







Arnold 2: The Developers Q&As Uncut is a non-profit project.

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All content and design by Neil Reive. Special thanks to all developers who agreed to discuss their gaming coding and design work in the Amstrad CPC scene, and even those who declined the courtesy of a reply



## Introduction

It was always the intention to release these Q&As as they were compiled, rather than the edited prose versions that appear in the *Amstrad CPC: The Games Companion*. The original Q&As went into more depth. Much more than I could fit into the book, so it seems only logical to release the Q&A interviews as they were originally written down. The main book was digitally released in February 2020, with the potential of a physical release in the hands of an independent publisher who requested to work on a French translation as well as an English version. The year 2020 turned into quite the disaster for many companies, so it is unclear whether the physical version will see the light of day...

All the Q&As with the developers in this publication took place in 2015. Yes, a whole five years before the book finally made it to the virtual book shelf. There were reasons for getting the Q&As done during the beginning of the CPC Book's journey – I think I explained this on the CPC Book's webpages. So a great thank you to all that gave time to discuss their work on Amstrad games. What you see is in here is, as the title suggests, totally uncut or edited. These Q&As are exactly how the discussions panned out, bar the usual formatting style and editing to fit into the PDF...

Obviously, Amstrad fans will probably notice some notable names missing, and this wasn't by choice as a handful of people were untouchable. That was a real shame as one the elusive few is the designer of (probably) my favourite game of all time, who has now refused to respond on numerous occasions over the past 14 years – despite appearing in a certain retrogaming publication numerous times during this period. Not to worry, though, it is still one of my favourite games of all time.

So a big thank you to everyone who took time to respond to questions on topics dating back 30-odd years. It is very much appreciated.

Neil Reive



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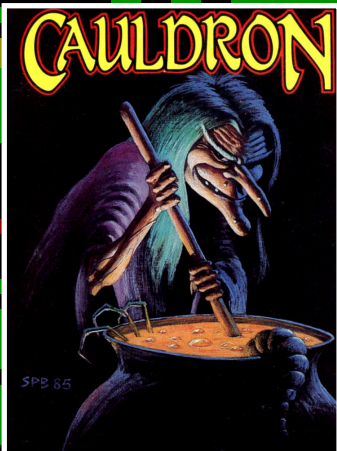
TARGET VEHICLE



# RICHARD LEINFELLNER



Richard Leinfellner was a programmer for Palace Software and worked on the likes of *Cauldron*, *Cauldron II*, and *Barbarian*...



**Q) Cauldron was originally developed as a tie-in licence from the classic *Halloween* film. What happened during the development for it to change into *Cauldron* and just how much of the original remains?**

I honestly don't remember that, I am pretty sure it was based on an original idea by Steve Brown.

**Q) What kind of game would *Halloween* have been if it had been developed through to the end?**

See above, its possible but as I hate horror movies I may have veto'd it which is why it died.

**Q) *Cauldron* was praised for the combination of platform and shoot 'em up action. How did the idea of mixing two genres come about?**

Down the pub (Malt & Hops in Kings Cross), Steve said "It seems odd that there are either scrollers or platformers" I said, "Well there is not reason we can't combine them" and the game was born.

**Q) Although *Cauldron* was very well received at the time, there was one complaint about the high level of difficulty. Was this intentional or was the development team so good at the game?**

We never tested the whole game in one session and hence never noticed that you lost too many lives. So for *CII* added live pickups.

**Q) *Cauldron II* is a radically different game from the first one, which features a role reversal as the pumpkin sets out for revenge against the witches. What prompted the change in plot and gameplay?**

Steve's idea, to be honest we all liked the pumpkin more than the witch so it was fun having it as the hero

**Q) As well as coding the Amstrad versions of *Cauldron***

**I & II, you coded the C64 version of *Cauldron* and the Spectrum version of *Cauldron II*. What was it like to work on various machines and were there any problems during the developments?**

I had to take Amstrad over as the main guy Andy Fitter got very sick, main issue was lack of scrolling hardware and the attribute based screen own the Speccy. Nice to be working on the CPC with floppy discs though much better than those bloody specie micro drives which kept dying

**Q) You worked on the Amiga version of *Barbarian: The Ultimate Warrior*, a game that came under fire for its violent content and advertisement campaign which featured Maria Whittaker and Michael Van Wijk. What did you think about all the fuss?**

Loved it, it was such a storm in a tea cup but great for sales.

**Q) Where did the idea for the decapitation move in *Barbarian* come from?**

I think Steve was a big *Conan* / *Red Sonja* fan.

**Q) Why the change in names when releasing games in North America: *Barbarian* -> *Death Sword* and *The Sacred Armour of Antiriad* -> *Rad Warrior*.**

When you get a new publisher they feel they need to make their mark I guess.

**Q) Where did the idea of *The Sacred Armour of Antiriad* come from and how weird was it that *Metroid* was released in the same year of 1986?**

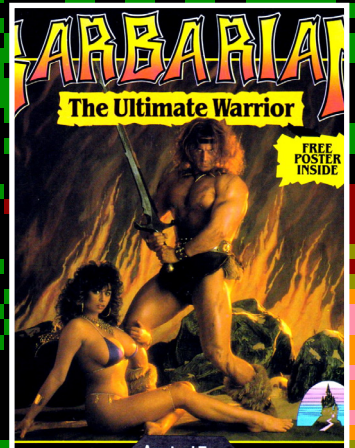
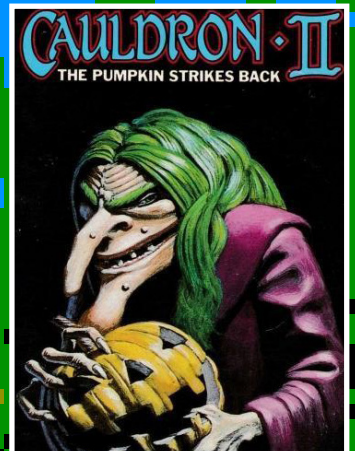
Antirad was the design work of Dan Malone, a brilliant artist and massive comic fan. I had never heard of *Metroid* until someone mentioned it last year

**Amstrad CPC Softology:**

*Cauldron* (1985)

*Cauldron II* (1986)

*Barbarian* (1987)





Jon Ritman was a programmer best known for his work on Z80 8-bit computers with games such as *Head Over Heels* and *Match Day II*.

## Q) How did you get into computing?

I was a TV engineer at Radio Rentals when they considered renting out computers, it was 1980/81. I decided to learn more on the basis that engineers with specialist knowledge (such as video recorders), earned more. I bought a ZX 81, the rest is history.

## Q) What was the first computer that you owned?

A ZX81.

## Q) Was *Namtir Raiders* for the Sinclair ZX81 the very first game that you programmed?

Yes.

## Q) How did the publisher deal with Artic Computing come about?

I sent the game out to 2 or 3 publishers, Artic responded very promptly.

## Q) What can you tell us about the Spectrum games *Cosmic Debris*, *3D Combat Zone*, and *Dimension Destructors*?

*Cosmic Debris* was an asteroid clone, a friend, who knew nothing about games, suggested the title, it came from a Frank Zappa song. *Combat Zone* came from playing battle zone in the local burger joint, I loved that game and I spent a long time trying to find out how to do wireframe 3D graphics, remember this was pre-internet, pre-computer games books. *Dimension Destructors* was my first original game, using the maths I'd learnt doing combat zone.

## Q) *Bear Bovver* was a step up from previous efforts: bigger game, addition of in-game music, advertising... What are your recollections of the game's development and release problems?

Development was reasonable, first time I'd done a 48k game. Release was odd. Artic's advertising had been pedestrian up till then, to say the very least. They would advertise 20+ games on a single advert, just showing the edge of each cassette box. I managed to persuade them to do a campaign, to show the add (full page) with no text for a few weeks then to include the text – it appeared to be working, I personally heard people discussing it in games shops, as in, what the

hell was that advert about. Then they put the adds with text out, then they completely failed to put the game on the shelves, I have no idea why. The game appeared 3 month later (oops).

**Q) Your next Spectrum game would be the massively successful Match Day. How did the game and the deal with Ocean Software come about?**

I was at a show at ally pally, bear bover was on the art stand. David Ward of Ocean asked me what I was doing. I told him a soccer game, he must of taken my phone number as he phoned me many moths later and offered me a great deal, I accepted.

**Q) This was also the first time your game went multi platform with conversions developed for the Commodore 64, Amstrad CPC and BBC Micro. How did you feel about the various machines and the conversions?**

The conversions for *Match Day* were crap, made by programmers who didn't give a damn. I even phoned the Amstrad people to explain stuff and they really didn't care, they said they were just doing a job.

**Q) Where did the idea for the isometric puzzle game of *Batman* come from and how did the licence come about?**

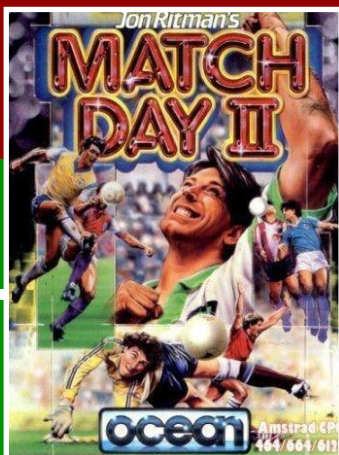
*Knight Lore* was the inspiration, as soon as I saw it I wanted to do a game like that. The idea of doing *Batman* was mine, ocean sorted the license. I gather it was easy after all it was long before the blockbuster films

**Q) *Batman* also marked the first time that you paired up with Bernie Drummond. Did bringing Bernie in to do the game artwork allow you more time to handle all the conversions yourself (Spectrum, Amstrad CPC, PCW, MSX, Einstein and Enterprise)?**

No, I brought Bernie in because he could draw, he is way better than me. The conversions were easy. I had maybe 20 files that made up the code for *Batman*, only 3 of these needed to be changed for each different computer, sound, graphic output and input (e.g. keyboard/joystick). It would take me 2-3 days to convert the code for each machine. Bernie took much longer converting the graphics for the Amstrad but once that was done I could use the 2 sets of graphics for every platform.







**Q) No Commodore 64 version of *Batman*? What were the various machines like to develop for?**

The C64 was a completely different processor so would have required a complete rewrite in a language I wasn't familiar with. As I said, all the Z80 platforms used the same code apart from those 3 small files.

**Q) *Head Over Heels* took the premise of *Batman*'s isometric world and added the innovation of co-operative play between the Head and Heels characters. What was the thinking behind this game?**

I have been accused of inventing a whole new genre for *HoH*, the multi character game, but believe me I didn't think of it that way at the time. I came up with a way, with *Batman*, of deciding what abilities I wanted him to have, then removing them and making the player earn them, With *HoH* I thought I was just extending that idea, two characters, that in the end, became one

**Q) The game also marked the first time that one of your games was released - albeit, converted by others - on the Commodore 64 and Atari ST. How did this work out?**

*Match Day* was released on the Amstrad, it was rubbish. The conversion process for *HoH* was very different; the programmer converted my Z80 code, line by line, to the 6502 processor. We could step through the code, me looking at my Z80 code and Colin looking at the 6502 code, and expect to see identical results, when they were different we knew Colin had a bug. The end result even had the same bugs (well one bug), that I had missed.

**Q) *Match Day II* displayed many improvements on the first game with additions such as the Diamond Deflection System with realistic ball ricochets. Where did the idea of the DDS come from and was it hard to implement?**

Err, not sure really, just wanted a better deflection system. I understood that soccer was about controlling the ball and the more ways I could provide that the better. It was hard to implement in the same way that all code is hard to implement, there were no instructions, I had to work it out.

**Q) There is mention of a football arcade game called *Final***



**Whistle (also known as Soccerama) that was unreleased. What happened to the game?**

You are talking about two separate games, *Final Whistle* was an arcade game that was fully written but when tested in the arcades did not make the grade, on reflection this was because I wrote games you had to learn to play, they took time to acquire the skills. Arcade games do not work like that, if the player didn't feel they were doing well in their first game then they wouldn't put another 10p in the slot. *Soccerama*, a working title, was a game for the super Nintendo and it looked good and played well but it had a bug, a bizarre bug that only showed up every few days but crashed the game. In the end I decided that I would need a certain bit of kit to find the bug (as I suspected it was a hardware problem), the publishers never managed to get the kit.

**Q) What were you up to after you left the 8-bit computing scene and did you leave any games unfinished at this time?**

Yes, there was a game, but only in its infancy, I can't even remember what it was called but it had a spaceship flying over a huge terrain, I worked with Rare for some time, I designed and programmed the development system they used for many of their games. Then I ran my own company for a while before that was absorbed into a larger company. Later on I worked with Geoff Crammond for a few years. I have done several things since then.

**Q) Seven years after your last release, *Monster Max* appeared on the Nintendo Game Boy. What can you tell us about this game and the delay in its release?**


The game was written on the dev kit I designed for Rare and Rare were the producers, it was published via Titus and for a reason that has never been explained to me it was released 10 months after it was finished and the reviews had been released.

**Q) What happened to the unreleased *Soccerama/Total Soccer* for the SNES?**

Nothing

**Q) You left Rare to launch your own company called Cranberry Source and went on to release *Super Match Soccer* for the PC**





**and PlayStation. Was this essentially a 3D multiplayer follow up to *Match Day II*?**

Yes, and would have been called *Match Day 3* but Ocean folded and Acclaim, who picked it up, decided to call it something else.

**Q) The game also changed name many times, from *The Net* to *Match Day III* before settling on *Super Match Soccer*. Why all the title changes?**

The net was a working title, *MD3* was the released title for Ocean, the change from that are too complex to go into.

**Q) *Quintessential Art of Destruction* quickly followed in the same year and marked a bit of a departure from your previous games. How did this sci-fi shooter come about?**

Just a game, a bit of variation.

**Q) What happened to Cranberry Source, the proposed release of *Redemption* and yourself following these two releases?**

Cranberry was absorbed into Argonaut, redemption was cancelled.

**Q) Have you managed to get a look at any of the various *Batman* and *Head Over Heals* remakes that have appeared over the years?**

Yes.

**Q) Would you ever go back and remake any of your own games with the technology currently available?**

No, always move on.



**Amstrad CPC Softography:**

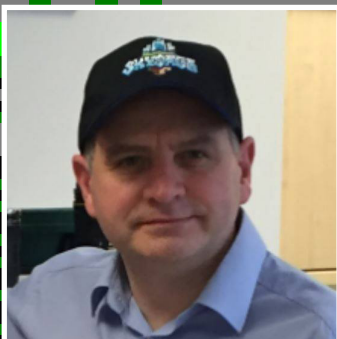
*Batman* (1986)

*Head Over Heels* (1987)

*Match Day II* (1988)



# OLIVER TWINS



Philip Oliver, along with his brother Andrew, coded games as The Oliver Twins on many platforms, including the Amstrad CPC. Their most famous creation, Dizzy, was created on their Amstrad CPC 664.

## **Q) Can you tell us how you came to have an Amstrad CPC computer?**

A) We developed Cavey and had problems finding a publisher. Frankly three were a lot of much better games on the BBC model B) So we figured we should develop games for a "softer target". The Amstrad had come out, was doing well and had fewer games. So we used some of our earning from games like Tellscope, the unreleased Easy Art, and the Model B computing work to buy an Amstrad CPC 664. The one with a Disc Drive – and we got the version with the colour monitor.

## **Q) Where did the idea for *Ghost Hunters* come from?**

So we'd written *Super Robin Hood*... that went VERY well.

So we figured we should make a game like it, but instead of a Castle – we should do a game based in a haunted house. Something between, *Scooby Doo* & *Ghost Busters*. We felt the resolution of *Robin Hood* was too "chunky" (low res.) and we'd use the higher resolution of the Amstrad, which would also match the Spectrum resolution, making it easier to port. Mark Baldock, the guy doing the conversion of *Super Robin Hood* pointed this out, and David Darling had sent us a Spectrum asking us to put the next game we did onto the Spectrum ourselves.

The target shooting was inspired from the *GhostBusters* proton guns. On reflection the sudden change of controls was difficult for players to get the hang of.

## **Q) The game also had a pretty unique control method if I remember rightly, with use of both the cursor keys the joystick. How did this control method come about?**

The problem for game developers, is that you can often get too close to what you are developing and you can easily master whatever controls you put in. What we needed to do was to test on a few friends, and they would have identified the controls as an issue. But our few friends had gone off to university and so we were able to complete the game with no outside input whatsoever.

## **Q) Explain how the SPLink cable, a device which allowed you to link the Amstrad CPC to the Spectrum, came to be and how it worked?**

The Spectrum was a much bigger market, games on spectrum would sell 3 or 4 times the volume of Amstrad games, so we were keen to try and port the game over rather than leave it in the hands of someone else. The Darlings had sent us a Spectrum, so the next trick was how to program it. A chance conversation with a relative

led to their relative who wanted in electronics, in Bath University I think, called David Jones. (not the David Jones of DMA and GTA & Lemmings fame). We met with him to discuss if it was possible to hook a Spectrum to the Amstrad via a cable and he came up with the prototype. SPLink cable. (photo attached), and a very small program to run on the spectrum which would put the spectrum into a "receive data" state. From the Amstrad we could send over bytes to any memory location and then trigger an execution. Later we worked out how to create some code that would then trigger a save from the Spectrum to create the master cassette.

**Q) Your most famous creation is undoubtedly *Dizzy*, an adventure game that was a relative change from the previous games. Where did the concept of *Dizzy* come from?**

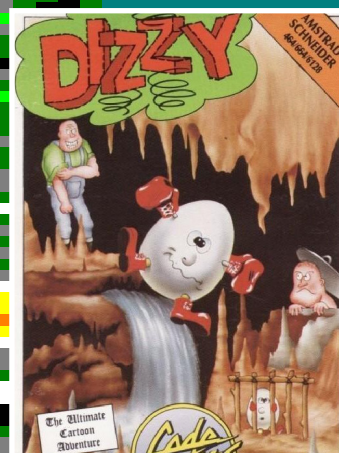
*Dizzy* was a natural extension of *Super Robin Hood & Ghost Hunters*. We loved cartoons and felt that we could create our own adventure in a fantasy world – like Middle Earth from the Hobbit or cartoons like, The Smurfs or Dungeons and Dragons. We'd played lots of Text based adventures like *Zork* on our friends Apple IIe and all the Acornsoft (*Countdown to Doom*, *Philosophers Quest*, and *Sphinx Adventure*). An adventure meant finding items and taking them to places to open new areas. The most basic being a key and a door.

**Q) *Dizzy* is often thought of as a Spectrum game, but did it not originate from the Amstrad first and converted to the Spectrum via the SPLink? Just how did the development of the Amstrad and Spectrum games work out?**

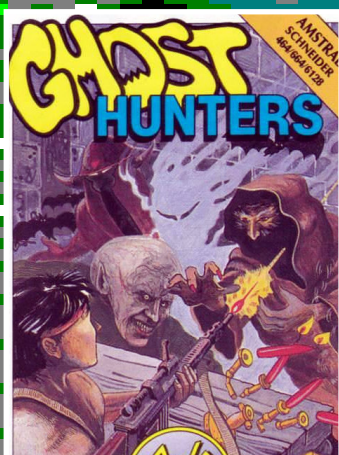
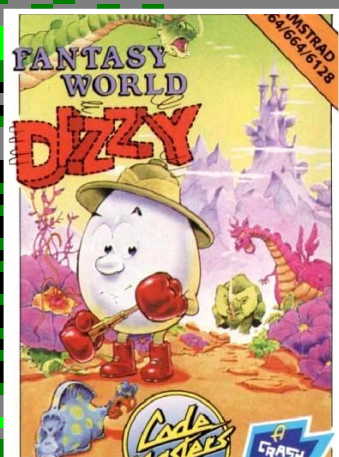
All our early Codemasters games were developed on the Amstrad CPC's., until we upgraded to PDS running on 8086 PC's with whopping 20MB harddrives. We'd try to make games in about a month and then spend a few days converting to the Spectrum. To do this we simple put "if Spectrum" or "if Amstrad" sections of code into the game – for reading the controllers or output to the screen or speakers. The game code and logic was not touched. Once we'd developed this Spectrum routines, they didn't need further work either. Since All graphics were developed in Panda Sprites – we'd create the Amstrad version. Then using an enhanced version of Panda Sprites we were able to spit out a new file containing all the spites in Spectrum format.

**Q) How did the *Dizzy* special edition - which appeared on the cover tape of *Amstrad Action* - come about? What were the differences to the normal version?**

*Amstrad Action* were keen to have a *Dizzy* game on the cover. It







would help sell their magazine, and we and Codemasters could raise the profile of *Dizzy*. No money changes hands in these deals. But giving them a whole brand new game would have been a massive cost to us, so instead we gave them an existing *Dizzy* game with some changes. But I'll be honest, I don't remember what changes.

**Q) Can you recall how the opportunity to develop the Amstrad and Spectrum versions of Ghostbusters II came about?**

**Was there any source material to work from, either from a screening of the film or storyboards or script?**

We were contacted by Stefan Ufnowski (for whom we'd converted *Incredible Shrinking Sphere*\* to Amstrad and Spectrum for). He had a small company FoursField, based locally, in Westbury only 10 miles away. He'd managed to win the full contract to develop all versions of *GhostBusters 2* for Activision. Steve and Colin were artist and programmer of the lead ST & Amiga version, and we were commissioned to convert to Amstrad and Spectrum. So the actual art and design was lead by them. We did get to see a script and a few photos from the set (which didn't really help). The first part of the game was based on the sewer decent scene in the script. We saw the film for the first time in The Odeon, Leicester Square, London, at the preview and sat in front of Jonathan Ross and his wife – there to review it for *Film* '89.

\*we decided not to put our names on this, as it might have upset the Darlings at the time – so we gave credit to our friend Ivan Link who wanted to get into the games industry. It was his Dads Apple IIe that we'd got so addicted to playing games like *Tax Man*, *Night Mission* and *Zork* on.

**Q) The development team credited in the manual of *Ghostbusters II* is larger than usual. Was this a list of people who not necessarily worked on the CPC version but either one of the other 8-bit or 16-bit computers?**

The team that made *GhostBusters 2* was FoursField and us. Activision would have added a Produce, some QA people and maybe a bunch of other support staff. That's fairly common practice.

I just looked at Moby Games – and I see an MSX version? That's strange? MSX was VERY similar to Spectrum – but we didn't do it???  
<http://www.mobygames.com/game/ghostbusters-ii>\_\_\_\_\_

**Q) Did the film company suggest anything for inclusion in the game or comment on the game itself?**

Film companies didn't really care about games. They just sold right to the highest bidder. In this case Activision. The same people looked after games that would licence beach towels, lunch boxes and t-shirts.

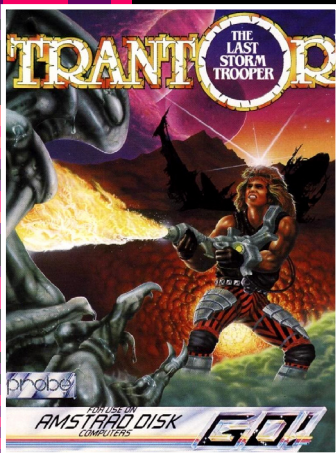
#### Amstrad CPC softography

*Freedom Fighter* (1986)  
*Killapede* (1986)  
*Super Robin Hood* (1987)  
*Ghost Hunters* (1987)  
*Grand Prix Simulator* (1987)  
*Dizzy* (1987)  
*Professional Ski Simulator* (1988)  
*3D Starfighter* (1988)  
*Jet Bike Simulator* (1988)  
*Fruit Machine Simulator* (1988)  
*The Race Against Time* (1988)  
*Professional BMX Simulator* (1988)  
*Advanced Pinball Simulator* (1989)  
*Treasure Island Dizzy* (1989)  
*Fast Food* (1989)  
*Incredible Shrinking Sphere* (1989)  
*BMX Simulator 2* (1989)  
*Grand Prix Simulator 2* (1989)  
*Operation Gunship* (1989)  
*Championship Jetski Simulator* (1989)  
*Ghostbusters II* (1989)  
*Fantasy World Dizzy* (1990)

# NICK BRUTY



Nick Bruty is known as one of the best graphic artists to have graced the CPC, and formed a fruitful partnership with programmer David Perry.



## Q) Where did your journey with computers begin and when did you decide to start dabbling with computer artwork?

I think I've always been ready to work on computers but they just weren't around when I was a kid. I had no money to buy anything. They had some computers at school but I was too young and not allowed in the computer room back then. Frustrated I found a computer magazine with programs in Basic and Machine code listed. I had no idea what any of it meant but I wanted to build and play the games so badly. I had no interest in school. I just wanted to have my own computer and be free. Finally when I was 14 I got a Spectrum 48k for Christmas and it became my world. I have always been visually based so I used that as my driving force to learn computers. No data bases for me. The first thing I learned to do was put a sprite on the screen. It was Michael Jackson. But there were no sprites on the Spectrum and I had no art package. I had to draw him on graph paper then convert him into numbers which is how I learned about binary and hex. Then find how to put that data on the screen which is how I learned about memory and where things went. Every day was a discovery. However I was untrained in both computers and art. My art skills had to keep improving everytime a new system came out with better graphics.

## Q) Can you tell us a little about your pre-Probe days?

My first job in games was for Softstone who were based in Brighton. My friend and future Speccy *Trantor* programmer David Quinn had just land a programmer position there. I had helped him with some art for his demo and they were impressed. David said "hey just come down, they need more Artists". So off to Brighton I went. It was an odd situation. I went into the office and everyone was friendly but there was no actual interview for any position. I just sat down at a station and started making some art for a spectrum version of V. Programmers would come by and just take what I did and put it in the game as if I worked there. I was crashing on my friends floor at night going into the office each day. After a couple of weeks the head of the company called me into his office. I had no idea what was about to happen but he just said "Well.. I guess I should start paying you then".

## Q) How did you get a position working at Probe Software?

After Softstone folded David Quinn started working at Probe and while developing *Trantor* with me in his spare time. At Probe he was converting a horse racing game which had some rather poor artwork. He suggested to Fergus that I come in to help out and during that



period Fergus got wind of Trantor. We showed him our demo and he was instantly sold on the game. In those days Probe's office was a tiny 2 room in Tooting. It was David and I in one room and Fergus and his assistant in another.

**Q) You are often linked with David Perry, who you worked with on many great games. How did this successful partnership form?**

Fergus was looking for someone to convert *Trantor* to the Amstrad. David had been working at Mikro-Gen which had just folded. We had an instant chemistry together. We both worked very fast and loved pushing the envelope. I think David is very visually based and was always looking to maximize whatever I could do. Some programmers can be closed off and only want to work a certain way but David would work to empower artists and designers.

**Q) You had worked on the Spectrum version of *Trantor* before starting on the Amstrad CPC version. Where did the idea of *Trantor* come from?**

I got into game and computers because I hoped to make big wonderful worlds in them. After my first year in games I was kind of frustrated with how limited the computers were and how little memory I was given to build the art with. I spent my first year in games working at Softstone doing conversions of less than stellar games. Softstone went bust and while I was between jobs I used the opportunity to have some fun and come up with my own original game. I was going to blow the entire memory budget on huge sprites because there was no one to tell me not too! I wanted to have some fun and bring a more epic and cinematic feel to the experience.

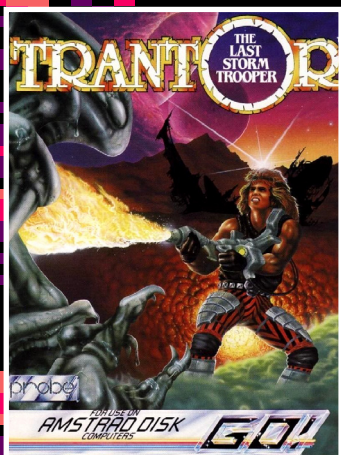
**Q) Can you recall any moments in the development period that stand out for any particular reason? Any problems overcome or ideas dropped for time or hardware constraints?**

Initially the game was meant to be very simple. I had planned it as a budget game. Once the game was picked up by Probe Software the plan expanded. But memory was always the biggest hurdle. True to my word I had blown the memory on huge sprites and had to come up with simple devices to expand the game play without taking up resources. Like the terminals and puzzles. I wanted *Trantor* to go up against sprits of his size or larger. In the end I had to stick mainly with smaller enemies apart from one large Alien sprite. Even with him I had to cut it off at the legs. Make it look like he was walking on a platform below Trantors to make him look bigger!

**CPC Softology:**

*Quartet* (1987)  
*Trantor* (1987)  
*Rygar* (1988)  
*Demon's Revenge* (1988)  
*Savage* (1988)  
*Dan Dare III* (1990)  
*Teenage Mutant Hero Turtles* (1991)  
*Extreme* (1991)  
*Smash TV* (1991)  
*Paperboy 2* (1992)  
*Captain Planet and the Planetears* (1992)





**Q) The intro sequence and title screen for *Trantor* was very impressive with some sampled speech in there as well. Who came up with the idea of this movie like intro and how did it all come together so well?**

I came up with the intro and wanted it to feel like a cinematic adventure but as always we were out of memory. We stored all the intro art and sound in various buffers that would be used once the game playing. This is why you would only see the intro sequence just once at the start. After the game started running the data would be overwritten.

**Q) *Trantor's* ending screen promised a sequel '*Trantor II: Revenge of the Stormtrooper*'. What happened to the follow up and what would the game have been like?**

Everyone tends to view the game as a success but as far as I know the game didn't sell well enough to warrant a follow up. For the sequel I wanted to make the action less horizontal more dynamic with vertical maps. To accommodate this I would have had to shrink *Trantor* down a bit to give him more screen space. Ideally I would have liked to have *Trantor* in multiple sizes for different rooms. The levels felt like endless corridors so I wanted to have better defined areas that were key to the progression of the game rather than a simple terminal.

**Q) There are conflicting sources online about which computer *Savage* started life on. Can you enlighten us to which computer *Savage* was developed on first?**

*Savage* was started on the Spectrum. David and I typically led on the Spectrum but we got the conversion process down so well that often times we would work on both versions of a title at the same time to keep them in sync.

**Q) Where did the idea for *Savage's* plot and design come from?**

You'll notice the first chapter of *Savage* was very *Trantor* like. That's because we were planning to make *Trantor 2* but when that didn't get picked up we evolved the game into *Savage*. The game was faster and more intense. While Dave Perry converted *Trantor* this was our first original title together and we were just having fun throwing a lot of concepts in there. As usual we were running out of memory but having so much fun we decided to just make it multiple loads just so we could try building out the other mechanics.

**Q) How did the deal for the *Smash TV* licence come about?**

It came from Fergus McGovern at Probe Software. Probe handled most of the licensed work for various publishers. Before working with Perry I converted a ton of licenses like *OutRun/Xevious/SlapFight/MetroCross/Quartet* and a bunch others I can't even remember!

**Q) Did you get to play much of the arcade game as resource for developing the home conversions?**

Not as much as I would have liked. Often the arcades boards were built into a portable case you can take home but this time it was the huge heavy arcade machine which stayed at the Probe office in Croydon. We made a trip to the office to play as much as we could in one day.

**Q) Again, *Smash TV* features bright and colourful visuals, with super fast sprites. How did the development of *Smash TV* go?**

It was a very smooth production. David's game engine was very polished by then and we knew how we were going to approach it. The whole development was done in around 1 month.

**Q) Can you recall the implementation of the arcade's control system onto the Amstrad CPC, as I imagine there must have been headaches trying to get a method that worked?**

I'm afraid not. Too long ago! Controls were always a pain making the game work equally well on a keyboard or Joystick.

**Q) One point that crops up about many Amstrad games is the lack of scrolling, but this was implemented very well in many of your games, including *Trantor* and *Savage*. How was this accomplished when so many others have failed?**


That's really a question for David.

The fast scrolling was the first thing that surprised me and make me take note of David Perry when he started converting *Trantor*. I wasn't expecting too much when I went to see his first demo of the conversion. At first I was shocked by just how much of the game he had running in such a short time but to also have it run as fast or even faster than the Spectrum. I just thought to myself, I've gotta work with this guy!

**Q) *Trantor* and *Savage* features massive sprites, smooth animation and lots of colour, which was quite a revelation at the time. How did you achieve this and what software was used?**

I don't think there was anything particularly difficult in pulling it off. It





was more about the positive desire to make a big and bold game. We weren't afraid to try anything. That's where David and I were always a good matchup. We would never say no to each other. We would get excited by the same things and just try to make it happen one way or the other.

**Q) The *Savage* advertisement was kind of, erm, different. What was the idea behind this?**

OMG. Yeah. That sucked. We saw it around the same time as everyone else. We had no control over marketing or pr back then. It was quite disheartening and had nothing to do with the tone of the game. Still scratching my head over that one.

**CPC Softology:**

*Quartet* (1987)

*Trantor* (1987)

*Rygar* (1988)

*Demon's Revenge* (1988)

*Savage* (1988)

*Dan Dare III* (1990)

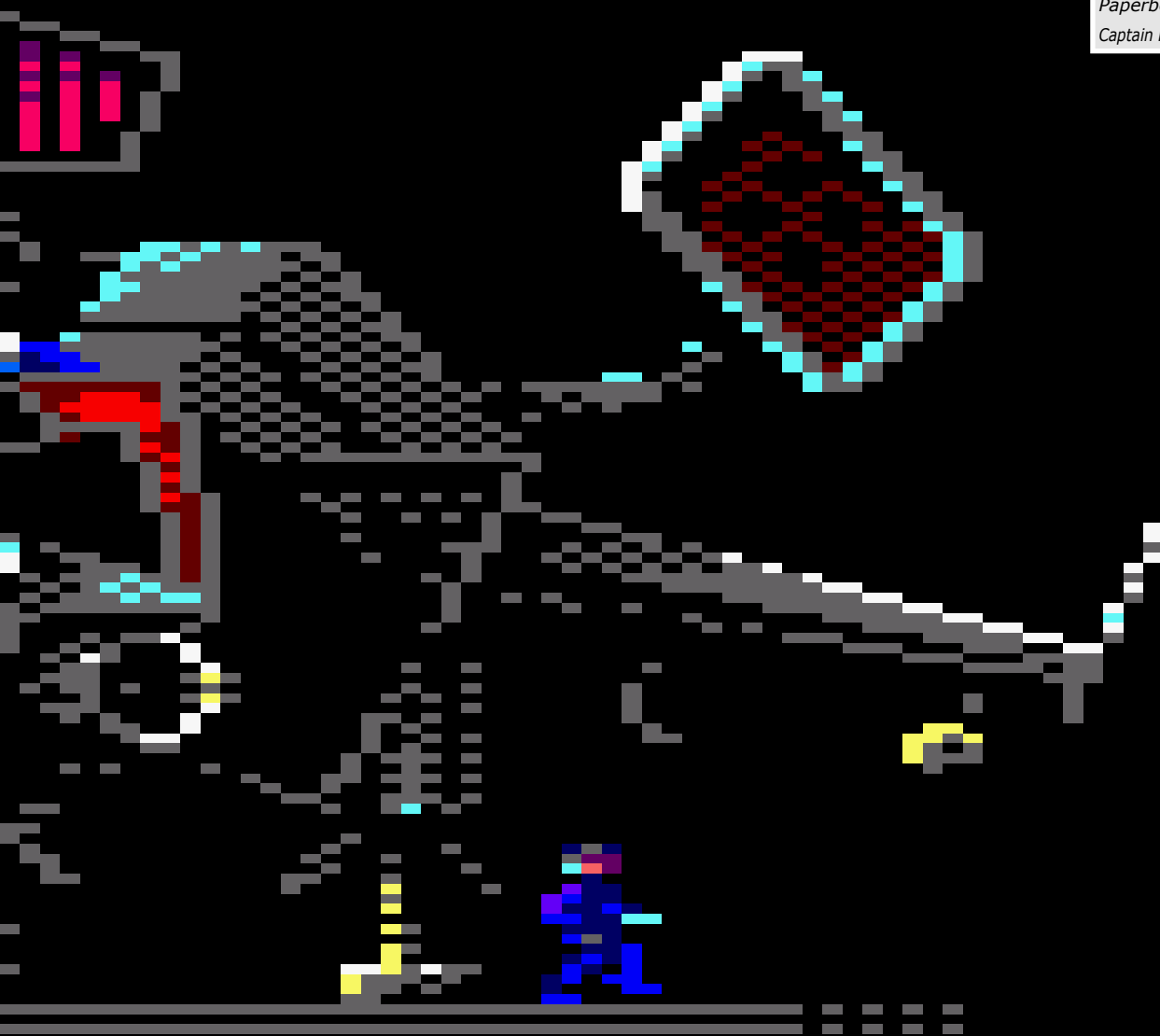
*Teenage Mutant Hero Turtles* (1991)

*Extreme* (1991)

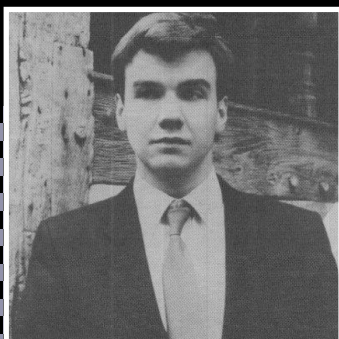
*Smash TV* (1991)

*Paperboy 2* (1992)

*Captain Planet and the Planeteers* (1992)



# IAN ANDREW



Ian Andrew (programmer, producer and designer) was the founder of Incentive Software and was part of the development team that produced the ground breaking Freescape games.

## **Q) How did you first get interested in the computer gaming scene?**

Always loved games when young in the pre home computer days - mazes, wooden pinball etc. Then saw an advert in the *Daily Mail* for a ZX81 for £69.95 I think it was. Bought it then taught myself basic and made a snake game and other basic play things

## **Q) Can you tell us about your the early days of Incentive, pre-Freescape?**

Incentive started with *Splat!* I jointly wrote the game with a machine code programmer, then I launched the company with it.

The company was called Incentive as the game had an extra incentive to play it - A high score prize of £500 for the top scoring player by a certian date

## **Q) Tell us about how the Major Developments team came about and the conception of the Freescape 3D engine?**

When console and handheld games started becoming popular, I saw that we had a choice... Either we went headfirst into developing for these proprietary machines or we had to do something that stood out on the "open" platforms. Open meaning we were not at the mercy of a third party regarding the publishing of games. I choose the "open" route.

The "stand out" feature was what we called "solid 3D". Wire frame 3D games were about, but no one was filling in the wires!

I asked my brother Chris to join the business to do the design and coding - he said it could be done when others said it could not! Chris is an amazing programmer that did magic with assembler which made it happen.

He created a hex editor within the code so I could create cubes, pyramids and lines to make the environments. The editor also allowed me to assign game attributes to the objects when they were bumped into or shot.

It was a very powerful tool that enabled me to make the games and environments whilst being no more than a basic programmer myself.

The name Major Developments was a way of distinguishing the publishing label - Incentive from the Programming team.

## **Q) Was the Amstrad CPC used as the home platform for *Driller* and subsequent Freescape games? Why was the CPC chosen to develop on when the C64 and ZX Spectrum were more popular?**

The CPC had 128K of memory and a disc drive which made development easier. I can't remember the exact order of things.



However we did secure a big deal with Book Club Associates - called the Home computer club - and we had to have those 3 formats ready at the same time. Spectrum, CPC and C64.

**Q) How did the development of *Driller* go? Was there any memorable moments, problems, delays, features dropped?**

Just getting it to work at all was quite memorable – it was a very hard technical challenge

A long time ago now! Quite a ride. We just kept going. We just kept optimising so that the frame rate got to be under one frame a second!

**Q) The *Driller* game package was a lavish affair with folding map and instruction manual with an in-depth background story of the game. How did all these individual parts come together for the package?**

I think we added all the packaging to provide extra value and experience for the gamer. It was £14.95 when the average price of a game was around £6.95 (cassette). So as well as the game you got a folding map, a story, a poster in some versions and a big colour box :o)

**Q) What were the reasons for *Driller* being renamed *Space Station Oblivion* in the US?**

That was the decision of Mindscape - they thought the name would do better in the US market.

**Q) I have seen mentions of *Dark Side* being a sequel to *Driller*, but that is quite misleading. Yes, it takes place in the same game universe, but centuries later. How would you describe *Dark Side*'s ties with *Driller*?**

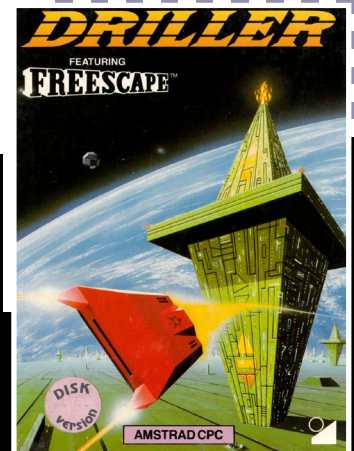
Ah good question. I saw it as a follow up with more features and a little more optimisation.

**Q) *Total Eclipse*'s plot and setting couldn't be any more different to the previous two games. Did you feel a need to move away from the sci-fi plot and setting or were there other reasons?**

Yes, we felt the need! I didn't want it to get boring - I think if we had done another space version it may have been criticised as such.

**Q) *Total Eclipse* appears to be bigger and faster than the first two *Freescape* games. Was this a conscious decision to make improvements where ever possible?**

Yes and Yes.





**Q) There is a scoring system in *Total Eclipse*, which was a first for Freescape games. What were the reasons for introducing this?**

I think it made progress more tangible.

**Q) What was the idea behind *Total Eclipse: The Sphinx Jinx*? Was it intended as a sequel, follow up, expansion pack or a bonus extra in Special Editions of *Total Eclipse*?**

This actually was a commercial decision as The Home Computer Club who had really supported us and the Freescape series asked for some extra value in their version in exchange for a big order! So we gave them a complete extra game. I think that was the way it happened - a long time ago now.

**Q) *The Sphinx Jinx* has been described as the hardest game in the Freescape series. What were your thoughts on the game?**

Yes it was hard - maybe it was a little rushed in hindsight.

**Q) *Castle Master* was the final Incentive game to use the Freescape engine. Was it felt that the series had come to a natural end or were there other reasons for bringing the**



**series to a close?**

Natural end! And also we wanted to make the tool available for everyone to use - so we followed it up with the 3D Construction Kit.

**Q) All the Freescape games received positive reviews from the magazines. Did you get the chance to see any of the reviews and how did it feel to get such great praise for the games?**

It was fantastic. Still make the hairs on my neck stand up thinking about it. Amazing response and recognition, such a buzz for all of us.

**Q) Did you manage to see the fan remakes of *Driller* and *Total Eclipse* on PC? How do you feel that gamers still have fond memories of the Freescape games after all this time?**

It feels great - I love the fact that we talk about it and people are still interested after all this time.

**Q) The Virtual Worlds compilation included *Driller*, *Total Eclipse*, *Castle Master*, and *The Crypt*. Was there any reason why *Dark Side* was missing from the compilation?**

No idea!

**Amstrad CPC Softography  
(programmer):**

*Splat!* (1985)

*Driller* (1987)

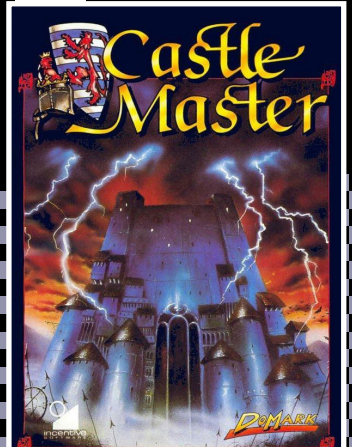
*Dark Side* (1988)

*Total Eclipse* (1988)

*Total Eclipse II: The Sphinx Jinx* (1989)

*Castle Master* (1990)

*Castle Master II: The Crypt* (1991)



# DAWN HOLLYWOOD



Dawn Hollywood (known then as Dawn Drake) was a graphic artist known for working on Ocean Software games such as *RoboCop*, *Target*, *Renegade*, and *Batman (The Movie)*.

**Q) Can you tell us about your pre-Ocean artwork exploits? When did you first get interested in computing and what was the first computer you owned?**

I had originally been a graphic designer but went for job interview as board game artist originally and ended up being employed as a computer game artist. I started work in the mid-80's at Canvas Software in Crosby. I had the pleasure to work with late Ian Weatherburn, Steve Cain, Martin Holland, Paul Clancy, Paul Hobart, Chris Pink, the entertaining Calvert brothers and Simon Butler to name but a few.

Shock horror, I didn't own a computer as I basically lived at work and was out partying the rest of the time.

**Q) How did the graphics designer position at Ocean Software come about?**

As Canvas Software was slowly being run down at the time, I managed to get an interview at Ocean Software and was lucky to be accepted. Canvas Software had done some games for Ocean (and US Gold) previously and I had already met Gary Bracey & Steve Lavache anyway on their many visits to Canvas. As Ocean was the biggest name in the industry and here in the North West region, it was an obvious choice.

**Q) Can you recall the time when Ocean decided to work on *Target*; *Renegade*, a follow up to *Renegade*?**

*Target Renegade* had already started with Mike Lamb as programmer and an artist called Ronnie. Ronnie left and as I had just been employed by Ocean (early 1988), I was partnered with Mike Lamb to jump in and take over. I enjoyed working on this game and it appeared to get some good reviews at the time.

**Q) *Target*; *Renegade* was not a conversion of an arcade game, like the original, but an original game in itself. Who came up with the concept of *Target*; *Renegade*: it's story and design?**

Unfortunately, I cannot comment on this as I was not employed by Ocean at the conception of this game.

**Q) Can you tell us about the time you first learned that you were going to be working on *Robocop* and then, soon after, *Batman: The Movie*?**

I was very excited to work on the '*Robocop*' film tie-in. Although there were the usual hurdles to get over at the start of the work, basically we watched the film and had photographic stills (eventually) for referencing. I can't remember there being a brief, but we took from the film scenes that we thought would be good for game play and

translated these into sections in the game.

For '*Batman: The Movie*', Mike and I were flown to New York to watch the film and make notes to incorporate certain scenes into game play and to gather competition prizes. The work for this was more of a rush job due to the film being released recently and needing to try and merge with the frenzy of advertising and merchandising around the hype of the film.

**Q) *Robocop* and *Batman: The Movie* were two great games that utilised select scenes from the movies to play through. Were you given any source material from the movies to work from at all? Who decided how the games were designed and set up?**

I was extremely pleased that *Robocop* went onto being no. 1 for 18 weeks. I wish there had been the likes of BAFTA awards for games back then as I personally never even received an award or certificate, so have nothing to show that I had worked on a successful game. On both film tie-ins we eventually had photographic stills and I think we may even have had the script for one of them. As I mentioned earlier, I can't remember there being a brief, but there must have been some art direction possibly from Steve Wahid and Simon Butler. I think Mike and I had the majority of the game plan sorted prior to its blessing to go ahead.

**Q) One strange thing that I think about *Robocop* is that it seemed that review copies of the Amstrad version were not sent out to the main UK computer magazines. Do you recall what that was all about?**

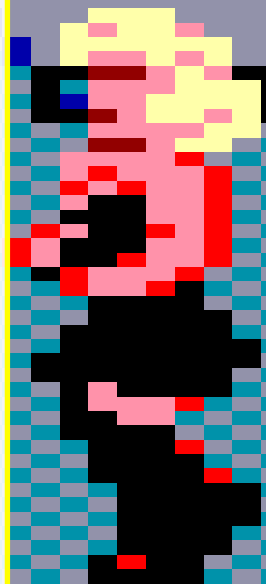
Nope, can't remember, sorry. We would have been too busy on the next game.

**Q) *Batman: The Movie* was converted to cartridge for use with the Amstrad Plus range and GX4000 console. What changes - if any - were made to the cartridge version?**

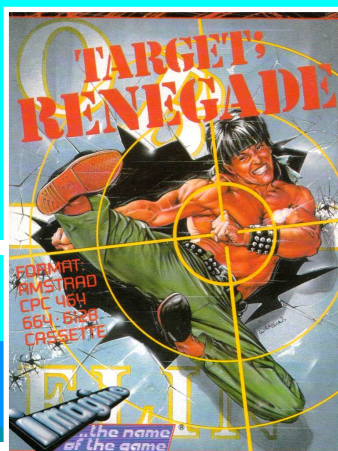
Artistically, no changes as far as I am aware. Programming wise, that's a question for Mike Lamb to answer.

**Q) Do you recall of any problems that occurred during the development of *Target*; *Renegade*, *Robocop*, or *Batman*? Did anything have to be cut from the final games due to memory limitations?**

I remember, (and this goes for most games), that graphics had to be reduced in various sections. Sprite action and background work was always kept to the best minimum possible.



# DAWN HOLLYWOOD



**Q) Although you worked on Spectrum and Amstrad versions, you never produced a so called Spectrum port for the Amstrad. Were the Amstrad graphics drawn from scratch or were anything used from the Spectrum versions?**

As far as I can remember, they may have been ported over, but some were probably drawn from scratch. It wouldn't be hard as used my spectrum stuff as reference anyway.

**Q) Despite the lack of reviews for the Amstrad *Robocop* version, the game sold extremely well, staying in the Gallup software charts for over a year. How did it feel to see a game you worked on be so successful?**

I was very excited that the game for both versions did very well. I can't thank the loyal gamers enough for loving it and keeping it there.

**Q) The 8-bit computer games are well known for their loading screens. What kind of reference material did you have when drawing the *Target; Renegade*, *Robocop*, and *Batman* loading screens?**

I think we may have used Bob Wakelin's drawing for reference, again, I apologise for my 'senior moment'. I did enjoy doing the title screen for *Target Renegade* though – a bit of 'Bruce Lee' type action! For *Batman*, photographic material was available. If in any doubt about graphic content I would discuss with Simon Butler, my mentor and friend.

**Amstrad CPC softography:**

*Miami Vice* (1986)

*Killed Until Dead* (1987)

*Leaderboard Tournament* (1987)

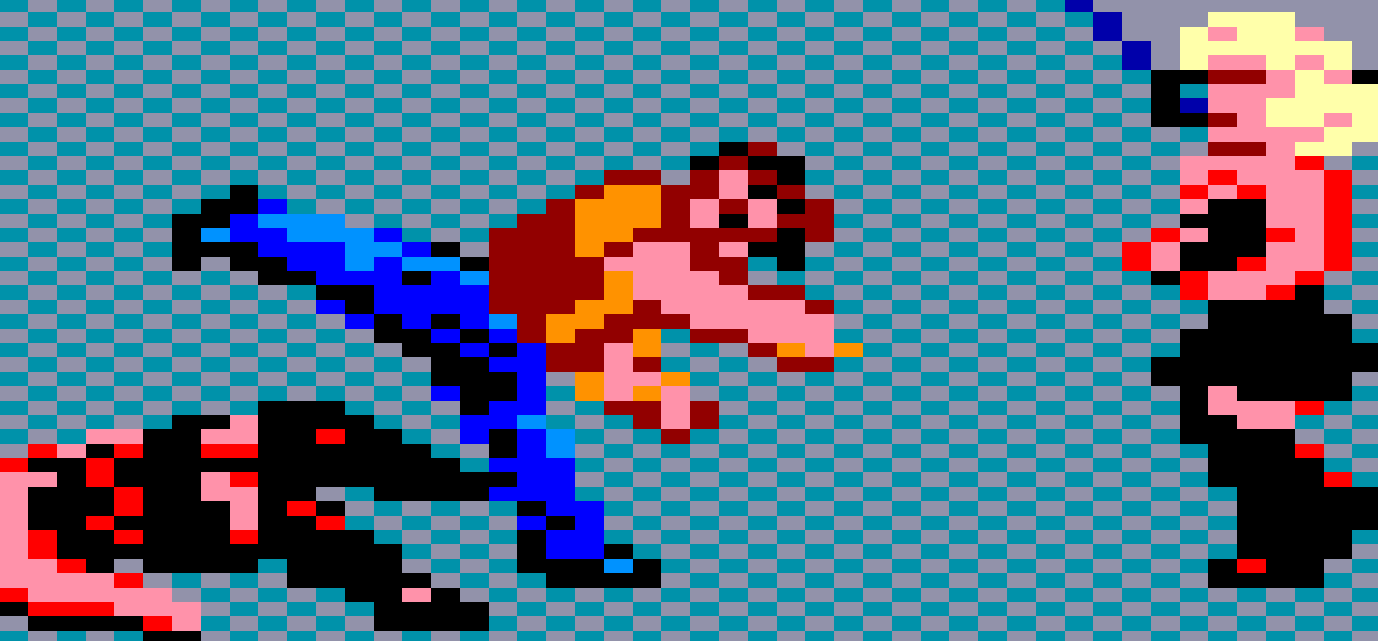
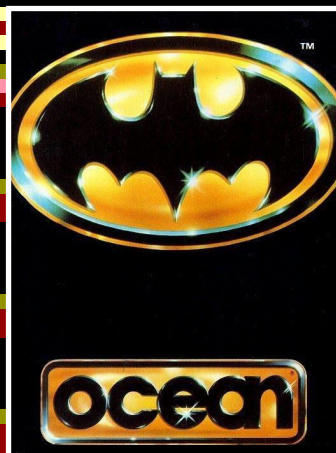
*Airborne Ranger* (1988)

*Target; Renegade* (1988)

*Daley Thompson's Olympic  
Challenge* (1988)

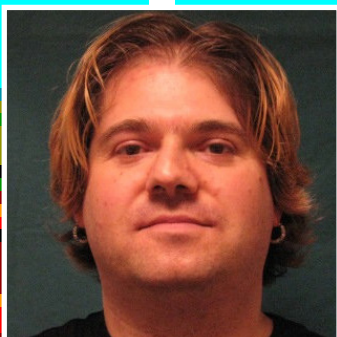
*RoboCop* (1989)

*Batman (The Movie)* (1989)

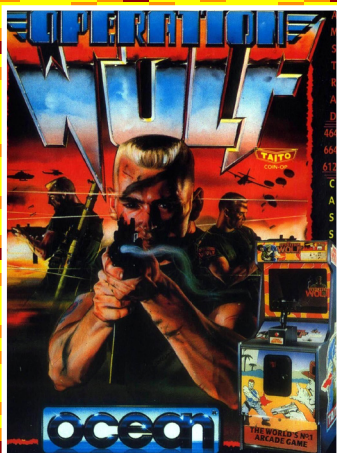




# IVAN HORN



**Ivan Horn was a graphic artist who worked at Ocean Software during the height of the 8-bit computer reign. Along with his coding partner, Andrew Deakin, they developed some of the finest Amstrad CPC games...**



## **Q) How did you get in to the computer scene and graphics design in particular?**

I'd had an interest in computers since the late 70's, my step brother worked in "data processing" and did a little programming at the time. While at college I bought my first computer, an Oric, soon to be replaced by another when the keyboard failed, then got my money back after the replacement also failed, then I bought a Spectrum.

After that I spent a couple of years just playing games, then Andrew Deakin and I (we went to school together) decided to have a go at writing our own. This started with buying a software package called "White Lightning" which was a tool that allowed you to write the game code in Forth, from which various assembler routines (draw graphic, emit sound etc.) could be called as well as a simple graphics editor.

With this we wrote an early game, then we moved onto a new package "White Lightning" which allowed the programmer to write in assembler. This was something that Andrew had a little experience with, as had recently started a programming course at Bristol Poly, which was cut sort by a motor bike accident.

As for my role on the graphics side of things, I had no art background and did nothing beyond the compulsory art lessons at school, but I did like to scribble the occasional (pretty bad) drawing. But as Andrew had his 2-3 months on at Bristol Poly, it made sense that he would do the coding from then on.

## **Q) Can you tell us a little about your pre-Ocean days?**

I lived in Devon and met Andrew Deakin at school in the late 70's. We became friends there and the interest that we had at playing games, both on our Spectrums, but also in the arcades (we we both REALLY good at Track and Field and Hyper Sports) we developed an interest in writing them.

In our first couple of years in the business, before moving to Ocean in 1987, we wrote three games and made a start on a fourth. We were living with our parents at the time, which made living pretty cheap, so the little money we made out of those early games mostly went into buying equipments and games.

Both of the games we made were published on budget labels, one on Firebird and the other by Mastertronic.

## **Q) What do you recall about getting the graphics artist role at Ocean Software?**

It was pretty straight forward. We had come back on the train from an interview with Gremlin Graphics, where we weren't offered jobs, but they were interested in the game we had in development and we

found we'd had a letter waiting from Ocean, to whom we'd applied a couple of weeks earlier. Some days later we went for an interview at Ocean's office in Manchester, where we showed them the game we had been working on, which they liked, but weren't interested in publishing, but they did offer us both jobs that day.

Within a couple of weeks, we moved to Manchester, to begin working in Ocean's "crypt".

**Q) One of the biggest games to work on must have been the arcade conversion of *Operation Wolf* on both the Spectrum and Amstrad CPC in 1988. How did converting the classic gun mounted arcade game onto these two home computers work out?**

It worked out pretty well, better than expected in fact as we were expected to take until around August converting the game, but we were done by early May on both Spectrum and Amstrad. This gave Ocean the opportunity to promote the game from an earlier time than expected, so probably contributed to its success.

**Q) *Operation Wolf* is often cited as one of the best arcade conversions on the Amstrad CPC. Just how did you manage to get the game looking so well? Did you have access to the arcade machine or any other resource?**

As for all arcade conversions that Ocean did we had the game set up in our arcade room. This didn't contain arcade cabinets, but instead the guts of the machines (PCB, display and controls) housed in something that looked more like a kitchen than an arcade. The controls were attached to a section of kitchen countertop and the PCB in a wooden box underneath, with the display on a shelf above the controls. It actually worked pretty well and we had a particular advantage with *Op Wolf*, as the gun wasn't mounted, but instead was loose on the end of its cable to the PCB, which made game play a bit easier.

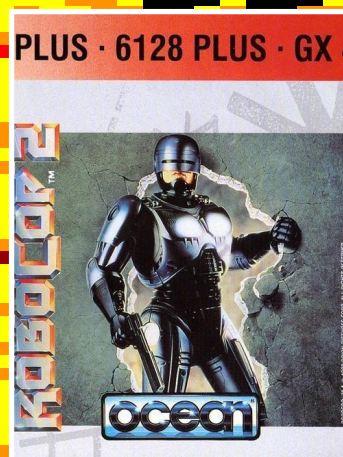
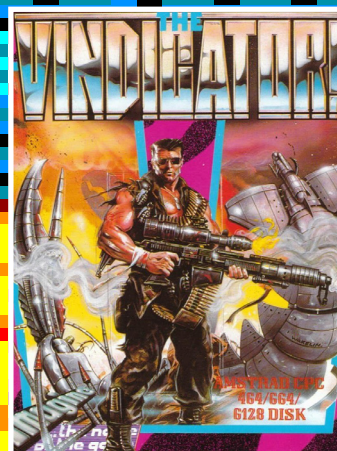
As I did with any arcade conversion I worked on, I played through the game, end to end and recorded it on a video camera on a tripod behind me, so that we had good reference in terms of both visuals and game play of the whole game.

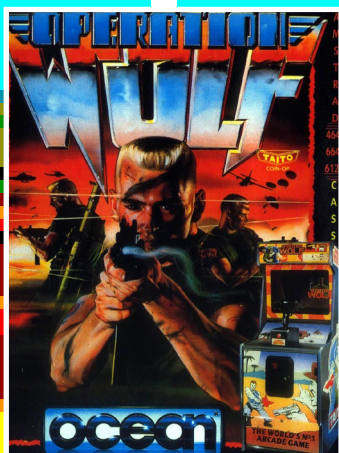
**Q) You worked on the sequel *Renegade III*. What were your thoughts on the final chapter in this beat-'em-up trilogy?**

I think that *Renegade III* was a sequel too far really. There wasn't a strong theme for the game, so someone, can't remember who, came up with the "fighting through time" idea which might have been ok, but neither Andrew or I had a lot of enthusiasm for it, so the game was a bit lame.

#### Amstrad CPC softography

*Arkanoïd 2: Revenge of Doh* (1988)  
*The Vindicator* (1988)  
*Operation Wolf* (1988)  
*Rambo III* (1989)  
*Renegade III* (1989)  
*Operation Thunderbolt* (1990)  
*RoboCop 2* (1990)  
*Total Recall* (1991)  
*Terminator 2: Judgement Day* (1991)  
*The Addams Family* (1992)





**Q) While you worked on the Spectrum version of film licence *Robocop 2*, it was arguably the Amstrad Plus/GX4000 cartridge version that gained the plaudits for its 16-bit style gameplay and visuals. What was it like working on a true Plus version rather than one that was merely enhanced?**

The plan was originally that Andrew Deakin and I would make the Spectrum, GX4000 and Amiga/ST version. As neither of us had any experience of 16 bit machines, it ended up being too much of a stretch for us to do all of them in the time allocated (about 10 months), especially with the Amstrad being a new machine.

However the capabilities of the Amstrad were quite a lot higher than those of the CPC, so it felt more like working on the ST/Amiga than the CPC/Spectrum.

**Q) As great as *Robocop 2* looked and played, it is also considered one of the most difficult games on the Amstrad computers. Was there a conscious decision to make this game more challenging than previous games?**

I think that might have been the result of the battle of wills between Andrew Deakin and Ocean's test department to see who would blink first. Andrew always liked games to be on the hard side to say the least, so our games tended to reflect that. I don't know why that game in particular was so hard, just luck of the draw I guess.

**Q) What were your thoughts on the ultimately doomed new Amstrad machines?**

Not a lot of thoughts really, other than that Amstrad was very much a European company, whereas other console makers were more global, so this probably affected Amstrad's ability to sell the machine.

**Q) The last Spectrum and Amstrad CPC game you worked on turned out to be the film licence of *The Addams Family* in 1992. Do you recall the development of the game and if you were given any source material from the film to work from?**

I vaguely remember the game being over and done with quite quickly, possibly as it was to be our last Spectrum/Amstrad game and we were eager to move onto new things, especially as James Higgins and Warren Derbyshire were working on the SNES version at the time (Ocean's first experience with the new console) and it was looking so nice in comparison with what we were doing.

Gary Bracey had been over to the US to get some reference material from the set, including a few photos he took there himself. I think I still have a couple of them laying around somewhere.



**Q) You often worked on both Amstrad and Spectrum versions of the same game. What was it like coding a game on two different machines and did it help that the CPC and Spectrum shared a similar Z80 processor?**

Well the CPU of the machines both being Z80 didn't affect my work on the graphics, but for Andrew it did mean that a large part of the code was the same, so the way we tended to work was to do the Spectrum version first, then make the necessary changes (including all the art being drawn over in colour) to create the Amstrad one.

That might sound like the Amstrad was a bit of an afterthought, but it did mean that version got more of a tweak to its game play compared with Spectrum version.

**Q) You forged a long lasting working relationship with coder Andrew Deakin who you worked with on many games and various hardware. How did the partnership come about to begin with and was there a method in the way the two of you worked with each other?**

I started at Cullompton Comprehensive school in 1977 and that's where I met Andrew. We were both part of a group of half a dozen or so friends who were some of the more academically inclined people in the year. We both did computer studies CSE at the school, at first using something like a teletype machine hooked up to a computer at the local college, via an acoustic coupler modem, with programs stored on paper tape. Thankfully after the 1st year the school bought an Apple II.

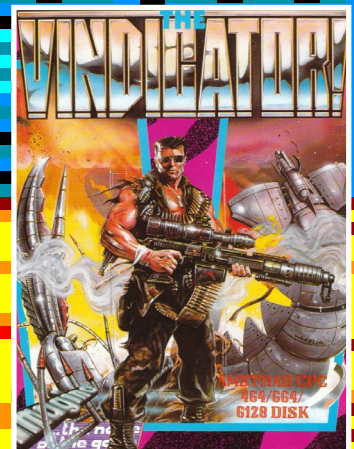
When one of our friends bought a Video Genie computer (a TRS-80 clone) in 1981/82 and saw that it could play games and be programmed, we decided that we had to get computers ourselves. By this time the various 8 bit machines that would form the basis of the home computer generation of the 1980's were just about to come out and we were both drawn to the glossy ads for these, so the saving up for these started.

Once we both had Spectrums and had got to the point of actually developing a games instead of just playing them, we found that we both liked to get up late and work late and this often resulted in our working until the early ours of the morning, then the late hours of the morning and finally what we called a go around, which was to stay awake, but not necessarily working, until late evening, when we would get to sleep in order to get our sleep cycle in sync with the rest of the work again.

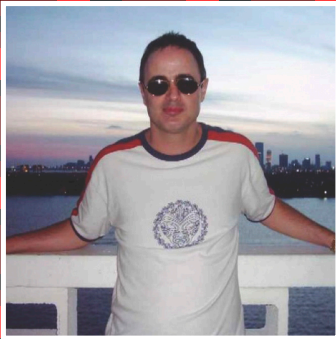
We also spent quite a few nights walking around the back lanes of Devon, discussing game ideas and techniques we might want to use. This usually involved parking my car on some random back road and walking around for an hour or two and hoping that we didn't get lost in the process, which came close to happening a couple of times.

**Amstrad CPC softography**

*Arkanoïd 2: Revenge of Doh* (1988)  
*The Vindicator* (1988)  
*Operation Wolf* (1988)  
*Rambo III* (1989)  
*Renegade III* (1989)  
*Operation Thunderbolt* (1990)  
*RoboCop 2* (1990)  
*Total Recall* (1991)  
*Terminator 2: Judgement Day* (1991)  
*The Addams Family* (1992)



# MIKE LAMB



Mike Lamb was a programmer who worked on games that were both a critical and commercial success. Indeed, Mike was involved with a game that spent more time in the United Kingdom Gallup software charts than any other title.

**Q) Can you recall the events surrounding the conception and development of *Target; Renegade*? How did the game's design come about? The addition of a two player option greatly enhances the gameplay, but were there any other ideas put forward?**

Ocean wanted to get the license to Taito's sequel *Double Dragon*. I believe Melbourne House outbid them but Ocean and Gary Bracey worked out a deal to do a sequel to *Renegade*. TBH it wasn't that far different from *Double Dragon* in terms of gameplay, but we were able to do some different stuff. I liked the dogs attacking you in the park and the telephone tag idea from *Dirty Harry*.

**Q) Non-Amstrad gamers often point to the use of flip-screen in *Target; Renegade* as a failing, but it isn't really interfere with the gameplay experience at all. Was there any technical reasons to why the game used flip-screen used rather than side-scrolling? (As I recall the game did scroll vertically when players went up or down in the elevators).**

If hardware scrolling was available we would have used it, but it would have slowed the game down a lot to scroll instead of flipping. It didn't make much difference to the gameplay.

**Q) *Robocop* and *Batman The Movie* were both well received games that utilised select scenes from their respective films. Did you get to see the films or given any source material to work from? Who decided on the design and how did the development of the games go?**

We were able to see *Robocop* in the cinema because the game was timed for the video-release. I believe we had a script before then. Data East had an arcade game that we saw as it was being developed. Simon Butler came up with the photofit matching sub-game and we ripped off *Operation Wolf*, an arcade game license Ocean was working on for the first person shooting sub-games.

For *Batman* we went to Pinewood studios to look at the sets and get source photographs. We also had the script. The movie came out in the US before the UK. The only way we could see it was to fly to New York which Ocean did.

**Q) One strange incident that still surfaces whenever I think about *Robocop* is that review copies of the Amstrad version were not sent out to the main UK computer magazines. Do you recall what that was all about?**

I don't know anything about that. Possibly we had finished the spectrum earlier and we were racing to get everything finished for the *Robocop* video release. In those days we would finish the game and the tapes would be duplicated and sent to the shops in a day or two.

**Q) Despite the lack of reviews for the Amstrad version, *Robocop* sold extremely well, staying in the Gallup software charts for over a year. How did it feel to see a game you worked on be so successful?**

I think Ocean expected *Operation Wolf* to be the Christmas number 1, but *Robocop* got there instead. We were chuffed.

**Q) *Batman: The Movie* was converted to cartridge for use with the Amstrad Plus range and GX4000 console. What changes - if any - were made to the cartridge version and what was the new Amstrad hardware like to work with?**

I didn't work on the console version.

**Q) How did your journey with computers begin, and when did you decide to start your own programming?**

I was interested in computers. My friend's brother William Wray wrote some games for Artic and made big money. I decided to give it a shot myself.

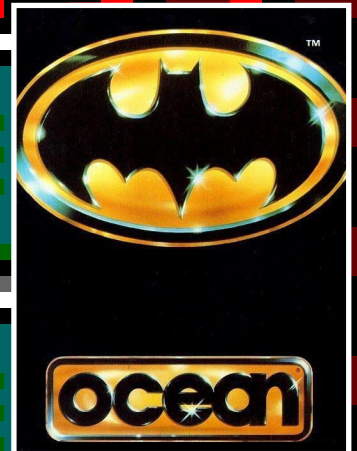
**Q) Can you tell us a little about your pre-Ocean days?**

I wrote Spectrum Pool from CDS and followed it with *Steve Davis Snooker* which I ported for a number of machines. I started work on a golf game for them but things didn't work out and I looked for work at a publisher - I was also getting a bit bored working on my own all the time.

**Q) How did you get a position working at Ocean Software?**

Ocean had got some great licenses but the quality of the games they were publishing wasn't really that good. They brought Gary Bracey in to turn things around. He hired quite a few developers.

**Q) Although you developed the Spectrum version of *Renegade*, did you see how the Amstrad version was working out? There seemed to be some controversy regarding the blood in the Amstrad game. I recall seeing two versions of the game: one with red blood in magazines and the released version with blue blood. Do you recall what this was all about?**





John Brandwood and Mark Jones worked on that. The arcade game had stars animating around the guy's head but they went one better! However, there was concern at the time about video-nasties and violence in games and they were told to tone it down. Ron Fowles and myself didn't see the point in trying to go down that route. It's a bit sad when you see what they do with games these days.

**Q) The Amstrad CPC 128k version of *Robocop* featured an impressive soundtrack and digitised speech. Do you recall how this was achieved?**

John Brandwood worked on some digitized speech and we used his code.

**Q) You often worked on both Amstrad and Spectrum versions of the same game. What was it like coding a game on two different machines and did it help that the CPC and Spectrum shared a similar Z80 processor?**

We were keen to do both SKUs since we got two bonuses. It was obviously helpful to have the same processor. I'd guess it was only about 1/2 as much work to port it over.

**Q) Did you get a chance to see the unofficial remake of *Target; Renegade* for the PC in 2006? Would you ever go back and remake any of your own Amstrad or Spectrum games?**

I didn't see a remake. I probably wouldn't bother with most of my games. I wouldn't mind redoing Topgun since the 3D had potential but didn't turn out that well because we had to release for Christmas.

**Amstrad CPC softography**

*Steve Davis Snooker* (1985)

*Pool* (1986)

*Top Gun* (1986)

*Combat School* (1987)

*WEC Le Mans* (1988)

*Target; Renegade* (1988)

*RoboCop* (1989)

*Batman* (1989)





# MARK K JONES



**Mark K Jones — not to be confused with Mark R Jones — was a graphic artist during the mid to late 1980s. Despite only working on two Amstrad CPC games, they are arguably two of the finest games to grace the 8-bit machine...**

## **Q) When did you get interested in computing and graphics designing?**

I became interested in computing around 12 or so and designing graphics around a year later. I would save my pocket money and buy games for my VIC 20 and was not impressed by much of the art work. So I started designing my own (on graph paper) and later would redesign the ASCII characters to form the graphics I wanted. Lots of grids and inputting of numbers.

After moving to the Amstrad graphics became easier and I was able to draw directly on screen. Using the cursor keys.

## **Q) Can you tell us about your pre-Ocean graphics artist exploits?**

Ocean was my first job. I had put together a portfolio of my work, and started sending that off to various companies. Ocean was the first to offer me a position. Art college did not appeal at that time. I was told there was no such thing as 'computer graphics'. I was 18 (30 years ago...)

## **Q) How did the graphics artist position at Ocean Software come about?**

Back then there was no official training for computer game careers. I liked ocean games, so I wanted to work there. I applied and was hired (seems so simple now! LOL)

## **Q) *Renegade* proved to be a massive hit for the Amstrad. How did the development of the arcade conversion go and did you have any source material to work from?**

Ocean has an 'arcade alley' where all the games that were were 'converting' were housed. My little corner of the dungeon was just outside the door :) We simply played the games, and videoed that. We would borrow the video player and set that up next to our desks and I would watch those tapes for hours, then try to recreate the graphics on the Amstrad, one pixel at a time

## **Q) There seemed to be some controversy regarding the blood in the game. I recall seeing two versions of the game: one with red blood in magazine and the released version with blue blood. What was this all about?**

We liked to add in things. The blood was one of those things. But very close to the release of the game the Hungerford shootings happened. A massacre. Awful. Evil thing. Computer games (like

comics and rock n' roll before) were being blamed for the 'escalating' violence in society, so we changed the blood to blue. Not sure how that helped really, but there was a cheat in the game to bring it back to red.

**Q) *Renegade* contained a combination of joystick and keyboards commands to pull off all the varied moves. How did this unique method of controlling the character come about?**

That i cant remember but John had a very good handle of how a game felt. That was one of his choices.

**Q) *Gryzor* was another successful conversion from its arcade parent with varied gameplay and fast action. Can you recall the development of this CPC classic?**

As with *Renegade*. Lots of hours playing it, videoing it. Watching it. The trying recreate the same feel on the CPC

**Q) Do you think that it could have been possible to include a two player mode on the CPC version of *Gryzor*?**

Bill and Lance? It would have been nice, I think John was pushing the Amstrad quite a bit, and perhaps two player may have slowed it down just too much.

**Q) The ending for *Gryzor* is pretty downbeat and quite unexpected. Where did the idea for this ending come from?**

John liked that. He thought it was very funny. All that work. Beating the game. All for nought! :) This was the 1980s. We were reading Alan Moore's *Watchmen* series. It was Manchester. It was pretty dark :)

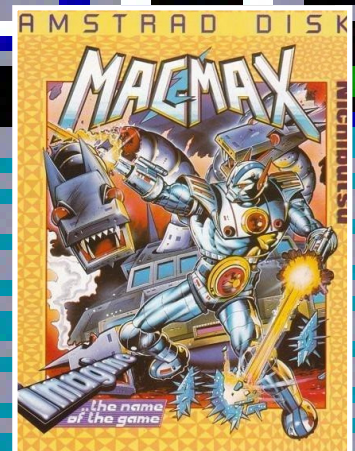
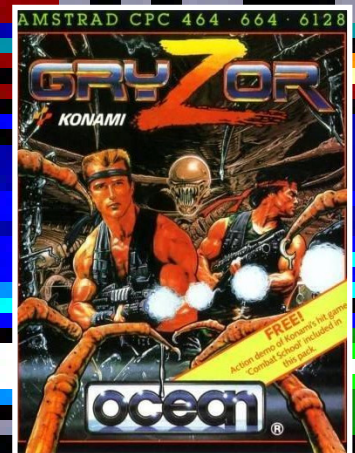
**Q) Was there any reason why the *Contra* conversion was renamed *Gryzor* for the home computers?**

The machine we had was called *Gryzor*, I think it was a regional thing

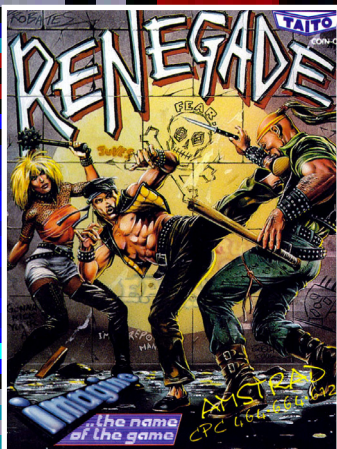
**Q) A flip-screen method was used as opposed to the scrolling of the original. Was this down to the hardware available and would it have been possible to use some kind of scrolling at all?**

I had seen some scrolling that worked ok on the CPC, but again, I think it was too much for this game. It would have looked jerky at teh speeds we could achieved. The flip, helped the game

**Q) The 8-bit computer scene would become associated with**







**the iconic loading screens. Both *Renegade* and *Gryzor* have fantastic loading screens, but where did the inspiration for the images come from?**

I loved working on loading screens. It was just art. No limitations for game space, just pure artwork. Of course I used the game covers as inspiration, but I added my own stuff. The graffiti on the *Renegade* one was fun! ;) Spot the references if you can!

**Q) You had worked on the 16-bit conversions of the Amstrad platform adventure *Stormlord*. Do you recall the controversy surrounding the Sega Mega Drive/Genesis version regarding the censorship?**

I remember bikinis. That's about it. I still roll my eyes when no one seems to care about violence, but even artful nudity sends everyone into a tiz!

**Q) Ocean Software is regarded as one of the most famous during the 8-bit computer reign. What was it like working at Ocean and with so many other big gaming names?**

Ocean was such a great experience! I was so lucky! So very very Lucky. AS I was with my other experiences with all the companies I have worked with. I have met very few tossers in my 30 years. See, lucky!

**Q) Both *Renegade* and *Gryzor* were well received in the gaming press. Did you notice any of the feedback from journalists and do you recall any particular review that sticks in the mind?**

The reviews and feedback were the best. You never knew how things would be received. Working inside a bubble. I remember when *Gryzor* got a BIG write in *Amstrad Magazine*. I still have those reviews! :)

**Q) Looking back, were there any games that you would have liked to have improved and were there any unfinished/ cancelled games?**

Lots. All of them to some extent. At least on improving them. You never finish, just run out of time. There has been lots of unfinished games. More than releases. Pixel artwork is hard. At least I found it to be so. I would refine and refine and refine. I can produce a photo realistic Zbrush model, with over 10 million polygons, faster than I can a sprite set.

Amstrad CPC softography

*Mag Max* (1986)

*Renegade* (1987)

*Gryzor* (1987)



# JAMES HIGGINS



James Higgins was a programmer who is known for working at Ocean Software during the mid to late 1980s. He had worked on both the CPC and Plus range of machines, producing some of the finest games to grace the two ranges.

## **Q) When did you first get interested in computing and what was the first computer you owned?**

Well - I was led to computer (video) games originally as a consumer at about 14 years old when I borrowed the cash to purchase a ZX81. I was a fairly typical kid and I wanted to play the games but alas in my early teens I had virtually no disposable income so I couldn't afford to buy very many games. However there were a glut of type in listings at the time and my school library had a subscription to Your Computer. I spent hours typing hex digits into hex editors waiting for the spectacular game that was promised. Unfortunately - they rarely worked. Sometimes just flat out doing nothing or crashing after a few stutters.

## **Q) Can you tell us about your pre-Ocean programming exploits?**

My ZX81 period didn't last too long though - just long enough to figure out basic and start to look at the Z80 - and by Xmas of that year I'd already graduated to a Dragon 32 (thanks mum). I learned to program in assembly language on the Dragon 32 which used the 6809 processor. Wrote a pretty awful game on the Dragon called Jumbo's Troubles (a poor clone of Namco's Mappy) and the following Xmas I was upgraded (thanks mum) to an Amstrad CPC 464. After figuring out 6809 it was fairly easy to move to Z80. I started work on a rip-off of *Sorcery* (by Virgin) called *The Apprentice*. It was published by Mastertronic.

Around about that time I was trying to figure out what to do with myself - I'd finished school and had to either go get a job or go to college full time (I was doing some part time college at the time). I saw Ocean had a job ad in one of the magazines at the time and called up. Spoke to Gary - told him that I could program Amstrad and he didn't really seem that excited until I mentioned that I could also code the 6809 processor. As luck would have it they had a need for someone to work on the Thomson M05/T07-70 and T09 so off I went down to Manchester to meet and said yes to the first amount Gary offered (2500 GBP - which at the time was a small fortune to me) to port *Green Beret* to the M05. Eventually to the T07-70 and T09 too.

## **Q) How did the position at Ocean Software come about?**

I went on to do conversions of *Arkanoid*, *Yie Ar Kung Fu II* and *Game Over* Parts 1 & 2 for the Thomson machines. I also had a nice trip to Paris out of that work visiting the FIL offices there. All of this work was freelance and I went to work (although still in a freelance capacity) in-house on *Combat School* for the Amstrad.

**Q) Was *Combat School* (1987) the first Ocean game that you worked on? I see that you are credited along with Mike Lamb on that one. How did this arrangement work out?**

*Combat School* - first internal job at Ocean although I was still freelancing. Art was by Ronnie Fowles - a man of few words. I was really up against it on that one and Mike Lamb (who did spectrum version) helped out with the final mission. His contribution was a timely lesson in how much I still had to learn.

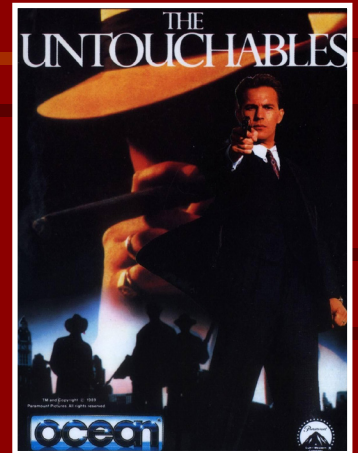
**Q) The following year, 1988, seemed to be a massively busy year, working on *Arkanoid Revenge Of Doh*, Daley Thompson's *Olympic Challenge*, *Dragon Ninja* and *The Vindicator*. Can you tell us about working on these games?**

*Arkanoid 2* - my first project as an employee. I started work on this with the very talented Ivan Horn. He'd actually done most of the art/screen layout before I started as I believe Mike (Lamb) was originally going to do it. Not sure why that happened. I might be mixing up this game with another but I vaguely remember it being sent off for duplication and being called back because of some problems. I think I even had a trip to the duplicators to test it as it was coming off the line.

*DTOC* - That was a troubled project. I think I was asked to step in and help with it. The original programmer was doing the spectrum version (maybe Amstrad too - kinda hazy on that) and just didn't seem to be getting it done. I think it was his first time away from home and on his first day in Manchester his flat was broken into. Probably never really settled. Anyway - art was by Bill Harbison who did a nice job.

*The Vindicator* - a fairly troubled project. I think my version went about the smoothest. Or at least I had the least number of run-ins with Simon. Martin again on art if I recall correctly. Main memory of this one was the "3D" maze section. I'd written some code that used a simple map to generate each view programmatically but the C64 programmer had Simon laying out a character mapped screen for each step in the corridor and for each viewpoint. A painful process. With the benefit of hindsight I think he might have been inflicting a cruel and unusual punishment on Simon :) Anyway long story short - my solution was made to work on the other platforms too. A rare example of code/algorithm sharing. In those days we all - bizarrely - kept our code as private as possible. Makes no sense these days but at the time - there was very little sharing.

**Q) *Dragon Ninja* featured some smooth scrolling, which the**



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**Amstrad was accused of not being able to do. How did you get around the non-existence of hardware scrolling on the CPC?**

I don't think the scrolling was especially smooth to be honest. Basically - made the screen small enough and drew just enough to keep the framerate acceptable. Nothing special there at all. I think I had some cheesy BIG sprite code in there that faked huge objects moving around on Map Tile boundaries.

**Q) Out of all the arcade conversions you worked on, did you ever get to play the arcade games themselves before or during development?**

Yes we played them all. We had an "Arcade Alley" that had all of the coin-ops on free play.

**Q) *The Untouchables* appeared in 1989 to good response. Can you tell us about the game's development, from conception to development and release?**

*The Untouchables* - Again working with Martin MacDonald. He was much more at home with a monochromatic palette so 4 colour mode it was. My main memory of this was that it seemed to take forever - felt like it took a whole year but maybe not. Spent most of that time worried it was taking too long and we'd all be fired. There wasn't a lot of communication in those days about production. It really was incredibly ad-hoc.

**Q) When it came to working on *The Untouchables* and *Navy SEALs*, were you given any source material to work from at all, see any script or even the films beforehand?**

We got to read the movie script and I believe we had some on-set



photos for art reference.

**Q) I recall hearing that the *Navy SEALs* cartridges were initially manufactured in the wrong size plastic casing. Is that correct?**

This is partially true but not in the case of the GX 4000. The C64 carts were designed wrong and didn't fit into the slot on the C64. These were all notched to fit at the Central Street offices and re-packaged.

**Q) The main things that I recall about *Navy SEALs* - and is still true today - is the incredibly tough difficulty. Why did the game turn out to be so difficult?**

We were lousy at play-balancing. Basically we'd all gotten so good at playing it was hard to balance for a new user.

**Q) The Amstrad Plus/GX4000 cartridge version gained plaudits for its 16-bit style gameplay and visuals, but what other 'Plus' features did *Navy SEALs* exhibit?**

Navy Seals - this was actually for the ZX-Spectrum / Atari ST and Amiga initially. Amstrad were looking to release the GX4000 and I'd been down to attend some of the preliminary HW discussions. I enjoyed working on the GX4000 version as it actually had some decent capabilities (for the time) nice HW sprites; smooth scrolling; large palette. That said it was still a huge challenge scrolling that screen around but managed to pull it off. Martin MacDonald on sprites and Warren Lancashire on Design/Background art.

We pretty much utilized every HW feature it had on offer. HW sprites; Scrolling; Extended screen space; extended palettes. Ran @ 60fps.

#### Amstrad CPC softography

*The Apprentice* (1986)

*Combat School* (1987)

*Arkanoïd: Revenge of Doh* (1988)

*Daley Thompson's Olympic Challenge* (1988)

*The Vindicator* (1988)

*Bad Dudes vs. Dragon Ninja* (1988)

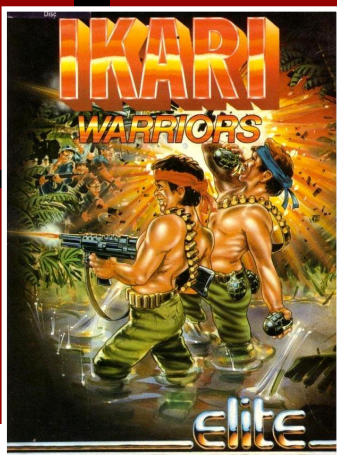
*The Untouchables* (1989)

*Navy SEALs* (1990)

# DAVID SHEA



David Shea was a programmer who had worked on many games for the likes of Elite Systems and Probe Software...



## **Q) How did you get started with computers and when did you decide to start dabbling with programming games?**

It was at school when I was 14-15 - I was into electronics, and it was about the time the first build it yourself computers started coming out. The school eventually got an RML380Z computer that me and a few of my friends started hogging, and learning Basic by writing adventure games. I was at that time spending plenty of time in the local arcades too, and the desire to write games like I saw in the arcades was strong. When I was about 16 I managed to buy a ZX81, and taught myself Z80 assembler.

## **Q) Can you tell us about your earlier work on ZX Spectrum games such as *Frenzy* and *Hijack*?**

Frenzy was a copy of a game I enjoyed playing in the arcades, Bazerk. I wrote it for my own amusement and to improve my assembler skills. I saw an advert by Quicksilver when I was 16, basically it was send us your game and make money. So I did. They liked it, and suggested a heap of changes to avoid copyright problems and bring it up to scratch as a completed game. Once done they published it!

## **Q) Tell us how the opportunity to work on the arcade conversion of *Ikari Warriors* came about? Was this your first time working with the CPC?**

From what I remember, Elite were looking for programmers, so I went up to see them. They had *Ikari Warriors*, and needed it on the Amstrad. I'd only done Spectrum stuff at that point, but told them I could do it - and returned home, on the way buying my first Amstrad CPC and a book about it. So yeah, it was my first CPC experience.

As they'd never used me before, I had to go up and work in their offices - and stay in a most awful B&B (coin operated hot water!) By then I was using a CPM machine to edit and build the game, and squirt it down a serial cable to my Spectrum (this was far in advance of what most people were doing at the time.) It was easy for me to take most of my library code on the Spectrum and get it going on the Amstrad pretty quickly.

The majority of the game came together over about 5 weeks, helped by the fact all I did was work while I was there (there wasn't much else to do.)

I was used to doing graphics as well at that point, and I did get some help from a graphic artist there.

## **Q) How did the development of the game work out, considering that you were producing both code and graphics for the game?**



Think I just answered that ^^

**Q) While you are also credited for the Spectrum version of Ikari, this was not released until 1988. What caused the delay, as there are reports that the game was originally ready to be released in 1986?**

There were several people that had a go doing the Spectrum version - including Dave Perry - but none seemed up to scratch, and were never completed.

I was snowed in at my parents house at Christmas, and tinkered with the Amstrad version - I basically took all the Amstrad code, substituted my Spectrum libraries for the Amstrad ones, and took all the colour graphics and grey-scaled them - and it ran. Pretty basic, but it was enough for Elite to give me the job of finishing it. The thing that worked for me was keeping the scrolling window the same as the Amstrad, rather than trying to make it full screen, which gave me extra cycles to run the rest of the game.

**Q) How was the Spectrum version compared to the CPC? Was there any code sharing or a possibility of the CPC version being ported to the Speccy? (A rare thing as games were usually ported the other way around)**

About 80% of the code was identical between versions.

Most of my work at that time ran on both machines simultaneously, since I'd developed libraries for both machines that handled joysticks/screen etc.

**Q) Victory Road, the follow up to Ikari Warriors, was released soon after. How did this sequel fare to the first game? Did you work on the CPC and ZX versions one after the other or side by side?**

Ocean came to me with *Victory Road* - I went up to see them, Gary Bracy gave me a briefcase containing the arcade board (just plug it into a TV for the full arcade experience), and a cheque. I liked Ocean that day.

The sequel was a painful experience, took a long time - *Victory Road* was technically more advanced, with many more gameplay elements, and I had trouble reproducing many of them. I was also at uni by now, and so ended up not devoting all my time to the game, and missed milestones. I'm not sure the game even got a full release (I never got retail versions.) - I remember not getting paid the full amount for that project.

[...]

#### Amstrad CPC softography

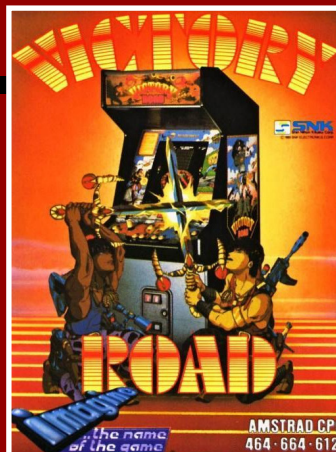
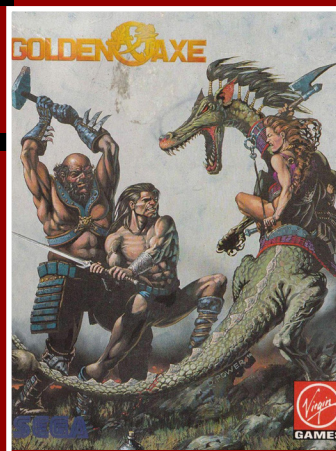
*Hijack* (1986)

*Ikari Warriors* (1986)

*Victory Road* (1988)

*Savage* (Sound) (1988)

*Golden Axe* (1990)



# GRAHAM BLIGHE



Graham Blighe was a programmer who worked on many computer systems and games. Arguably, his biggest success came with *Emlyn Hughes International Soccer*

## Q) [...]

I wrote the arcade section of all versions of *EHIS*, *European Champions*, *Wembley International Soccer*, *Lothar Matthaeus*. Michael Maclean and then later, Terry Wiley wrote the menu screen sections. Graphics (designs of sprites, advertising hoardings, pitches etc) were initially done by Andrew Calver (Peter Calver's brother) and later by Herman Serrano.

The only version I didn't work on was a PC version of I think (? could be wrong here) *European Champions* which I've never seen so I don't know how it plays.

## Q) Where did the idea of Audiogenic developing a football game come from and how much of an influence was *International Soccer* from Commodore?

I'd developed a 1541 (C64 disk drive) speed up utility which I sent to Supersoft (aka Audiogenic) for evaluation. They (Peter Calver and Pearl Wellard, the directors of Supersoft/Audiogenic) liked it and published it as "Turbo Disk".

They then gave me work doing the Amstrad PCW and CPC conversions of *Graham Gooch's Test Cricket* and BBC version of *Instant Recall*.

Peter Calver had been keen to create a football game for some time and asked me to do it. We looked at *International Soccer* from Commodore as an example of what was the best football game at the time (this was in summer 1986 I think but not sure). I've no idea how *International Soccer* worked, didn't disassemble it or anything. I just set about writing a football game.

All the new AI and physics ideas came from me and a lot of the football ideas (eg backheels, sliding tackles) came from Peter. I think Jeremy Wellard (Pearl's son, later to found HB Studios, Nova Scotia) was doing play testing then and may have suggested ideas as well.

*International Soccer* wasn't much of an influence except to demonstrate that you could have a smooth scrolling side-on view of a football pitch. We stuck with the side-on view because it's how you watch football on TV and seemed most natural. In much later versions (Atari and Amiga) we added an overhead view to hopefully please players who preferred the overhead view.

## Q) Considering that Emlyn Hughes had been retired for some time, why was he chosen as the figurehead of the game?

This was Peter's call. I'm not certain but I think Emlyn was chosen because he had retired and was thus neutral and we wouldn't be perceived as favouring one team over another. He was also a popular

TV personality at the time. Looking back on it, I think he was a very good choice. He came across as a genuinely nice chap.

**Q) Was there any reason why international teams were chosen over club teams for the game?**

I don't know the answer to this I'm afraid.

**Q) Can you tell us how the development of the original Commodore 64 version went? Were there any problems or things that had to be cut from the game?**

It went pretty smoothly considering the tiny budget and limited equipment. I used two C64s - one to assemble the source code (using a Mikro assembler cartridge) which was then ported over to the second C64 to run the code. The C64 that assembled the source code could only hold a small part of the source at one time, so the complete program had to be linked together via jumpblocks that all sections of source code knew about. All data was saved onto 1541 disks. It was only after the original C64 version had been released that I got a PDS system (Programmer Development System?) where all code was assembled on a PC and sent to a target home computer in one chunk.

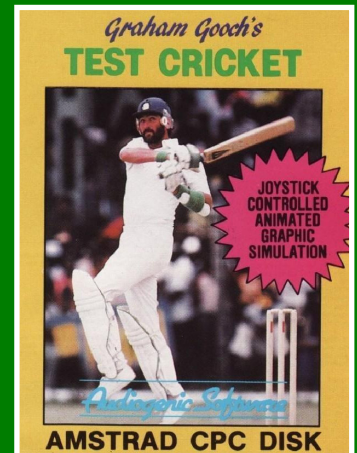
I worked from home in Southampton. Audiogenic were in Harrow, London. Communication was by letter and phone. I sent code updates to Audiogenic as disks sent in the post.

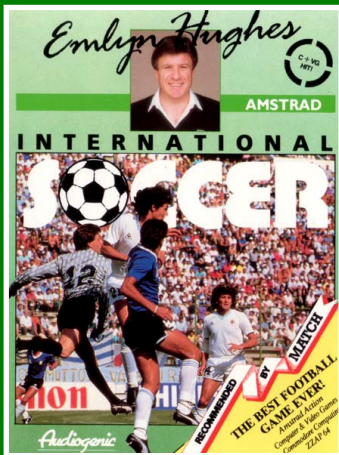
Execution time was a problem on any home computer displaying animated graphics. The C64 was way ahead of all the other 8-bits because of the video hardware and hardware sprites. There were 8 hardware sprites, hence you only see a maximum of 7 players on screen at any one time. The eighth sprite is the football. As the pitch scrolls sideways, players can be deemed to be out of their area of the pitch and as soon as they go offscreen, they are replaced by a new player just offscreen in the about to be revealed section of pitch.

The max seven players on screen limit was carried over to Spectrum, CPC and early 16 bit because it saved a lot of execution time on those machines.

There were lots of features that it just wasn't possible to include because of the hardware limitations.

**Q) *Emlyn Hughes International Soccer* was released on the Commodore 64 late in 1988 to fantastic scores and accolades from magazines such as *C+VG*, *Commodore User* and *Zzap!64*. So it seems strange that no one was willing to convert the game to the other popular computers at the time. Why do you think that was?**





Audiogenic tried to get programmers to write Spectrum and Atari ST versions while I was developing the game. I supplied them with the code and diagrams of how it all worked. The programmers didn't deliver and so I wrote all the versions and that's why the versions came out one after the other.

**Q) So you worked on the Spectrum version next, a different computer to the Commodore 64. What was the development experience like with this version?**

The video hardware and lack of hardware sprites limited the Spectrum and CPC versions to an update rate of 25Hz whereas the C64 ran at 50Hz and was silky smooth and judder free. Sound hardware was non-existent on the Spectrum which limited what I could do sound effects wise.

**Q) The Amstrad CPC shares many hardware features with the Spectrum, so did this help while working on the CPC version? Both games seem quite similar in gameplay and design.**

The CPC version was very similar to the Spectrum. But because the CPC had better video hardware, we were able to put some colour back into the graphics. The CPC also had a sound chip which allowed better sound effects.

**Q) There are some minor cosmetic differences in the Amstrad CPC version compared to the original Commodore 64: no option of different colour football kits, no advertisement boards, human player highlighted by an arrow over head, no music on menu screens. Was there any particular reason for these changes from the original?**

In the C64 version, the crowd and advertising hoardings scrolled with the pitch. This didn't put much demand on the processor as the C64 used a one byte character code for each 8x8 pixels on screen. The Spectrum and CPC had the screen as a bitmapped section of memory. So eight times the amount of data had to be shifted to display a different section of the pitch and there just wasn't the execution time for the crowd and hoardings.

On CPC, all of the four colours were already taken for must haves - green grass, black and white football, pink skin colour. So there wasn't a colour left over for kit colour. But we did have plain and striped shirts to tell the two teams currently on pitch apart.

There were only two colours available for the players on the Spectrum and four on the CPC, so we couldn't display the currently controlled player in a different shade of his team's kit colour as on the

C64. Thus the arrow above his head instead.

I don't know why there wasn't music on CPC menu screens.

**Q) Did you get to play any of the games at all. If so, what did you think of the finished game and the varying conversions?**

I got to play all the versions continually as I wrote them so as to test things out. It got so bad that going into a pub showing a football match on TV my initial reaction was "hey who's playing *EHIS*?".

On the later 16 bit machines, there was so much more computing power that we could have all the players on screen and penalty shootouts. Plus a referee (albeit not on pitch but making an appearance to book a player). The players were much better resolution with more kit styles and colours. I was able to add more features - I was particularly proud of the action replay which worked just like a VCR and you could advance one frame at a time to see exactly what happened. You could save the replay to disk and view it in overhead or side view.

I was also able to do more with the sound effects including proper 3D type sound when headphone mode was chosen. The crowd song chants were taken from TV matches I taped. It's me adding to the boos when a player is sent off. And the air horn is one I used to use on a motorcycle.

**Q) All the 8-bit versions received great reviews and the game did well in the charts. What was this like to see each additional game perform so well in the magazines and charts?**

The good reviews were much appreciated. But my impression at the time was that reviews were mixed, with *EHIS* being slammed by some for what seemed like silly reasons or no reason at all. I got the impression some reviewers hadn't spent much time playing it. Looking back, I think this was inevitable - the first football game you play, you spend a lot of time mastering it and then you don't really want to spend all that time again on another game maybe? This was disheartening for me and Audiogenic. It was only after I quit games programming in 2001 that I found fans of *EHIS* on the internet. It was great to find that a lot of people did actually like what I'd done.

**Q) Is *European Champions* a spiritual successor to *EHIS*? There certainly seems to be some familiar gameplay elements in there.**

Yes, *European Champions* is a direct evolution of *EHIS* with the same team having worked on it.

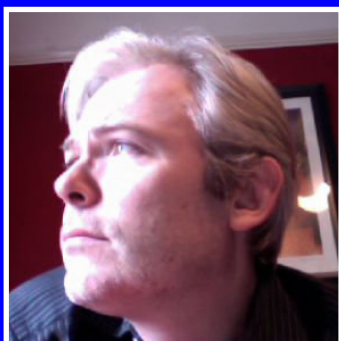
**Amstrad CPC softography**

*Graham Gooch's Test Cricket*  
(1985)

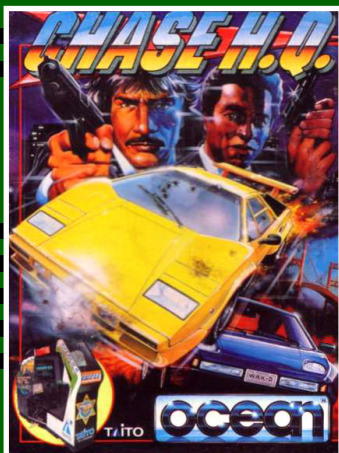
*Emlyn Hughes International Soccer* (1989)



# BILL HARBISON



Bill Harbison worked as a graphic artist for Ocean Software during the late 1980s and early 1990s, working on some of the finest looking games produced there



**Q) Can you tell us about the time when did you first learned that you were going to be working on both the Spectrum and Amstrad CPC home conversions of *Chase H.Q.*?**

*Chase HQ* came about after my work on *WEC Le Mans*. I had drawn the graphics for the ZX Spectrum version and the game engine was created by Sentient Software and Ocean's Mike Lamb. After the game was completed Jon O'Brien was playing with the engine and making it run faster and more efficiently. We were then informed that we'd be working on this arcade conversion for the Spectrum and Amstrad. It was expected that if you worked on a Spectrum game that you would do the Amstrad version too as the conversion process for code was fairly easy.

**Q) Is it true that Ocean had many arcade cabinets? Was there a *Chase H.Q.* cabinet available while creating the graphics?**

They had the arcade circuit boards linked up to monitors and joysticks but not the whole cabinet, that was until *Chase HQ* was delivered to the office. It was the sit in cabinet and it was massive and massively popular in the office.

**Q) I seem to recall slight enhancements in *Chase H.Q.* with a 128k Amstrad, including digitised voice and levels being loaded in one go. Were there any other features that were omitted from the original game, but saved for the 128k version, or was there anything dropped all together?**

Digitised speech was something we wouldn't even think about putting into a 48k version because of the size of the samples. With the left over memory we had we could easily incorporate them into the game. As for other features I think everything is much the same.

**Q) Hey, is that the Spectrum loading screen used for the Amstrad version? 8-bit computer games are well known for their loading screens. Did you have any of the game's artwork to refer to when doing these?**

Yes. I can't remember but I probably just added a bit more colour to it. When doing loading screens we might have had a photocopy of the cover artwork but I don't remember having anything like that. I think I just made it up from various other images.

**Q) Presumably, the Spectrum version of *Chase H.Q.* was completed first with the code used for the Amstrad version. Can you tell us about your time working on the Amstrad CPC version? What software did you use and were there any**



**problems encountered?**

I think the sprites were created with the Ocean in-house sprite editor on the Atari ST. The only problem I had with the graphics creation was I wasn't used to the double pixel width of the Amstrad. I had only done one other Amstrad game and one Commodore 64 game which used the same graphic restriction so it took a while to get used to it.

**Q) Apart from the colour palette, is there any other major difference between the Spectrum and Amstrad versions?**

No, not really.

**Q) Both the Spectrum and Amstrad versions of the game received praise from gaming magazine around the world. Did you ever check out any of the magazines at the time to see how your games fared?**

Are you kidding? We checked all the magazines and read all the reviews. Ocean was quite a competitive place to work so if your scores were lower than other peoples' there would be a bit of good-natured banter. Also if a magazine scored your game low if maybe it didn't deserve it the others would be very supportive.

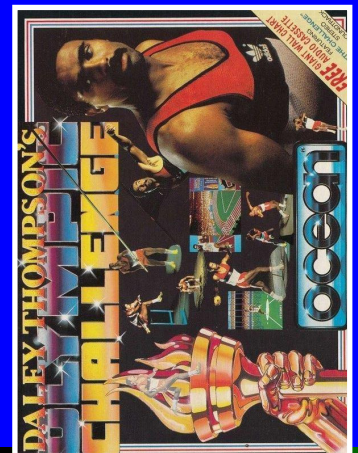
**Q) Can you tell us about your pre-Ocean artwork exploits? When did you first get interested in computing and what was the first computer you owned?**

The first time I saw a home computer in action was in a science class at secondary school. I watched as the teacher produced a flat slab of black plastic and plug it into the TV. He typed a few lines onto the screen and by pressing 'run' created a kaleidoscope of moving shapes on the screen. In reality it was a ZX 81 running a simple mandelbrot generator but it was a life changing experience and I had to have one of those machines.

**Q) How did the graphics designer position at Ocean Software come about?**

I didn't know that there were any job positions available, I was sending my work to various software houses and getting declined from almost every one. I decided to send my work to Ocean still expecting to be rejected. It took about a year of waiting and a second letter to check if they were still interested for Ocean to contact me and invite me to an interview.

**Q) Chase H.Q.'s sequel, SCI, was meant to be released on Amstrad's GX4000 gaming console. The game was reviewed**



in a couple of French gaming magazines, *Amstrad Cent Pour Cent* and *Joystick*, but it did not seem to get a proper release. I think you were working on the fabulous Amiga version of *Batman*, but do you recall much about what happened with the *GX4000* game?

No I didn't know anything about it. Even though I was working on a massive Amiga title I was still disappointed that I couldn't work on the sequel.

**Q) The Amstrad version of *Chase H.Q.* does feature a rather square framing. Was this due to the resolution mode used to maximise the speed of the game?**

Yes it was exactly that. That's why most games had 'status panel' as we called them then. Today they'd be called UI.

**Q) Despite having worked on the one Amstrad game, your name is well known within the CPC community, which is testament to the legacy of your work. What did you think of the Amstrad computers and would you have liked to have worked on more CPC games?**

Back then I was judging the machine on what it looked like. It was an ugly looking beast with it's cheap looking keyboard and monitor, it

looked like the old computers we used at the high school 'computer club'. I also had previously owned an Amstrad Hi-Fi system which was a disappointing and low quality purchase, so I thought if Lord Sugar (as he's now known) made his computers to the same low standards then I would be avoiding them like the plague. As it turns out the machine was quite powerful with much more colourful graphics than either the Commodore 64 or Spectrum but by the time I found this out I had already upgraded to an Atari ST.

**Q) What was the reason for outsourcing the Commodore 64 version of *Chase H.Q.* to Teque Software?**

Probably because every member of staff was working on something or other plus *Batman The Movie* on Atari ST and Amiga had swallowed up nearly three teams that would normally be working on a project each.

**Q) Whose job was it to write up the instruction manual for the game?**

In the old days the manuals were written by the programmers but later when the home-grown industry became more of a business and the 'suits' got involved they were written 'upstairs' with all other marketing material.

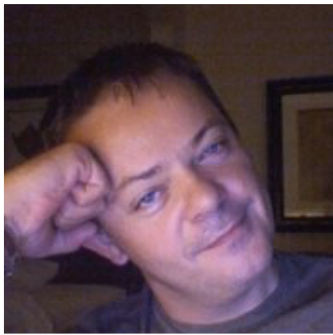
**Amstrad CPC Softology**

*Daley Thompson's Olympic*

*Challenge* (1988)

*Chase H.Q.* (1989)

# BRICE RIVE



Brice Rive was a programmer who worked on Amstrad games such as *E.X.I.T.* and *Defender of the Crown*

## Q) Can you tell us a little about your early computer interests?

I have always been a tinkerer starting with mechanics and then electronics and grew very interested when personal computers started appearing.

However, being very young at the time I could not afford any of them until Sinclair's ZX81 showed up.

I purchased one as soon as I could gather the money and started playing with it first in Basic, then mostly in Z80 assembly.

I did a bunch of hardware modifications on it both to expand its capabilities and to learn more.

At some point I developed a game using software hi-resolution and decided it was very cool and I should try to edit it.

I met with Philippe Ulrich at Ere Informatique, which was one of the main game publishers in France in those days and got an agreement with them.

The game name was *Surfix*. I am probably the only person who still has a copy of it as it sold very little, the ZX81 game market being at its last moments at the time.

## Q) How did the partnership with graphic artist Laurent Boucher come about.

We met in our engineering school (ESIEA in Paris), in 1983. We became, then, friends and still are.

Philippe Ulrich wanted me to look at developing on the Amstrad since it is a Z80 machine and the market was strongly moving to it in France. He showed me some pre-versions of two very nice games (*Crafton et Xunk* and *Eden Blues*) and I thought it was a great idea.

However, games had started requiring a lot of graphics work and I could not do that. I thought that Laurent, who had always been a very good artist might be interested. He also was very technical, which was required of graphicsists in those days of 64Kb machines.

## Q) You entered the Amstrad CPC market with *E.X.I.T.* with publisher Ubi Soft. Tell us about how this deal worked out?

Well, although I had started with Ere, they rubbed me in the wrong way with the low sales of *Surfix* (asking me to pay for unsold copies) so I was not too happy to keep working with them. Laurent, on the other side was childhood friends with the Guillemot brothers (founders of Ubi soft) so he introduced me to them and we got along very well. Our main interlocutor was Yves and he was very straight in business.

Of course, we were young students, with very little money and a real thirst to create and be published so we did not know how to make real money, but still, it was pretty fair.

## Q) *E.X.I.T.* was released in France only, so we had no

**information on the game at the time. Can you tell us about the game and what it is all about?**

Basically, the game is a graphic adventure where you find yourself stranded on a strange planet and must find your way out.

There are a few specificities about it: No text input - you interact with the world through your hand (very nice and animated). Beautiful colorful graphics. Total freedom - you can explore the whole place and puzzles are not localized. Hard - no help or clues, you must figure it out by yourself.

Now, on the bad side, we tried to put too much stuff in there and it ending being too messy, complicated and boring :-)

We put a lot of effort in making clues very subliminal, having a ton of symbolism behind everything, hoping that, if players immersed themselves into the game, they would get the solutions. We went too far but we had fun :-)

**Q) *Defender of the Crown* was - and still is - remembered as a 16-bit, so who decided that a CPC version should be developed?**

Yves (Guillemot) bought the rights from Cinemaware. Since the CPC market was strong in France, he asked us if it could be done.

This was a real challenge, both in terms of graphics and programming, and the game had a very strong aura at that time so we decided it would be a great experience and went for it.

**Q) Did you have any of the source material of the original game to work from?**

We had very little as Cinemaware was not available to help. Ubi gave us a few helpful things, though:

A hacker (Tsuno) had extracted the graphics from the ST version, and Laurent used them as a starting point for his work.

There were a couple of documents that Yves had, which helped me greatly:

- A copy of an article from *Computer Gaming World* ("Inside Defender of the Crown") describing the strategy of the game.

- Some notes from somebody at Cinemaware, apparently from the "testing staff", describing a few of the game dynamics.

I still have a copy of these.

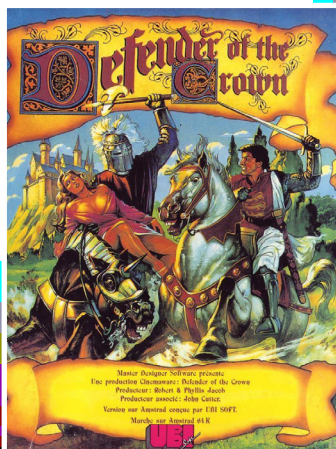
Laurent and I played the ST version of *DOTC* a lot of game to figure out the missing details.

**Q) The development for *Defender of the Crown* seems relatively short for a huge game. Just how long did it take to complete work on the game?**

Sorry, I don't recall exactly how long it took, I'd say somewhere around 6 months. We worked like crazy. Laurent had a ton of work adjusting pixels by hand on all the screens and sprites. I coded tons of







tools and the game itself. All this is assembler, which as you know is not the fastest language to write into.

**Q) How did the development of the game go? Were there any problems encountered or any features dropped to fit onto 8-bit CPC?**

We did not drop anything from the ST version. There are some differences (like the joust where we show a moving target instead of the lance) but it should be very close.

The ST version itself had some differences from the Amiga version, but I did not know that at the time. In my mind, a port ought to do all that the original does.

In terms of programming I wanted the whole game to fit on a single disk so I created a custom file system that could only be written with a small hardware modification of the CPC. That doubled as a copy protection.

**Q) There seems to be a unfortunate event in the game, where it is virtually impossible to marry the princess. Can you clarify what this is all about?**

Well, it is possible but you would have to play a LOT at it ended up being far too unlikely:

At every turn of a Normand Lord, he will look for a territory to attack, if he cannot find one, for example because he is surrounded by friends, he will look to organize a joust.

In some cases he cannot do that either, so he will pick one of the Saxon lords at random and, provided that that lord is still alive and has at least 10 gold, he will attempt a raid.

That raid will succeed or fail according to this formula:

$(\text{SwordStrength}(\text{defender}) - \text{SwordStrength}(\text{attacker}) + 10) < \text{random}(20)$

If the raid succeeds, and the defending lord is married, then there is a chance in 3 that the lady is kidnapped.

In that case, the player is presented with a choice to go and raid the attacking lord's castle and free the lady.

As stated above, possible but too unlikely :-)

**Q) The reception from computer magazines, *Amstrad Cent Pour Cent* and *Tilt*, was very good. How did you feel about the CPC game and how it turned out?**

We were very proud of our work and were happy that it got good critics. On the other hand, we did not have any financial interest in its success since we were just paid a fixed amount to do the port. So we did not pay much attention to its commercial results.



## Amstrad CPC softography

E.X.I.T. (1988)

Defender of the Crown (1989)

**Q) Despite the success of the Amiga and ST versions, there was no English language release for the CPC. Why do you think that was?**

I would think that the Amstrad market was already too small in England at that time. I don't really know.

It would have been very easy to do, though.

**Q) Both *E.X.I.T.* and *Defender of the Crown* were written in 1989 and then you left the CPC scene. Why did you decide to stop working on CPC games and what did you work on next?**

*E.X.I.T.* was written in 1987 and came out in 1988; *Defender...* was written in 1988 and came out in 1989

After that, I still did a few copy protections for UBI Soft and, then started a real job. Most game programmers in those days could not live off of their work.

I am now a software engineer and I specialize in explosive detection systems for airport security; lots of image processing and machine learning.

**Q) You have also written an Amstrad CPC emulator. Can you tell us about it and how it came to be?**

It's name is CPC++, because it is fully written in C++. It is free and it runs on OSX and Windows at the moment.

I have the project to release it as open source when I find some free time.

I originally got the idea for it back in 1994.

At that time I was programming on a Sparcstation for my day job and I realized that it had enough power to create a software version of the whole CPC that would be able to run CPC software. Of course, that's called an emulator, but I did not know that at that time.

I started coding the whole thing and could get to a boot screen pretty fast; it felt like I was close to done.

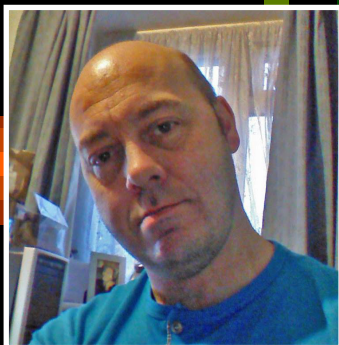
However, when I started testing more and more programs, I realized that there was a lot of devils in the details.

Since all CPC's are extremely similar, programmers made use of incredible amounts of special, mostly undocumented, features of the hardware to push the limits of what could be done.

To support that, the emulation needs to be extremely precise and it becomes very difficult. I put a lot of effort into improving that through the years since then.

Even today, I don't think any existing CPC emulator can claim 100% accuracy.

# ROB BUCKLEY



Rob Buckley was a programmer, artist and founder of Radical Software which helped keep the Amstrad CPC alive during its latter years

## **Q) Tell us how you got into the Amstrad CPC computers?**

It started when I got a ZX81 in 1982, and shortly after I progressed onto a Spectrum 48k. However without being rude and a cool as the spectrum was it was always a little toyish and i wanted what looked like a serious computer. My first choice was actually then Elan Enterprise as it looked so nice, but it never came out. The CPC with it primary coloured keys looks really similar, which is why I think I went for it around the end of '84.

To be honest there was little choice if you wanted a real computer at that time other than the BBC or CPC, and the BBC was a little clunky.

## **Q) Where did the idea to start Radical Software - a publishing company - come from?**

I was made redundant from the architectural firm I worked for in around 92/93, so I was looking for what to do next. I had a bit of redundancy money in my pocket and I made the decision that I'd like to be my own boss. One of my joys and debatable talents was coding so Radical was born. At the time the amount of CPC software coming out was dwindling fast and I thought quite strongly that someone needed to step in to provide games.

## **Q) Ball Bearing was a great game, but was unfairly criticised in Amstrad Action. What was the story behind the game and AA's critical review?**

Im not sure it was unfairly criticised given time to look back. I can see why it was, and I think the admission that it was an idea based on a PD game called *Croco Magneto* did it no favours. I did of course take that game and add the obvious scrolling, and lots more colour and graphics. It wasnt a bad game and not as good as it could have been. I've revisited the idea since on the PC too.

Its difficult to say if there was a reason behind the not so glowing review, but I would say that I wasnt exactly liked by the AA staff writer Simon. Im sure there are reasons and I was probably too pushy and thinking everything I did amazing. I also wrote the art package Smart+ and the review for that was I've always thought was amazingly dull. They clearly didnt use the package (you can tell from the images they used) and its not as if they were snowed under with reviews. There were probably three or four new bit of software coming out a month at that time.

I think its fair to say that AA had a hard job though

## **Q) Your next game was more ambitious with the development of Fluff. Where did the idea for Fluff come from?**

Fluff is a very standard platform game really. Its stand out feature was that it was for the plus machines. I at the time thought that a lot of CPC software was either geared towards pushing the hardware or demo effect, at the detriment of gameplay. That was my main aim

**Q) Why was *Fluff* developed for Plus machines only? What features does the game have that could not be done on a normal CPC?**

Well it certainly wasn't for financial reasons. I really did believe at the time though we needed to explore areas we hadn't and the plus was effectively an under developed area. It with hardware scrolling and sprites really allowed super smooth gameplay and that allows for a lot of balance in control. Games are all about control and at that time there were very few games that I felt had that nuance where you thought the character was an extension of your control. Its difficult when you have slower speeds and byte movements with software sprites. When you're spending ninety percent of your time shifting the screen about the control gets lost. That was what *Fluff* tried to do, but I don't actually think it succeeded.

**Q) *Amstrad Action* seemed very keen for the game and featured on the front cover with a preview inside. What was the story behind this and did this attention put any added pressure on you to complete the game sooner?**

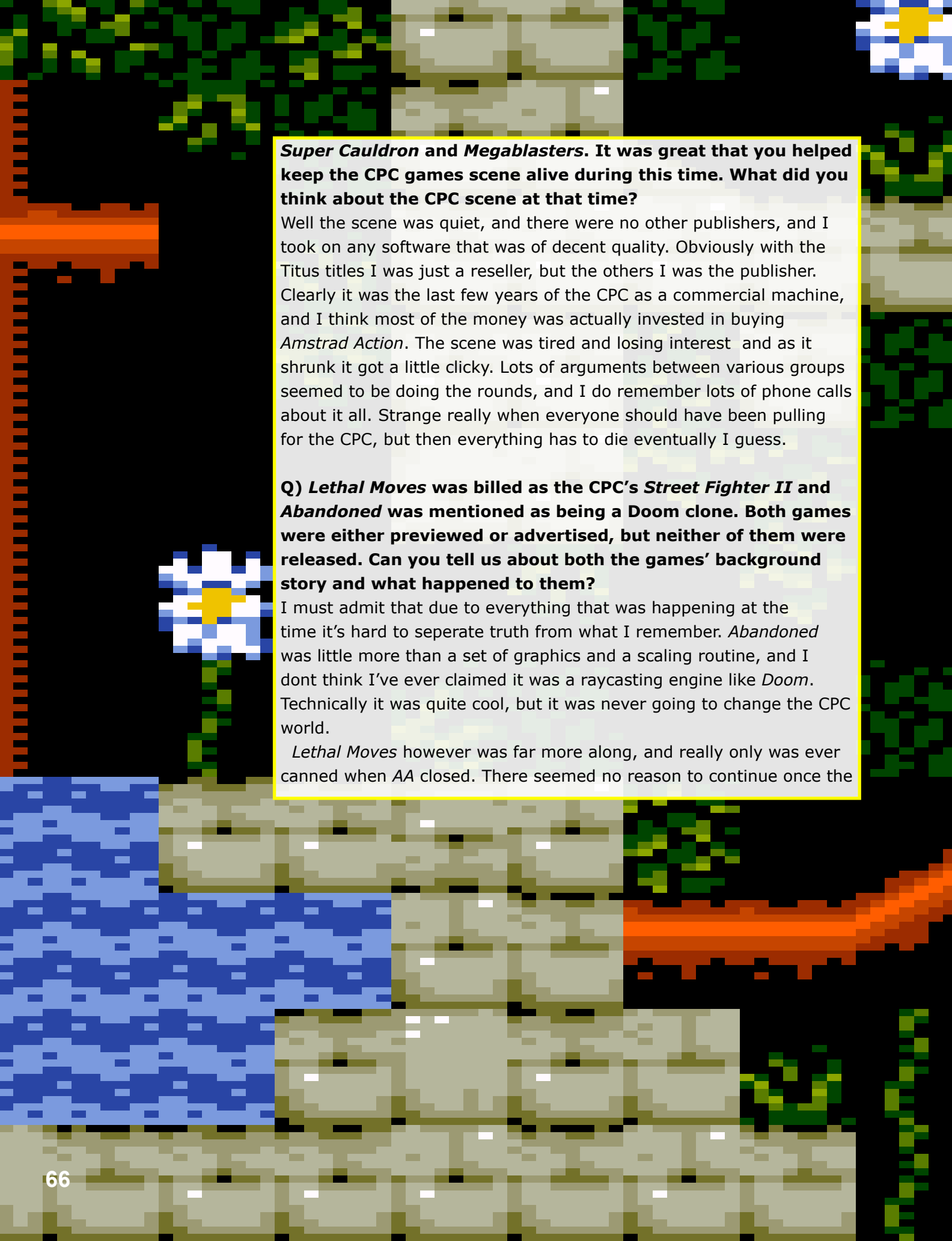
At that time AA was it for the amstrad. The other magazines had gone, we had no internet so if you didn't get great publicity in *Amstrad Action* you might as well not bother. I believe Dave Golder had the idea to put *Fluff* on the cover, and I was told this several weeks before it went to press. *Fluff* wasn't ready at that time at all, but they wanted something so the day before the final copy went for printing I got the train down to Bath with a hobbled together version, and they then wrote a preview that day. It wasn't the best way to do it. The next month had the full review and it was 99% new code and graphics, but even so it was a rush job.

It is unfair to blame AA for that though as I was promoting it as almost done, and that was balanced by the adverts I was placing. Adverts in AA were ordered months in advance. What will be ready in two months led to lots of lies about what people could order.

There is the issue that I was spending so much time running and getting order out it was hard to develop the software too.

**Q) I believe you also distributed other developer's games as well as your own, including *Masters of Space*, *Prehistorik II*,**





***Super Cauldron and Megablasters.* It was great that you helped keep the CPC games scene alive during this time. What did you think about the CPC scene at that time?**

Well the scene was quiet, and there were no other publishers, and I took on any software that was of decent quality. Obviously with the Titus titles I was just a reseller, but the others I was the publisher. Clearly it was the last few years of the CPC as a commercial machine, and I think most of the money was actually invested in buying *Amstrad Action*. The scene was tired and losing interest and as it shrunk it got a little clicky. Lots of arguments between various groups seemed to be doing the rounds, and I do remember lots of phone calls about it all. Strange really when everyone should have been pulling for the CPC, but then everything has to die eventually I guess.

**Q) *Lethal Moves* was billed as the CPC's *Street Fighter II* and *Abandoned* was mentioned as being a *Doom* clone. Both games were either previewed or advertised, but neither of them were released. Can you tell us about both the games' background story and what happened to them?**

I must admit that due to everything that was happening at the time it's hard to separate truth from what I remember. *Abandoned* was little more than a set of graphics and a scaling routine, and I don't think I've ever claimed it was a raycasting engine like *Doom*. Technically it was quite cool, but it was never going to change the CPC world.

*Lethal Moves* however was far more along, and really only was ever canned when *AA* closed. There seemed no reason to continue once the

final outlet for getting the info out had vanished. It was as I recall a request from Dave Golder to develop it, as he knew that *Street Fighter 2* wasn't going to happen and he believed that a game could pick up a lot of the hype, and they would if it was produced make sure it was presented as a suitable replacement and get a lot of coverage. It at the time seemed like a sensible development, only that it required two or three months more to develop than Amstrad Action had.

As for code or graphics that remain then I fear there is probably none. Definitely nothing of *Abandoned* remains, and all that remains of *Lethal Moves* is a few of the graphics.

**Q) There was mention of a *Fluff 2* fanmade sequel around 1996? Was this released at all, as it seems to have disappeared now?**

Yes, I was at some point sent a game called *Fluff 2*. I might be lying but I'm sure I sent somebody the data structures and mapping tool and they produced 5 or 6 new levels with new graphics. Where it is now I have no idea. I'm sure it's all decayed away.

**Q) You also mentioned a follow up to *Fluff* yourself. What ideas do you have for any possible sequel?**

I would love to go back to *Fluff* one day, and if the Plus machines ever get the cartridge issue sorted I think it would be great to have a sequel and release a limited edition of the original since it never came out on cart. Currently I'm doing a lot of work on the CPC around *Symbos*, and weird as it might seem I hope this will lead to something that will interest CPC gamers.

**Amstrad CPC softology**

*Eve of Shadows* (1991)

*Ball Bearing* (1993)

*Fluff* (1994)



# ELMAR KRIEGER



Elmar Kreiger was best known for his work on *Prehistorik II* and *Super Cauldron* which were released in 1992 and 1993 respectively, helping to keep the Amstrad CPC's failing lifeline alive

## **Q) How did you get into the Amstrad CPC and the demo scene in particular?**

My father bought a CPC 664 because he liked the all-in-one concept with green screen and built-in disk. And I was really lucky: while my class-mates were busy swapping their Commodore 64 cracks, I was somewhat isolated and had the time to get into programming. I found another CPC owner nearby, who showed me the first CPC demos, and I immediately got sucked into assembly language to find out how this hot stuff worked.

## **Q) Did *Zap't'Balls* start off as a conversion of the arcade game *Pang*? Can you tell us about the development and how the game progressed to become a cover tape game on CPC Schneider International?**

I had figured out a programming trick to display many huge ball sprites on the classic CPC (balls were always popular in demos), and since *Pang* was a major title on the new CPC+, a CPC back port was an obvious idea. Unfortunately Ocean Software didn't want one, and I didn't have the heart to bury the idea, so a *Pang*-inspired cover disk game was the ideal solution: get the project done quickly on a small scale.

## **Q) What were the reasons behind developing *Zap't'Balls: The Advanced Edition*?**

Mostly the positive feedback from the CPC scene. That raised my hopes to get into professional video game development, and get paid for the things that were most fun to do...

## **Q) There was a feeling in the CPC scene that *Amstrad Action* rated *Zap't'Balls* harshly with a score slightly lower than was expected. What was your take on this at the time and what do you feel about it now?**

Ratings were important back then, just like demo programming was a competition between testosterone charged youngsters. But overall this didn't matter at all - otherwise I wouldn't have totally forgotten about this story.

## **Q) *Zap't'Balls* got you noticed by Titus. What were the expectations from Titus when you were given the task of developing both *Super Cauldron* and *Prehistorik 2*?**

Titus liked the *Zap't'Balls* sprite engine (I remember Eric Caen looking at the balls jumping around at 50 fps and asking for confirmation that no frame was ever dropped). Since the CPC was nearing the end of its

commercial life-time, they probably figured that not much could go wrong by outsourcing the project. And I fear I forgot to tell them that my sprite engine could only do balls...

**Q) *Super Cauldron* and *Prehistorik 2* had been released on PC the previous year. Was any of the PC version used as source material for the CPC games?**

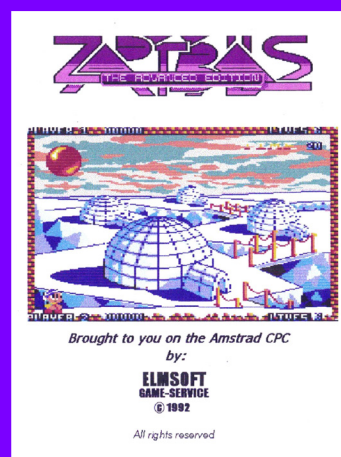
Of course, I played the PC version and got the original artwork, which was done at the usual PC VGA resolution of 320x200 pixels with lots of colors. I sampled this down to CPC Mode 0 (160x200, 16 colors), and tuned it a bit manually. I didn't see the PC source code, but that wouldn't have helped anyway with Z80 assembler on the CPC.

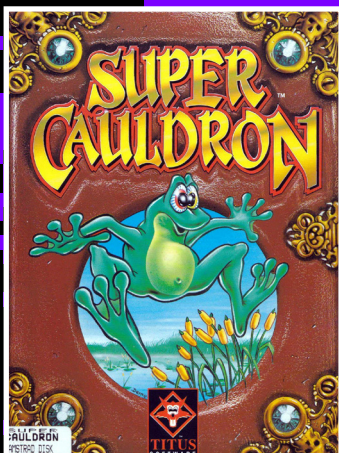
**Q) *Super Cauldron* looks like an enhanced CPC Plus game, but in fact it is a normal Amstrad CPC464 game. Tell us how you managed to produce a 16-bit game (with scrolling) on the 8-bit Amstrad CPC?**

The '16-bit' label is really too much honor (I associate that with endless nights in the *Sonic* universe or on *F-Zero* racing tracks). To scroll the screen smoothly with 50 fps, *Super Cauldron* simply recycled tricks I learned from the CPC demo scene. The CPU was far too slow to scroll the screen by copying data around, instead you had to use hardware scrolling, i.e. change the start address of the video ram in the CRTC (Cathode Ray Tube Controller) chip. This yielded a corresponding shift of the screen content, and was routinely done by CPC Basic (when you pressed Return until the screen scrolled up), and many CPC games like *Ghosts'n'Goblins*. But only the demo tricks allowed to scroll in smaller steps, and split the screen to keep a status panel fixed at the bottom. Actually the largest problem was drawing the software sprites on this constantly moving screen (only the CPC+ had special sprite hardware like the C64). Since the game had to run with 64KB, double buffering was not an option, so it was a difficult fight against flicker (which you can see when many larger sprites overlap).

**Q) The PC had more powerful hardware than the CPC back then, so were there any compromises made during development of *Super Cauldron* due to hardware or memory limitations? We noted that the 64k and 128k versions vary slightly.**

If I recall correctly, the main difficulty was that Titus' disk copy machine could only do single sided copies, this meant 180k of disk space for the whole game. That's why the CPC version had fewer





levels than the PC version - which saved me a lot of work, apologies to all gamers for that. The differences between 64k and 128k were mostly cosmetic.

**Q) *Prehistorik 2* was developed on both CPC and CPC+. What were the reasons behind doing the two versions?**

I had finally gotten my hands on a CPC+, and they were trembling in excitement, so I convinced Titus that we should take this opportunity.

**Q) We presume you worked on the CPC version first and worked on enhancing that for the CPC Plus version?**

Exactly, yes.

**Q) Take us through the development of the CPC Plus version. We notice that the game makes use of the Plus hardware features, including extended color palette, parallax scrolling, DMA music, hardware scrolling, hardware sprites and screen splitting.**

To develop the CPC+ version, I simply started with the normal version and worked my way through the list of new features, thinking about ways to use them. An obvious relief was the new palette of 4096 colors. Having to choose the 16 on-screen colors from just 27 options was a major problem for all classic CPC games (skin never looked like skin, smooth color gradients didn't exist etc.), so the 4096 color palette resulted in an immediately visible facelift.

Next on the list, the heavily missed hardware sprites had finally

arrived, no more jealousy of C64 owners was needed. Changing Prehistorik 2's software sprite engine to use hardware sprites would have been hopelessly complicated, so instead I abused the hardware sprites as a front plane for parallax scrolling. The CPC+ didn't really offer enough sprites for that purpose, I had to clone them by changing the sprite coordinates while the cathode ray drew the screen.

Another great new feature was that interrupts could happen much more often than the 300 times per second (and thus 6x per frame at 50 fps) known from the old CPC. So an interrupt routine could change the background color frequently, yielding a smooth color gradient as the back plane for parallax scrolling. It also became worthwhile to use 'paper art', i.e. change the color of the background (Paper command in BASIC) so quickly, that graphics appeared (used for the mountains in the back plane). Finally, the new DMA music was used by Christian Lier in the intro. I think I also used the simplified hardware scrolling.

**Q) Making the game compatible with normal CPC machines must have meant that there were compromises with the Plus version. Was this the case with *Prehistorik 2*?**

Had the game been developed for the CPC+ only, then I would have intuitively used the hardware sprites for the game characters - and lost the parallax scrolling in return. So keeping the game compatible actually helped the game's looks, but at the cost of responsiveness (when lots of large software sprites overlapped, things slowed down noticeably).

**Amstrad CPC softography**

*Space Taxi* (1986)

*Cyborgs* (1991, unreleased)

*Zap'T'Balls* (1992, PD version)

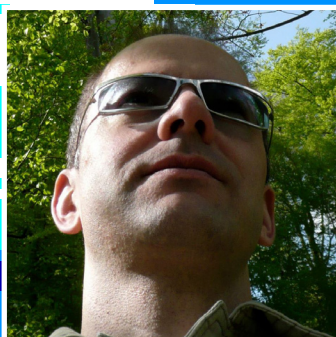
*Zap'T'Balls: The Advanced Edition* (1992)

*Super Cauldron* (1992)

*Prehistorik 2* (1993)



# GEORG ODENTHAL



Georg Odenthal was known as Odiesoft and was the main person behind the last great Amstrad CPC game, *MegaBlasters*

## **Q) How did you get interested in computing and the Amstrad CPC in particular?**

My parents had the foresight to buy my three older siblings and me a computer back in 1984. Their intention was, that we learn how to use a device like that so that we would have an advantage over our peers later in school and on the job market.

So at that time I was twelve years old and still playing with Legos and a toy train in my room. Until then I had been completely ignorant to computers, but that quickly changed.

## **Q) You produced some pretty awesome demos on the Amstrad CPC. Can you guide us through some of your favourites and give a little background on them?**

*The Vector Graphics* demo is special to me, because I had to learn how to calculate 3D graphic correctly and create my own line drawing routine. Since there was no internet at that time, this wasn't that easy. I also am a big fan of the *Space Paranoids* from *Tron* and wanted to create one for this demo. It was a bit slow unfortunately.

*The Wishing Well*, despite being very simple, had a lot of fans at that time. I remember that often other CPC users approached me to tell me, that they spend hours sitting in front of the Wishing Well, inserting or pulling plugs in order to try to make the well overflow (which it couldn't, though). Because it was so popular I created the Wishing Well Construction Kit.

*The Twistscroll* was quite difficult to create because for all the necessary calculations I needed to use each and every register of the CPC. I even abused the stack pointer as an additional 16-bit register for the floating point calculation. Since the stack pointer holds the base address for the system stack, one shouldn't really use it for any other purposes, else the system could crash.

*The Texture Mapping* demo was actually the first ever demo on the CPC using a texture mapping algorithm. I was quite proud to be the first to achieve that, even though the demo makes heavily use of pre-calculations data.

*The Chessboard Zoomer* is a rather simple effect, which I created during a CPC party at the Inicron headquarters. I created this effect in about 3 hours in the middle of the night after having 5 or 6 beers. Three or four other guests were looking over my shoulder all the time often explaining their disbelief that I didn't write a single comment line in my source code.

*The Terminator Scroll*, albeit a rather simple hardware scrolling using the CRTC register 3 trick to fake a byte-wise scrolling (which looks awful on a green screen though) is also one of my favorites. That is



because I always liked the introduction to the first *Terminator* movie and I struggled quite a bit to create a fake alpha-blending effect when the two lines in the foreground faded into black and the huge ODIESOFT letters in the background were gradually shining through.

*The Heat Demo* was one of the first fire-effects on the CPC. It is running with only 25 frames due to the heavy load of calculating a new state for each pixel on the screen for each new frame. But it looked nice and I also added a special version for the Plus which uses more colors and hardware sprites for the match and the sparks.

**Q) Your name in the CPC scene is synonymous with *Megablasters*, but you did actually develop a few other games for the Amstrad CPC. Can you tell us about about them?**

Besides *Megablasters* I had one more release: the tank game "*Last Mission*" was published on the cover disc of the German Amstrad Magazin "*CPC Schneider International*". The *Gauntlet* clone "*The Caves of Horwar*" almost also got published in this magazine as well, unfortunately the magazine was cancelled shortly before it was supposed to be published.

But at least my snow effect was on the final cover disc of the magazine.

**Q) You worked on *Cannon Fodder*, *Gryzor* and *R-Type* clones but did not manage to finish them. How far into the development were the games and was any of the source code saved at all?**

When I was looking for a good idea for a game I tried different things to figure out what the CPC is capable and to hone my programming skills. Most of these unfinished games were rather a technical prototype that wasn't intended to become a full game.

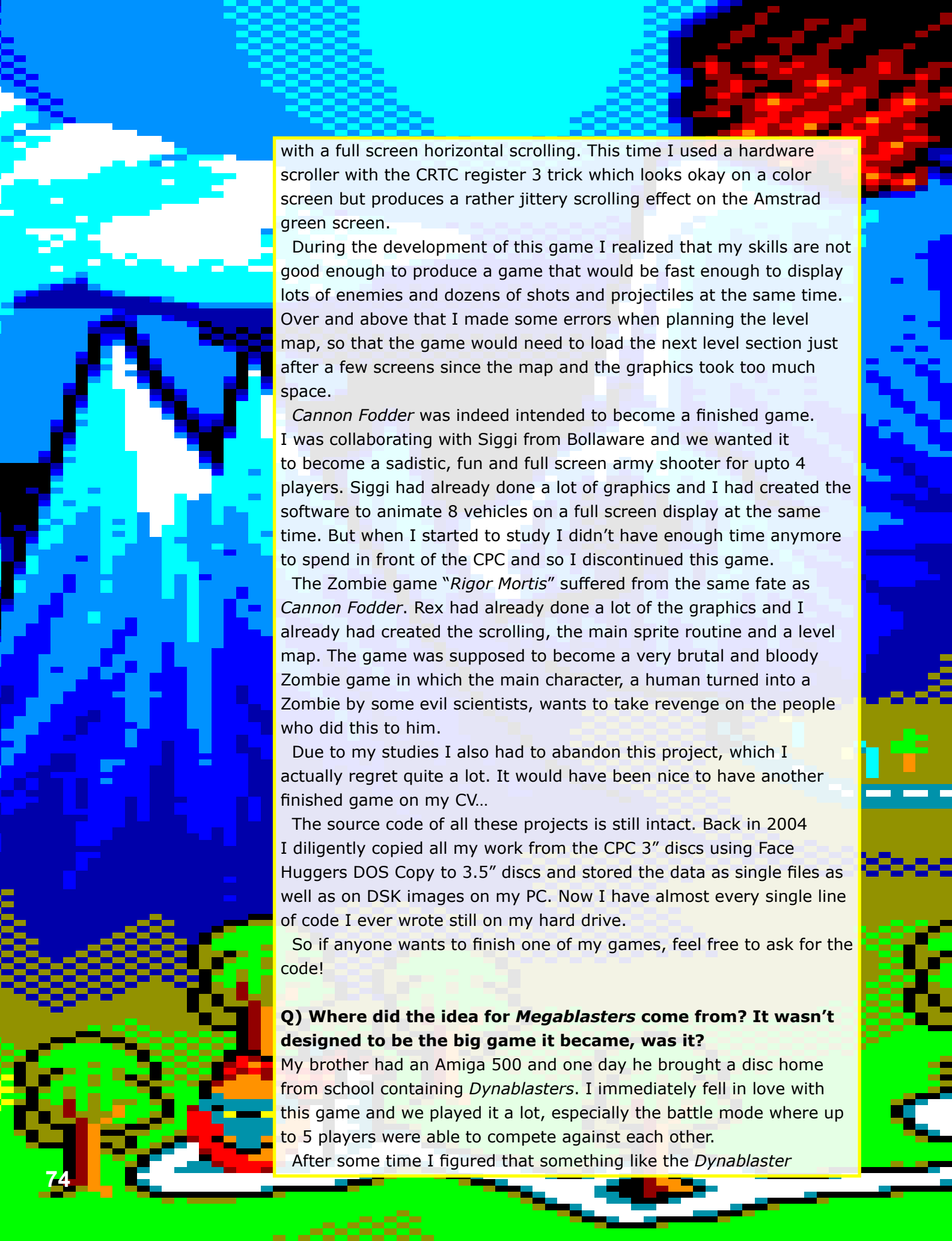
In the *Gryzor* clone I heavily copied the graphical style of *Gryzor* and couldn't have released it anyway else Ocean Software probably would have sued me. Since I didn't like the fact, that the original *Gryzor* didn't have scrolling I tried to figure out whether a *Gryzor* like game would be possible with software scrolling. As expected the CPC was too slow to produce a scrolling that would be good enough for a fast action game as *Gryzor* and thus I abandoned the work on this game demo.

Interestingly, *Face Hugger* also created a *Gryzor* tech demo, but he was mostly focusing on the final boss of the first stage which he copied from the arcade original. Unfortunately, *Face Hugger* also chose to abandon this project before it was finished.

The *R-Type* clone was the continuation of my effort to create a game



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with a full screen horizontal scrolling. This time I used a hardware scroller with the CRTC register 3 trick which looks okay on a color screen but produces a rather jittery scrolling effect on the Amstrad green screen.

During the development of this game I realized that my skills are not good enough to produce a game that would be fast enough to display lots of enemies and dozens of shots and projectiles at the same time. Over and above that I made some errors when planning the level map, so that the game would need to load the next level section just after a few screens since the map and the graphics took too much space.

*Cannon Fodder* was indeed intended to become a finished game. I was collaborating with Siggie from Bollaware and we wanted it to become a sadistic, fun and full screen army shooter for upto 4 players. Siggie had already done a lot of graphics and I had created the software to animate 8 vehicles on a full screen display at the same time. But when I started to study I didn't have enough time anymore to spend in front of the CPC and so I discontinued this game.

The Zombie game "*Rigor Mortis*" suffered from the same fate as *Cannon Fodder*. Rex had already done a lot of the graphics and I already had created the scrolling, the main sprite routine and a level map. The game was supposed to become a very brutal and bloody Zombie game in which the main character, a human turned into a Zombie by some evil scientists, wants to take revenge on the people who did this to him.

Due to my studies I also had to abandon this project, which I actually regret quite a lot. It would have been nice to have another finished game on my CV...

The source code of all these projects is still intact. Back in 2004 I diligently copied all my work from the CPC 3" discs using Face Huggers DOS Copy to 3.5" discs and stored the data as single files as well as on DSK images on my PC. Now I have almost every single line of code I ever wrote still on my hard drive.

So if anyone wants to finish one of my games, feel free to ask for the code!

**Q) Where did the idea for *Megablasters* come from? It wasn't designed to be the big game it became, was it?**

My brother had an Amiga 500 and one day he brought a disc home from school containing *Dynablasters*. I immediately fell in love with this game and we played it a lot, especially the battle mode where up to 5 players were able to compete against each other.

After some time I figured that something like the *Dynablasters*

battle mode should be possible as well on the CPC. A game with four players, a few bombs and some explosions sounded simple enough to be converted to the CPC. So I started to create some simple graphics and setup a playing area in order to figure out whether the CPC can handle this much animation on the screen at the same time with a decent refresh rate.

I especially wanted to fix an issue I always had with *Dynablasters*: in my opinion, the playing area was too small. As a player I felt I never had enough time to collect extras before I met the other players and had to fight with them. So I used Mode 1 graphics and increased the playing area size to 31 x 19 fields compared to the Amiga 13 x 11 fields. But this playing area, on the other hand, proved to be too big to be fun to play. It now took too long before you met the other players and often the players blew themselves up before even meeting the others.

Also the graphics wasn't very pretty in the 4 color mode and it was difficult for the players to differentiate between their players. Thus I switched to the 16 color mode 0 and reduced the playing area size to 17 x 11 rows, just barely more than on the Amiga version.

Since this kind of game is more fun the more players fight with each other I had to have up to 4 players compete with each other, which made *Megablasters* the first game ever on the CPC to have a real 4 player mode. Due to an error in the Amstrad CPC keyboard mapping this was almost impossible to achieve, since even two players may already influence each others controls due to the error. But I managed to develop a system that avoided most keyboard conflicts, so that the game would be playable by four people at the same time.

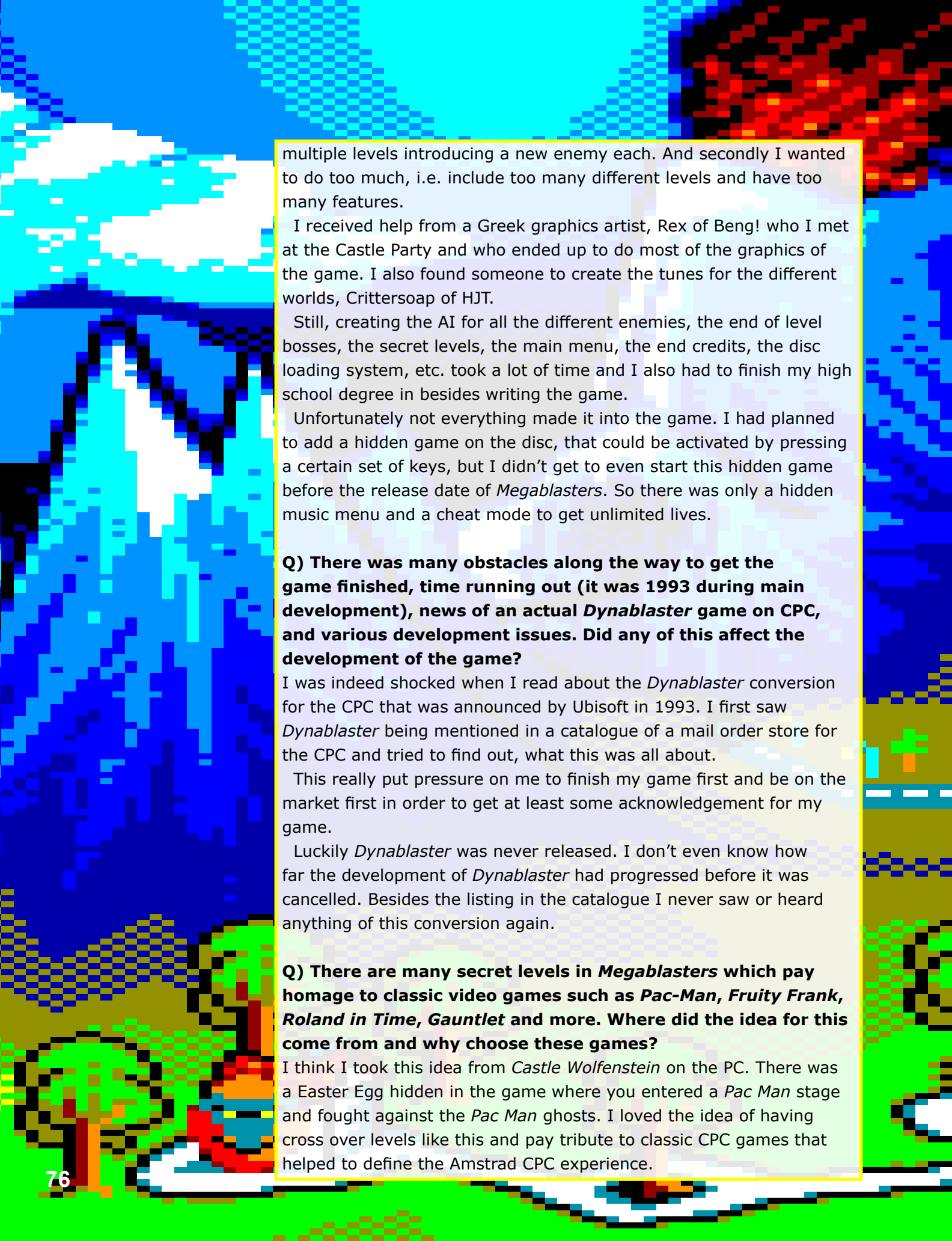
This made the battle mode the default Amstrad CPC party game. When I presented the new Mode 0 battle mode on the GOS Party IV in Bad Hersfeld, I was approached by another guest who asked me, if I could make a complete game out of this with different levels and enemies. This guest was Kangaroo Musique who had a small company that amongst other things distributed CPC software such as BSCs Soundtrækker.

I liked the idea and started to work on a complete game right away. But it took me about 1.5 more years to finish it and in the end I published it myself in Germany and had friends of mine distribute it in France and the UK.

**Q) How did the development of the enhanced *Megablasters* go? Did you have to bring in help for the graphics and music?**

Well the first thing I had to realize was, that I had completely underestimated the time and effort needed to create a game with

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multiple levels introducing a new enemy each. And secondly I wanted to do too much, i.e. include too many different levels and have too many features.

I received help from a Greek graphics artist, Rex of Beng! who I met at the Castle Party and who ended up to do most of the graphics of the game. I also found someone to create the tunes for the different worlds, Crittersoap of HJT.

Still, creating the AI for all the different enemies, the end of level bosses, the secret levels, the main menu, the end credits, the disc loading system, etc. took a lot of time and I also had to finish my high school degree in besides writing the game.

Unfortunately not everything made it into the game. I had planned to add a hidden game on the disc, that could be activated by pressing a certain set of keys, but I didn't get to even start this hidden game before the release date of *Megablaster*s. So there was only a hidden music menu and a cheat mode to get unlimited lives.

**Q) There was many obstacles along the way to get the game finished, time running out (it was 1993 during main development), news of an actual *Dynablast*er game on CPC, and various development issues. Did any of this affect the development of the game?**

I was indeed shocked when I read about the *Dynablast*er conversion for the CPC that was announced by Ubisoft in 1993. I first saw *Dynablast*er being mentioned in a catalogue of a mail order store for the CPC and tried to find out, what this was all about.

This really put pressure on me to finish my game first and be on the market first in order to get at least some acknowledgement for my game.

Luckily *Dynablast*er was never released. I don't even know how far the development of *Dynablast*er had progressed before it was cancelled. Besides the listing in the catalogue I never saw or heard anything of this conversion again.

**Q) There are many secret levels in *Megablaster*s which pay homage to classic video games such as *Pac-Man*, *Fruity Frank*, *Roland in Time*, *Gauntlet* and more. Where did the idea for this come from and why choose these games?**

I think I took this idea from *Castle Wolfenstein* on the PC. There was a Easter Egg hidden in the game where you entered a *Pac Man* stage and fought against the *Pac Man* ghosts. I loved the idea of having cross over levels like this and pay tribute to classic CPC games that helped to define the Amstrad CPC experience.

So I added one hidden stage to each world, most of which were tributes to CPC or other classic games (I don't think that there ever was an official Lady Bug version for the CPC) and two stages contained messages to the players about how to defeat the final boss, Cobron.

It was quite fun to create these stages, because sometimes I had to try to fit the original game into my rectangular playing area where you can only move in four directions. For example in the original Gauntlet you can move in 8 directions and I had to adapt it, so that it would be playable with four directions only.

**Q) Can you tell us how you went about getting *Megablasters* distributed/published?**

As mentioned before the person who convinced me to create a complete game including a saga map and several worlds, Kangaroo Musique, also wanted to publish the game. But when I took longer than expected and he had already started to advertise for the game we had a discussion about the costs for the advertising and the release date of the game. I said that it is done when it is done, but that wasn't good enough for Kangaroo and thus I broke the deal off and decided to publish it myself.

For the UK I teamed up with Rob Buckley from Radical Software, who sold *Megablasters* in the UK and for who I sold his three games *Fluff*, *Star Driver* and *Masters of Space* in Germany. In France I also had a friend of mine sell some copies semi-professionally, but he didn't sell a lot.

Totally we sold about 300 copies of the game. Thus I didn't get rich, but considering that I'm still being asked for interviews in 2015 it made me a bit famous at least.

**Q) Although the game did not sell in vast quantities - this was 1994, after all, when CPC was dying - the game is considered to be one of the CPC's greatest. What do you feel about the game and its legacy with CPC gamers?**

Well, first of all, I'm quite happy that I did finish this game considering all the obstacles I encountered during its development and now have a shipped game on my CV.

Over and above, that it is quite an honor to see my game rank among the top games on the Amstrad CPC. The *Bomberman* gameplay is just highly addictive and choosing this genre has surely helped a lot to make my game this memorable.

I think the fact that my game still sometimes shows up in retro computing magazines is worth much more than having sold a few

**Amstrad CPC softography**

*Ghosthunters* (1988, unreleased)

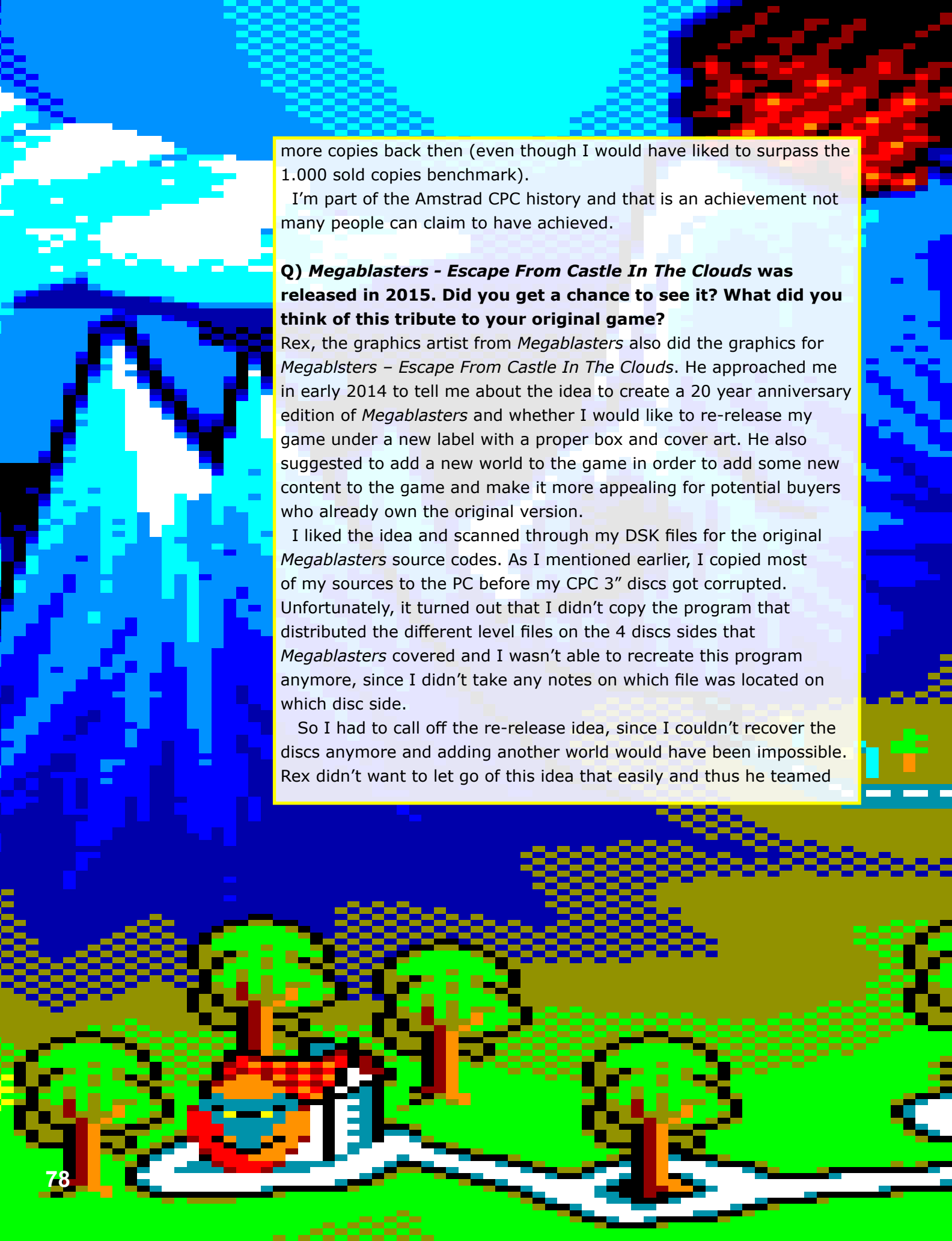
*Last Mission* (1988, unreleased)

*The Caves of Horwar* (1989, unreleased)

*MegaBlasters* (1994)

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more copies back then (even though I would have liked to surpass the 1.000 sold copies benchmark).

I'm part of the Amstrad CPC history and that is an achievement not many people can claim to have achieved.

**Q) *Megablasters - Escape From Castle In The Clouds* was released in 2015. Did you get a chance to see it? What did you think of this tribute to your original game?**

Rex, the graphics artist from *Megablasters* also did the graphics for *Megablsters - Escape From Castle In The Clouds*. He approached me in early 2014 to tell me about the idea to create a 20 year anniversary edition of *Megablasters* and whether I would like to re-release my game under a new label with a proper box and cover art. He also suggested to add a new world to the game in order to add some new content to the game and make it more appealing for potential buyers who already own the original version.

I liked the idea and scanned through my DSK files for the original *Megablsters* source codes. As I mentioned earlier, I copied most of my sources to the PC before my CPC 3" discs got corrupted. Unfortunately, it turned out that I didn't copy the program that distributed the different level files on the 4 discs sides that *Megablsters* covered and I wasn't able to recreate this program anymore, since I didn't take any notes on which file was located on which disc side.

So I had to call off the re-release idea, since I couldn't recover the discs anymore and adding another world would have been impossible. Rex didn't want to let go of this idea that easily and thus he teamed

up with Axelay to created the tribute without my help.

It's great to see that these guys liked the game this much to create a tribute to it. I feel quite honored by that and I liked their interpretation of the game. Rex sent me a copy before it was release so that I was able to give my feedback to it.

The *Megablasters* tribute is a really cool and well done new interpretation of the game. Technically it is an improvement to my version since now the floor also has tiles and isn't just plain as in the original *Megablasters*. But it is also a different gameplay since each hit kills your character now instead of four or more hits as in my version.

I'm looking forward to see what will happen on the 30th anniversary of *Megablasters*!

### Q) So what do you work on nowadays?

There are two more reasons why I didn't have time to contribute to the *Megablasters* tribute last year: first of all, my wife and I had a son last October and he takes up quite a lot of my leisure time. And secondly, I started a new job as the Lead Game Designer and Balancer at the Free2Play game company Goodgame Studios last year and I had to do quite a lot of catching up to do, in order to understand how the gaming business is working now.

So I'm back in the gaming industry and I must admit, that it feels like this is the place where I belong. I'm looking forward to see what kind of an impact I am going to have in this position. Maybe there will be another game made by Odiesoft in the near future? Chances for that have improved a lot with this career change (I worked in market research for the past 7 years).

### Amstrad CPC softography

*Ghosthunters* (1988, unreleased)

*Last Mission* (1988, unreleased)

*The Caves of Horwar* (1989, unreleased)

*MegaBlasters* (1994)

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GAME



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OVER

