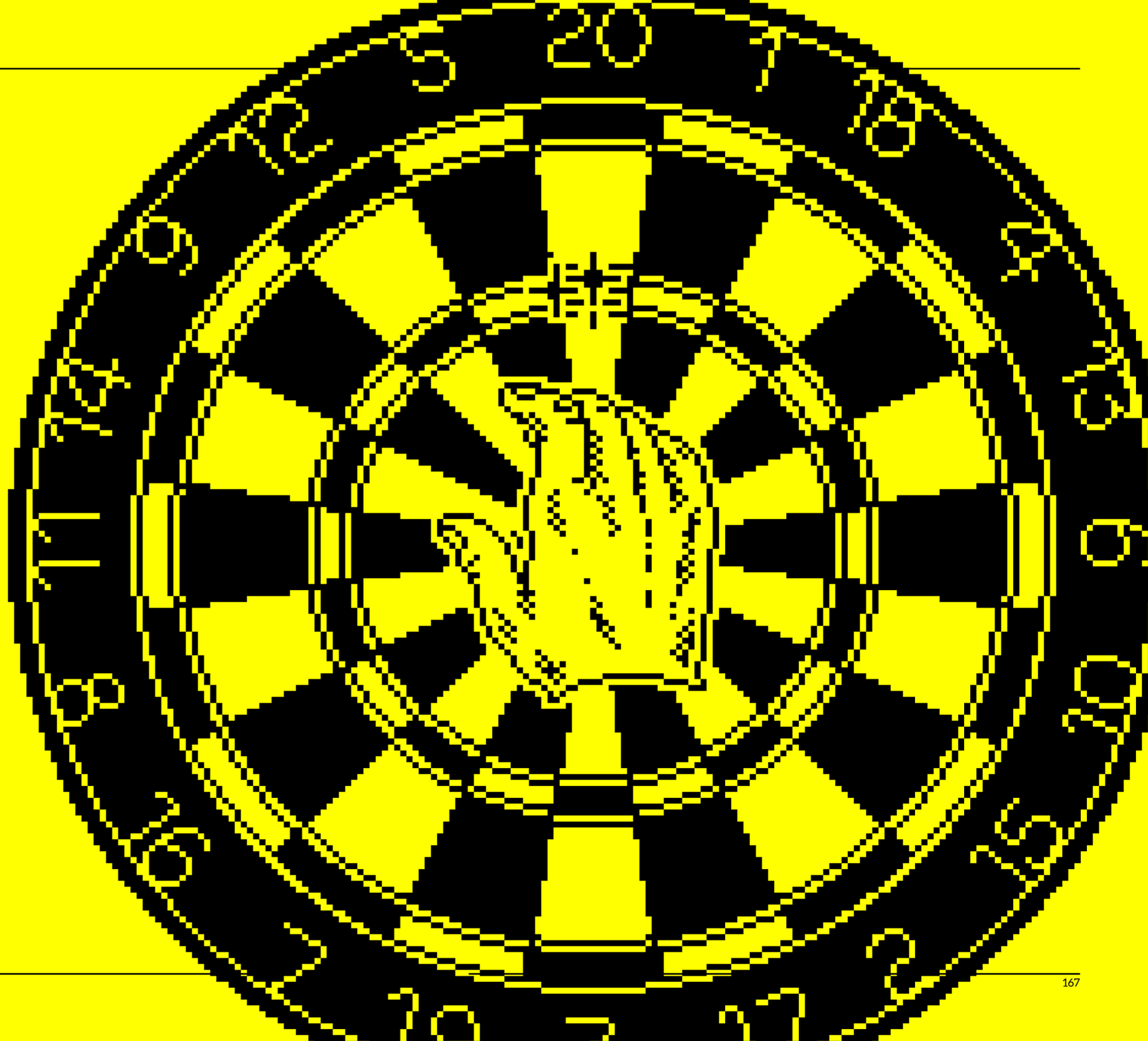
Robert White



180

"180 was my first project, started on my very first day at work, aged 16 and straight out of high school. My brother John had written a really cool 'windows-based' sprite editor for the ZX Spectrum (he'd never seen a windows OS, so he programmed windows how he imagined they would work). I used this to draw the animated hand holding the dart, which was based on my own hand. Being right-handed, the hardest part was continually taking my hand off the keyboard in order to mime the arrow throwing motion, then keeping it in my mind's eye as I plotted the actual pixels."

Ste Pickford

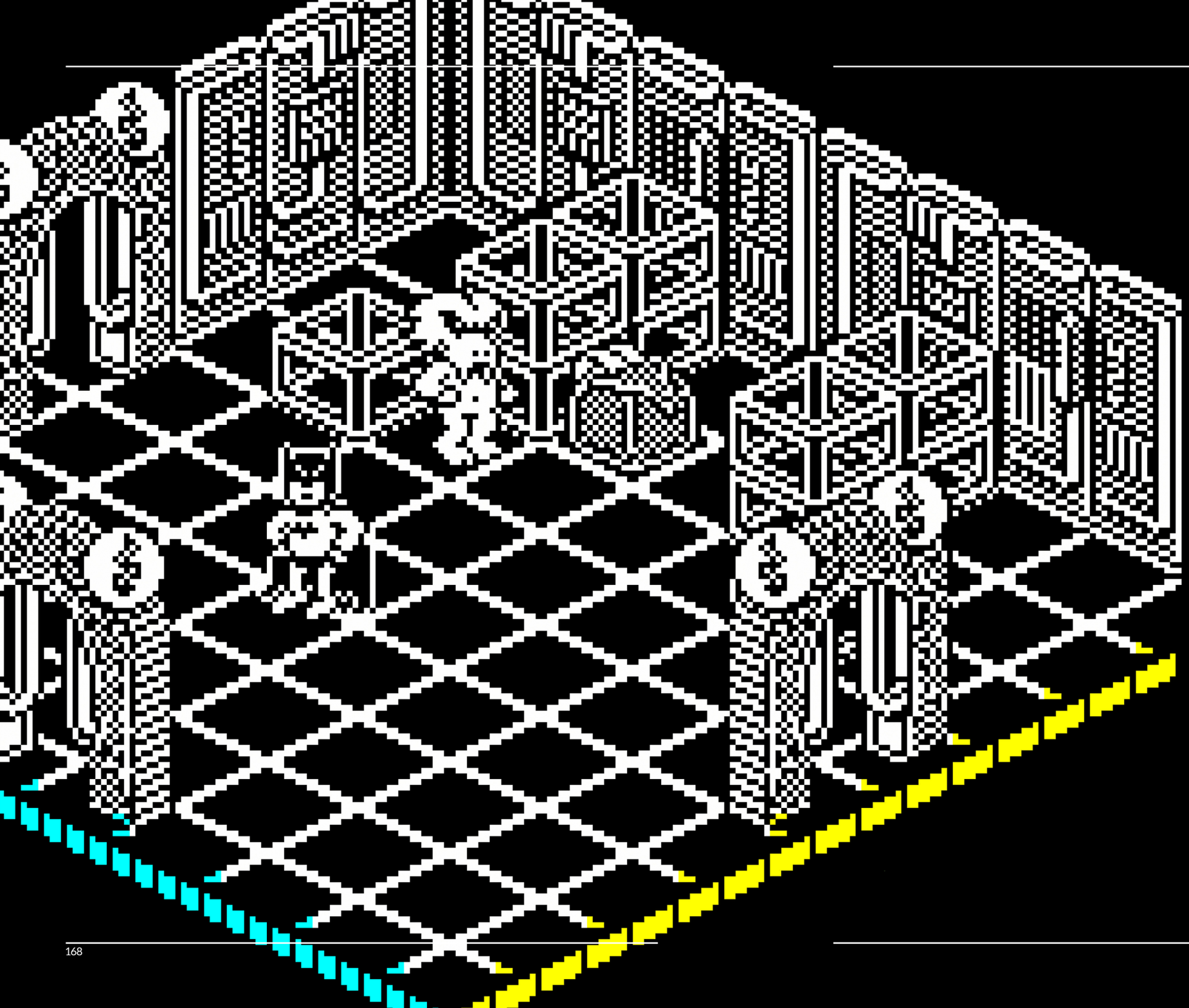


Released
1986

Genre
Sports

Developer
Binary Design

Publisher
Mastertronic
Added Dimension



Batman

"Jon Ritman was always one of my favourite game designers. He had this amazing knack of creating games with real depth and complexity with the simplest building blocks. It was always difficult to know which version of Batman you were supposed to be in this classic – you certainly didn't seem to have the dynamism of the character on the box artwork, being limited to shuffling and the occasional jump, but what the game missed in action it more than made up for with some fiendish puzzles. Sinclair User described it as a classic – and we weren't wrong!"

Tony Dillon

"When one thinks back over the Spectrum's impressive legacy of isometric 3D games, Batman is often overshadowed by the likes of Knight Lore, Fairlight or Head Over Heels. In reality, this oft-forgotten classic crafted by Messrs Ritman and Drummond was arguably the finest of the bunch. Lacking the ability to save our progress, my best mate and I spent almost nine hours one Saturday trying to assemble the Batcraft, before his Dad barged in and commandeered the telly to watch the news. I like to think that somehow, somewhere, Batman still waits for our return, impatiently tapping his foot."

Andy Roberts

Released
1986

Genre
Adventure

Developer
Jon Ritman

Publisher
Ocean Software

Your Sinclair magazine

Originally published by Dennis in 1983 as Your Spectrum, the magazine was subsequently rebranded in 1986 as Your Sinclair. Over its ten-year lifespan, the magazine built up an extremely loyal following thanks to its humorous and irreverent editorial content and no-nonsense game reviews. Your Sinclair was later sold to Future Publishing in 1990, and eventually closed in 1993.

James Leach

"Every magazine I've worked on has had a team spirit but Your Sinclair took that to a whole new level. The readers were part of the crew. The in-jokes, the secret argot, the sheer fun of the mag was infectious and we occupied a cute, wacky niche for years. It was exactly the magazine the spongy-keyboarded little micro deserved, and I got to play games, write copy that made me laugh, and meet some of my heroes from the development world. I grew up with the machine and was a huge fan; I had the best job in the world."

Phil South

"Late nights eating pizza in a darkened office after an evening at the pub, playing games that nobody else in the world had yet seen. Everyone grabbing one of any bit of merchandise that came into the office. Steve England and the late and sorely-missed Felix Dennis intentionally letting a group of dedicated maniacs do whatever they wanted to make the magazine something special. Marcus and I being made up as pantomime dames and ending up looking more like drag queens. Being chaperoned around Alton Towers and doing all the rides in an hour and a half."

Jonathan Davies

"The Multiface revolutionised the taking of screenshots for Your Sinclair reviews. No more need to photograph the screen and wait for the film to come back from Boots. Now you merely had to press the red button to freeze the game, wait 40 seconds for the screenshot to save to tape, and repeat until you'd filled up one side of a C15. Then you'd load in your screenshots one by one, wait a few minutes for each one to appear line by line from the inkjet printer, then hand them over to the art department to be cut out and stuck onto the pages with wax. Easy!"

"I would receive Spectrum games to review in Jiffy bags, their cassette boxes usually reduced to splinters of plastic by the postman. Having struggled through each game as best I could, I'd save some screenshots onto a C90, type out my review on a green-screen Amstrad CPC464 and print it off on my dot matrix printer, then squish everything back into the Jiffy bag and mail it back to Your Sinclair HQ in London. Cutting-edge stuff for 1987, although everything changed once my Atari ST arrived: reviews could now be saved onto 3.5-inch floppy discs and posted off to YS. Luxury!"

Matt Bielby

"Your Sinclair was fairly lonely at Dennis, with only Zero magazine to keep it company, but at Future it became the first of many single-format games titles, and it tended to influence them all. What YS gave to Future was irreverence, invention, and a feeling that the words mattered – it was vitally important that we were honest about games, and would always call things as we saw it, but it also counted that we were funny and surprising while we did it. If someone who doesn't care about Spectrums or platform games or whatever could still read YS and enjoy it, we thought, we've won."

"Early YS covers were violent in the extreme. Unlike most rival magazines, who used the same cover artist every issue, we tended to try a different guy each time. We used some big names, like Jamie Hewlett of Tank Girl fame, but some of the things they came up with were not exactly family-friendly and, indeed, out of sync with the tone of the mag, which was risque in a more cheeky fashion. There were knives, guns, bikini-clad Page 3 girls, and gore beyond belief. The basic rule of thumb seemed to be 'Can we get away with this?' And, it turned out, we usually could."

Your Sinclair masthead by Craig Stevenson / 2015



















Fat Worm Blows a Sparky

"It was my wife Veronica who came up with the bizarre title of Fat Worm Blows a Sparky for the game by Julian Todd. It featured a very clever 3D representation of a bug (or worm) wriggling around a computer motherboard, though in hindsight the 3D rendering was possibly a bit too demanding for a poor old Spectrum to handle at speed. Julian actually wrote this in the holidays before heading off to study maths at university, and although it received a great review from Crash magazine (95%), the sales were ultimately disappointing."

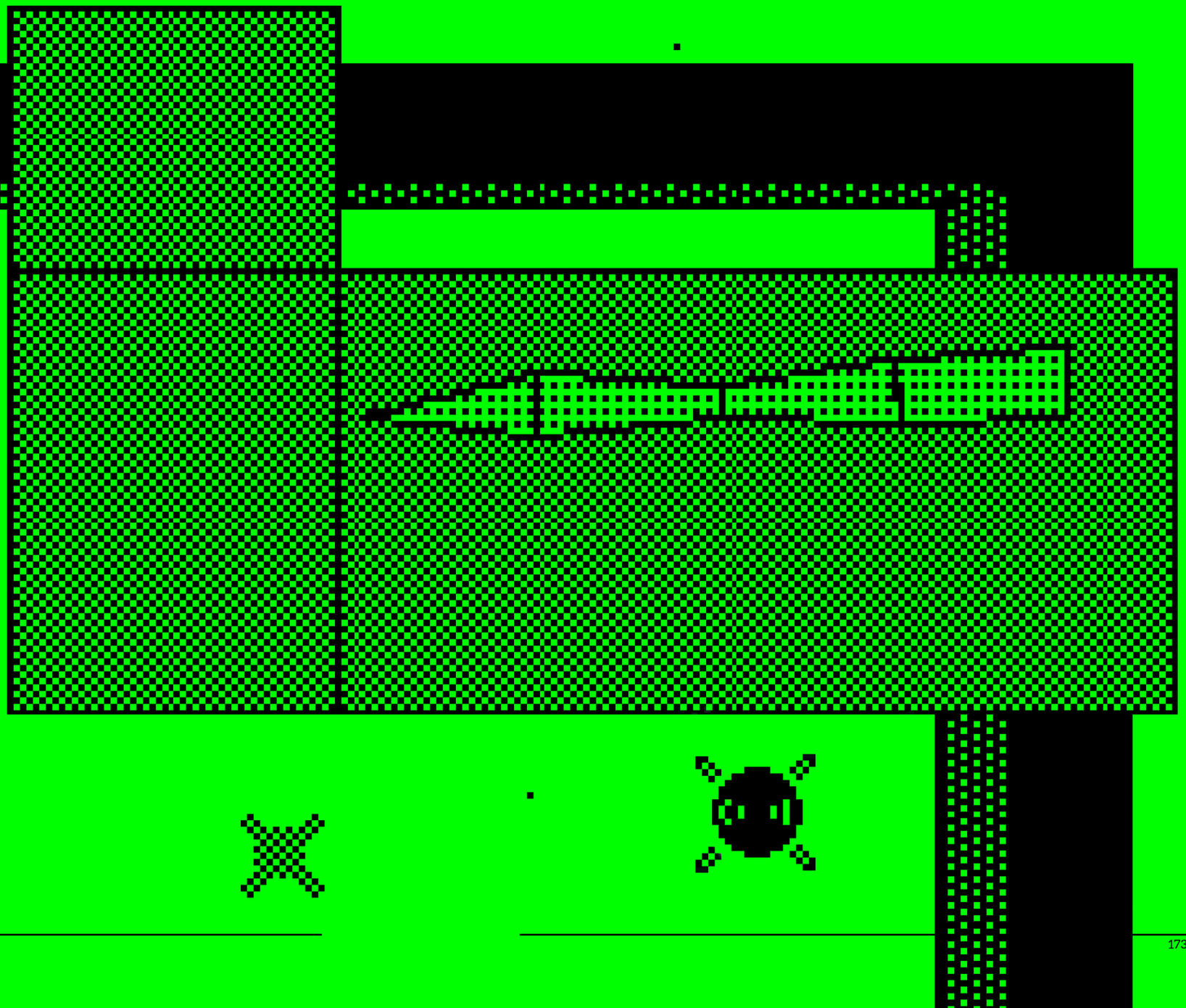
Robert White

Released
1986

Genre
Action

Developer
Julian Todd

Publisher
Durell Software



Roller Coaster

"The theme park is closed and the rides are left running? Health and Safety would have a field day! Your objective as park owner Colonel G. Bogey was to retrieve the bags of money a disgruntled employee had left scattered around the joint. As a young lad, messing around in an empty theme park was the golden ticket here; collecting money was all well and good, but the thrill of avoiding the speeding rollercoaster or Wurlitzer beat that right out of the water. Not only that, there wasn't a queue in sight – surely this was the best theme park in the world?"

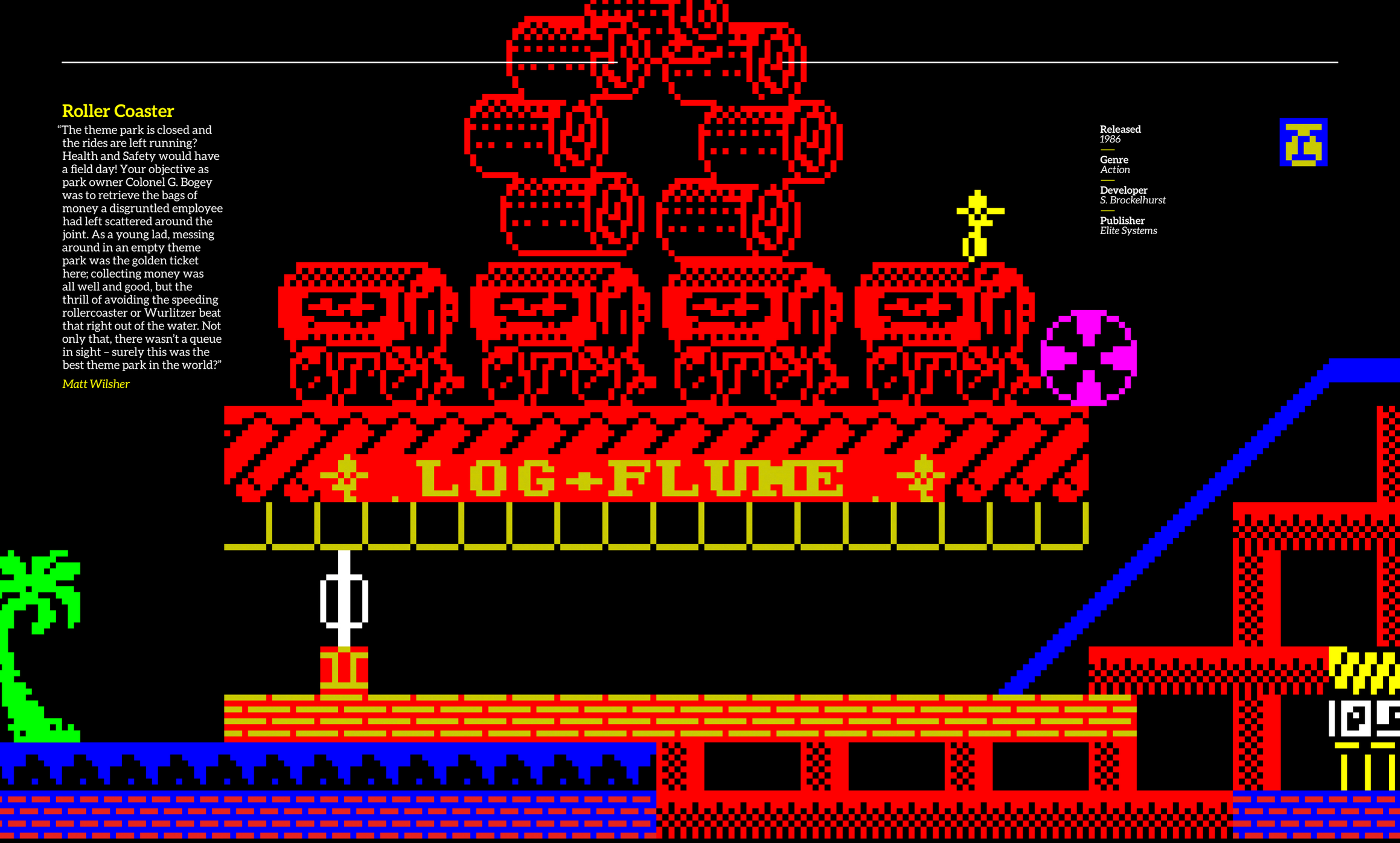
Matt Wilsher

Released
1986

Genre
Action

Developer
S. Brockelhurst

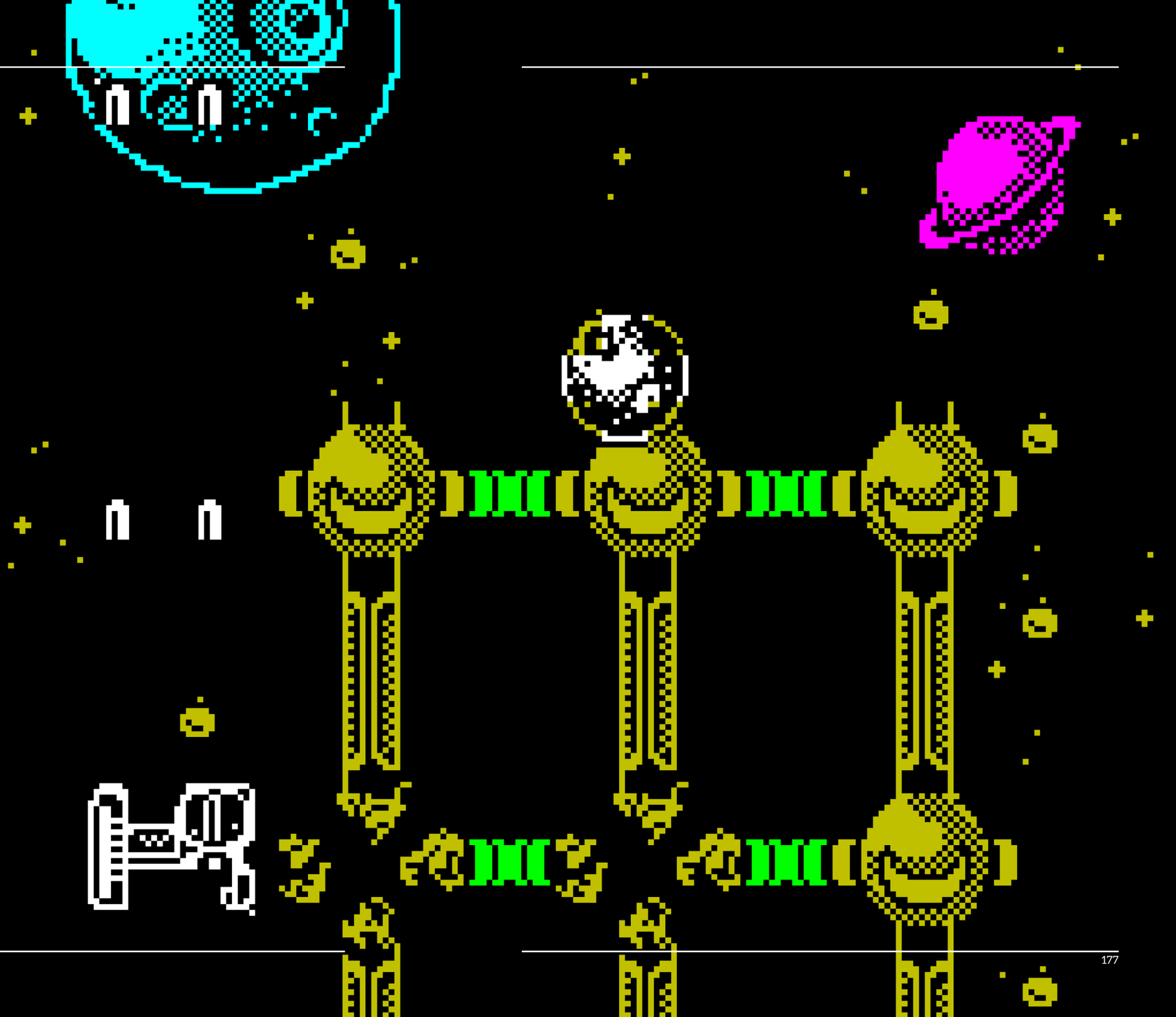
Publisher
Elite Systems



Light Force

"In another of those 'that can't be done on the Spectrum' moments, FTL's Star Force-inspired shooter brought colourful, arcade-style scrolling mayhem to the masses and proved that the old dog was still full of life. Starved of quality shoot 'em up action, Spectrum owners embraced the fast-paced blasting and were dazzled by the sheer number of multicoloured enemies being thrown at them. It didn't hurt, either, that the game was tremendously playable. Light Force was a work of programming devilment and sorcery for which Spectrum owners will always be thankful."

Paul Morrison



Released
1986

Genre
Shoot 'em up

Developer
Carter Follis Software

Publisher
Faster Than Light

Cobra

Released
1986

Genre
Platformer

Developer and Publisher
Ocean

Artwork
Oliver Frey

Dan Dare: Pilot of the Future

Released
1986

Genre
Adventure

Developer and Publisher
Virgin Games

Artwork
Oliver Frey



Contact Sam Cruise

"The beauty of Contact Sam Cruise was that it allowed me to simulate some of the mischief I enjoyed in my mid-teens: exploring buildings you're not allowed in, knocking on doors and scarpering, and generally irritating the locals. All that harmless fun was at your fingertips here, but of course you could also just try to solve 'The case of the Bali Budgie' by answering telephone calls to gain clues. Avoiding either the cops or the gangsters – and sometimes both – really got the adrenalin going, too. A true sandbox game before the term was even invented."

Howard Wilsher

Released
1986

Genre
Adventure

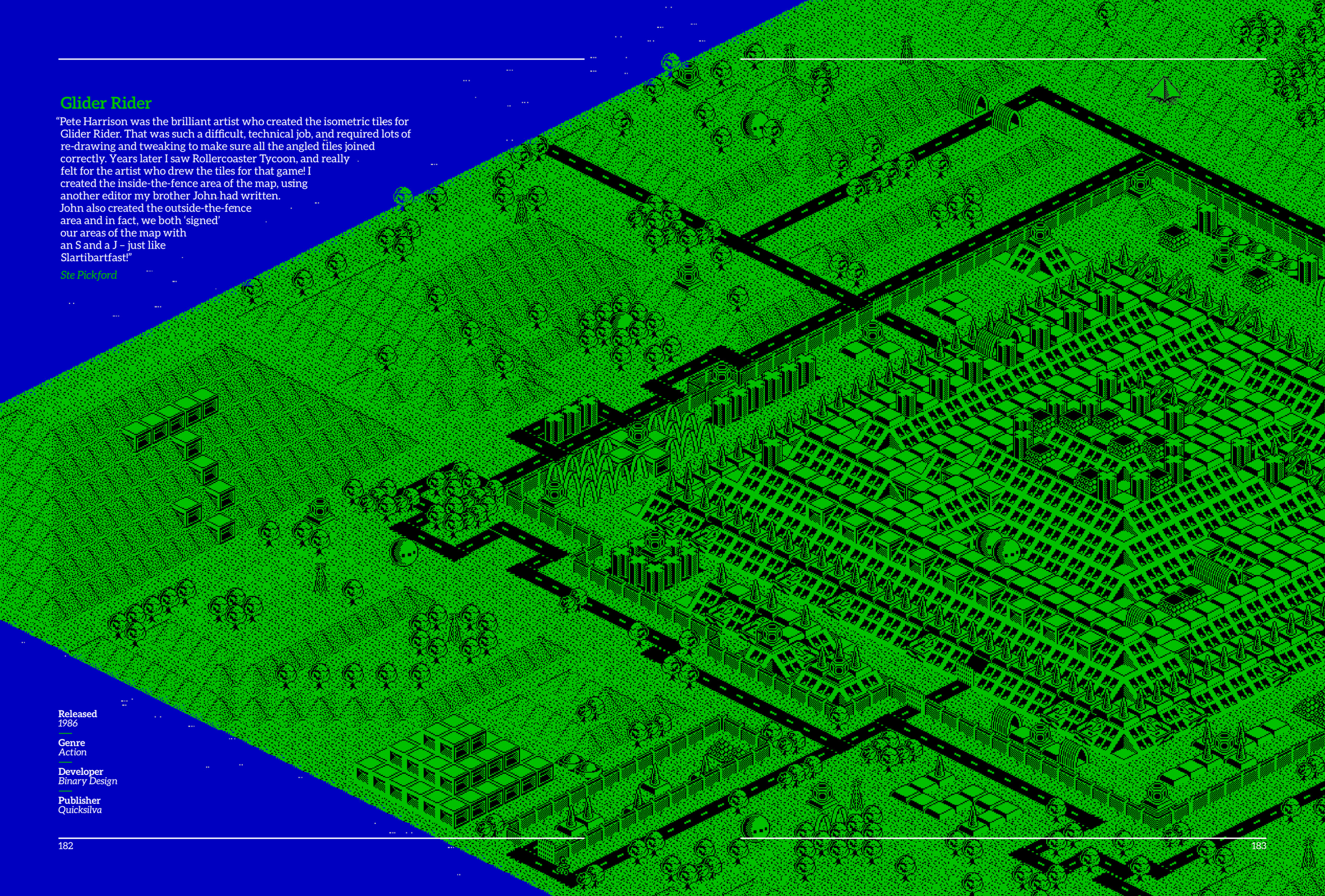
Developer
David Reidy

Publisher
Microsphere

Glider Rider

"Pete Harrison was the brilliant artist who created the isometric tiles for Glider Rider. That was such a difficult, technical job, and required lots of re-drawing and tweaking to make sure all the angled tiles joined correctly. Years later I saw Rollercoaster Tycoon, and really felt for the artist who drew the tiles for that game! I created the inside-the-fence area of the map, using another editor my brother John had written. John also created the outside-the-fence area and in fact, we both 'signed' our areas of the map with an S and a J – just like Slartibartfast!"

Ste Pickford

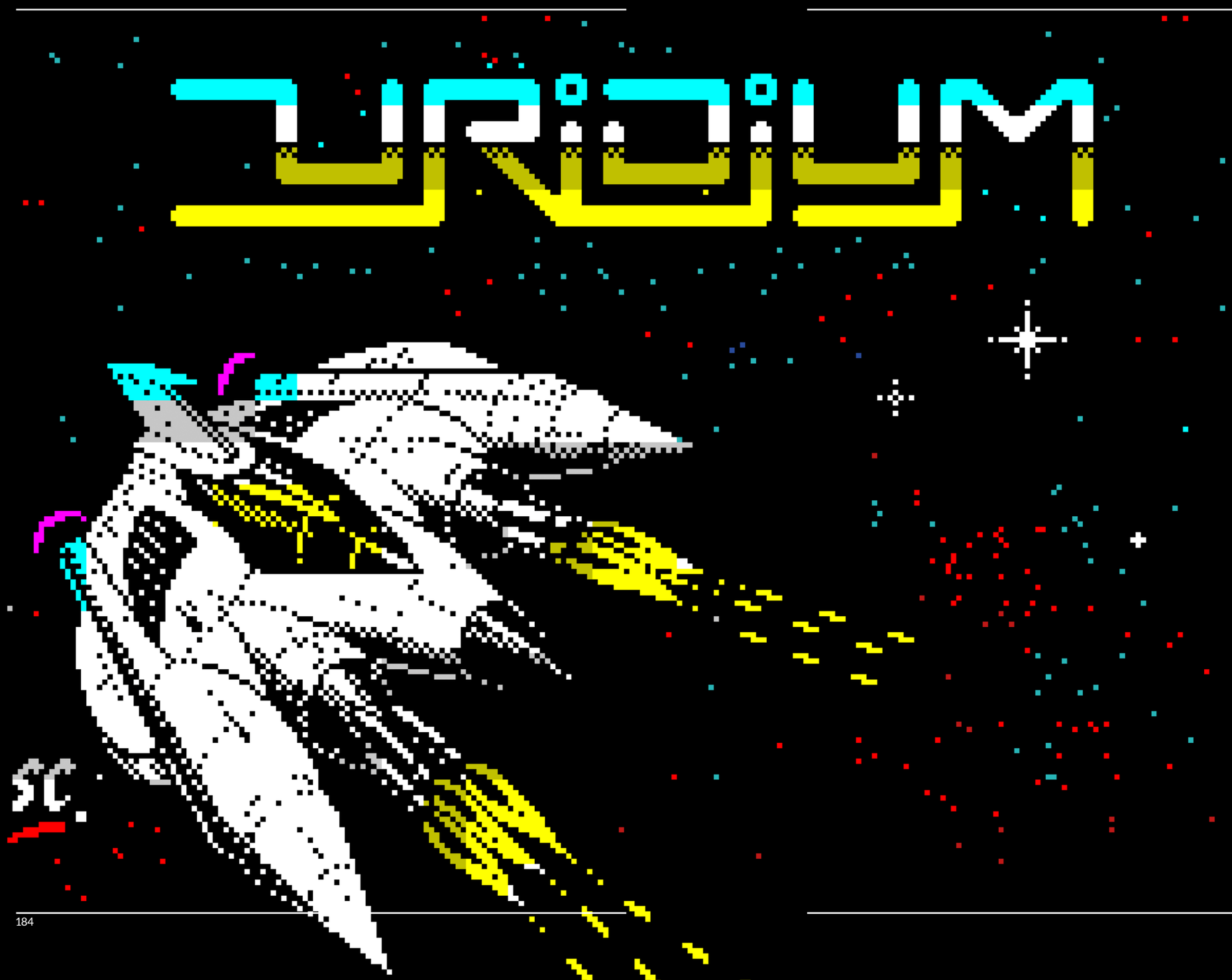


Released
1986

Genre
Action

Developer
Binary Design

Publisher
Quicksilva



Uridium

"Uridium was our biggest ever hit when it launched on Commodore 64, so bringing it to the Spectrum audience was essential. Some considered it to be an impossible task, but Dominic Robinson didn't seem phased and delivered a brilliant conversion. However, when he casually informed me after we had shipped that he and John Cummings had hidden an entirely new set of levels in the game, I was more than a little perturbed – if only they'd told me earlier, we could have made a big deal of it in the marketing!"

Andrew Hewson

Released
1986

Genre
Shoot 'em up

Developer
Dominic Robinson

Publisher
Hewson Consultants

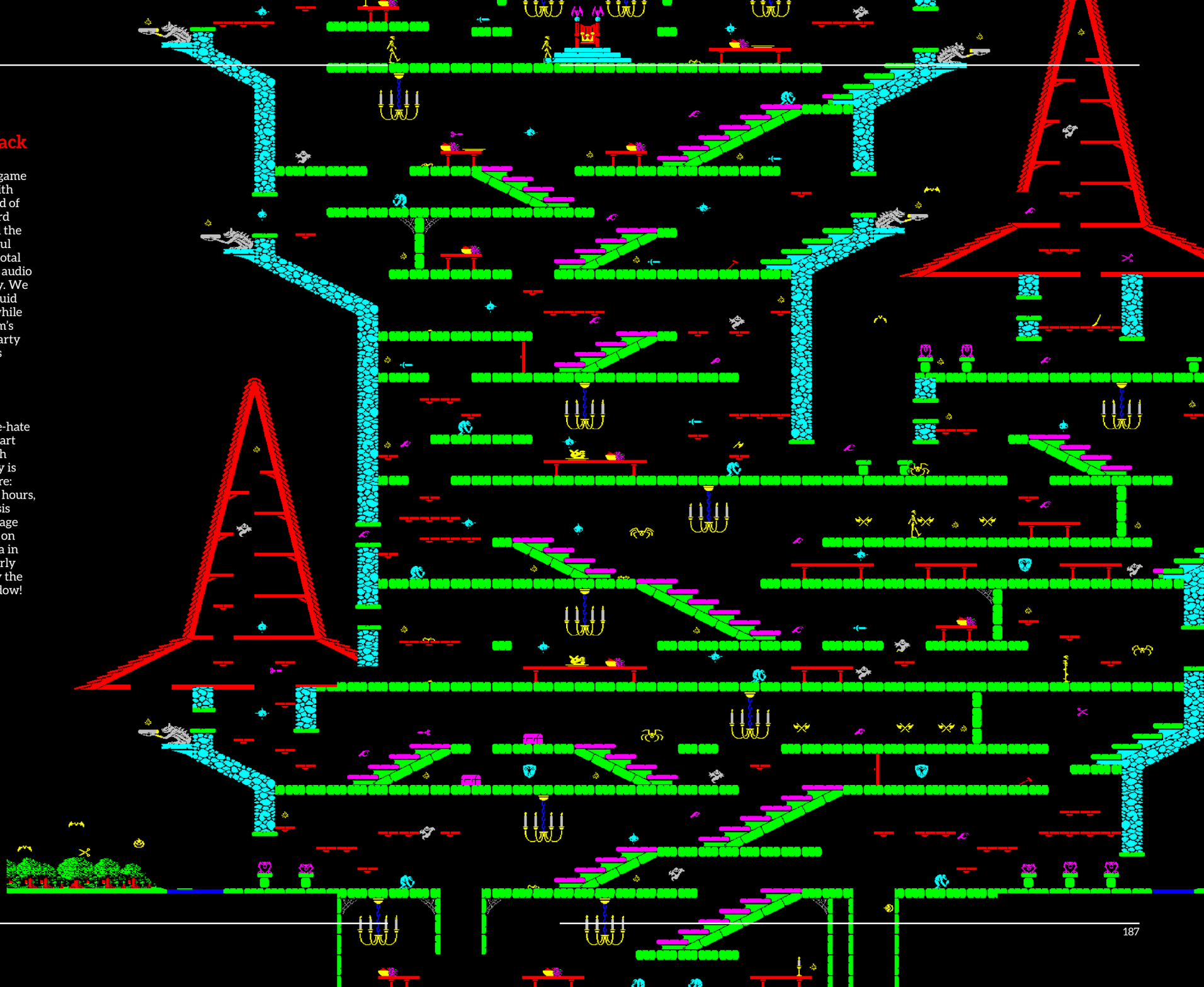
Cauldron II: The Pumpkin Strikes Back

"A life-long Commodore 64 coder, Cauldron II was the first Spectrum game I programmed and I remember it with some fondness. The team, comprised of Steve Brown, Stan Schembri, Richard Joseph and myself, soon abandoned the original plan for a cheap and cheerful conversion. Instead we opted for a total re-write, ensuring the graphics and audio were 100% optimised for the Speccy. We paid special attention to ensuring fluid movement of the 'Pumpkin Hero' while making the best use of the Spectrum's high-res display modes and third-party joystick support. This approach was much more costly, but I think the results were worthwhile."

Richard Leinfellner

"It has to be said, at times I had a love-hate relationship with the Spectrum. Apart from the challenges of working with limited colours, my abiding memory is one of frustration with the hardware: I remember our programmer losing hours, if not days, of work on a regular basis due to the flaky ZX Microdrive storage system. We worked out of an office on the second floor of the Scala Cinema in Kings Cross, and after one particularly catastrophic failure I'm afraid to say the machine was tossed out of the window! Luckily, no-one was brained!"

Steve Brown



Released
1986

Genre
Platformer

Developer and Publisher
Palace Software



> “The demand for Spectrum games was overwhelming and this inspired countless home-grown programmers and artists.”

Dawn Drake



Bomb Jack

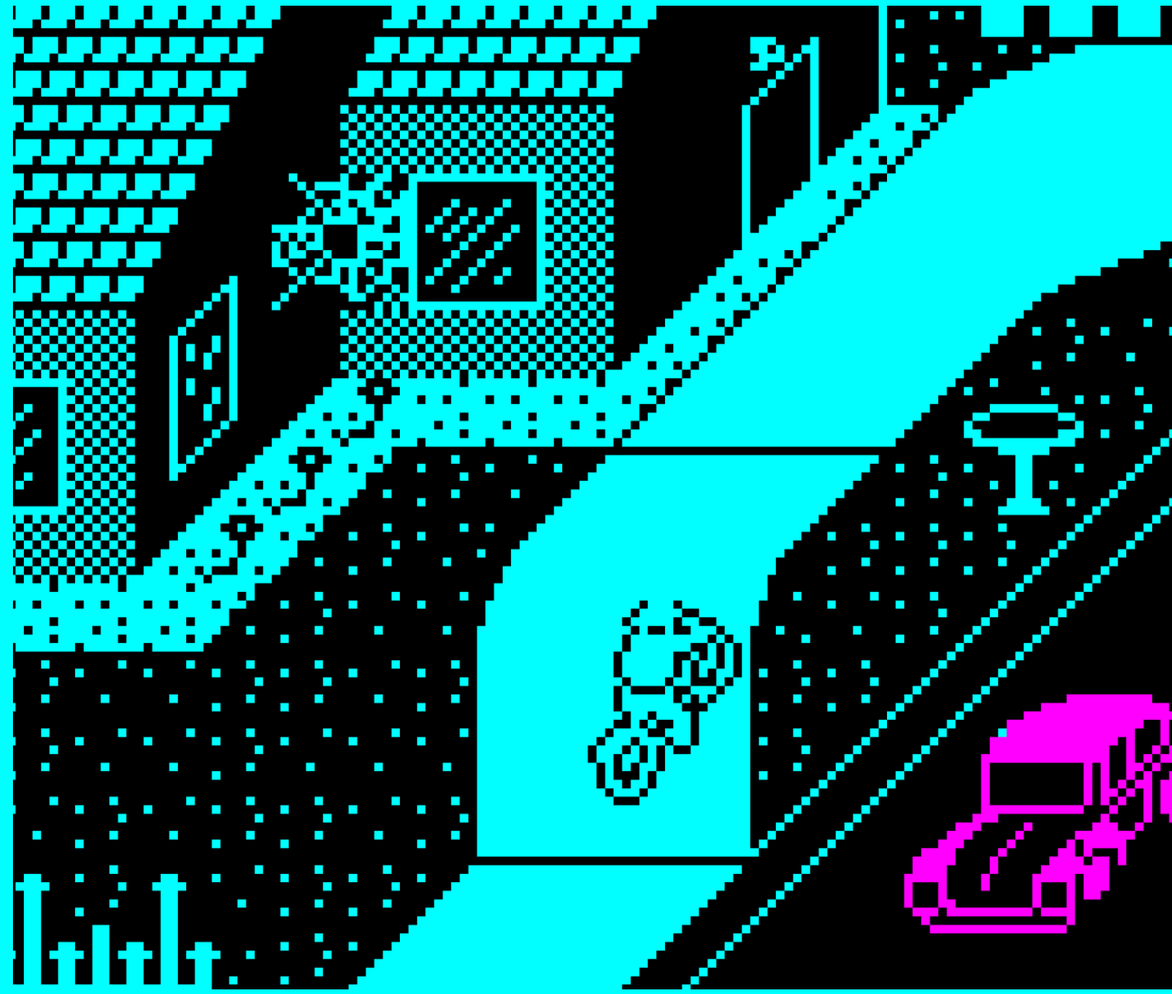
"I think it's fair to say that most 8-bit computers were a mixed bag when it came to arcade conversions: some were simply too ambitious, while others just seemed like rushed cash-ins. Occasionally, though, they just 'worked' and Bomb Jack was a perfect example of this. A superb conversion by Elite Systems captured the essence of the arcade machine perfectly, with its gorgeous graphics, fast and smooth gameplay and, rather impressively, almost no colour clash. As a Spectrum owner, this was one of those games that you'd use to trump your C64-owning mate in the playground."

Sam Dyer

Released
1986

Genre
Arcade

Developer and Publisher
Elite Systems



Paperboy

"Ok, so you didn't have the ultra cool handle bar controller at home, but this arcade conversion of Atari's classic Paperboy was pretty darn faithful to its arcade counterpart – if you could see past the lack of in-game music and monochrome graphics. The gameplay was spot-on and all the little details, such as the row of houses showing your daily delivery report and the iconic 'The Daily Stun' newspaper with its 'blah blah blah' text, were all included. I loved the addition of the obstacle course at the end of each street which really mixed up the gameplay. Paperboy certainly delivered."

Sam Dyer

Released
1986

Genre
Action

Developer and Publisher
Elite Systems

Quazatron

"Quazatron started out as a graphical demo of my new 'Ziggurat' isometric landscape engine. I didn't have a game design and as Paradroid had been very successful I decided to 'borrow' its gameplay. The main character KLP-2, a little droid whose talent was dismantling things, was invented during a Friday night session at our local amid howls of laughter. I actually used an assembler rather than hand-assembling the code, making the development process much easier than usual. That said, it took ages to assemble so I would often pop out and do a bit of gardening while I waited. Rather fittingly, a Polish fan recently sent me a little model of KLP-2 he had made to use in Robot Wars."

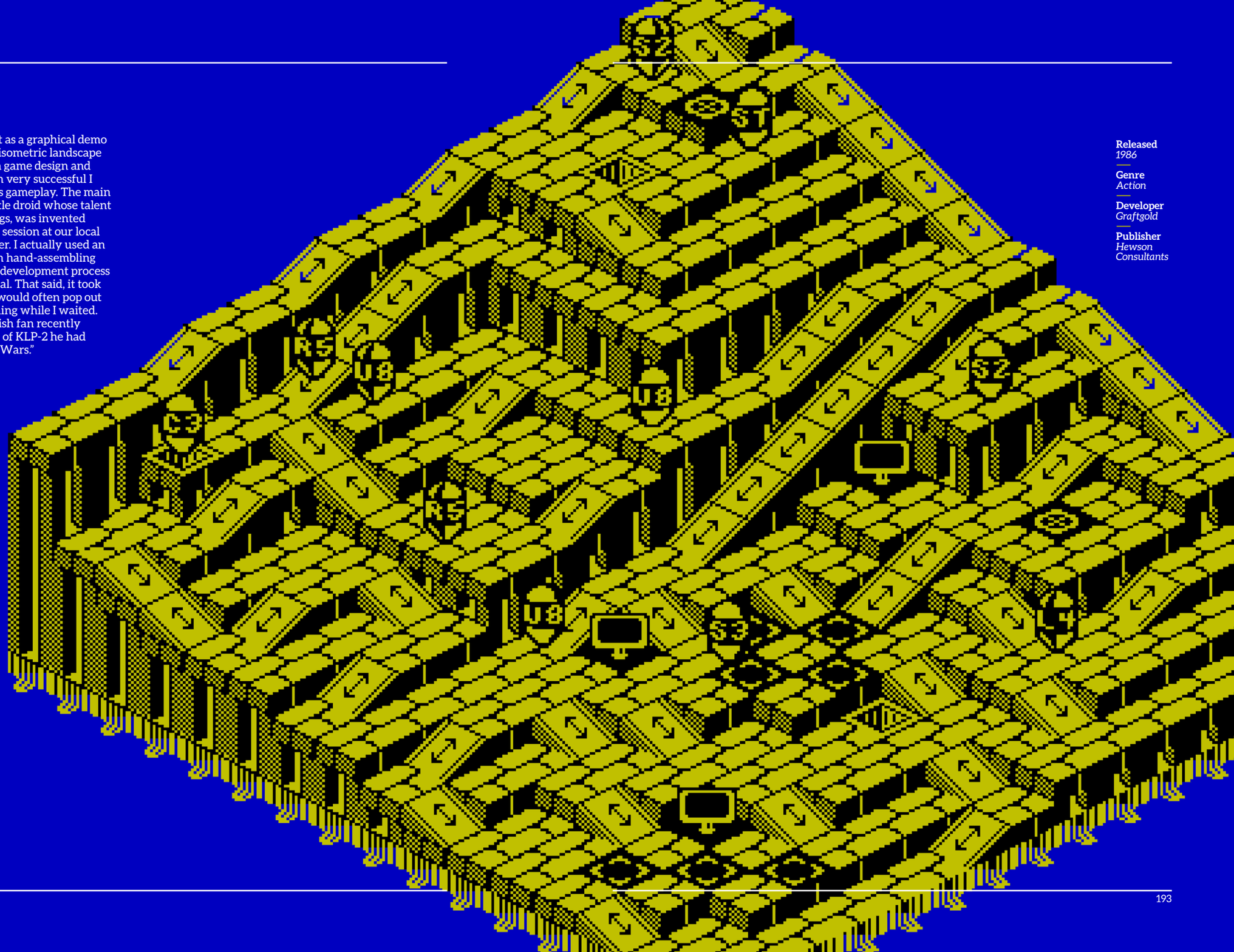
Steve Turner

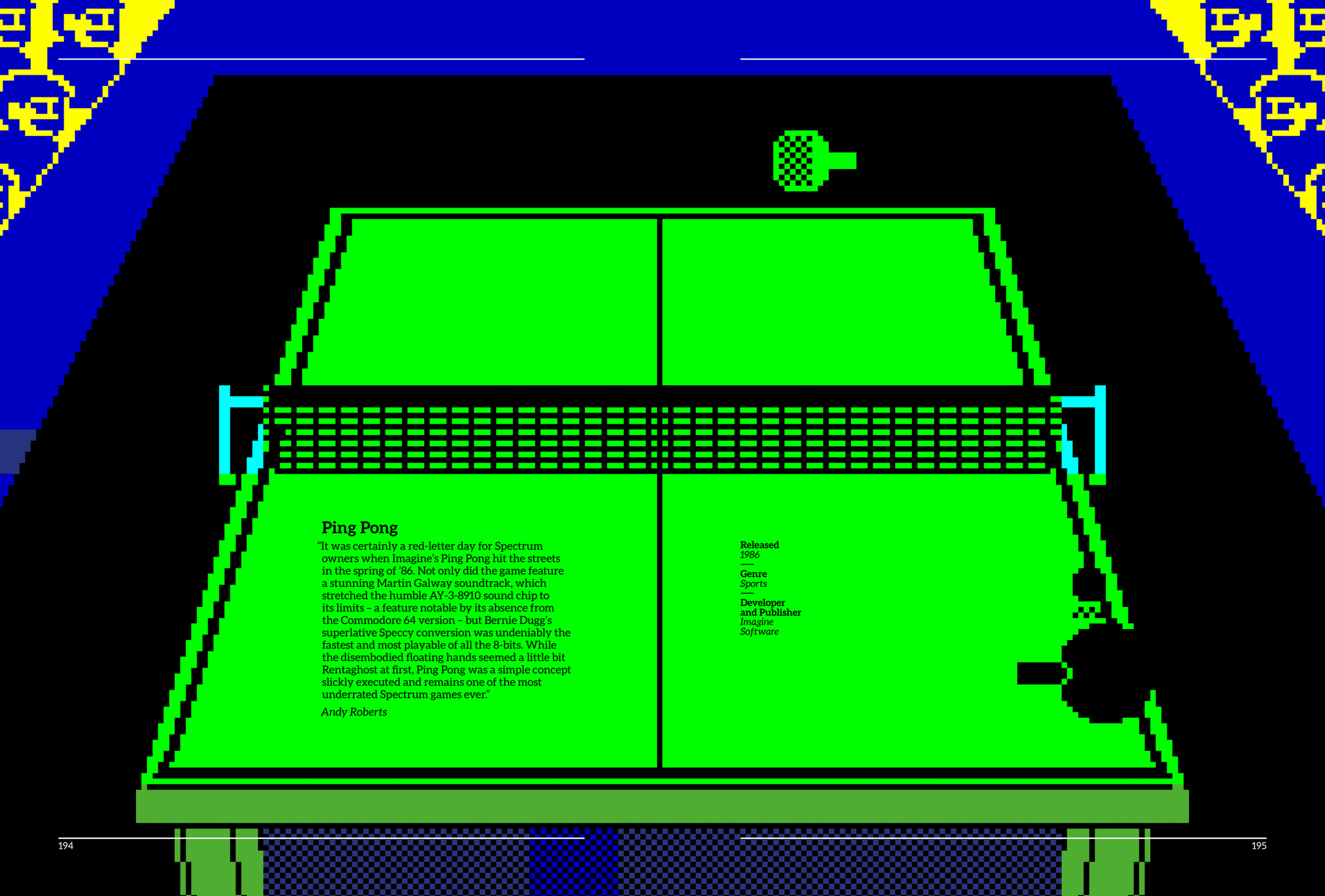
Released
1986

Genre
Action

Developer
Graftgold

Publisher
Hewson Consultants





Ping Pong

"It was certainly a red-letter day for Spectrum owners when Imagine's Ping Pong hit the streets in the spring of '86. Not only did the game feature a stunning Martin Galway soundtrack, which stretched the humble AY-3-8910 sound chip to its limits – a feature notable by its absence from the Commodore 64 version – but Bernie Dugg's superlative Speccy conversion was undeniably the fastest and most playable of all the 8-bits. While the disembodied floating hands seemed a little bit Rentaghost at first, Ping Pong was a simple concept slickly executed and remains one of the most underrated Spectrum games ever."

Andy Roberts

Released
1986

Genre
Sports

Developer and Publisher
Imagine Software

An interview with Nick Bruty

Nick Bruty is widely regarded as one of the Spectrum's most talented and influential pixel artists. After joining Probe Software in the late '80s he went on to work almost exclusively with David Perry, producing between them numerous classic games including Savage, Tintin on the Moon, Dan Dare III, Teenage Mutant Hero Turtles, Captain Planet and Extreme.

How did you first get interested in computers?
Growing up, there weren't many computers around. My high school had a few but I was too young to be allowed into the computer room. One Christmas I finally got a Spectrum and it was so exciting I didn't want to sleep. I would wait until everyone went to sleep then sneak out of bed and start programming.

It was a great adventure because everything was new and the Spectrum was so simple and easy to explore. The first time I poked a byte to the screen was a breakthrough: I quickly drew a Michael Jackson face on grid paper, converted it to hex and poked it to the screen. It was my first piece of computer art.

How did your career in games get started?
My school friend David Quinn and I were messing around with sprite routines we got from a book. David saw an advert for a game programmer at a company called Softstone and said he was going to apply, so he used the sprite routines and I did some animation for him. To my utter amazement he got the job – we were still in high school at the time! Shortly after he started his job, he called to tell me that everyone was impressed by my animation and I should come down to Brighton.

I turned up and met some people, but there was no real interview and nobody seemed bothered by my being there. They were working on V – The Game, so I just sat down and started doing some animation for the main character. For the next couple of weeks I kept working until one day the boss called me into his office. I was pretty nervous, but he simply said, "I guess I should start paying you something!"

What was your first Spectrum game?
V – The Game, based on the '80s TV show. I started off doing the animations for Donavon but then moved on to the backgrounds and user interface.

How did you end up working for Probe?
Softstone closed and David Quinn and I moved back to our parents' houses in London. While I was wondering what to do next, I started working on Trantor: The Last Stormtrooper. I wasn't really thinking about making a big game with it, I just wanted to play around with huge sprites and have a bit of fun. David had just started at Probe but liked the game idea and started coding it as a side project. At some point Fergus McGovern saw what we were doing and offered to fund it as a full-price game. We worked in a tiny two-room office in Tooting Broadway with Fergus in one room and David and I in the other.

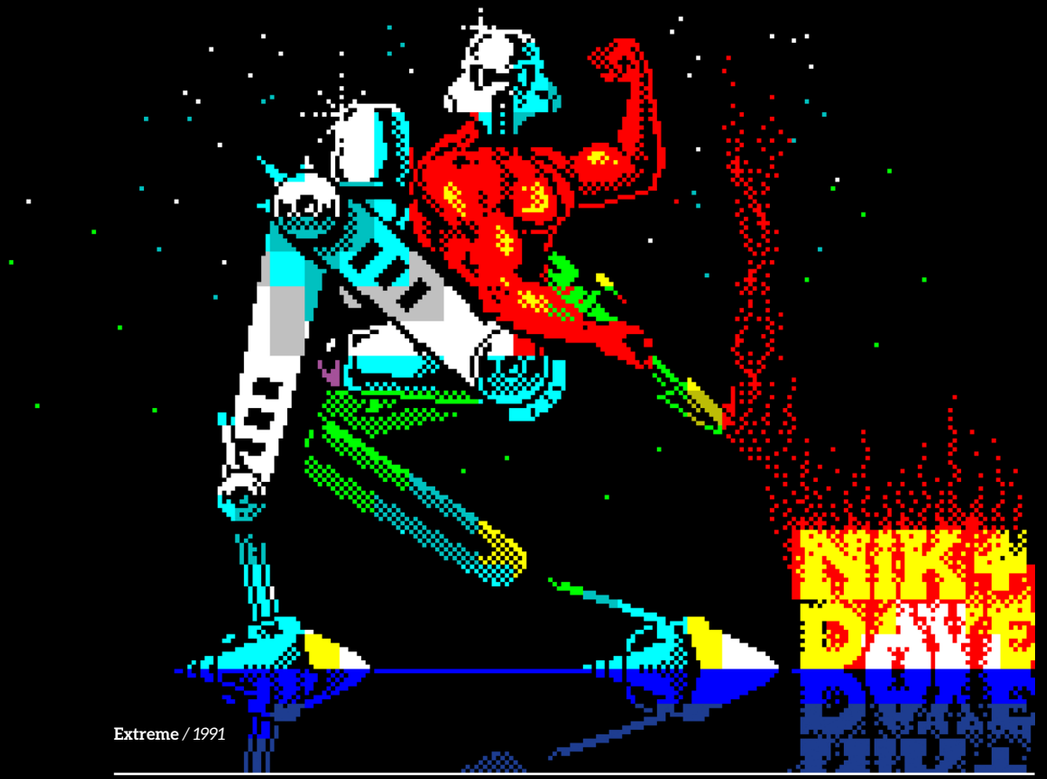
You worked on several games with David Perry; what was the experience like?
Fergus introduced us when we were looking for someone to convert Trantor to the Amstrad, and we hit it off right away. I was amazed by how fast this guy coded and did everything he could to empower me with tools and support. We had a natural shorthand with each other and we were so quick at putting games together that I now look back and wish we'd taken a little more time with some of them! It was such a good relationship we actually bought houses next to each other to make things easier.

"I finally got a Spectrum and it was so exciting I didn't want to sleep. I would wait until everyone went to sleep then sneak out of bed and start programming"

What did a typical day in front of the computer look like?
As a freelancer it changed a lot. When I lived in London I would work at Probe's offices like a regular job. When I lived on the south coast I worked from home, mainly at night. Then when I teamed up with David Perry we worked out of an office in his mother's house – that was my favourite setup as I like working directly beside the programmer to help drive each other forward.

Which programs did you use to create your Spectrum art?
I used The Artist a lot for loading screens or large pieces. For backgrounds we used a variety of custom tools for tile and map creation. David Perry had his own set of tools for the Atari ST, which was the first time I'd made graphics for the Spectrum on a different machine.

Did you use any custom tools that weren't available commercially?
There weren't that many options out there so most of the tools we used were custom. They were all rather simple though, from sprite animators to background map editors, but over the years they evolved to become quite powerful.



Extreme / *1991*

What were the best and worst aspects of creating art for the Spectrum?
There was no mouse for starters, I drew everything with an old Atari 2600 joystick that I'd soldered extra buttons to. Making loading screens was tedious because it took forever to move the cursor around the screen. I would hold the joystick down with one hand and drink my tea with the other while I waited! Also, the drives weren't the most reliable – saving to Microdrive always felt like gambling in Vegas. On the plus side it was a fun challenge trying to bend your art around corners to fit within the attributes. It was almost like a puzzle.

What was your process? Did you plan on paper, or jump straight in?
Typically I would just jump straight in, especially for background art. If I did draw on paper it was certainly no more than a doodle. I once visited Rare and everything they were doing was coloured-in on graph paper. That seemed too time-consuming to me, but obviously worked well for them.

How did your process change throughout your career?
In many ways I still operate the same way. I love to come up with an idea, jam on it in with a programmer and get a result on the screen in an hour or two.

What was the development time for a typical game?
Each one was different. Games tied to big licenses typically had a strict deadline, and sometimes a job would fall into your lap like Teenage Mutant Hero Turtles where you'd only have a month! Others, like Savage or Trantor, had no fixed deadline because a publisher wasn't signed when we started them.

Did you receive much artistic direction, or did you have complete freedom?
Complete freedom. There really weren't many artists out there and I don't think I came across an actual Art Director until I was working on consoles.

When it came to Spectrum art, which aspect did you most enjoy?
I always enjoyed animation – if the Speccy had more memory I would have focused on it far more.

Did you have much input in terms of game design?
David Perry and I were very collaborative and had similar sensibilities, and as it was just the two of us it was all a rather simple exchange. We never had any design documentation, and I'm sure most design docs never get read anyway!

Did you pay much attention to magazine reviews?
Yes I would check them out, especially in the early days as I was still learning how to do my job! I enjoyed reading reviews on the games where we weren't rushed. I still have the clippings somewhere.

If you had the chance to revisit any of your games, what would you change?
I would go back to Trantor to improve the platforming aspect and add more dimension to his movement. I'd likely have to reduce his size a bit, but it would probably pay off.

Was there anyone in the industry whose work was inspirational to you?
I considered Ultimate to be the best and would always check out what they were up to. Their art was usually pixel perfect.

What Spectrum games impressed you, or had an influence on your work?
I liked Costa Panayi's games, including Highway Encounter and T.L.L. I was also a sucker for vector games like Elite and Tau Ceti. For pure enjoyment, probably 3D Deathchase. So. Damn. Tense.

"There were no restrictions: anyone could make a game, save it to tape and sell it at the local corner shop"



Xevious / *1987*



Slap Fight / *1987*



Outrun / *1987*

Outside of games, what were your biggest artistic influences?
As a kid I loved 2000 A.D. and always enjoyed seeing Simon Bisley's work – there seemed a time where everyone was copying his style. I was also heavily influenced by the Blade Runner and Alien movies. I don't think H. R. Giger's unique production design for Alien has ever been topped.

Of all the games you've worked on, which are you most proud of and why?
I would split that between Trantor and Extreme. Trantor because it was my first original game, and Extreme for showing off just what a Spectrum could do.

Were there any Spectrum games you worked on which never saw the light of day?
I would noodle around with various ideas but never had a project cancelled. David Perry and I did work on an original project called Crazy Jet Racer that eventually became Dan Dare III.

What was your final Spectrum game? What made you leave the machine behind?
Extreme. David Perry and I knew that it was going to be our last one, as we were already working on other platforms by then. We wrote it in about four weeks and just had a blast with it.

Was there a Spectrum game you would have loved to have created the graphics for?
I never got the chance to do an isometric game like Knight Lore or Fairlight. I also wanted to make a vector game; I was always amazed how much atmosphere you could create with just a few lines.

What was your favourite Spectrum game?
Oh man. Just one? I'm going to be boring and say Knight Lore. It wasn't the game I played the most, but it had a big impact on me and was so charming.

Any stand-out memories from the Spectrum era?
Crazy Jet Racer, the game that eventually turned into Dan Dare III, was a game about a character on a unicycle, and was inspired by the time David Perry and I bought some unicycles for a laugh. We weren't very good, but somehow we ended up in a pickup unicycle hockey game. I was so bad they put me in goal so I would have a goalpost to hang on to. It was surreal to see a dozen fully-grown men armed with hockey sticks screaming towards you on unicycles!

Why do you think the Spectrum is remembered so fondly?
The Spectrum is like the R2-D2 of the computing world: cute and plucky. For most of us it was the first time we owned a computer of any sort and the possibilities seemed endless at the time. There were no restrictions: anyone could make a game, save it to cassette and sell it to the local corner shop.

Do you still own a Spectrum?
No, it didn't make it out to California with me, but this interview makes me want one!

What are you up to these days?
David Perry and I moved out to California where we founded Shiny Entertainment. Now I'm a co-founder at Rogue Rocket Games where I'm working on my next original title, First Wonder. Still loving the game business!

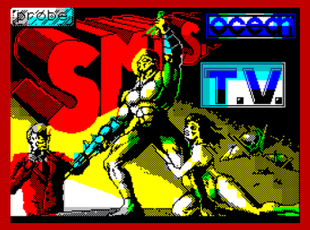
"I considered Ultimate to be the best and would always check out what they were up to. Their art was usually pixel perfect"



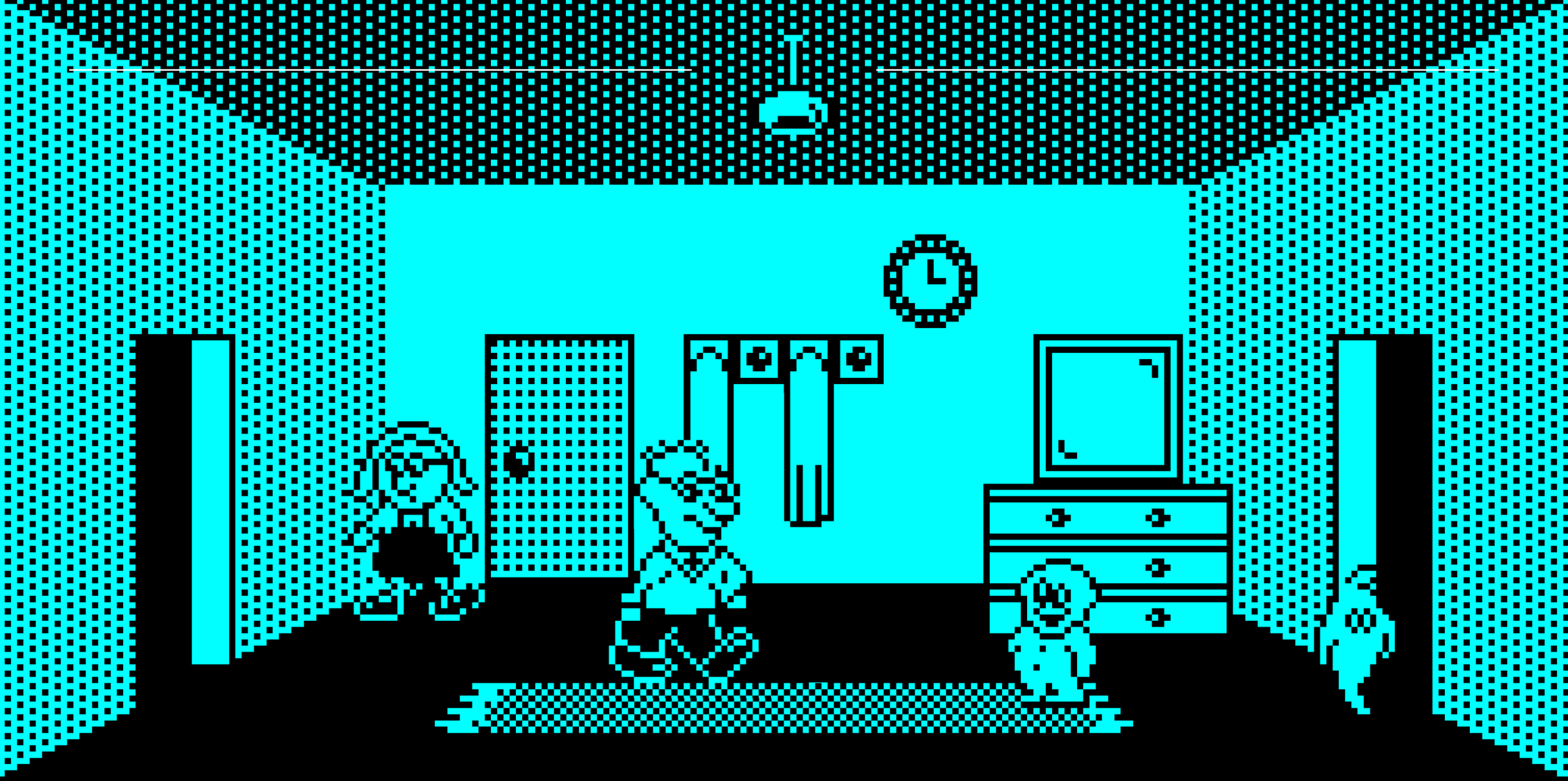
Trantor: The Last Stormtrooper / *1987*



Teenage Mutant Hero Turtles / *1990*



Smash T.V. / *1991*





Released
1986

Genre
Adventure

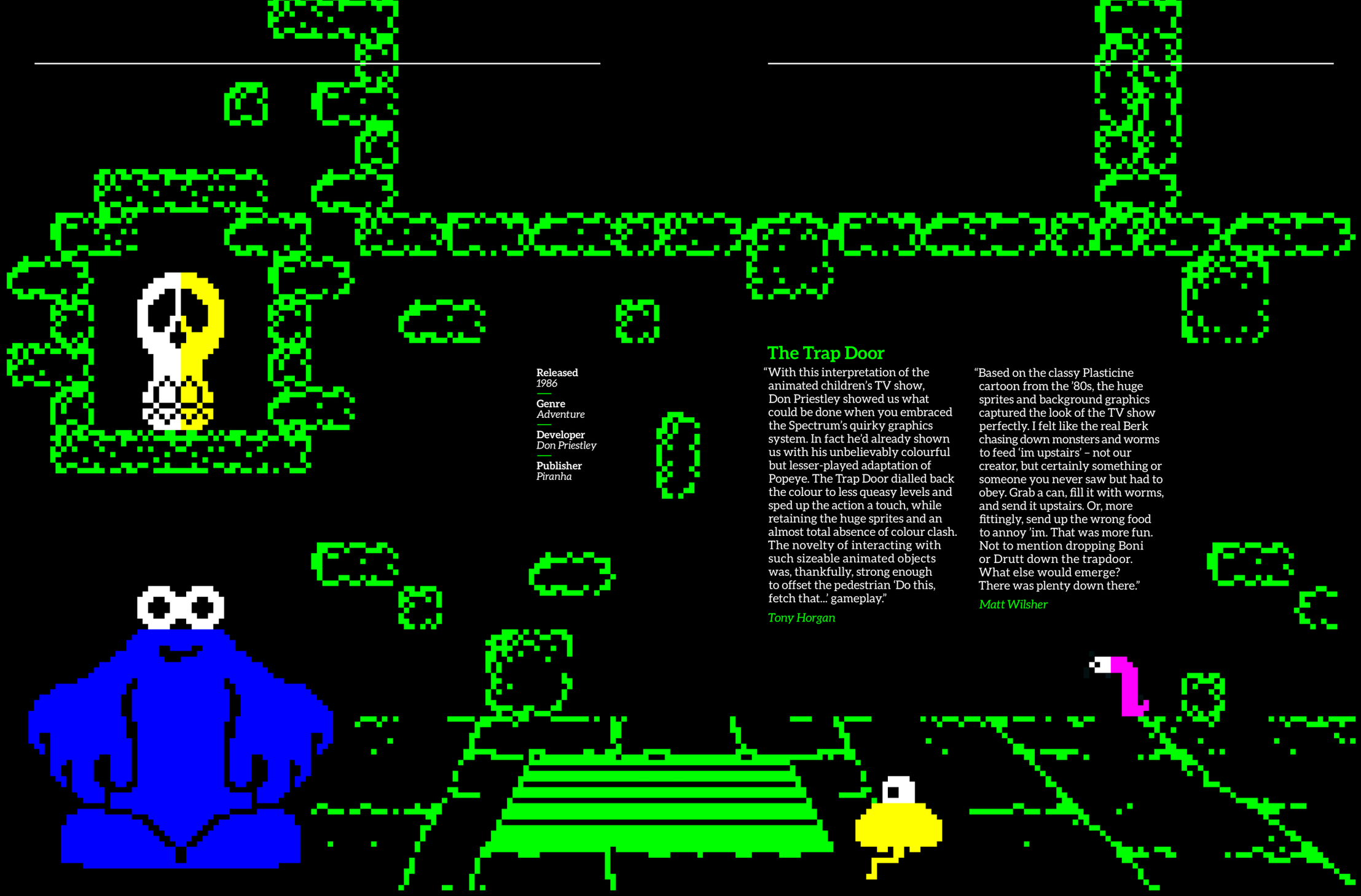
Developer
Greg Holmes

Publisher
Gremlin Graphics

Jack the Nipper

"Every day on Crash magazine a new batch of cassettes would arrive, and you never knew what gems would be among them. Jack the Nipper is a case in point: personality oozed out of every pixel. The team of Greg Holmes, Nick Laa, Peter Harrap and John Holmes did a fantastic job; colour clash was avoided by using a monochrome colour scheme, while the cartoony sprites – with a twinkle in their eyes – were some of the best to appear on the old Speccy. The flip-screen adventure was nothing new, but playing a baby on the rampage with a cheeky grin? Great fun!"

Nick Roberts



Released
1986

Genre
Adventure

Developer
Don Priestley

Publisher
Piranha

The Trap Door

"With this interpretation of the animated children's TV show, Don Priestley showed us what could be done when you embraced the Spectrum's quirky graphics system. In fact he'd already shown us with his unbelievably colourful but lesser-played adaptation of Popeye. The Trap Door dialled back the colour to less queasy levels and sped up the action a touch, while retaining the huge sprites and an almost total absence of colour clash. The novelty of interacting with such sizeable animated objects was, thankfully, strong enough to offset the pedestrian 'Do this, fetch that...' gameplay."

Tony Horgan

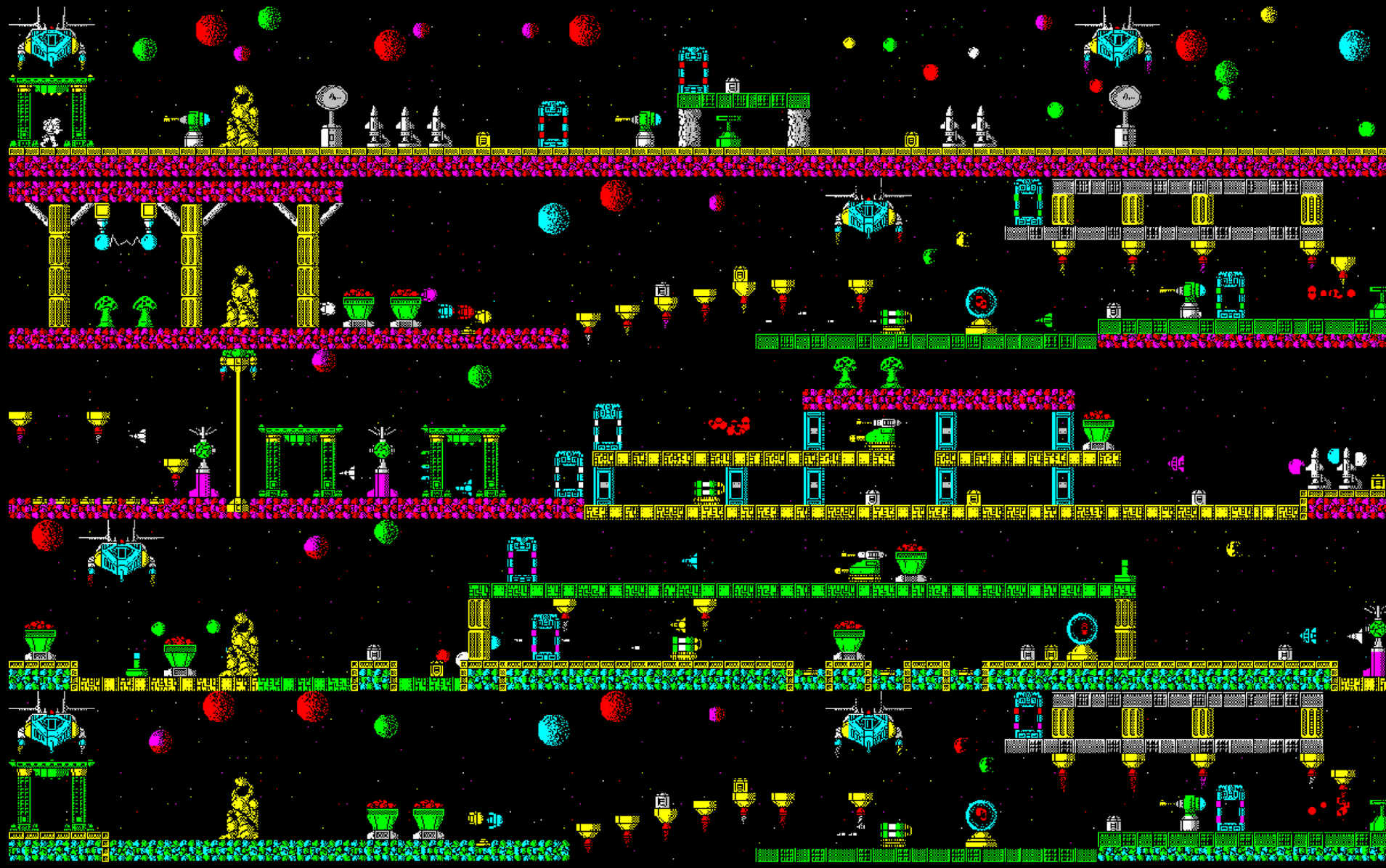
"Based on the classy Plasticine cartoon from the '80s, the huge sprites and background graphics captured the look of the TV show perfectly. I felt like the real Berk chasing down monsters and worms to feed 'im upstairs' – not our creator, but certainly something or someone you never saw but had to obey. Grab a can, fill it with worms, and send it upstairs. Or, more fittingly, send up the wrong food to annoy 'im. That was more fun. Not to mention dropping Boni or Drutt down the trapdoor. What else would emerge? There was plenty down there."

Matt Wilsher

Exolon

"Exolon was Raffaele Cecco's first game for us after we signed him as a freelancer. The first time I saw the game there were just a few demo screens up and running, but Raf had that fantastic backpack missile launcher working. The missiles zipped up out of the backpack and fizzed across the screen, obliterating obstacles, which exploded like fireworks against the blackness of space. It was a spectacularly colourful visual showcase for the game and gave it a really destructive arcade feel. I came away really excited about both the game and the potential of this talented young programmer."

Andrew Hewson



Released
1987

Genre
Shoot 'em up

Developer
Raffaele Cecco

Publisher
Hewson Consultants



Afterburner *Activision*



Blasteroids *Image Works*



Cauldron *Palace Software*



Terra Cresta *Imagine*



Stunt Car Racer *Micro Style*



Fist II *Beam Software*



Marauder *Hewson Consultants*



Krakout *Gremlin Graphics*



Stormlord *Hewson Consultants*



Hydra *Tengen*



Chase H.Q. II *Ocean*



Dizzy Down the Rapids *Codemasters*



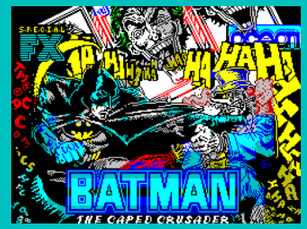
APB *Tengen*



Commando *Elite Systems*



Raid Over Moscow *U.S. Gold*



Batman: The Caped Crusader *Special FX*



Cybernoid II *Hewson Consultants*



Rambo: First Blood Part II *Ocean*



Darkman *Twilight*



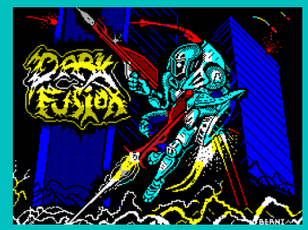
CJ's Elephant Antics *Codemasters*



Wizball *Ocean*



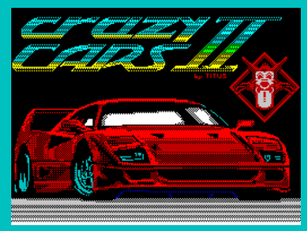
Hunchback II *Ocean*



Dark Fusion *Gremlin Graphics*



Arkanoid - Revenge of Doh *Imagine*



Crazy Cars II *Titus*



Daley Thompson's Supertest *Ocean*



Driller *Incentive Software*



Dan Dare II *Virgin Games*



Cisco Heat *ICE Software*

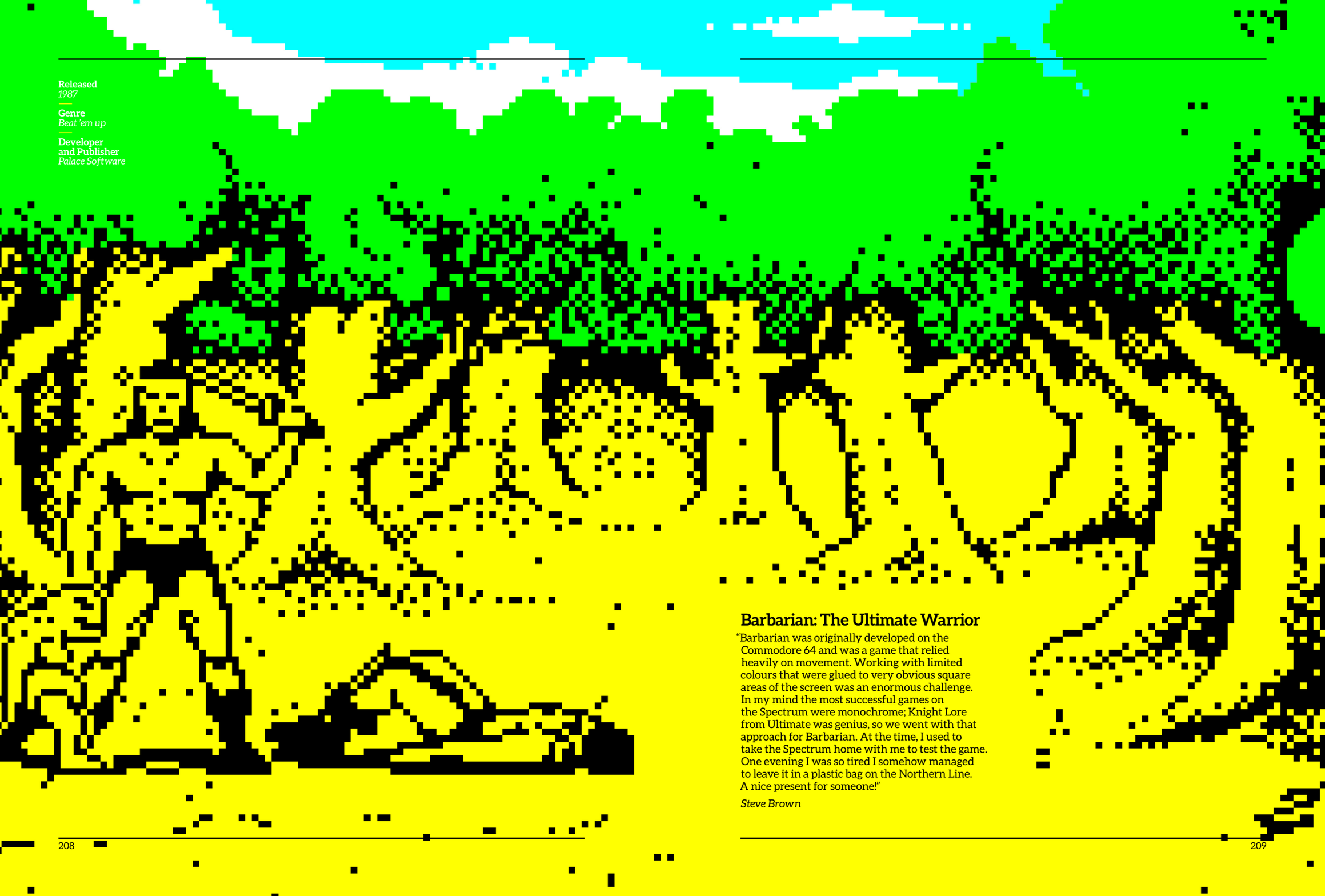


Mikie *Imagine*

Released
1987

Genre
Beat 'em up

Developer and Publisher
Palace Software



Barbarian: The Ultimate Warrior

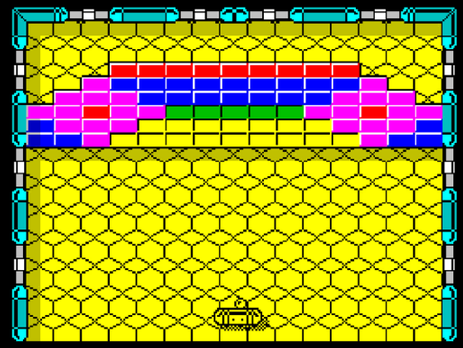
"Barbarian was originally developed on the Commodore 64 and was a game that relied heavily on movement. Working with limited colours that were glued to very obvious square areas of the screen was an enormous challenge. In my mind the most successful games on the Spectrum were monochrome; Knight Lore from Ultimate was genius, so we went with that approach for Barbarian. At the time, I used to take the Spectrum home with me to test the game. One evening I was so tired I somehow managed to leave it in a plastic bag on the Northern Line. A nice present for someone!"

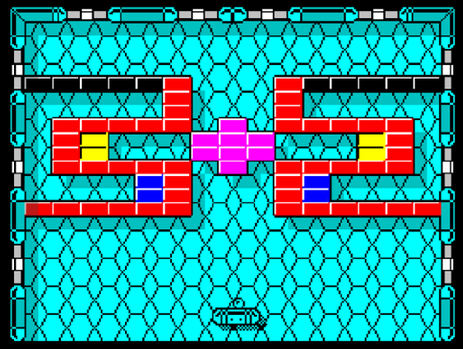
Steve Brown

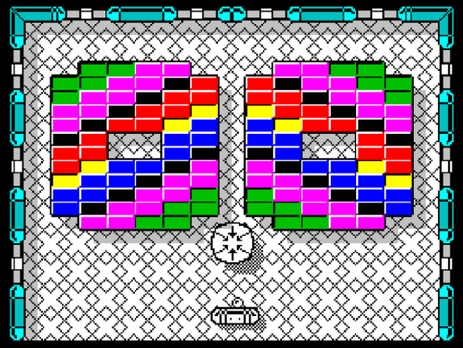
Batty

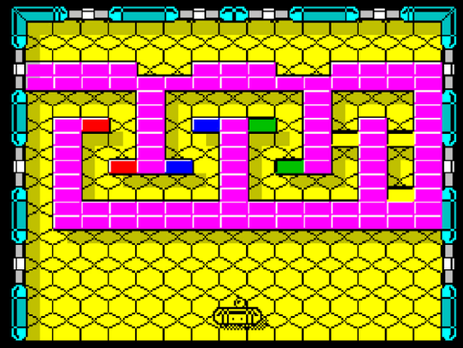
"Although belaboured unfairly at the time with the accusation of being a mere bandwagon-jumping Arkanoid clone, Batty was so much more than the sum of its predecessors. It was a bat-and-ball game with actual, authentic, gritty cajones. Skipping lightly by that mildly unpleasant image, it really was rather good, coded to look cool on the Spectrum's limited graphics display and play fast and well. I recall vividly the tension caused by bombs dropping on you in the same position where the ball was going and the anxious moments of sweaty indecision that caused – that's entertainment right there. It still delivers the thrills."

Phil South







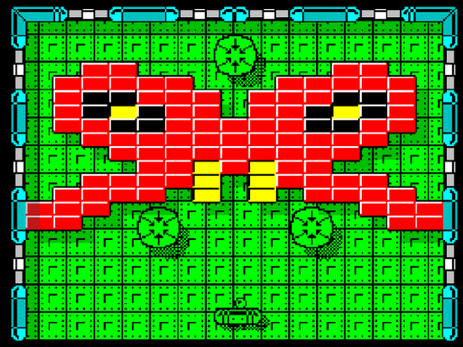


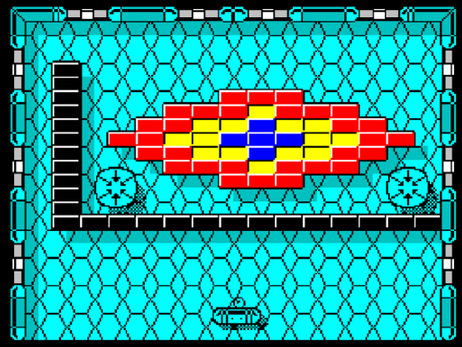
Released
1987

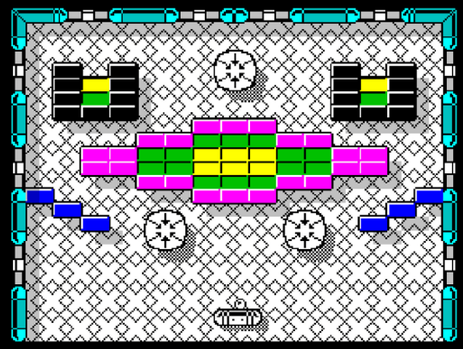
Genre
Action

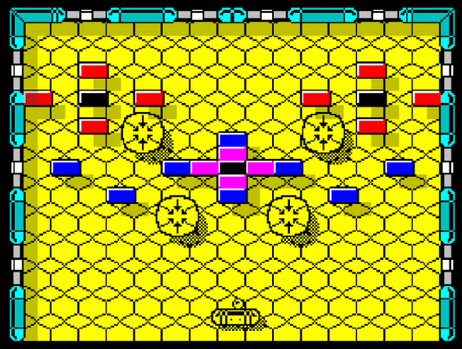
Developer
Mark Crane

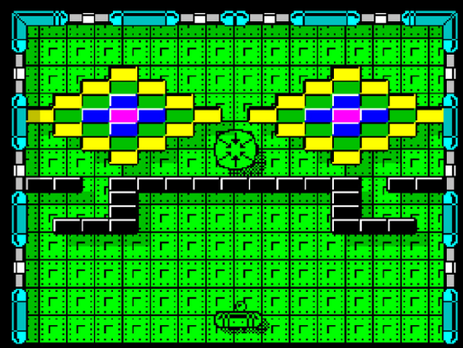
Publisher
Elite Systems

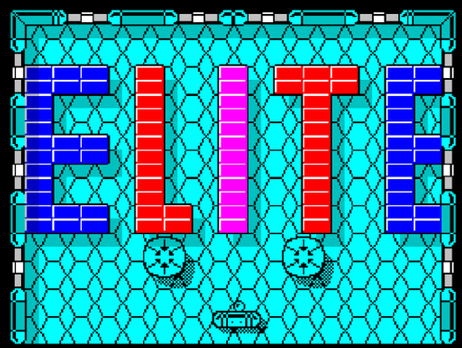


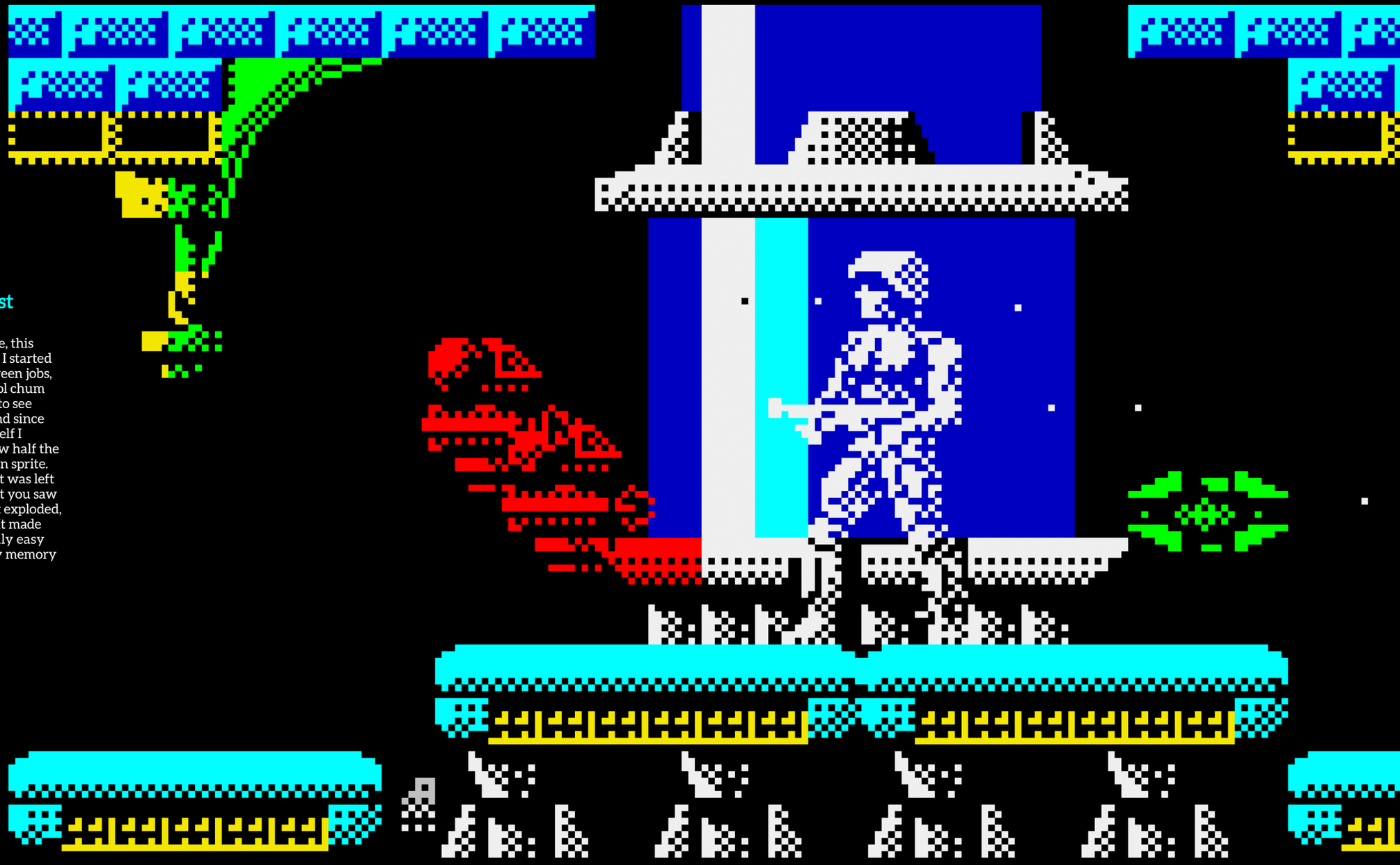












Trantor: The Last Stormtrooper

"As my first original game, this one is close to my heart. I started making it while in between jobs, along with my old school chum David Quinn. I wanted to see something cinematic, and since I was doing this for myself I thought screw it, I'll blow half the memory just on the main sprite. Then I blew half of what was left on a giant spaceship that you saw for ten seconds before it exploded, never to be seen again. It made finishing the game really easy because I never had any memory left for anything else!"

Nick Bruty

Released
1987

Genre
Action

Developer
Probe Software

Publisher
Go!

The Living Daylights

Released
1987

Genre
Action

Developer
Walking Circles

Publisher
Domark

Artwork
Oliver Frey

Renegade

Released
1987

Genre
Beat 'em up

Developer and Publisher
Imagine Software

Artwork
Oliver Frey



Feud

"Feud was programmed by Pete Harrison, the main artist on Glider Rider, so I got to do all the graphics. It was a real treat to get to draw large sprites with several frames of animation. The fact that the game didn't need to scroll meant we could also be quite lavish with the backgrounds, with big trees, huts, and so on. My brother John encouraged me to draw big, whereas in most other games at the time we were trying to be as efficient as possible and draw the smallest sprites we could get away with. This is the Spectrum game I'm most happy with."

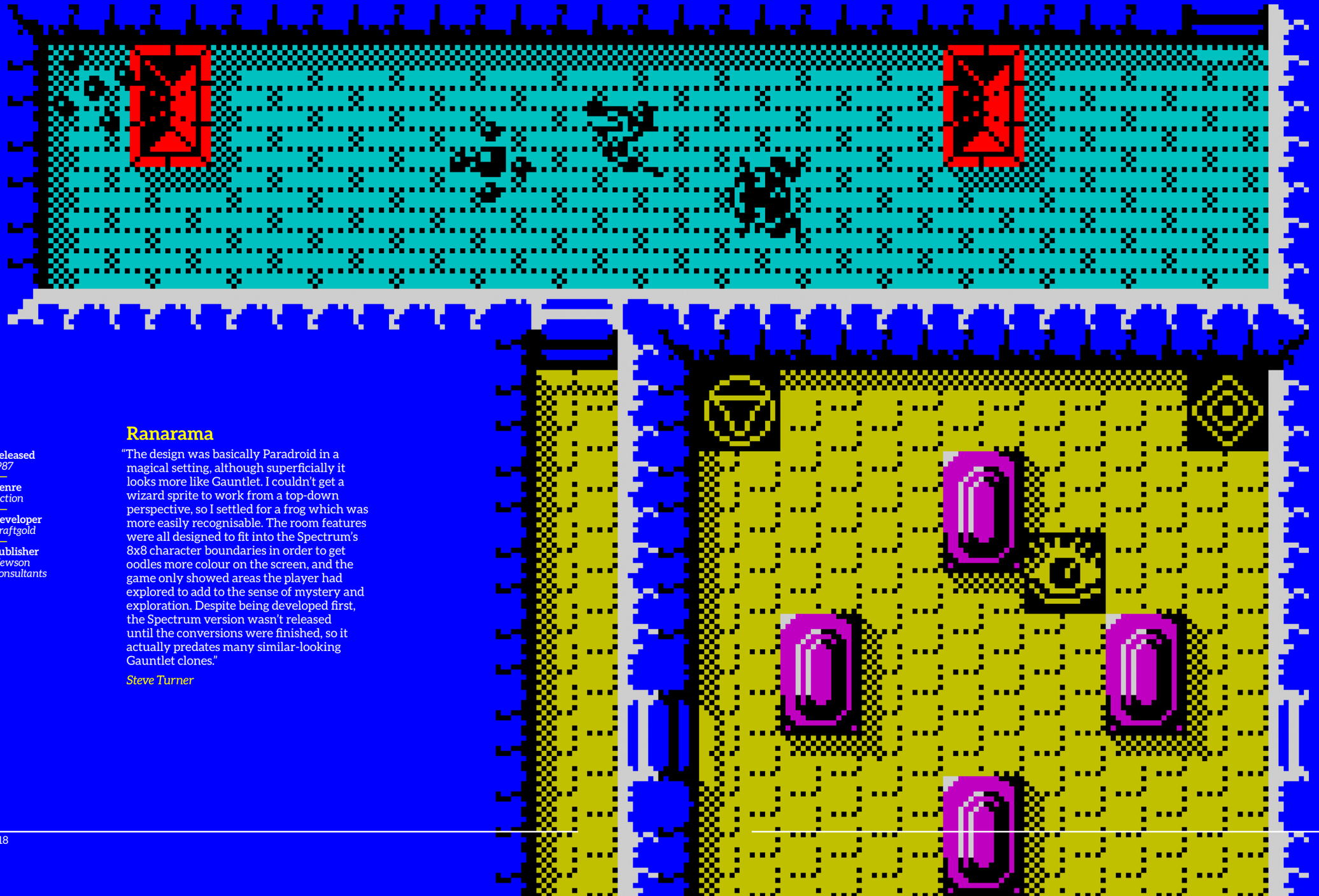
Ste Pickford

Released
1987

Genre
Adventure

Developer
Binary Design

Publisher
Bulldog Software



Released
1987

Genre
Action

Developer
Graftgold

Publisher
Hewson Consultants

Ranarama

"The design was basically Paradroid in a magical setting, although superficially it looks more like Gauntlet. I couldn't get a wizard sprite to work from a top-down perspective, so I settled for a frog which was more easily recognisable. The room features were all designed to fit into the Spectrum's 8x8 character boundaries in order to get oodles more colour on the screen, and the game only showed areas the player had explored to add to the sense of mystery and exploration. Despite being developed first, the Spectrum version wasn't released until the conversions were finished, so it actually predates many similar-looking Gauntlet clones."

Steve Turner



Alien Highway / *1986*

Vortex Software was an independent UK game developer and publisher. Originally founded in 1981 by Costa Panayi and Paul Canter, the core team was later expanded to include Costa's brother Crete Panayi and brother-in-law Luke Andrews. With a string of critically-acclaimed titles under his belt, Costa eventually took a sabbatical from the games industry in 1988, before reforming Vortex in 1990 with an eye on the Amiga and Atari ST markets.

An aerospace engineer with an interest in computers, Costa began his career writing games for the ZX81 with his friend Paul Canter. Despite its limited 1K memory, the ZX81 would prove instrumental in learning to program efficiently, and after some initial success the duo set up Vortex to sell their games. When ZX81 software sales began to drop, they wisely made the decision to shift gears and focus on the newly-arrived ZX Spectrum.

Between 1983 and 1989 Vortex produced some of the most technically advanced games ever to appear on the humble Spectrum. With an emphasis on quality over quantity, titles such as Android Two, T.L.L., Highway Encounter, and Revolution helped Vortex establish an unprecedented reputation for both technical innovation and gameplay excellence. So much so, new Vortex releases were often eagerly anticipated by both fans and reviewers alike.

Vortex's initial releases for the Spectrum were fairly simplistic in nature as Panayi and Canter got to grips with the new Spectrum's hardware – not to mention the exponential increase in available memory. Gun Law, a gun-toting romp around the Old West, was described by Crash as "reasonably interesting and addictive," while Cosmos – a conversion of the ZX81 original – was praised by Home Computing Weekly and awarded five stars.

> *"New Vortex releases were often eagerly anticipated by both fans and reviewers alike"*

In 1983, Android One would usher in a new era for the company. Building on the scrolling techniques Costa had pioneered on the ZX81, the game was a journey to the heart of a mutant-infested reactor, the game's simple aesthetics belying the tense and unnerving gameplay within. Home Computing Weekly awarded the game four stars, warning players to "give up any hope of spending stress-free evenings with your Spectrum," while Popular Computing Weekly called the game "a sort of macho Hungry Horace."



Highway Encounter */ 1985*



Deflektor */ 1987*



H.A.T.E. */ 1989*

Until this point Vortex had been a lucrative if time-consuming hobby, but the success of Android One allowed the company to expand beyond that of a modest back-bedroom operation. Costa's brother, Crete, came on board to handle advertising, while brother-in-law Luke stepped in to run the business and allow Costa more time to focus on what he did best: programming groundbreaking games.

> *"Vortex was an astute company with an eye on current trends"*

1983 concluded with the release of Android Two, Vortex's first 48K game and arguably its most ambitious to date. Gone were the linear 2D levels, replaced by a vast, scrolling maze constructed in pseudo-3D (a look which would become something of a Panayi hallmark). Praised for its bright 3D graphics and fast gameplay, Android Two was an instant hit. Crash summed up its review with "highly addictive and first-rate value for money," awarding the game a coveted 'Smash'. Big K were similarly enthusiastic, calling Android Two "a thoroughly professional presentation and a must for any library."

Vortex was an astute company with an eye on current trends, and the popularity of flight simulators gave rise to their next game, Tornado Low Level (T.L.L.), which arrived in the Summer of '84. Building on Android Two's 3D engine – and not forgetting that groundbreaking shadow effect – T.L.L. was pitch-perfect, offering more depth than an arcade game but more simplicity than a full-blown simulator. "The best flight game for the Spectrum," declared C&VG, scoring the game at 9/10. Crash was similarly impressed, describing T.L.L. as "brilliant."

1985 was a busy year for Vortex: after the release of T.L.L., Costa left his job with British Aerospace to work on games full-time, enabling him to focus on Cyclone. Despite a glut of helicopter games saturating the market, Cyclone was untouchable by the competition; building on the T.L.L. engine, the game featured interactive weather and even allowed players to switch viewpoints during the game, an unprecedented feature for the time. C&VG gave Cyclone 9/10, calling it "a simple concept executed with style," while Home Computing Weekly's reviewer gave the game five stars, stating "(it's) the best game I've seen in months."

> *"Though many tried, few developers ever managed to replicate Vortex's uncanny ability to consistently produce unique, distinctive, and technically accomplished games that would capture the hearts and minds of a generation"*

Although Cyclone was another hit in the bag for Vortex, the game would have a profound effect on the company in more ways than one. During a trip to the duplicators to master the Cyclone cassettes, Costa and fellow programmer Mark Haigh-Hutchinson caught their first glimpse of Knight Lore and, like everyone who saw Ultimate's groundbreaking game, were instantly captivated by the isometric 3D.

Suitably inspired, Costa spent the next nine months creating a new isometric 3D engine that was fast, smooth, and allowed full movement in eight directions. The end result was Highway Encounter, a strategic, flick-screen action game with a deceptively simple premise: take an explosive device down a hazard-laden highway to the enemy base. "This has to be one of the best games of the year," said Crash magazine, awarding the game 95% and earning Vortex its second 'Smash', while Popular Computing Weekly called it "a technically superb, thoroughly addictive game with plenty of original touches."

In early 1986, with Costa keen to work on a new concept, the not inconsiderable task of writing Highway Encounter's inevitable sequel Alien Highway fell on the shoulders of the late Mark Haigh-Hutchinson, who had previously ported numerous Vortex games to the Amstrad. Despite being inherently similar to its predecessor, Alien Highway boasted numerous tweaks including a random element that ensured no two games would play the same. "Another winner from Vortex," said C&VG, while Crash magazine deemed it a worthy sequel, branding it "frustrating, yet fabulously addictive."

Hot on the heels of Alien Highway came the stunning isometric puzzle game Revolution, the first Vortex game to be released by U.S. Gold under a new publishing deal. As was the case with many of Vortex's games, the concept – which had been bouncing around Costa's head for over a year – was inherently quite simple, but the implementation and presentation were exquisite. Sinclair User said "Revolution is fabulous," and awarded the game five stars. Crash magazine was also similarly impressed, scoring the game at 91% and adding another 'Smash' award to Vortex's collection.

It would be another 12 months before fans got their mitts on the next Vortex game, Deflektor, which arrived just in time for Christmas 1987. Inspired by a TV programme about lasers (rather than Virgin Games' Rebel, as many reviewers assumed), Deflektor had all the core ingredients of a classic puzzle game, mixed together with slick presentation and technical panache that had become Panayi's trademarks. "Vortex fans, you have not waited in vain," said ACE magazine, calling Deflektor "Fascinating stuff that keeps your heart firmly in your mouth."

Vortex's swansong on the Spectrum was H.A.T.E. (or Hostile Alien Terrain Encounter), an isometric shoot 'em up which, despite obvious comparisons to Zaxxon, owed a debt of gratitude to Highway Encounter more than anything else. The Games Machine praised H.A.T.E.'s pulse-pounding action, while Sinclair User pointed at the elephant in the room saying "this game could quite easily be called Highway 3: Freddy's Back."

After the completion of H.A.T.E., Costa was burned out and took a two-year sabbatical to contemplate his future. Vortex was subsequently reformed in 1990, and with Mark Haigh-Hutchinson back in the fold, the team produced 16-bit versions of Highway Encounter as well as a new game based on Deflektor. Sadly, none of the games were picked up by a publisher, and the team disbanded.

Despite Vortex's unfortunate demise, its reputation on the Spectrum remains unblemished. Though many tried, few developers ever managed to replicate Vortex's uncanny ability to consistently produce unique, distinctive, and technically accomplished games that would capture the hearts and minds of a generation.



Zynaps

"Up until Zynaps, our in-house programming team had mostly handled conversions, but after Dominic Robinson produced such a brilliant Spectrum port of the Commodore 64 arcade shoot 'em up Uridium, we decided to give him and John Cummings free reign to produce another shooter. Dominic wanted to introduce a lot more colour to scrolling games on the Spectrum and so he built a new engine to achieve this. The end result was the colourful, action-packed gameplay of Zynaps."

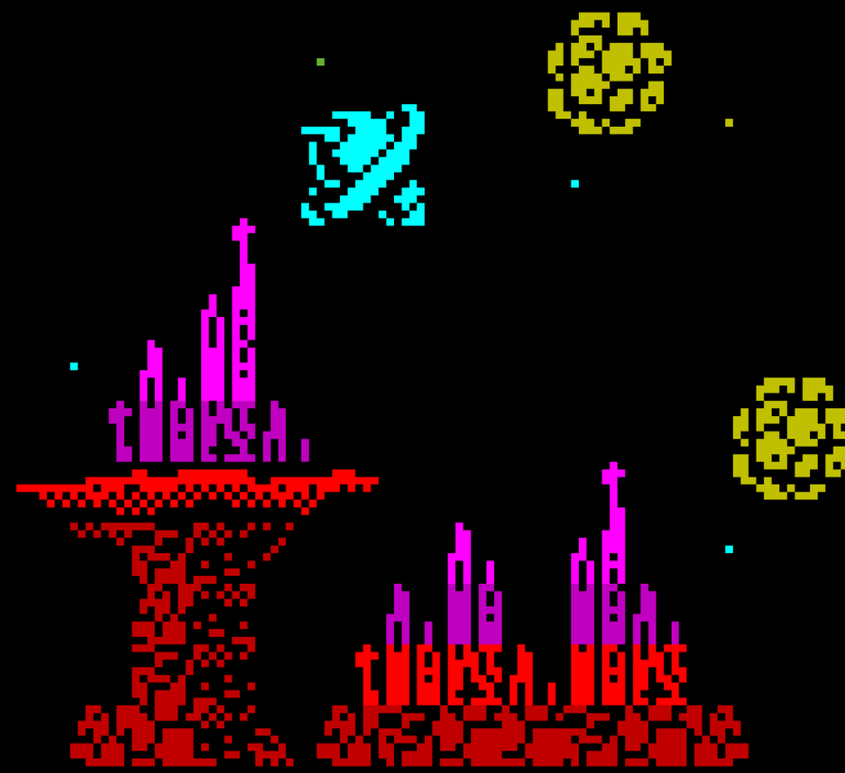
Andrew Hewson

Released
1987

Genre
Shoot 'em up

Developer
Dominic Robinson

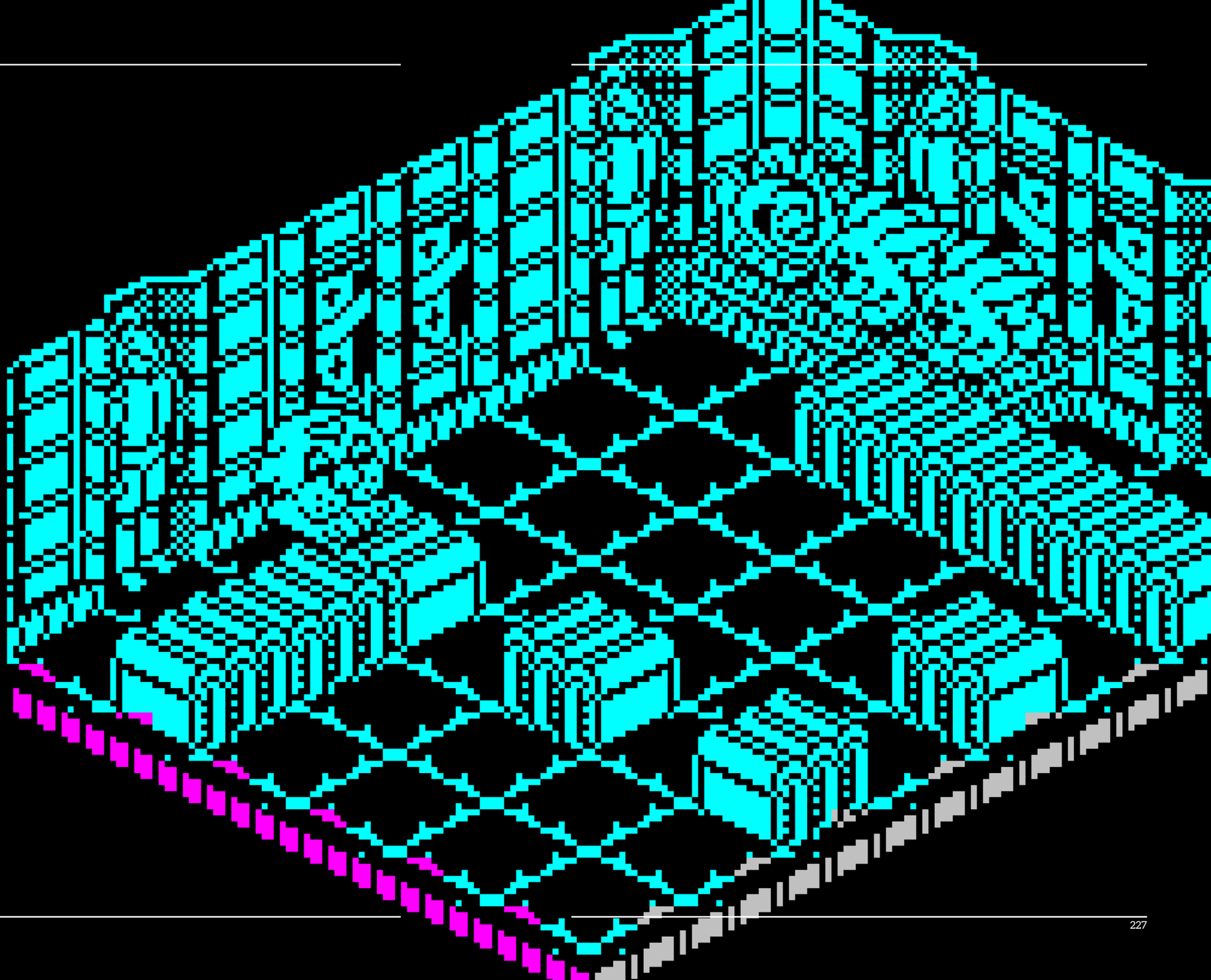
Publisher
Hewson Consultants



Head Over Heels

"This 1987 Jon Ritman effort is a true classic, and is often reckoned amongst the greatest Spectrum games ever written. Beautiful looking, superbly designed, slickly programmed and endlessly inventive, this was a 3D isometric puzzle game in which you – as a dog-like team of high-jumping Head and speedy Heels – had to use a combination of arcade skills, imagination, lateral thinking, speed of thought, and willingness to take risks to get through over 300 increasingly complex rooms. It's the nearest thing the Spectrum – or any 8-bit home computer – ever produced to the likes of Tetris and Super Mario Bros., and is a truly marvelous game."

Matt Bielby

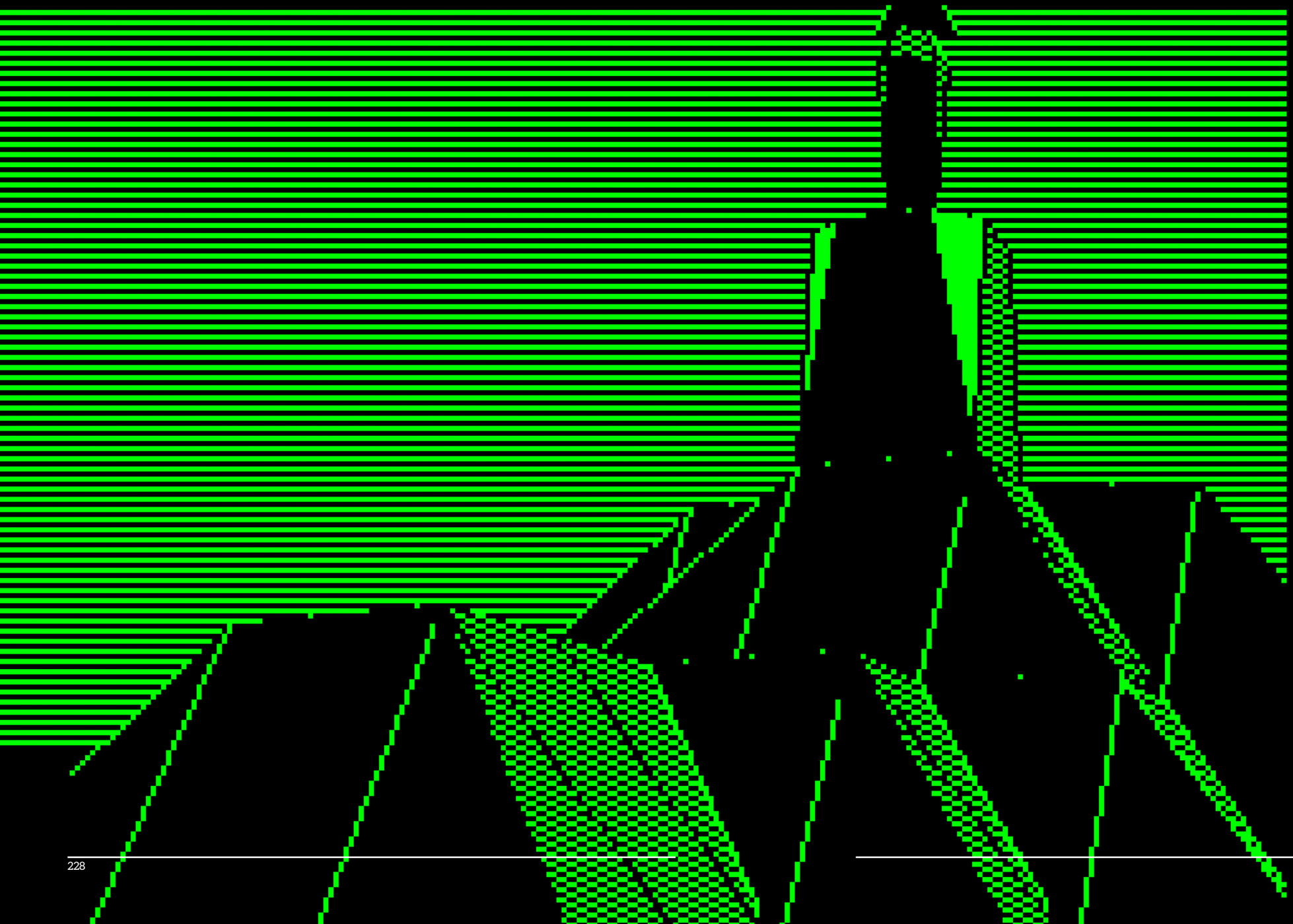


Released
1987

Genre
Adventure

Developer
Jon Ritman

Publisher
Ocean Software



The Sentinel

"An authentically scary puzzle game on a weird uppy-downy 3D chess board. If the Sentinel turned to look at you, you were dead. Using unique game mechanics and tension you could chew, the relentless turning of the Sentinel made for some panicky key hammering, evoking that moment in films where the hero drops his keys while trying to open a door. To make such an impressive 3D game on the Spectrum (ostensibly a calculator with delusions of grandeur) with just two colours was nothing short of astonishing. I still play it 30 years later and it's one of my favourite games of all time."

Phil South

Released
1987

Genre
Strategy

Developer
Software Creations

Publisher
Firebird Software



“Maybe some patriotic part of me loved it because it was British; it was ours.”

Simon Butler

Dizzy: The Ultimate Cartoon Adventure

"While working on Ghost Hunters we came up with the concept of turning our love of cartoons and fantasy stories into a game by creating 'The Ultimate Cartoon Adventure', where players could explore a strange magical kingdom solving problems. Keen to show facial expression on the main hero, and limited by sprite size and resolution, the character became a large head shaped like an egg with detached gloves and boots. He was named Dizzy as he was always tumbling, a feature developed largely because our sprite animation package Panda Sprites automated the process. Dizzy was slow to sell at first, but eventually spawned a series of very successful games."

The Oliver Twins

Released
1987

Genre
Platformer

Developer
The Oliver Twins

Publisher
Codemasters

Star Wars

Released
1987

Genre
Shoot 'em up

Developer
Vektor Grafix

Publisher
Domark

"Having spent countless nights in a freezing attic bedroom learning machine code, I suddenly found myself in a London office demonstrating my 3D landscape to two posh guys who owned Domark. At the end of the meeting they offered me the contract for Star Wars. Star Wars?! Was I hearing things? I travelled home to Leeds and on the eve of my 27th birthday established Vektor Grafix Ltd. and started work converting the Atari Star Wars coin-op to the Spectrum. I have to admit, many hours were spent playing the coin-op machine we had in our office – purely for research, you understand!"

Andy Craven

"I was thrilled to be commissioned to illustrate the cover for Domark's Star Wars. If anything epitomised Star Wars surely it must have been Darth Vader's shiny yet menacing helmet, so I made it dominate the design and spent many hours in a trance-like state airbrushing with inks and acrylics to get the polished reflective effect. Laser blasts and beams were also airbrushed in to give a sense of action and add splashes of intense colour. I remember posing in a karate suit in order to get Luke Skywalker's posture! If I was to do the artwork again, I'd definitely include Chewie!"

Steinar Lund



An interview with Shaun G. McClure

Credited on over 60 published titles, Shaun G. McClure was one of the Spectrum's most prolific pixel artists. After honing his skills on numerous budget games for publishers such as Zenobi, Alternative and Codemasters, he went on to create graphics for several high-profile arcade conversions including NARC, Rod-Land, and St. Dragon.

How did you first get interested in computers?
My friend Ian Smith had access to a ZX81, which his dad had purchased. As there weren't many games available, we spent long, sunny afternoons typing in programs from Sinclair Programs magazine. This helped us learn how to program in BASIC, fix the inevitable errors, and make alterations to the games. I later received my own ZX81 for Christmas, and eventually got my own Speccy. The rest is history.

"I sketched on acetate, which was then taped to the screen; then I'd move my little pixel cursor underneath it to trace the shape, keeping my entire head as still as possible"

What was your first Spectrum game?
The first game Ian and I made was Excalibur: Sword of Kings. Ian was really into text-based adventures, and because they were easier to make than arcade games, that's what we decided to do. We tried the big boys first – Ocean, Gremlin and so forth – but shockingly, they weren't interested, so our next stop was the budget companies; Alternative Software signed Excalibur and gave us a £60 advance, but the game never made more than that. I had to ditch the car and house plans rather swiftly!

How did your career in games get started?
During the development of Excalibur, I created a demo reel (on cassette, of course) and sent it out to every company I could. I wanted to get my name out there, and did a lot of free work for companies like Zenobi Software. I was also earning good money creating loading screens for D&H Games at 25 quid a go – a lot of money for me back then. One day I saw an article in the local paper about a local development team called Wise Owl Software; I found their number through directory enquiries, went to see them, and landed my first proper games job.

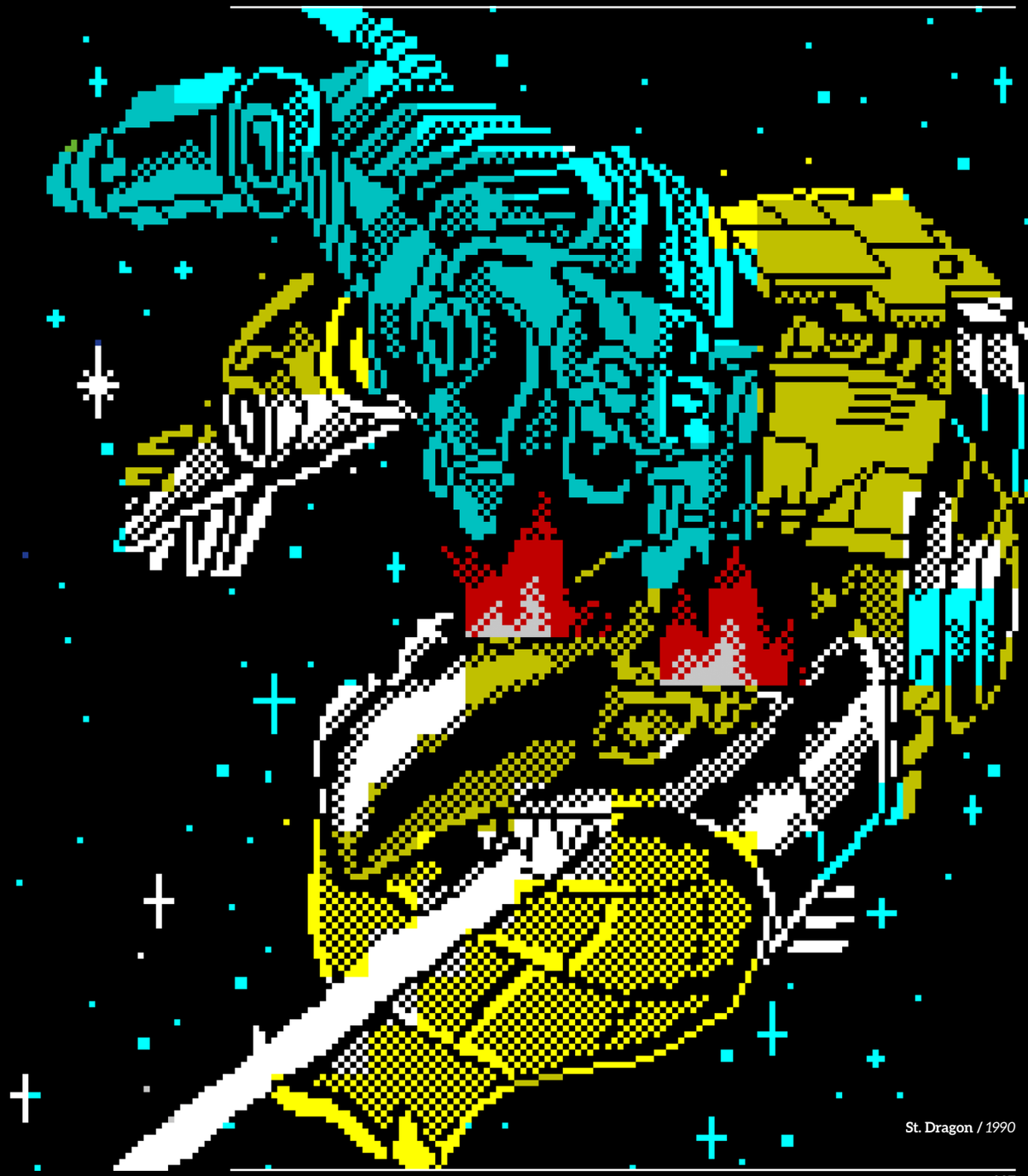
How did you end up working for The Sales Curve?
I was laid off from Wise Owl after finishing Gary Lineker's Super Skills. I worked for Enigma Variations in Harrogate for six months, then moved down to Watford to freelance for Vivid Image on Time Machine; I got to meet Raff Cecco, Nick Jones, John Twiddy and Mev Dinc, who would regularly get mentions in the magazines of the time. I thought I was in the big time.

I eventually got a full time job at The Sales Curve; they didn't have a specialist Spectrum artist, so I was brought in. I really did think I was great back then, getting interviews in magazines and creating games like SWIV, Rod-Land, and Double Dragon 3. We even had arcade machines in the office you could play for free!

What did a typical day in front of the computer look like?
That would depend on what was needed; the programmer would basically ask for things in advance, then tell you off if it was rubbish or the wrong size. There was also a lot of messing about; it was a lot like working in a youth club, and there was always an elastic band war or something going on. It was a lot of fun.

Which programs did you use to create your Spectrum art?
Melbourne Draw was the tool of choice for most professionals, mainly due to its grid overlay system that allowed you to plan the limited colour layouts.

Did you use any custom tools that weren't available commercially?
I wrote my own font designer for the Spectrum, which I used from time to time. A lot of my animation at The Sales Curve was created in Art Studio on the Atari ST and ported over to the Spectrum.



St. Dragon / *1990*



Fuddo & Slam / *1988*



Hit / *1989*



The Real Stunt Experts / *1989*

What were the best and worst aspects of creating art for the Spectrum?
The best and worst aspects were actually the same thing: the attribute clash. Few people took the care to get the colours looking nice and thus, nobody ever expected anything to look nice on a Spectrum. If you took the time to do it properly, people would be blown away; if it looked awful, that's probably what they were expecting anyway.

What was your process? Did you plan on paper, or jump straight in?
Generally I would sketch first, copy it onto graph paper, fill in the dots to make the graphics, then copy the dots onto the screen using Melbourne Draw. In those pre-internet days, I would regularly go through magazines and cut out good photos or illustrations to build a reference library. I was surprisingly organised for a kid.

How did your process change throughout your career?
Later I sketched on acetate, which was then taped to the screen, then I'd move my little pixel cursor underneath it to trace the shape, keeping my entire head as still as possible. Later, we would convert 16-colour artwork down to 2-bit by taking the original artwork, making it into solid blocks of white and black, then porting it over to Melbourne Draw to do the attribute work.

What was the development time for a typical game?
The games were always needed yesterday and had strict deadlines (except for the ones that I made as a kid while still living with my parents).

Did you pay much attention to magazine reviews?
Yeah – I used to cut them out and keep them in a scrapbook. Those scrapbooks had to go a long time ago, but yes, we would definitely look up our scores!

Did you receive much artistic direction, or did you have complete freedom?
For big-name licenses, the game had to look like the original. For most other games you had a bit of a leeway, but it still had to look good (people were quick to stick the knife in if it looked bad – the games industry is full of big egos, myself included).

When it came to Spectrum art, which aspect did you most enjoy?
The loading screens, simply because I could pretend to be a fine artist, really work on the details, and get the colours as lovely as possible.

Did you have much input in terms of game design?
The first three games I did with Ian Smith were the only time I had design input. After that, it wasn't until I worked on Double Dragon 3 with Tom Prosser that I could make gameplay suggestions that were actually taken seriously.

If you had the chance to revisit any of your games, what would you change?
I think my walking animations on Postman Pat 2 and Count Duckula could do with some improvement…

Was there anyone in the industry whose work was inspirational to you?
I was a big fan of Martin Wheeler (who worked on Virgin's Dan Dare games), as well as Dawn Drake from Ocean Software. Top artists.

"…we spent long, sunny afternoons typing in programs from Sinclair Programs magazine"



Lords of Chaos / *1990*



NARC / *1990*



Rod-Land / *1991*

"In those pre-internet days, I would regularly go through magazines and cut out good photos or illustrations to build a reference library. I was surprisingly organised for a kid"

What Spectrum games impressed you, or had an influence on your work?
I loved all of Julian Gollop's games (Chaos, Rebel Star, Laser Squad, etc.). So much so, I eventually contacted Julian and offered to work on some art for him, and subsequently ended up doing the loading screen for Lords of Chaos.

Outside of games, what were your biggest artistic influences?
I was a big fan of Tim White, Boris Vallejo, and Surrealists like Dali for their strong use of colour and contrast. And Giger, of course, for the sheer amount of detail.

Of all the games you've worked on, which are you most proud of and why?
Probably Rod-Land, it's very clean and well presented. I could have made the loading screen a bit better on reflection, but it still looks nice to this day.

Were there any Spectrum games you worked on which never saw the light of day?
A football-cum-driving game called Here We Go! The player had to drive between matches, and play football games against nuns and Mexicans. Yes, really.

What was your final Spectrum game? What made you leave the machine behind?
I think it was St. Dragon. The Spectrum had run its course and companies were pulling out of the market. Crash magazine was down to about three pages by that point, too.

Was there a Spectrum game you would have loved to have created the graphics for?
Rebelstar Raiders. I wouldn't have made it any better, but it would have been mine.

What was your favourite Spectrum game?
There are a few, but Laser Squad in two-player mode was one of the first games that made me laugh out loud; a friend of mine stole a dead soldier's gear from me, which included a primed grenade. I still laugh about that now (I don't get out much).

Any stand-out memories from the Spectrum era?
There was a programmer I once worked with who was mentally unstable. The boss was reluctant to lose him as we still hadn't finished the game, but once it was completed the programmer was sectioned. When it turned out that the game was full of bugs and nobody could understand the code, they tried unsuccessfully to sign him out of the hospital. Instead, they took him for a walk in the grounds, stuck him in the car, and took him back to the office until the bugs were fixed.

Why do you think the Spectrum is remembered so fondly?
It was such a naïve, unpretentious little machine, with its array of rainbow colours. It was the golden age of development before it got all grown up. I think it was quite social, too; swapping pirated games was a bit like swapping football stickers, wasn't it?

Do you still own a Spectrum?
Unfortunately it was stolen when I was burgled many years ago, and I don't really have the space for one any more.

What are you up to these days?
After working in games for a few more years, I spent some time teaching computer game art at Teesside University before moving to Scotland where I'm currently studying database administration and mobile development.



Released
1987

Genre
Action

Developer
Clive Townsend

Publisher
Durell Software

Saboteur II: Avenging Angel

"I wanted to have a female lead character because there didn't seem to be many around – certainly none as cool as a ninja. The character was named after a girlfriend who read DC Comics, specifically the Angel Love series, and the loading screen has a tiny heart/halo logo as a tribute. As this was a sequel, I needed to improve on the original; the playing area was slightly larger and the enemies moved from room to room, but I felt the backgrounds could have been more detailed. Saying that, the Evil Criminal Mastermind was probably still moving his equipment in..."

Clive Townsend









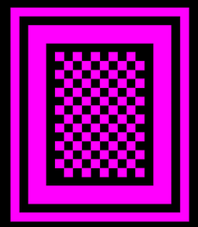
Released
1987

Genre
Action

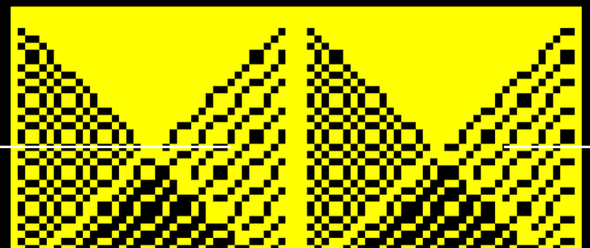
Developer
Tim Closs

Publisher
Firebird Software









I, Ball

"I was just 15 years old – and still at school – when I created I, Ball. I remember the Firebird press guy had tipped me off that the game was going to do well, and I was praying that it would score higher than 90% in Crash magazine and earn a coveted 'Crash Smash' award. When the magazine finally came out and I, Ball received the full multi-page treatment, it was a huge moment; being able to take my copy of Crash into the classroom and show it to my mates was gold."

Tim Closs

Cybernoid

Released
1988

Genre
Shoot 'em up

Developer
Raffaele Cecco

Publisher
Hewson Consultants

Artwork
Oliver Frey



Beyond the Ice Palace

Released
1988

Genre
Adventure

Developer
Paradise Software

Publisher
Elite Systems

Artwork
Oliver Frey



Super Robin Hood

"Created as part of our push to become commercially viable, we hit on the idea of using a 'free' license that people would recognise. In September '86 we met Richard and David Darling at a computer show; they were just setting up a new company called Codemasters and offered us £10,000 if we could produce the game quickly. We worked 20 hours a day, sharing a single Amstrad computer, and completed it in about a month. Codemasters commissioned Mark Baldock and James Wilson to convert it to the Spectrum after the Amstrad version become a number one hit."

The Oliver Twins



Released *1987* / **Genre** *Platformer* /
Developer *The Oliver Twins* / **Publisher** *Codemasters*

Professional Ski Simulator

"Having had great success with our previous Simulator titles, we were keen to find another exciting sport that we could translate into a computer game. The inspiration for Professional Ski Simulator came whilst playing one of our favourite arcade games, Marble Madness. The pseudo-3D looked a little bit like the side of mountain, and by adding trees and log huts we had a great look for another successful Simulator. Sadly, the Spectrum wasn't fast enough to produce the slick, full-screen scrolling required, so players had to 'push' their skiers down the beautiful mountains instead."

The Oliver Twins



Released *1987* / **Genre** *Sports* /
Developer *The Oliver Twins* / **Publisher** *Codemasters*



Released *1988* / **Genre** *Sports* /
Developer *Supersonic Software* / **Publisher** *Codemasters*

Soccer Skills

"I was an artist on loan from Optimus and was asked to drive to the Codemasters farmhouse early one Friday morning to help them with background tilesets. I worked at a furious pace through the day and late into the night, sitting in a Portakabin beside the farmhouse – it was rather spooky after everyone had left for the weekend. With the game being soccer, the backgrounds were an easier task than typical games so I burned through the tilesets, checked them in the game, and was finished by the early hours of Saturday morning. I was like a pixel doctor on call!"

Adrian Ludley



Released *1988* / **Genre** *Action* /
Developer *Supersonic Software* / **Publisher** *Codemasters*

Super Stuntman

"Super Stuntman was the first original game I wrote for the recently-formed Codemasters, having converted Mike Clark's Super G-Man from the Commodore 16 to the Spectrum a few months earlier. My first games were produced by hand-writing assembly language on paper, then inputting the code using the amazing rubber keyboard. Things got better, though; we eventually started using PCs to write the program, with the Spectrum connected as a target machine – amazingly advanced! Super Stuntman was Supersonic Software's first proper game, and it's still going strong half a lifetime later."

Pete Williamson

RoboCop

"When Mike Lamb and I were asked to do the game tie-in for the film RoboCop, it was really exciting; at that time, watching a film then incorporating its ideas into a game felt like a monumental achievement. I particularly enjoyed creating ED-209, RoboCop's awkward walk, and the hostage and photofit stages. In those days, it all came down to what the programmer could fit into memory and the artists working around those restrictions to the best of their ability. Mike and I often had heated debates, but it always worked out in the end!"

Dawn Drake



Released
1988

Genre
Action

Developer and Publisher
Ocean Software



Rex

"Up until Rex we had been releasing games under the name Creative Reality. To distance ourselves from our previous games, we decided to re-invent ourselves with the new name of The Light. Amusingly, not long after the release of the game, Sinclair User got in contact and wanted to interview this 'new' company. Problem was, we'd just done an interview with them a month or so earlier as Creative Reality, so we also had to fabricate fake names for ourselves. We even invented the back-story that we were ex-IBM employees and wrote the game in a matter of weeks. I never did find out if we'd actually fooled them!"

Jas Austin

"Rex was the kind of game that the Spectrum could do in its sleep by 1988, but it's doubtful whether it had ever been done as effectively before. Everything in Rex, including the main character, was small but perfectly formed, meaning that each screen was colourful and teeming with life. With destructible scenery and multiple routes through the game – not to mention an almost complete absence of colour clash – Rex was a beautiful game and an enormous challenge. And who didn't want to play as a warmongering rhinoceros?"

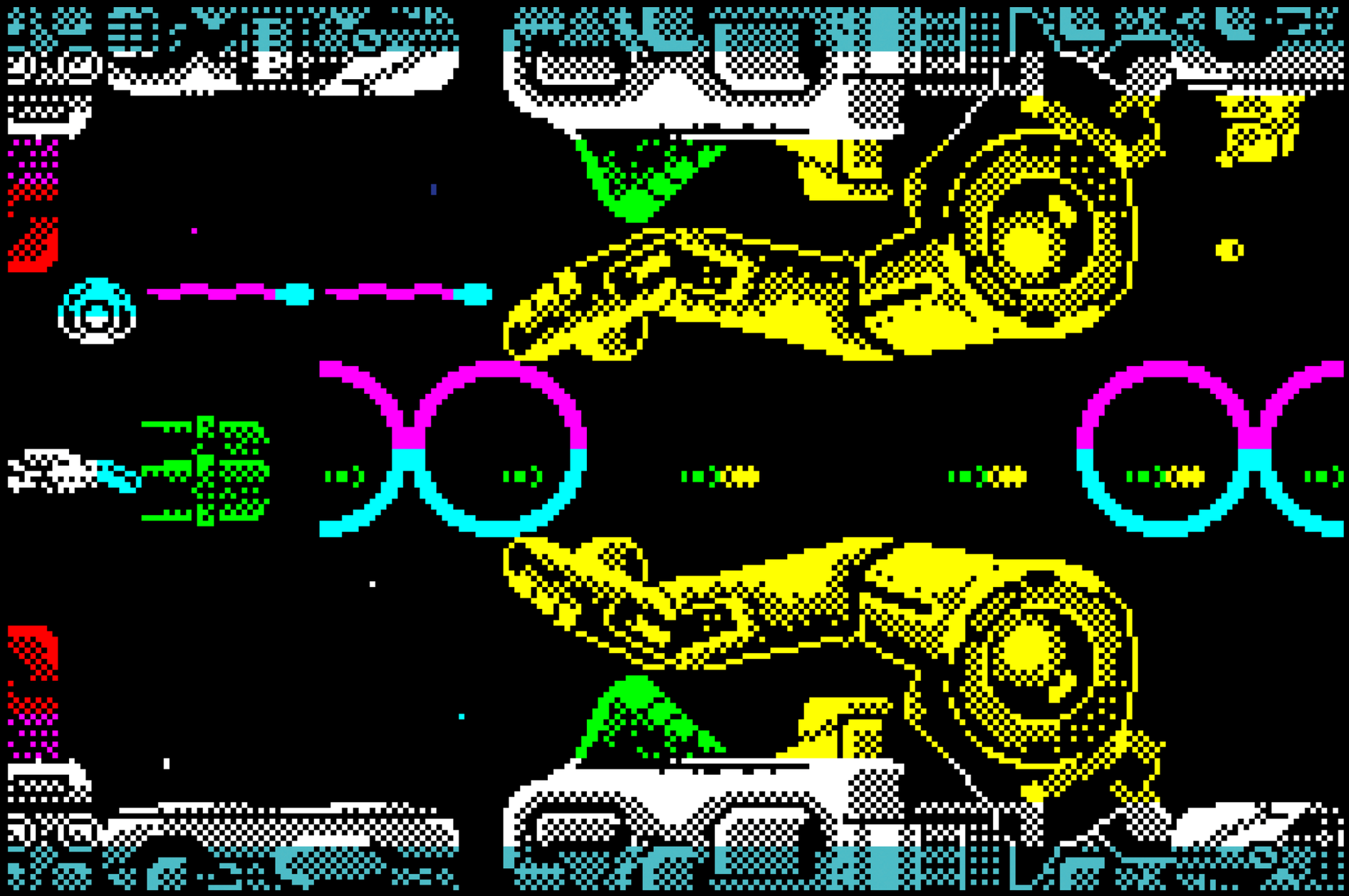
Paul Morrison

Released
1988

Genre
Shoot 'em up

Developer
The Light

Publisher
Martech Games



R-Type

"I set out to write the game as a kind of protest against Spectrum titles which boasted super-smooth scrolling or flicker-free sprites, but did so by severely limiting what ended up on screen. As I kept adding more and more to the game, I could feel everything slowing down but the gameplay kept getting tighter and tighter. Without a talented graphic artist like Mark Jones, who took all the intricate backgrounds and sprites from the arcade machine and squeezed them down to fit into a stupidly small amount of memory, it would have been a very colourless and bland game indeed."

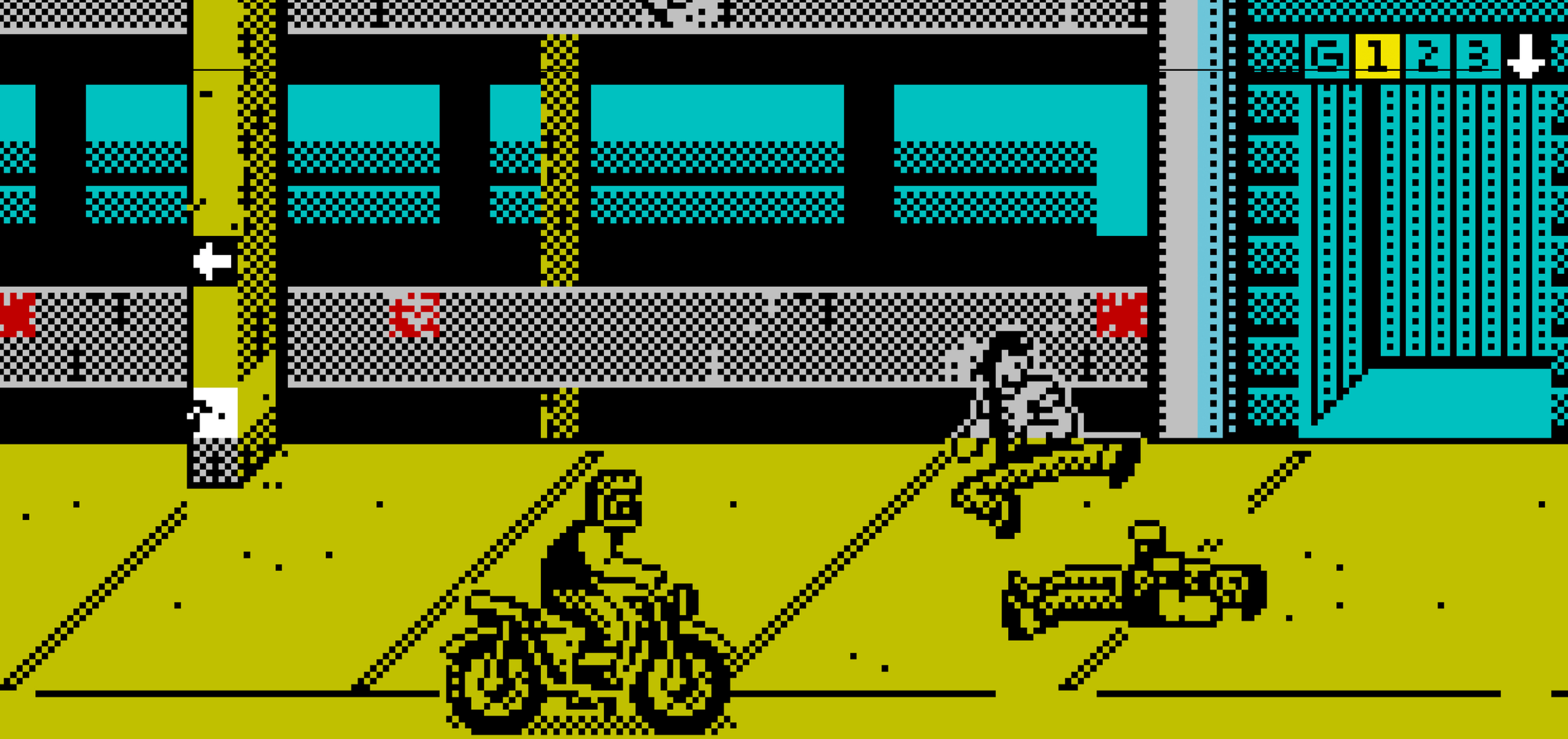
Bob Pape

Released
1988

Genre
Shoot 'em up

Developer
Software Studios

Publisher
Electric Dreams Software



Released
1988

Genre
Beat 'em up

Developer and Publisher
Imagine Software

Target: Renegade

"A sideways beat 'em up, certainly, but accusations that Target: Renegade was a low-rent Double Dragon were rife and unfair. Apart from the loading screen, which looked like a weird overhead CSI photo of a road traffic accident, the graphics were cleverly done. Rather than going for graphic muscularity, the playfield was essentially monochrome with block-colour overlays, like a Space Invaders machine. The increased speed meant you could concentrate on inviting someone to get off their motorbike by gently applying your shoe to their face. The downside was the music, which sounded like a music box on mescaline."

Phil South

Last Ninja 2

"I had already done technically great things on the Spectrum and felt that Last Ninja 2 would give me another opportunity to show off my command of the Spectrum. I think I succeeded! Gary Thornton did a great job translating Hugh Riley's wonderful Commodore 64 graphics across to Spectrum. I also wrote an editor to allow us to construct all those wonderful 3D screens with ease. There was so much testing involved to make sure all the objects, the Ninja, and other characters appeared properly behind walls and other objects to give the game its realistic 3D look and feel."

Mevlut Dinc



Released
1988

Genre
Adventure

Developer
Mevlut Dinc (MD Software)

Publisher
System 3

Odin COMPUTER GRAPHICS LTD

Odin Computer Graphics was an independent UK game developer based in Liverpool. Founded in 1985 by Paul McKenna, the core Spectrum team included programmers Steve Wetherill, Doug Burns, George Barns and Keith Robinson, and artists Paul Salmon, Stuart Fotheringham and Colin Grunes. Odin closed its doors in 1987, but the company was subsequently reformed in 2005 by Paul McKenna to bring Odin's catalogue of classics to modern mobile formats.

Odin began life as Thor Computer Software, which had previously published several home-grown games created by back-bedroom programmers such as Chris and Steve Kerry (who would later work for Ocean and Gremlin on titles including Auf Wiedersehen Monty and Footballer of the Year). When the company's focus switched to in-house development, Paul McKenna decided to make a clean break from the Thor label and appropriately christened the new company Odin Computer Graphics.

During the company's short reign from 1985 until 1987, Odin produced some of the Spectrum's most memorable arcade adventures, including Nodes of Yesod, Robin of the Wood and Heartland. Despite obvious comparisons between Odin Computer Graphics and Ashby Computers & Graphics (the company behind Ultimate Play the Game), Odin's first trio of releases earned coveted 'Crash Smash' accolades, an impressive feat, which few companies would ever replicate.

Odin's debut title was Nodes of Yesod, released in 1985. Originally titled Moon Munching Moles from Mars, Nodes of Yesod was a slick and colourful flick-screen platform game that drew more than its fair share of comparisons to Ultimate's seminal Underwurlde. Starring intrepid astronaut Charlie Fotheringham-Grunes (a tip of the space helmet to artists Stuart Fotheringham and Colin Grunes), the game played as good as it looked, the main character alone boasting over 64 frames of silky smooth animation. Your Spectrum magazine gave Nodes of Yesod 5/5, calling it "fast and furious," while Crash gave it a 'Smash', declaring it "one of the best games this year."

After the commercial success of Nodes of Yesod, Odin landed a lucrative six-figure deal with Telecomsoft – the computer software division of British Telecom, which owned the Firebird, Rainbird and Beyond labels – to produce ten games over a 12-month period. The first game to fall under the new deal was Robin of the Wood, a flick-screen arcade adventure loosely inspired by a 1980s UK television series starring Jason Connery.

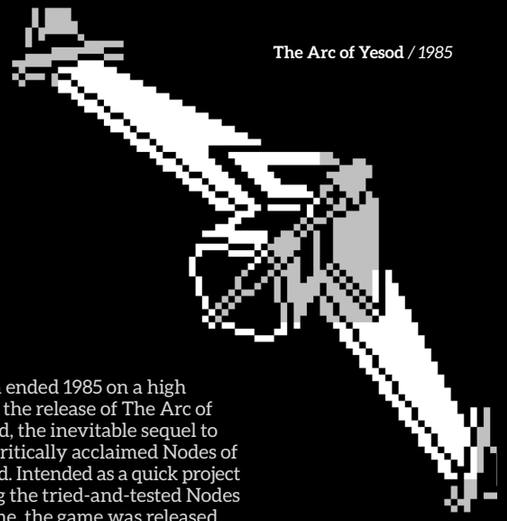
The brainchild of artist Paul Salmon, Robin of the Wood certainly owed a debt of gratitude to Ultimate's Sabre Wulf, but any similarities between the two games were arbitrary; Robin of the Wood was also packed with innovative, RPG-like gameplay elements that were years ahead of their time.

Nodes of Yesod / *1985*



"Odin's first trio of releases earned coveted 'Crash Smash' accolades, an impressive feat, which few companies would ever replicate"

The game was also a technical marvel, packed with digitised speech and a hefty 320 screens (compared to Nodes of Yesod's humble 256). Robin of the Wood scored an impressive 94% in Crash magazine, earning Odin its second consecutive 'Smash' award. Your Sinclair also gave the game a hefty 9/10 and summed up their review with "Buy it!"



The Arc of Yesod / *1985*

> *Robin of the Wood was also packed with innovative, RPG-like gameplay elements that were years ahead of their time*

Odin ended 1985 on a high with the release of The Arc of Yesod, the inevitable sequel to the critically acclaimed Nodes of Yesod. Intended as a quick project using the tried-and-tested Nodes engine, the game was released on the Thor Computer Software label, which had been recently resurrected for the purpose of releasing 'budget' titles developed by the Odin team.

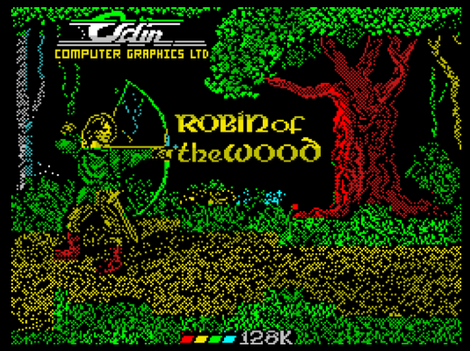
Despite being inherently similar to Nodes of Yesod, as a stand-alone game The Arc of Yesod was a hit with the reviewers thanks to the game's luscious visuals and stunning animations. Crash magazine called it "very playable and addictive," while Your Sinclair thrust a 9/10 rating on the game and declared "it's still the split pixel, platform-leaping, nasty-avoiding bizarre that makes you think there's lots of life left in the platform game (genre)."

Originally developed under the name Kimera, Heartland arrived in the Summer of 1986 to unanimous critical acclaim. A technically impressive flick-screen arcade adventure, Heartland was unmistakably Odin, from the gorgeous graphics to the superlative sprite animation (not to mention a cameo from Charlie Fotheringham-Grunes). Scoring a hefty 92%, Heartland earned Odin its third consecutive 'Smash' in Crash magazine, who thought it "very playable and immensely compelling," while Sinclair User called it "stunning to look at, delightful to play."

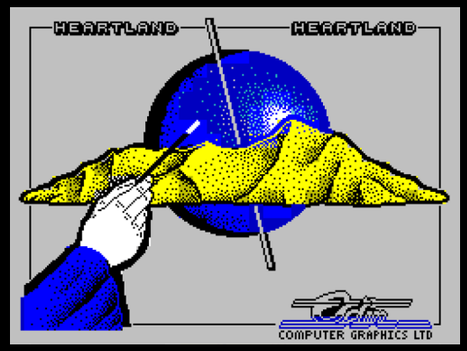
Odin's next release was I.C.U.P.S. – an acronym for the International Commission for Universal Problem Solving – released on the Thor Computer Software label at the tail-end of 1986. Part shoot 'em up, part surreal flick-screen platformer, the game was another perfect marriage of technical prowess and sharp visuals which were fast becoming Odin's hallmarks. For many reviewers, however, the balance of style over substance meant that I.C.U.P.S. would glean only modest review scores.

After a disappointing end to the year, Odin kicked off 1987 – both figuratively and literally – with Hypaball, a sports simulation set in the far-flung future. Despite the simplistic graphics, which were muted and sparse compared to Odin's previous releases, gameplay was solid, and came into its own when a second player was brought into the mix. "As future sports simulations go this isn't all that bad," said Crash magazine, while Sinclair User thought the game was "quite innovative."

Arriving just in time for Christmas 1987, the side-scrolling shoot 'em up Sidewize would provide a welcome, if fleeting, return to form for the scouse software giant. Although Sidewize owed a debt of gratitude to the Commodore 64 game Delta (which ironically wouldn't appear on the Spectrum for another two years), the game was a technical tour de force running at 50 frames per second, all thanks to the programming prowess of Steve Wetherill. C&VG magazine said "(Sidewize) has all the features of a classic shoot 'em up arcade game," while Sinclair User gave it a 'Classic' award and called it "the slickest, no-messing shoot-out in a long time."



Robin of the Wood / *1985*



Heartland / *1986*

Published by Firebird, Odin's final two releases appeared in the Summer of '88, ironically long after the company had ceased trading. First was The Plot, a return to Odin's platforming roots which thrust players into the role of Guy Fawkes in an attempt to re-write history by blowing up the Houses of Parliament. A solid platform game which gave subtle nods of respect to both Heartland and Monty Mole, Your Sinclair called it "a fairly straightforward but quite enjoyable platform and ladders game."

The final Odin game – in spirit at least – was Crosswize, Steve Wetherill's highly-anticipated sequel to Sidewize. Another tough-as-nails side-scrolling shoot 'em up, Crosswize was yet another technical and graphical marvel. Your Sinclair praised the game for its "smooth movement, luverlee explosions and detailed graphics," while Crash thought Crosswize was a tremendous improvement over its predecessor, saying "if you're looking for a tougher-than-average shoot 'em up this might just be the one."

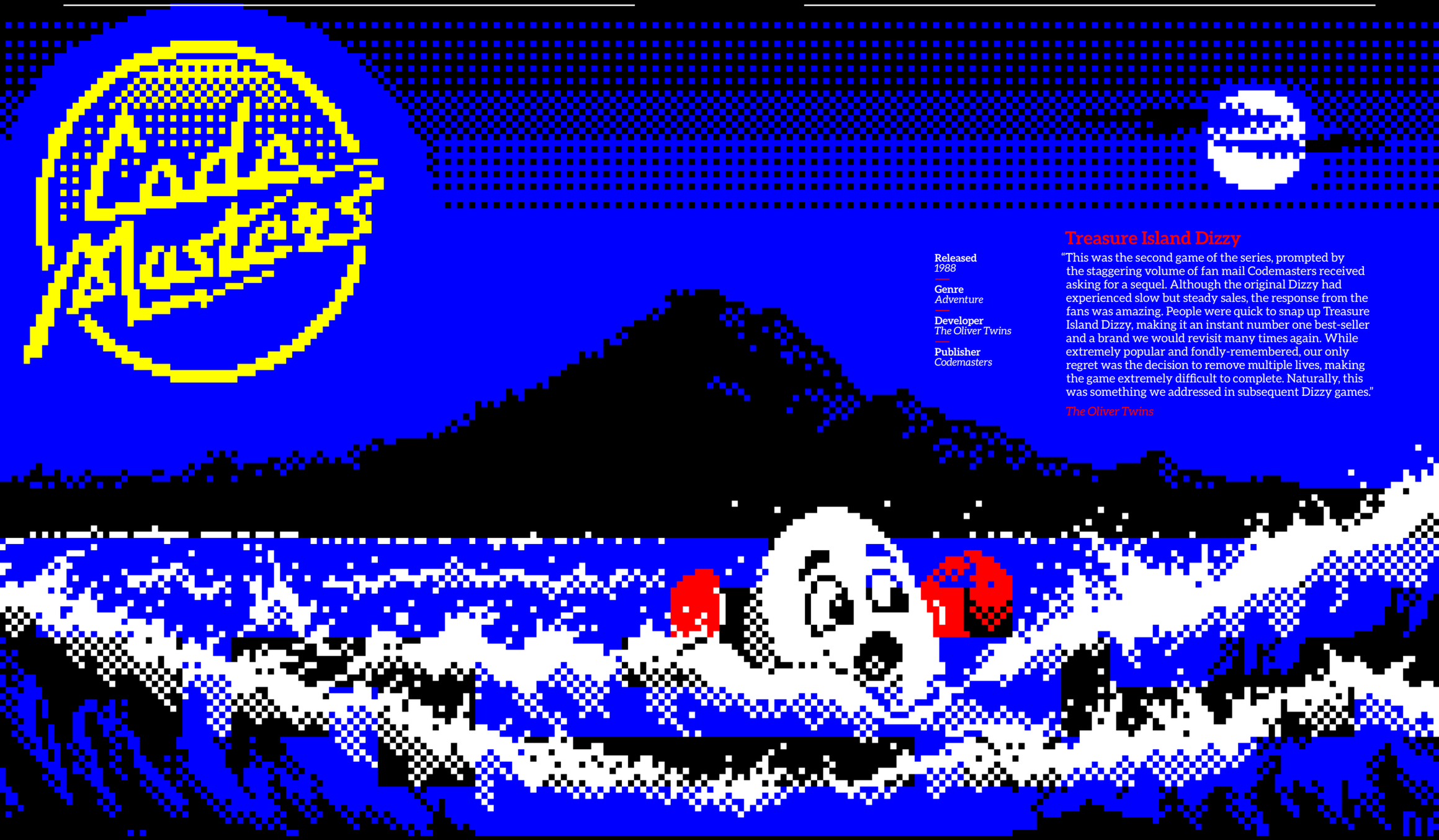
In many ways Odin was a victim of its own success; early releases like Nodes of Yesod and Robin of the Wood raised the bar incredibly high, setting a standard that could not be sustained in the long term. Indeed, by the time Odin had fulfilled its ten-game contractual obligation to Telecomsoft, most of the company's talent had already jumped ship to other local developers such as Denton Designs.

> *Once described by Crash magazine as "would be Ultimates," it would be remiss to remember Odin Computer Graphics as anything other than a significant player in the world of Spectrum software*

Once described by Crash magazine as "would be Ultimates," it would be remiss to remember Odin Computer Graphics as anything other than a significant player in the world of Spectrum software, boasting a legacy of unique and eccentric games that were both technically impressive and beautifully presented.



Sidewize / *1987*



Released
1988

Genre
Adventure

Developer
The Oliver Twins

Publisher
Codemasters

Treasure Island Dizzy

"This was the second game of the series, prompted by the staggering volume of fan mail Codemasters received asking for a sequel. Although the original Dizzy had experienced slow but steady sales, the response from the fans was amazing. People were quick to snap up Treasure Island Dizzy, making it an instant number one best-seller and a brand we would revisit many times again. While extremely popular and fondly-remembered, our only regret was the decision to remove multiple lives, making the game extremely difficult to complete. Naturally, this was something we addressed in subsequent Dizzy games."

The Oliver Twins



Where Time Stood Still

"All of the game's inhabitants used a very simple rule-based AI to create seemingly complex behaviour. One day I was testing the 'Throw Gloria Off The Sacrificial Ledge' set-piece. All the natives gathered around Gloria as she teetered on the edge of the abyss, but then suddenly a Tyrannosaurus turned up. The natives saw it as a threat and started running around throwing their spears at it. Gloria, unnoticed, took her chance, turned away from the edge, and walked quietly off. Gloria had escaped! I was very impressed and more than a little freaked out – my world had come to life and was doing stuff all by itself."

John Heap

Released
1988

Genre
Adventure

Developer
Denton Designs

Publisher
Ocean Software



Savage

"Savage started out with the working title of 'Project 5' and at that time Nick Bruty and I were still making games from a tiny room at my mother's house. We were so limited by the Spectrum's 48KB of RAM, we had to make three separate games, each loaded separately then activated using a password given at the end of the previous section. The game comprised a side-scrolling platform section, a 3D shoot 'em up section, and another side-scroller where you played a bird negotiating a maze. Thankfully, Project 5 was re-branded as Savage before the game's release!"

David Perry

"Savage was our follow-up to Trantor: The Last Stormtrooper. Bigger, splashier and with multiple loads, it was easily the largest Spectrum game we made. It was also my first full collaboration with David Perry; I got to use all of his cool tools built around his game engine, which was used on all our games together. Earthworm Jim on the Mega Drive and SNES was the last game Dave and I worked on together before he retired from coding, and it was still using the basic structure of his Spectrum engine. Savage was also marketed with the lamest advertisements I've ever seen. Thanks, Firebird!"

Nick Bruty

Released
1988

Genre
Action

Developer
Probe Software

Publisher
Firebird Software

11-a-side Soccer

"The Spectrum was an interesting machine for art, certainly a strange setup compared to most other 8-bit machines. Each character was like one big pixel of colour with 8x8 smaller pixels of contrast and detail within. My first pass would be to define colour borders in a very blocky nature and define the tile and character count. My second pass would be filling in the detailed repetitive patterns and custom blocks. It was like making a jigsaw puzzle with pieces before you even had a picture."

Adrian Ludley



Released *1988* / **Genre** *Sports* /
Developer *Supersonic Software* / **Publisher** *Codemasters*

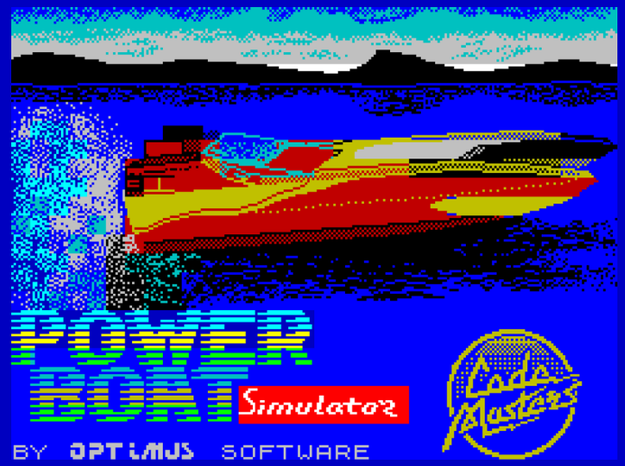
BMX Freestyle

"Codemasters' first mega hit was Richard Darling's BMX Simulator. BMX racing was obviously really hot, and thus BMX Freestyle just had to be made! The game featured a side-scrolling viewpoint, a two-player mode, and all manner of amazing BMX tricks. After all, why mess with a winning formula? I often marvelled at the skill of pixel artists such as Jim Wilson, Chris Graham and Neil Adamson who were capable of illustrating (and animating) recognisable characters and objects, by hand, in a tiny resolution with really blocky colour."

Pete Williamson



Released *1989* / **Genre** *Sports* /
Developer *Supersonic Software* / **Publisher** *Codemasters*

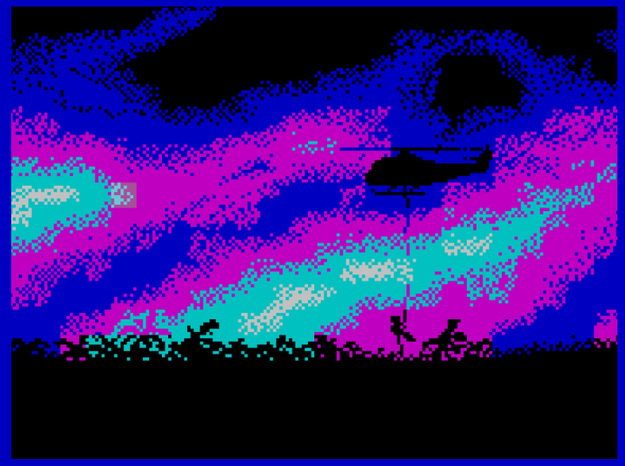


Released *1989* / **Genre** *Action* /
Developer *Optimus Software* / **Publisher** *Codemasters*

Pro Powerboat Simulator

"This was the second game that Optimus Software developed for Codemasters. We loved games like Toobin' and Spy Hunter and wanted to do a vertical scroller with boats, jumps, power-ups, bombs and lots of action. Pro Powerboat Simulator was the result. We took it a step further and added a simultaneous two-player mode and bonus levels (we developed a pattern with our Codemasters games of having alternating levels with a slightly different gameplay style). Later on we used the same code base to make a car game – I remember demonstrating an early version where the cars sank into the road when destroyed!"

Jason Falcus



Released *1989* / **Genre** *Action* /
Developer *Optimus Software* / **Publisher** *Codemasters*

SAS Combat Simulator

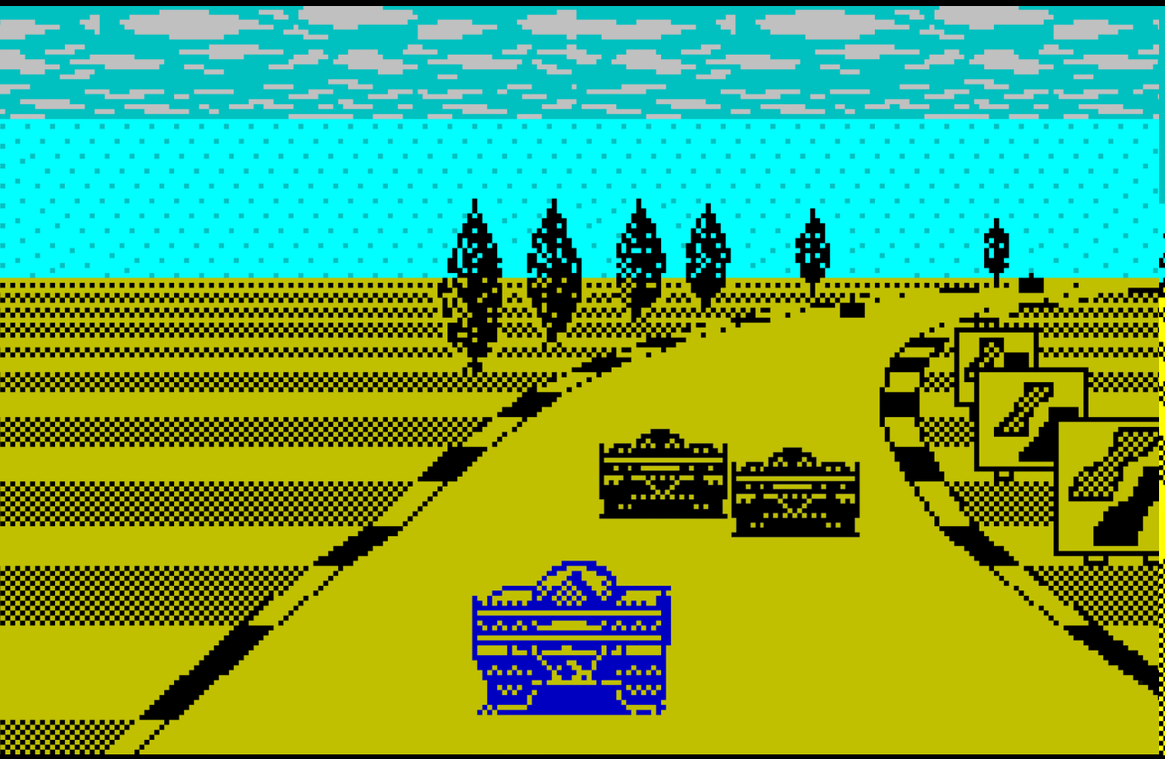
"Although SAS Combat Simulator was heavily influenced by arcade games like Commando and Ikari Warriors, we wanted to add a new twist, so instead of having just vertically-scrolling gameplay, we added horizontal sections and every other level was a side-on section inspired by Green Beret. It was developed on Spectrum and Amstrad, and the big challenge was to keep the graphics colourful within the restriction of two colours per 8x8 pixel character square. The end result was a good, fun game, which went to No.1 in the charts, and was later ported to Commodore 64, Amiga and Atari ST."

Jason Falcus

Released
1988

Genre
Racing

Developer and Publisher
Imagine Software



WEC Le Mans

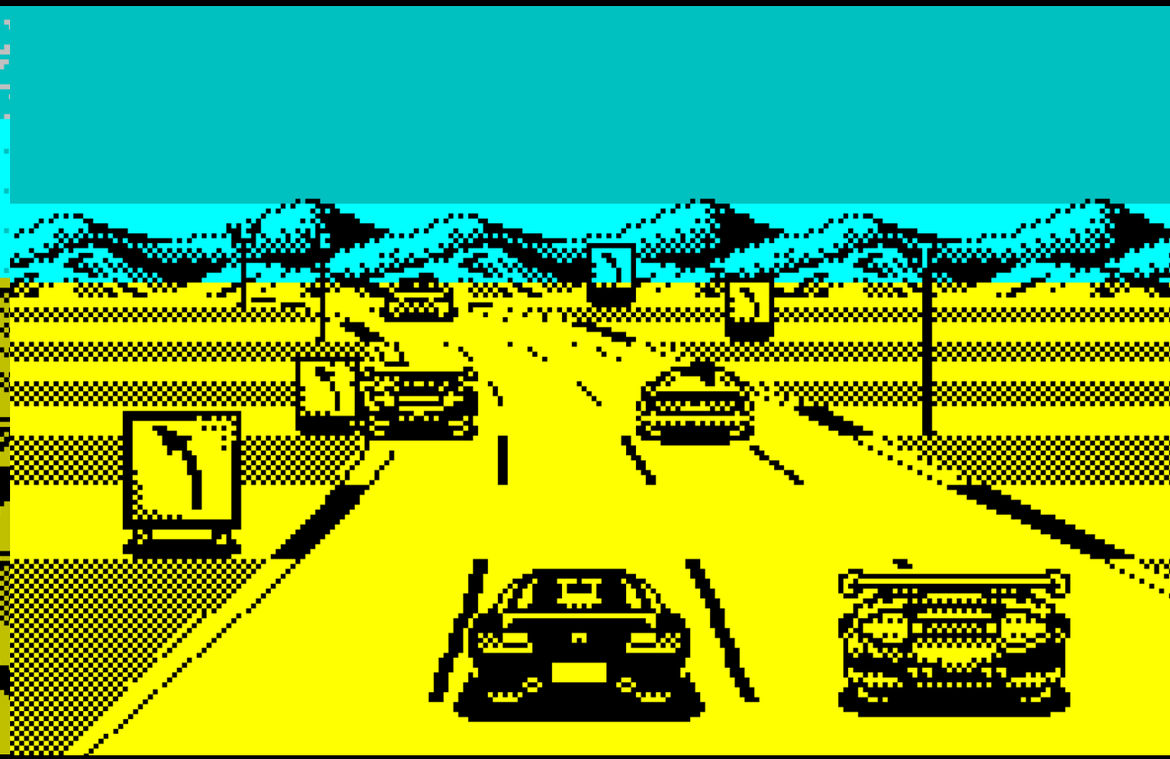
"This was my first arcade conversion and my first racing game. I was studying animation at the time and I decided to try a new technique on the car when it span after a collision, so I added motion lines into the sprites to give the illusion of extra frames and make the animation smoother. However, after I sent the frames off to the programmers they sent a message saying they thought the car must have got corrupted so they had one of their artists clean them up – I wasn't happy! If you look closely you can still see the remnants of them on the car."

Bill Harbison

Released
1989

Genre
Action

Developer and Publisher
Ocean Software



Chase H.Q.

"Once all the game elements and graphics had been added, Jon O'Brien told me there was lots of memory left to add extra stuff. The first thing we did was add the different title sequences with the 'Chase H.Q.' letters moving around. After that I made a game-complete sequence made up of images inspired by publicity stills from Lethal Weapon 2. I also made a short animation of one of the characters walking to the final criminal's car and pulling them through the window. This didn't make it into the game, but the criminal was based on Commodore 64 artist Stephen Ian Thomson!"

Bill Harbison

Operation Thunderbolt

Released
1989

Genre
Shoot 'em up

Developer and Publisher
Ocean Software

Artwork
Oliver Frey

Myth: History in the Making

Released
1989

Genre
Platformer

Developer
Concept Animations

Publisher
System 3

Artwork
Oliver Frey

H.A.T.E.

"H.A.T.E. – it stood for 'Hostile All-Terrain Encounter', which actually makes a sort of sense – was a fast, smooth, exciting isometric 3D shoot 'em up from Gremlin that took place on an ever-undulating yellow brick road, suspended in space and running diagonally from the bottom left of the screen to top right. Your job was to travel the road in a highly maneuverable tank or a strangely cumbersome plane, blasting every moving alien and static building you came across, and in doing so attaching an ever-growing 'tail' of life-giving plasma cells behind you – which sounds ill-advised, but there you go."

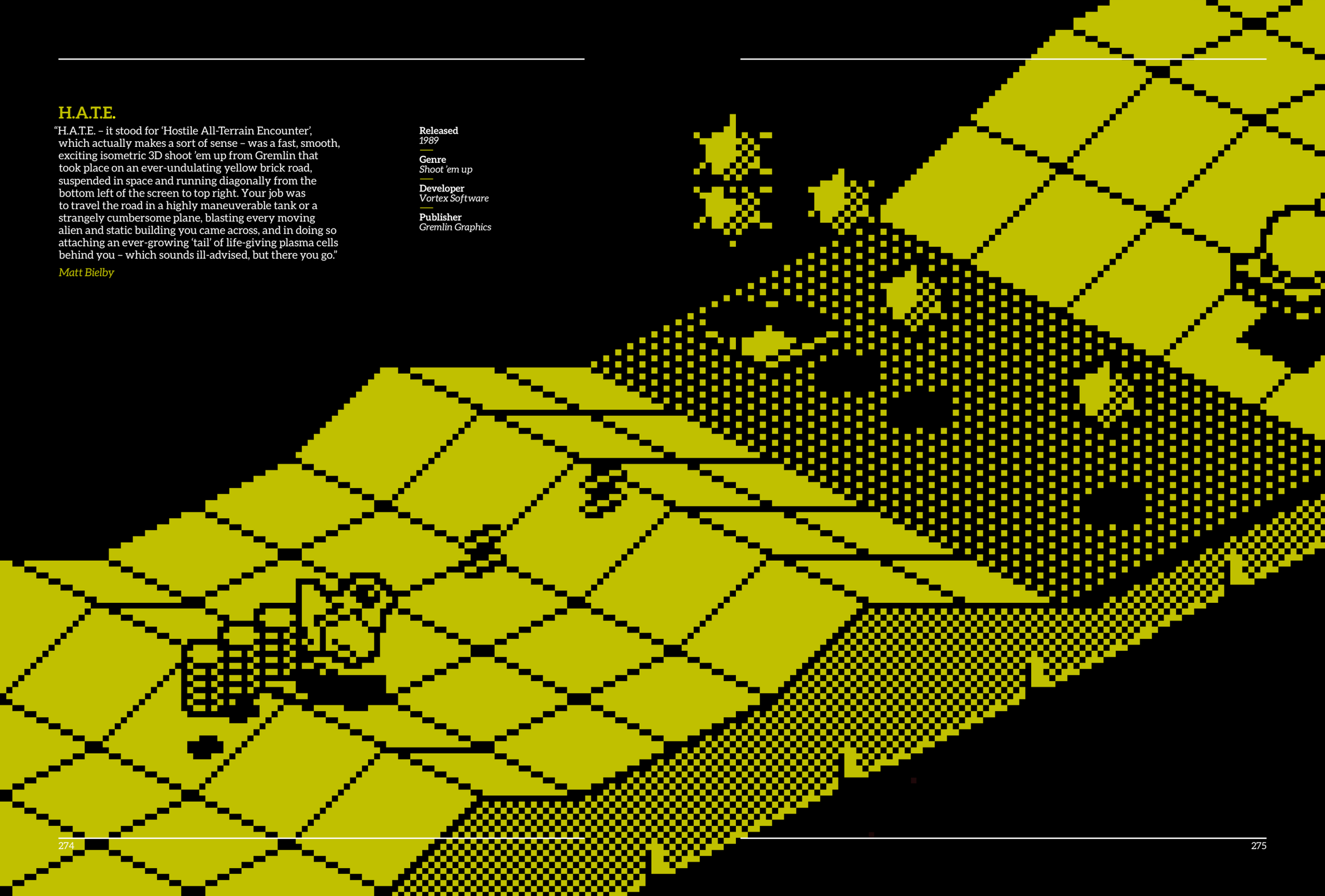
Matt Bielby

Released
1989

Genre
Shoot 'em up

Developer
Vortex Software

Publisher
Gremlin Graphics





> **“The Spectrum is like the R2-D2 of the computing world: cute and plucky.”**
>
> *Nick Bruty*

Rock Star Ate My Hamster

"I guess I was lucky to be in the right place with the right idea. I'd already done some work for Codemasters, so I pitched the idea of a humorous rock star management game. They were extremely supportive, and pretty much let me do what I wanted. They also put me in touch with Chris Graham, whose graphics added a huge amount to the game. I honestly don't know how we got away with the rock star characters – Dorrissey and Meathead still make me smile. The game was banned by several retailers, which would be funny except that nobody could actually buy it for a while!"

Colin Jones

"It would sometimes take days for a character design to come together and I would stay awake into the night shifting pixels around attempting to get a character to look right. Once a character had been completed, there would be a brief moment of accomplishment, joy and satisfaction before the horrid realisation set in that I would have to start the next character. I remember trying to be clever and adding subtle little things into the character graphics. For example, there's a bird nesting in Tina Turnoff's hair, but I doubt anybody noticed it was there!"

Chris Graham

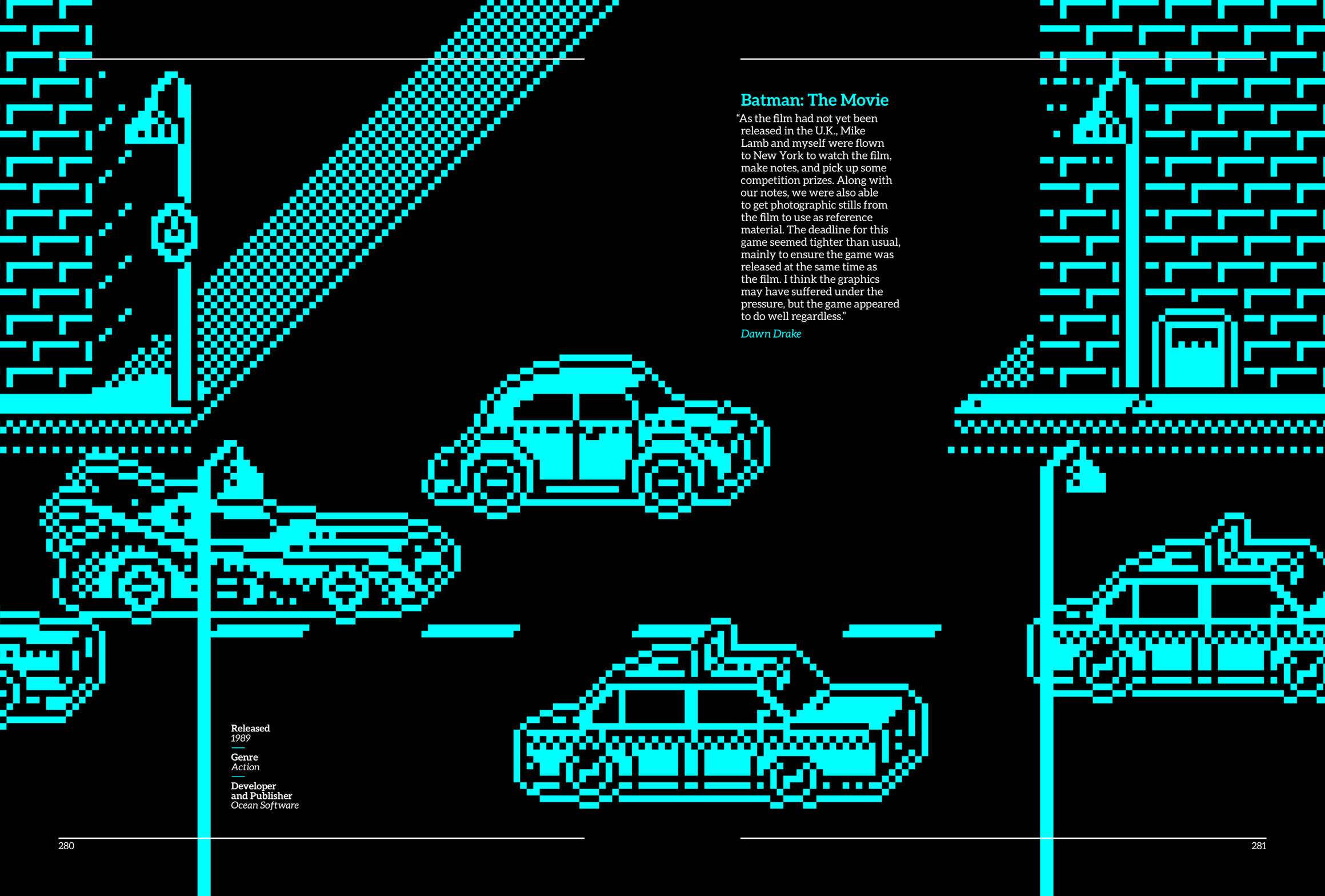
Released
1989

Genre
Simulation

Developer
Colin Jones

Publisher
Codemasters





Released
1989

Genre
Action

Developer and Publisher
Ocean Software

Batman: The Movie

"As the film had not yet been released in the U.K., Mike Lamb and myself were flown to New York to watch the film, make notes, and pick up some competition prizes. Along with our notes, we were also able to get photographic stills from the film to use as reference material. The deadline for this game seemed tighter than usual, mainly to ensure the game was released at the same time as the film. I think the graphics may have suffered under the pressure, but the game appeared to do well regardless."

Dawn Drake



Released
1989

Genre
Shoot 'em up

Developer
Special FX

Publisher
Ocean Software

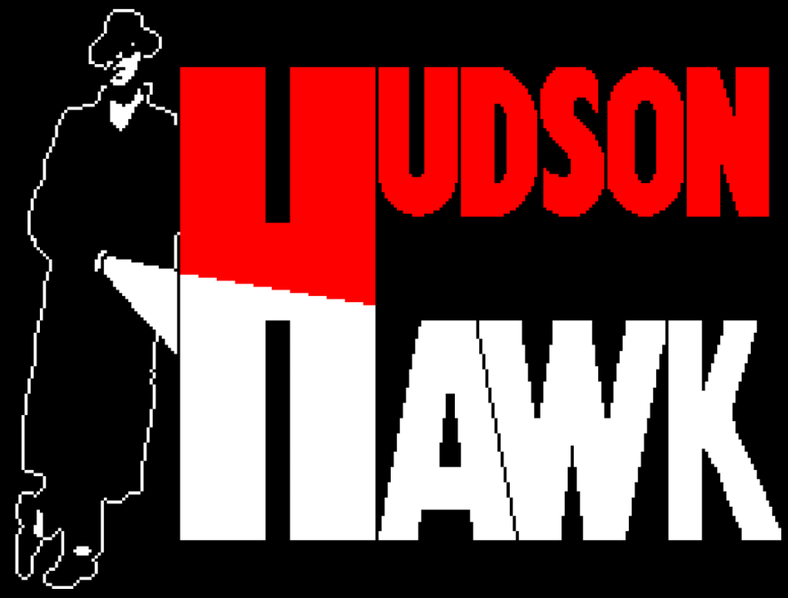


Released
1990

Genre
Shoot 'em up

Developer
Special FX

Publisher
Ocean Software



Released
1991

Genre
Platformer

Developer
Special FX

Publisher
Ocean Software

Cabal

"I wanted the conversion to have lots and lots of sprites like the arcade version, in fact there were a lot more sprites in Cabal than Operation Wolf. As I was still quite young and rambunctious, and as we were always having a laugh in the office, I added an animation at the start of the game when you pressed a certain combination of keys: the character would walk on screen, then proceed to pee all over Operation Wolf. To be honest, I'm surprised I got away with doing it, especially as they were both Ocean games!"

Jim Bagley

Midnight Resistance

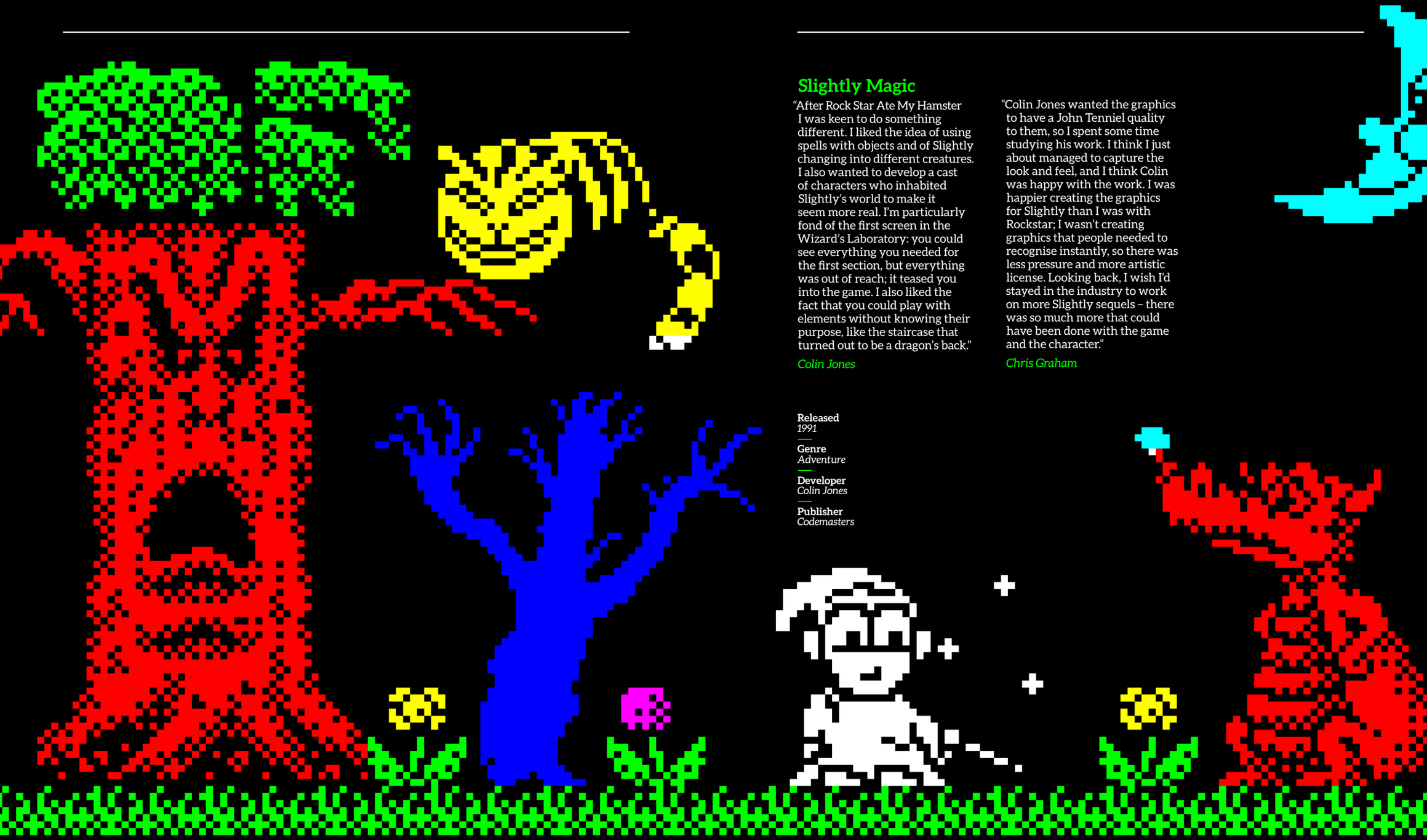
"When we were given the task of converting this game to the Spectrum, we were handed a metal suitcase with the arcade circuitry and controllers inside and a SCART cable to plug it into a TV. With the game thankfully set to free-play, we had to first learn how to complete the game, then figure out how we were going to get it all into the Speccy. I wanted to make sure I got the whole game ported across, including all of the cut-scenes and lots of bullets, especially as the Commodore 64 version didn't have nearly enough sprites to compete."

Jim Bagley

Hudson Hawk

"Creating this game was a strange experience because we didn't get to see the film; all we had was an early version of the script, so we had to make up how it looked and how it was going to play. We put a lot of silly things in, like big-chested nuns carrying bombs in wheelbarrows and people throwing plant pots out of windows. When we created the main character, Bruce Willis didn't think we could do his looks justice in monochrome so Chas (Davies) ended up doing a caricature of him instead, which I think worked better with the wacky style of game."

Jim Bagley



Slightly Magic

"After Rock Star Ate My Hamster I was keen to do something different. I liked the idea of using spells with objects and of Slightly changing into different creatures. I also wanted to develop a cast of characters who inhabited Slightly's world to make it seem more real. I'm particularly fond of the first screen in the Wizard's Laboratory: you could see everything you needed for the first section, but everything was out of reach; it teased you into the game. I also liked the fact that you could play with elements without knowing their purpose, like the staircase that turned out to be a dragon's back."

Colin Jones

"Colin Jones wanted the graphics to have a John Tenniel quality to them, so I spent some time studying his work. I think I just about managed to capture the look and feel, and I think Colin was happy with the work. I was happier creating the graphics for Slightly than I was with Rockstar; I wasn't creating graphics that people needed to recognise instantly, so there was less pressure and more artistic license. Looking back, I wish I'd stayed in the industry to work on more Slightly sequels – there was so much more that could have been done with the game and the character."

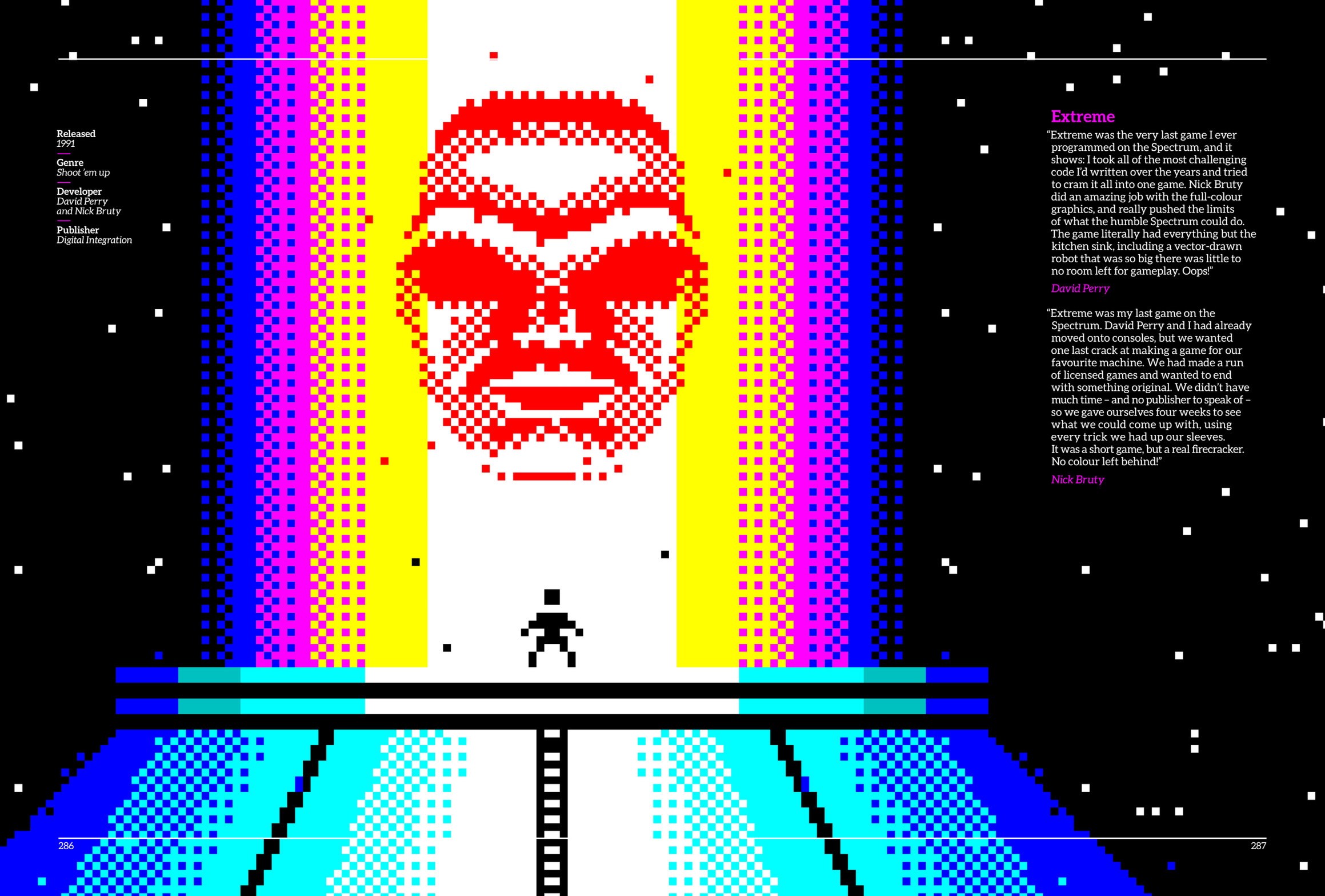
Chris Graham

Released
1991

Genre
Adventure

Developer
Colin Jones

Publisher
Codemasters



Released
1991

Genre
Shoot 'em up

Developer
David Perry and Nick Bruty

Publisher
Digital Integration

Extreme

"Extreme was the very last game I ever programmed on the Spectrum, and it shows: I took all of the most challenging code I'd written over the years and tried to cram it all into one game. Nick Bruty did an amazing job with the full-colour graphics, and really pushed the limits of what the humble Spectrum could do. The game literally had everything but the kitchen sink, including a vector-drawn robot that was so big there was little to no room left for gameplay. Oops!"

David Perry

"Extreme was my last game on the Spectrum. David Perry and I had already moved onto consoles, but we wanted one last crack at making a game for our favourite machine. We had made a run of licensed games and wanted to end with something original. We didn't have much time – and no publisher to speak of – so we gave ourselves four weeks to see what we could come up with, using every trick we had up our sleeves. It was a short game, but a real firecracker. No colour left behind!"

Nick Bruty

An interview with Chris Graham

Chris Graham went from humble hobbyist to professional graphic artist virtually overnight after an unexpected job offer from Codemasters. After jumping in at the deep end on the cult Spectrum classic, Rock Star Ate My Hamster, he went on to create graphics for dozens of Codemasters games including Slightly Magic, Seymour goes to Hollywood, and numerous Dizzy adventures.

How did you first get interested in computers?
A friend who lived close to me owned a Spectrum and we would play games on it after school. One of the first games he showed me was Scuba Dive and I was blown away. I remember walking home from his house thinking how lucky he was to have a machine that allowed him to have such awesome adventures! I was jealous, but also in awe of this little box of dreams. It was some time before I managed to order myself a Spectrum, but I remember counting down the days until it arrived.

How did your career in games get started?
I had been creating Spectrum artwork for some time as a hobby; I would spend weeks locked away creating screens, but I never thought it would amount to a career. That was until a friend suggested I send my artwork to one of the companies advertising for graphic artists in the back pages of a Spectrum magazine. It took some coaxing to put a demo cassette together, but my friend promised to create a cover letter so I agreed. A few days after I'd sent my artwork to Codemasters, I received a large box of games and goodies with a letter inviting me down to Leamington Spa for a chat! I was completely in awe at being accepted into the games industry.

What was your first Spectrum game?
Rockstar Ate My Hamster was the first game I worked on, and Codemasters' big jump into full-price territory. I felt it was a big gamble for them to give the job to me, as I hadn't worked on anything previously. I found it a massive challenge but ultimately, marvelous fun.

What did a typical day in front of the computer look like?
A typical day would consist of working all morning, lunch at the nearby pub, then back to work in the afternoon. The day would be broken up by conversations with programmers, occasional playtesting and general japery, like riding around on the Darling brothers' moped on the fields behind the farmhouse!

Which programs did you use to create your Spectrum art?
I used a few different programs including The Art Studio, The Artist and Melbourne Draw.

Did you use any custom tools that weren't available commercially?
Occasionally I may have used a programmer's sprite animation and editing tools rather than my regular art packages, but more often than not I stuck with what I knew.

"If I wasn't working after-hours I would be playing games – I was like a kid who had been given the keys to a toy shop!"

What were the best and worst aspects of creating art for the Spectrum?
The worst aspect was the attribute clash, but that said, it was one of the best aspects too: creating art on the Spectrum was like a puzzle; it wasn't just a case of drawing what you wanted to, you had to have an idea of how the image was going to fit the attributes, or how you might have to adjust an image in order to squeeze some colour into it.

What was your process? Did you plan on paper, or jump straight in?
Sprites would occasionally be planned on paper to get the animation correct, but generally I jumped straight in. When drawing a screen, I found the character grid helpful in getting everything scaled and aligned correctly, and I could usually tell before I started if the screen was going to be colourful or not. Whenever I was away from the Spectrum I found myself looking at scenes in everyday life and trying to work out how I would capture it on the Spectrum. I was weird like that!

Bronx Street Cop / *1989*





Slightly Magic / *1991*

How did your process change throughout your career?
My four years at Codemasters was the only time I worked as a graphic artist, and within that period my process changed very little.

What was the development time for a typical game?
It varied from game to game. There was a rough timeline as to when different elements would need to be completed – and the game as a whole – but it was nothing like the strict deadlines we have nowadays. Occasionally a game would be slightly late, but this never appeared to cause major issues.

Did you receive much artistic direction, or did you have complete freedom?
I had complete artistic freedom on most games. For Rockstar Ate My Hamster, Colin Jones provided some reference material regarding the look of the game, where the graphics would be used, and their size constraints, but I generally had carte blanche as to what was ultimately displayed on-screen.

When it came to Spectrum art, which aspect did you most enjoy?
I have to say, I definitely had more fun with the loading screens. Typically, in-game graphics and sprites were limited in terms of size, colour and animation frames, so I would tend to get frustrated with those more so than a larger piece of art.

Did you have much input in terms of game design?
I never really attempted to get involved with the actual game design. The programmer usually had the game mapped out in their head, how it was going to play, and how everything would fit together. Looking back, I wish I had spoken up a bit more and had a bit more input on the games I worked on.

“It was some time before I managed to order myself a Spectrum, but I remember counting down the days until it arrived!”

Did you pay much attention to magazine reviews?
I paid lots of attention to the magazines, mainly because I'd grown up reading them and they were pretty much the only form of feedback we had back in the day. It was mightily important to get a good write up, especially if the review of your game only occupied a very small portion of the page.

If you had the chance to revisit any of your games, what would you change?
It would have to be Rockstar Ate My Hamster. I know I could have added more colour to the characters and backgrounds, but it was purely down to the limitations of the Spectrum and what Colin Jones had envisioned the game to look like.

Was there anyone in the industry whose work was inspirational to you?
John Gibson's early games on the Spectrum really inspired me to try my hand at producing graphics for myself. I loved all of Jonathan Smith's work; everything was so slick and polished, you got the feeling that a lot of love went into them. I also adored Mark A. Jones' Spectrum arcade conversions, which were as close as you'd get to having an arcade machine in your living room.

What Spectrum games impressed you, or had an influence on your work?
I remember getting Turbo Esprit for my birthday and driving around thinking, 'This is the future of games.' In my experience it was the first real sandbox game. I also thought Fairlight was lovely – the game had a beautiful, ethereal quality about it.

Outside of games, what were your biggest artistic influences?
I loved sci-fi films and fantasy adventures. Many of my influences came from watching lots of television programmes when I was younger, like Space 1999, Thunderbirds, and Battle of the Planets, as well as films like Jason and the Argonauts. As for traditional artists, anything from Van Gough to Oli Frey!

Of all the games you've worked on, which are you most proud of and why?
Probably Rockstar Ate My Hamster: it's where it all started and holds many memories for me.

Were there any Spectrum games you worked on which never saw the light of day?
Not that I am aware of. There were plenty of graphics, characters and screens that were never used and discarded, but never an entire game.

What was your final Spectrum game? What made you leave the machine behind?
I'm not sure what my final game was. While working for Codemasters I was involved in a nasty road traffic accident, and after coming out of hospital I decided to stay in the games industry but take a slightly different direction. I ended up working for Psygnosis' QA department in Liverpool.

Was there a Spectrum game you would have loved to have created the graphics for?
I would have loved to try my hand at a game like Trantor: The Last Stormtrooper or Thanatos where the sprites were huge and packed with detail and the backgrounds bursting with colour.

What was your favourite Spectrum game?
There were many games that I loved and admired, but if I had to pinpoint one game that stood out I would have to say R-Type: it was a great conversion of the arcade game with so much going on and tonnes of colour.

Any stand-out memories from the Spectrum era?
I remember regularly sleeping at the Codemasters offices instead of journeying back home to my little bedsitter in Leamington Spa. I was surrounded by all these fantastic computers, consoles and games, it was a gamer's ultimate heaven! If I wasn't working after-hours I would be playing games – I was like a kid who had been given the keys to a toy shop!

Why do you think the Spectrum is remembered so fondly?
It was such a massive part of so many peoples' lives, and for some it was the first time they had ever used a computer. The games really fired the imagination and allowed you to explore some fantastical worlds. Also, things never seemed to be taken for granted back then – you were always waiting to see if the next big release would push the little machine even further.

On a personal level, that little box of 48K-ness opened so many doors for me and got me into the games industry where I was able to meet some of my idols and make many friends during my career.

Do you still own a Spectrum?
I still have my Spectrum 48K+, which is up in the attic with a big box of games. I also have a lot of reference material for many of the games I worked on, as well as the artwork I created back when it was still just a hobby. I may share this artwork with the Twitter community one day!

What are you up to these days?
After working for various companies including Psygnosis, Sony, Warthog and Genepool, the games industry became far too fickle for my liking. I eventually got myself a real job working for Auto Trader. I love it!



Kwik Snax / *1990*

Gauntlet III: The Final Quest

Released
1991

Genre
Adventure

Developer
Software Creations

Publisher
U.S. Gold

Artwork
Oliver Frey



Lemmings

Released
1991

Genre
Puzzle

Developer
DMA Design

Publisher
Psygnosis

Artwork
Oliver Frey



“There were also millions of Spectrum fans here – arguably more than the UK – as there were no competing machines such as the Commodore 64.”

Denis Grachev

The Russian Homebrew Scene

As early as 1985 the Soviet Union was flooded with cheap and cheerful ZX Spectrum clones, manufactured from Russian components using reverse-engineered schematics. This deluge of clones gave birth to a vibrant homebrew scene, which to this day continues to produce a constant stream of games and demos, pushing the Spectrum hardware to its limits.

Denis Grachev

"You could probably write an entire book about the ZX Spectrum in ex-USSR countries! The Spectrum became popular after the machine was successfully reverse-engineered and the schematics were shared and spread across the entire country. As a result, the market was flooded with lots of unofficial Spectrum clones created by hobbyists. In fact, unofficial Spectrums were still being manufactured here well into the late '90s. There were also millions of Spectrum fans here – arguably more than the UK – as there were no competing machines such as the Commodore 64."

"My first Spectrum clone was white, hand-made and very buggy! I received the machine in 1993 when I was just ten years old, and it was like a dream come true for this little boy: I suddenly had access to all of these huge Spectrum hits like Exolon, Rick Dangerous, Saboteur! and Batty. Nowadays, I have a ZX Spectrum +2, which I use to test my games on real hardware."

Aleksey Golubtsov

"I spent years throughout the '90s playing games on my ZX Spectrum and writing programs with its built-in BASIC interpreter, so it's a huge part of my life. I always dreamed of making games for the ZX Spectrum; I loved the machine and its many restrictions, and the sheer effort required to make something really cool. The games, the demo scene, my friends – they are the reason I loved it."

Mikhail Sudakov

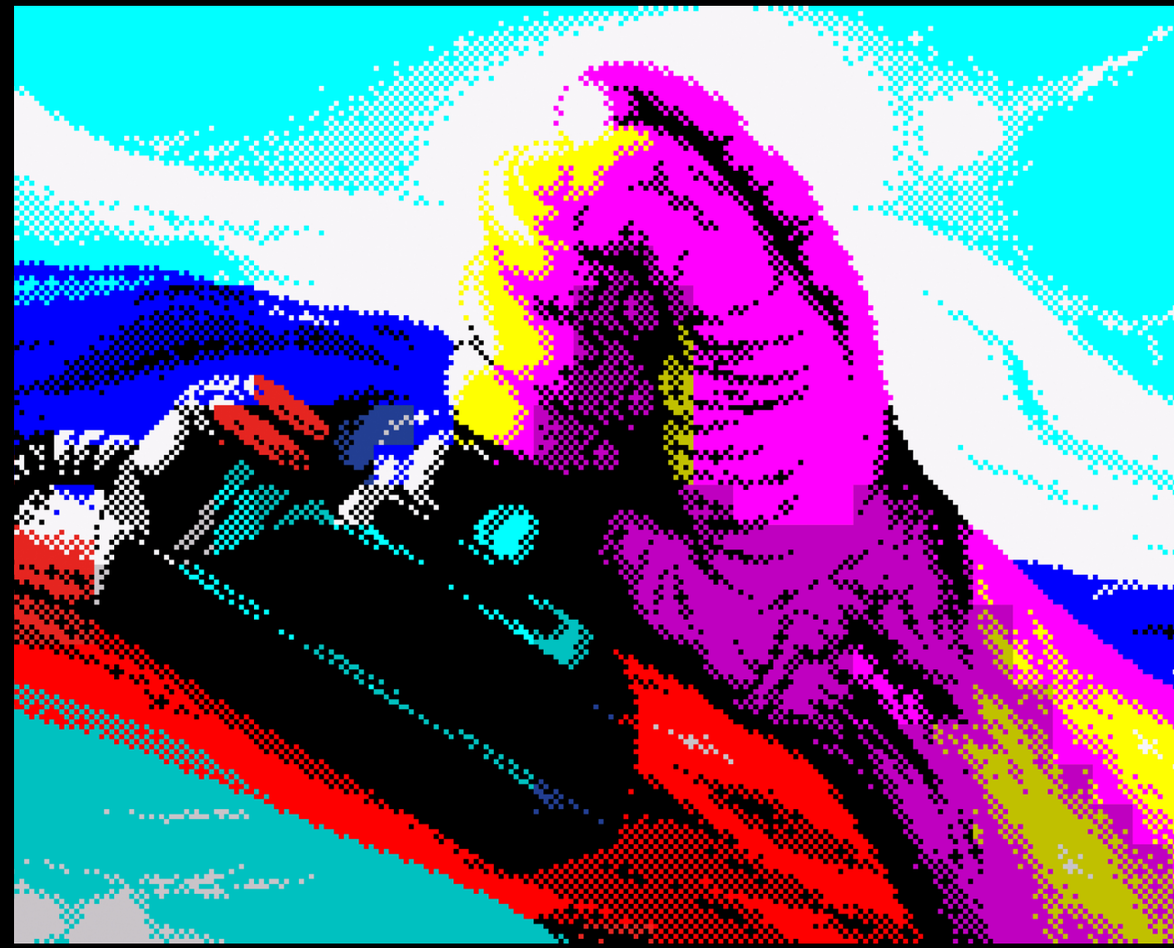
"The ZX Spectrum was a very cheap computer with a large library of games. We had other computers, but they were too expensive compared to the Spectrum and its clones. In the early '90s the Russian economy was torn to pieces, and that's why Speccy clones became more popular than ever; there were plenty of them, each cheaper than the last. Games were distributed first on cassette, then on disk, often in compilations containing 10-20 titles, so it was pretty easy to buy yourself a computer and plenty of games – good, playable and colourful games!"

Oleg Origin

"Spectrum games can be made by just a single person in just a short amount of time and it's possible to create some amazing effects that haven't been seen before, like smooth full-screen parallax scrolling. In every game I try to include something innovative, which means that each of my games is very different to the last. In fact, I'd argue that the Spectrum has no graphical restrictions, despite a lack of hardware sprites – it's simply a fantastic space for creativity!"

"During the '90s I never really thought of the Spectrum as popular: it was more the case that there weren't many other computers around. Of course, there were other systems, but some were too expensive (like the IBM PC), while others suffered from poor distribution (like many Soviet computers of that time). Even the Dendy, an extremely popular games console cloned from the Nintendo Entertainment System, only came to Russia much later. Home-made Spectrum clones were very popular, even in small, remote towns; they were cheap, and pirated games were on sale everywhere. Some fans even used reel-to-reel tape recorders!"

Brewed in Russia – The ZX Spectrum Russian Revolution by Craig Stevenson / *2015*



"In the early '90s the Russian economy was torn to pieces, and that's why cheap Speccy clones became more popular than ever."

Mikhail Sudakov

Aleksey Golubtsov

"For me, the best way to create an original picture is to draw it on paper first, even if I don't intend to follow the sketch exactly – I find my imagination simply works better when I draw on paper. Most of my pictures are copies of drawings, realised through various methods including tracing, scanning, or converting with special tools, before being manually redrawn from scratch. For this I tend to use basic applications such as EdgeTouch for iOS and ProMotion for Windows."

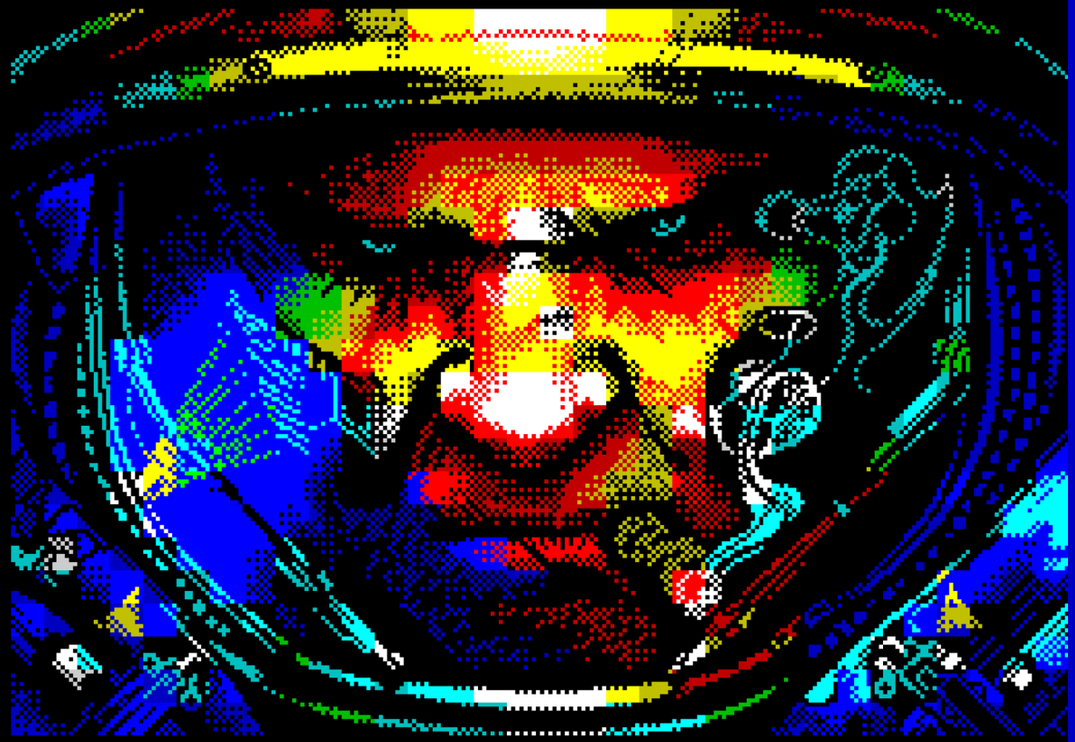
Oleg Origin

"My first Spectrum was a 48K clone called Symbol which I received as a gift from my parents on my 12th birthday. Although many of my friends and relatives were also fond of the Spectrum, I never participated in the Spectrum 'scene' as I lived in a remote town with no internet."

Denis Grachev

"It's a real challenge trying to make games within the many limitations of the machine: you have to embrace a different mindset. People from the scene still regularly meet for Speccy parties and competitions – it's fun to get nostalgic about the good old times!"

> *"In every game I try to include something innovative, which means that each of my games is very different to the last."*
>
> *Oleg Origin*

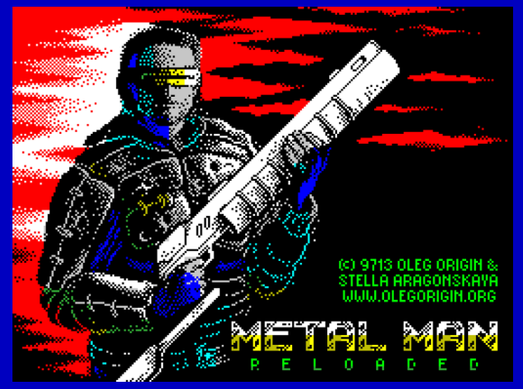


Mercenary 4. The Heaven's Devil by Aleksey Golubtsov / *2014*

Metal Man Reloaded

"Metal Man Reloaded is the sequel to my 1997 game Metal Man, which was inspired by Spectrum games such as RoboCop, Savage and Astro Marine Corps, as well as Demolition Man and Judge Dredd on the Sega Mega Drive, and action movies on VHS. As well as just a single level, the original game had very primitive gameplay and a heap of small bugs. At that time I didn't use an assembler and coded directly using machine code. However my lack of experience is the reason for the clumsy gameplay in all of my old games."

Oleg Origin



Metal Man Reloaded / *Oleg Origin & Stella Aragonskaya / 2013*

DreamWalker: Alter Ego 2

"DreamWalker was created for the Russian ZX Spectrum development competition Retro Games Battle 2014. It was designed as the sequel to my 2011 game Alter Ego, with new features and enhanced multi-colour graphics. The most amazing thing about DreamWalker – and something which I'm very proud of – is that it features multi-colour graphics and runs smoothly at 50 FPS; this was a real struggle as I'm not a natural-born programmer. The game was inspired by Einar Saukas' Nirvana Engine: when I saw the engine in action the first time, I knew I had to use it to create a multi-colour sequel to AlterEgo!"

Denis Grachev

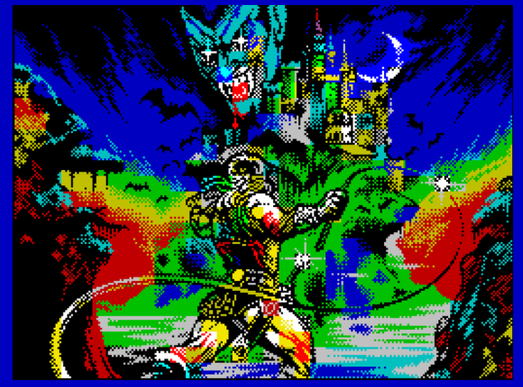


DreamWalker: Alter Ego 2 / *RetroSouls / 2014*

Castlevania: Spectral Interlude

"We spent hours, perhaps days discussing stairs. Some of us voted for hardcore classic stairs which are hard to go up and even harder to go down, but others thought the process needed to be much simpler. After a while we made our final decision and I think that our stairs are the best in any of the Castlevania games. The game was almost ready a couple of months prior to release, and we spent that time tweaking, hunting bugs, and making all sorts of adjustments. I killed poor Dracula about a hundred times, but it was justified and the game became much better for it."

Mikhail Sudakov



Castlevania: Spectral Interlude / *Rewind / 2015*

A huge thanks to all backers of the Kickstarter campaign!

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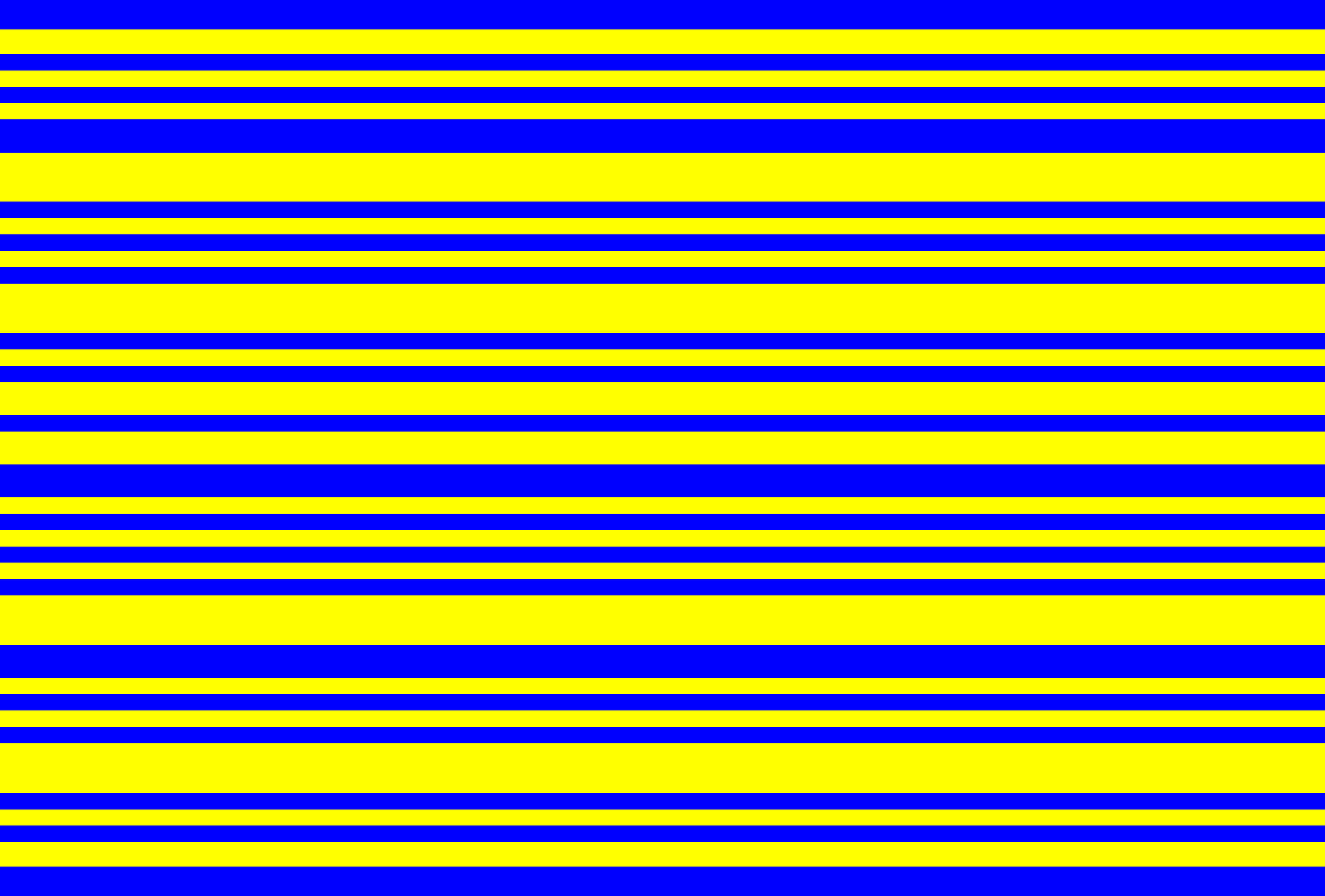
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