

CONVERSION CAPERS

DRAGON'S LAIR

HOW THE HELL DO YOU CONVERT DRAGON'S LAIR TO HOME SYSTEMS? THAT QUESTION HAS CONFOUNDED A NUMBER OF DEVELOPERS SINCE THE LASERDISC ARCADE GAME EMBARRASSED COMPETING COIN-OPS BACK IN 1983. MARTYN CARROLL ROUNDS UP THOSE FOOLHARDY FEW WHO TRIED AND DISCOVERS THREE VERY DIFFERENT WAYS OF APPROACHING THE SAME IMPOSSIBLE TASK

For UK gamers the first chance to play *Dragon's Lair* outside of the arcade halls came courtesy of Software Projects in 1987. The Liverpool-based publisher, desperately seeking a hit after a couple of barren years, released *Dragon's Lair* on home computers.

Despite very average review scores, the game was a faithful port of the original. Obviously we're not drawing comparisons with the original laserdisc game – we'd be dafter than Dirk himself to suggest that our beloved 8-bits could recreate the arcade experience. We're talking instead about the little-known *Dragon's Lair* game released for the Coleco Adam in 1984. The Adam was a somewhat quirky computer designed to build on the success of the ColecoVision console. It didn't, however, and was discontinued in 1985, just two years after its launch. The Adam was sold predominately in the US, but some stock was shipped overseas and it was moderately successful in France. And it was in France where Software Projects boss Alan Maton picked up a copy of *Dragon's Lair* for the Adam while on holiday. He noticed the game in a computer shop, liked the look of it and bought it out of curiosity.

Back in Liverpool, Alan acquired an Adam and loaded up the game that Coleco had apparently paid \$2 million to license. It was a curious multi-load affair with a number of varied levels loosely based

on scenes from the arcade game. He acquired the rights from Coleco and set about creating a team to port the title. John Darnell handled the Commodore 64 version; Mike Davies and Colin Hogg worked on the Amstrad CPC version while Paul Hodgson and Andy Walker were drafted in at short notice to sort out the Spectrum version. Hodgson up the story: "The *Dragon's Lair* job was a contract which Andy and I took on after the demise of Andy's software house Taskset. The Spectrum conversion wasn't going well, and whether he walked or was pushed I don't recall, but the original programmer left very suddenly. We talked to Alan, who we'd known for some time, and got the contract to finish it off. Andy did the business and I did the software. Luckily I knew pretty much nothing about the original laserdisc game otherwise I'd have run a mile!"

Hodgson instead ran to The Golden Mile to get a feel for the game. "There were no arcades near where I lived which had it, so it meant a trip over to Blackpool", he begins. "I quickly found out that *Dragon's Lair* was no ordinary game. Quite how someone decided that it would convert nicely to the Spectrum escapes me." It wasn't all bad though. The game was more or less a direct port of an existing 8-bit title (written on another Z80-powered machine) and work on the conversion had already begun when Hodgson arrived. There was a problem however. "The original programmer left a heap of unfinished, undocumented source code. It was a real mess and page after page was just sheer guesswork. So we quickly took the decision to junk most of it and start from scratch. One useful thing,



» Creators of a legend. From left to right, animator Don Bluth and producers Gary Goldman and John Pomeroy.

which we did inherit, was the vast majority of the graphics. These had been done in-house by Nicole Baikoff, a talented artist well used to squeezing the most out of the Spectrum."

Weeks progressed and deadlines loomed and finally with the code 'almost done', Hodgson and Walker decided to move over to Liverpool for a long weekend to finish it off. "Software Projects had rather dingy offices in a ramshackle part of the Bear Brand complex at Allerton Park," remembers Hodgson. "Heating and creature comforts were largely absent so we spent a cold bank holiday weekend working 24 hours a day. One of the

receptionists took pity on us and brought a food parcel in, otherwise starvation was a real possibility."

As you've no doubt guessed by now, this wasn't exactly a magical time for Hodgson. "The *Dragon's Lair* conversion was a bit of a nightmare and not what I'd want to be remembered for", he admits to us. "I don't think it was an unqualified success because no matter what you do, you can't replicate a laserdisc game on a Spectrum. Through various technical limitations we did our best and I think it was pretty playable. Certainly for all its shortcomings a lot of people liked it. It did have some neat technical features – we multi-loaded the various levels with a bunch of central library routines staying resident and it was available on disk (yes, even on the Spectrum!) which didn't half improve things."

AMIGA FOREVER

Faithfully replicating *Dragon's Lair* was always going to be an incredibly tough challenge that was

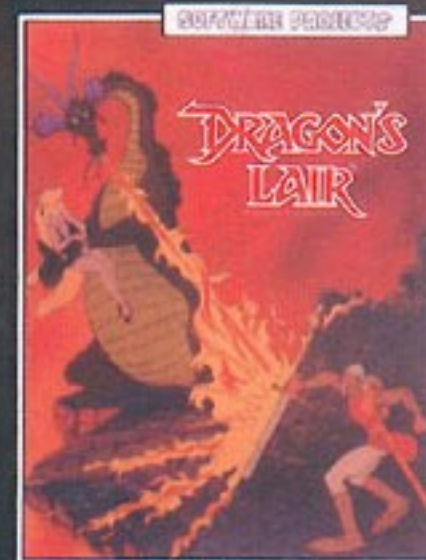
entirely dependant on the available home hardware. In fact, it's only now with Digital Leisure's new HD release that we've been able to experience a truly authentic version in terms of gameplay, visuals and audio. So it's staggering to think that in 1988, ReadySoft (the precursor to Digital Leisure) began its long association with *Dragon's Lair* by creating a game that mimicked the laserdisc style on the Commodore Amiga. No one thought such a feat was possible, including Bluth Group, owners of *Dragon's Lair*. "I'm not sure they believed we could deliver a game that actually played like the original", says David Foster, who worked on the game with Randy Linden. "We proved people wrong by issuing a demo disk before the release and it spread quickly. Nobody could believe that the level of video quality was possible on the Amiga. Retailers at the time were playing the looping demo in-store to show what the Amiga was capable of. I suspect we sold a lot of hardware for Commodore."

So how did ReadySoft manage to display large, cartoon-style graphics on the Amiga? Foster explained that the key challenges were minimising the size of the data, maximising disk space and access times, and optimising processor usage. "We began by carefully selecting scenes without background movement, then spent a great deal of time separating the foreground elements from the backgrounds. We touched up the foregrounds, reduced the colour palette to 16 colours, then compared movement between the foreground of the current and subsequent frames and reduced any information that didn't change (not unlike how MPEG compression works). The foreground image was then compressed."

We didn't use the Amiga operating system at all. In fact on the Amiga 1000 we even reused the special memory where the system would normally load into. All disk access was handled directly and we determined how much data needed to be pre-buffered and continued to load from disk as the animation was playing. We also came up with a proprietary disk format that packed more

DIRK ON DISK

Dragon's Lair was a multi-loader so those with the cassette version had to play the tape after completing each level and rewind it back to the start when all their Dirks had expired. C64 and CPC owners had the choice of a disk version, which improved things a great deal, but the Speedy faithful had to make do with their trusty tapes – unless you were lucky enough to own an Opus disk drive that is. By returning your tape to Software Projects, along with an extra £4 (taking the total price to a hefty £14), you'd be sent a disk version that took some of the pain out of that overly familiar 'game over' screen. We have no idea how many people took Software Projects up on its offer, but we can bet that the Opus disk version is a nice little collectable these days.



» Based on the Coleco Adam original of two years earlier, *Dragon's Lair* was a huge hit for Software Projects.



» While fairly primitive, the Coleco Adam version did at least attempt to mimic scenes from the coin-op.



"I QUICKLY FOUND OUT THAT DRAGON'S LAIR WAS NO ORDINARY GAME. QUITE HOW SOMEONE DECIDED THAT IT WOULD CONVERT NICELY TO THE SPECTRUM ESCAPES ME" PAUL HODGSON

CONVERSION CAPERS

DRAGON'S LAIR IS RUBBISH. DISCUSS

Spare a thought for David Foster. His company Digital Leisure has spent the best part of 20 years trying to deliver the ultimate *Dragon's Lair* experience in the home. The new Blu-ray release is the closest yet, surpassing the earlier DVD versions, but reviewers always dwell on the same old subject: is *Dragon's Lair* actually any good? "We hear the same thing now that we heard almost 20 years ago about the gameplay," says Foster. "There are two camps of reviewers: those that accept that the gameplay is unchanged and that we've done a good job of recreating the original, and those that can't get over the fact that gameplay is the same and has not kept up with the current gaming styles. Certain versions over the years have included visual 'helpers' but in the versions I've been involved with it has always been about staying as true to the original as possible."



» The new Blu-ray release is as close to the original as possible. One of the extras on the disc is a side-by-side comparison of the HD and Amiga versions to show how far things have advanced.



» One neat feature of the C64 version was that it loaded the next level as you attempted the current challenge.



» The awesome arcade battle with the dark knight was slightly less impressive on the Speccy.



"NOBODY COULD BELIEVE THAT THE LEVEL OF VIDEO QUALITY WAS POSSIBLE ON THE AMIGA. RETAILERS WERE PLAYING A LOOPING DEMO TO SHOW WHAT THE AMIGA WAS CAPABLE OF. I SUSPECT WE SOLD A LOT OF HARDWARE FOR COMMODORE" DAVID FOSTER



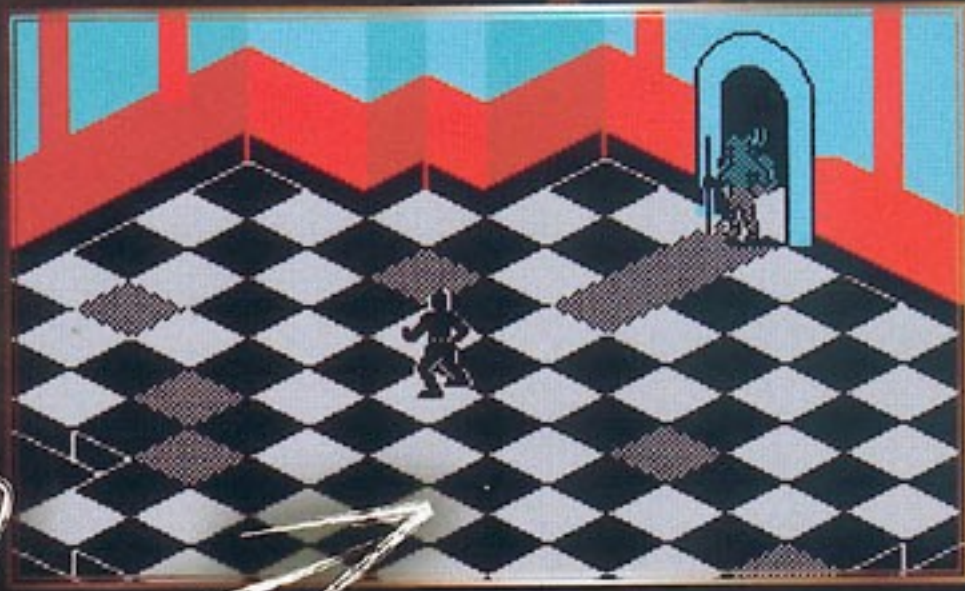
» The memory test screens were tricky, with you having to hit the right command at the precise time to avoid instant death.



information onto each track. Finally, the code was very tight assembly language. The image decoding programming was optimised by the cycle times each instruction took. We were dealing with a 7.14MHz processor so every cycle had to count."

Of course some compromises had to be made, noticeably in the number of scenes that could be included. "We ended up with about 15 per cent of the arcade game in the release version and this was

on six disks when disks cost \$1.25 each. And clearly there were compromises in video quality and frame rate, but we were dealing with an underpowered system, at least relative to what we wanted to achieve, with limited memory and a slow, small external storage device. It was uncharted territory at the time. Fortunately today's video codecs and storage media handle all of the tough tasks that we had to code for the Amiga."



» According to Paul Hodgson, the final battle with Singe had to be rewritten at the last minute as it was impossible to complete as programmed.

» Left: CD technology allowed ReadySoft to finally include the full complement of arcade scenes. The video quality was a bitropy however.

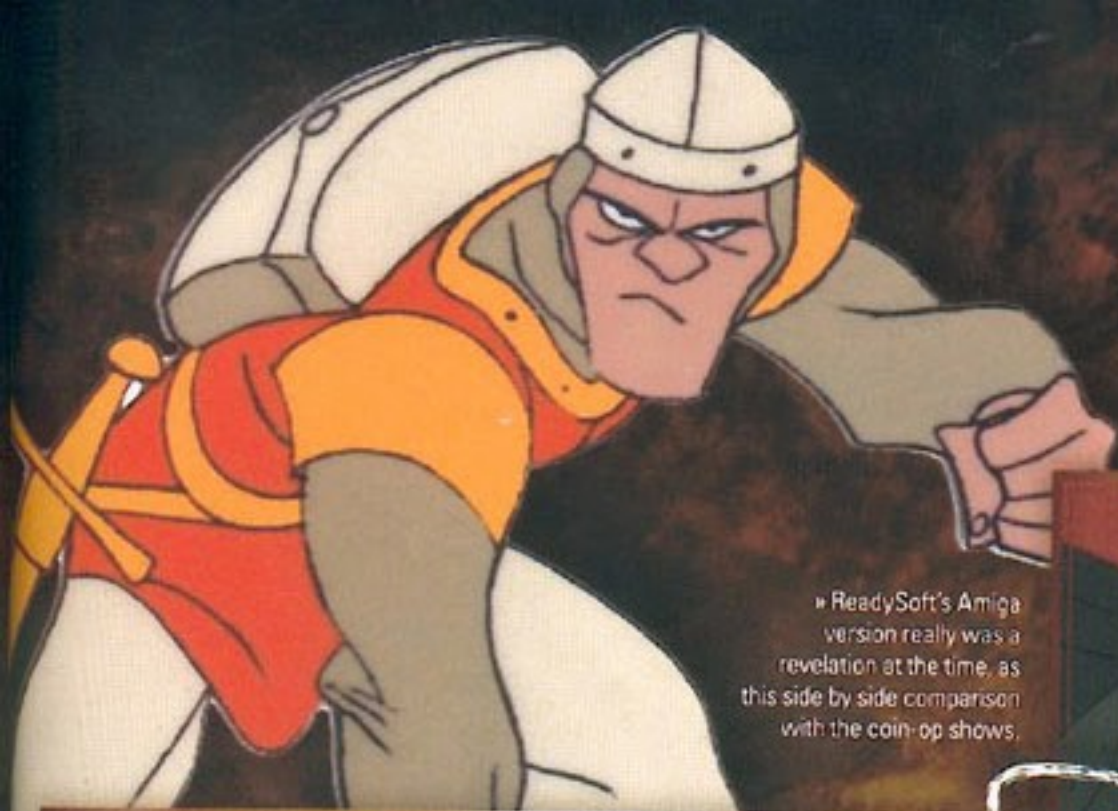
Happily for everyone involved, the compromises did not detract too much and the game was a huge success. Foster remembers that ReadySoft struggled to meet the initial demand: "We released it at the World of Commodore show in December 1988 in Toronto and we literally could not make them fast enough. I think we sold over 1,000 units at that show alone. Because of the proprietary disk format we could only copy the disks on certain drives. We were copying 24 hours a day and it took us three months to finally clear the backorders."

A semi-sequel quickly appeared, featuring additional scenes from the arcade version, and in 1990 the original Amiga version was ported to the PC, Mac and Atari ST. During the same year a very different *Dragon's Lair* game trundled onto the NES. It was developed by Birmingham-based Elite Systems, publisher of many a successful coin-op conversion including *Commando*, *Bomb Jack* and *Paperboy*.

ARE YOU ELITE?

Elite's involvement with the *Dragon's Lair* licence was mainly thanks to Software Projects. Following the slow death of Software Projects, Elite bought up some of its back catalogue, including *Dragon's Lair* and *Escape From Singe's Castle*, and re-released them on its Encore budget label. Both games were strong sellers and convinced Elite boss Steve Wilcox that he could possibly 'turn a penny' on a new console version.

Long-time Elite programmer Andy Williams (*Kokotoni Wilf*, *Frank Bruno's Boxing*) was enlisted to create the game – and he wasn't even thinking about following the ReadySoft route. "The NES was particularly suited to side-scrolling platform games so this is what we designed. The main feature of *Dragon's Lair* in the arcade was its superb graphics so we followed this and the game featured



ReadySoft's Amiga version really was a revelation at the time, as this side-by-side comparison with the coin-op shows.



OH BOY!

Remember *Rollercoaster*, Elite System's colourful platformer released on the Spectrum in 1985? Elite itself certainly did when it came to releasing *Dragon's Lair: The Legend* for the original Game Boy in 1990. Rather than taking the obvious option and porting Dirk's NES outing to the handheld, Elite blew the cobwebs off *Rollercoaster* and dressed it up as a *Dragon's Lair* title. It featured a new plot involving Dirk and Daphne, but the levels themselves were robbed from *Rollercoaster*. Re-skinning the graphics didn't fool anyone – the level structure was almost identical, with the platforms and pick-ups even sharing the exact same pixel locations on screen (see screenshots below). The subtitle is fitting because this cheeky act of Specky sabotage is already the stuff of legend.



Talk about déjà vu! *Dragon's Lair: The Legend* was a clear rip-off of *Rollercoaster*.

some of the largest and most detailed sprites seen on the NES. This did limit our gameplay design however. The animation had so many frames that it made the controls feel heavy, and it was far too hard."

Based on the success of *Dragon's Lair* (100,000 copies sold worldwide), Elite officially became one of Nintendo's first European third-party publishers. Over the next five or so years it released games for all the Nintendo platforms, so it was inevitable that a *Dragon's Lair* game would grace the SNES. Williams was once again involved, and this time he did at least consider a faithful conversion. "At Elite there had always been a push towards graphical quality, so we did investigate writing a scripting language that would allow us to create action similar to the laserdisc version but using hand-animated sprites. This was ultimately abandoned due to the huge amount of time required and the limited amount of memory available on the ROM carts. We decided instead to take the same approach as the NES version but use the SNES's

more powerful graphics hardware to enhance the gameplay."

There were efforts to lift the game above standard SNES platforming fare. Williams explains that bespoke design tools were written to increase the size of the characters: "The SNES has a limit on both the number of sprites available and the number that can be displayed on a horizontal line. One of the artists working on the project, Steve Beverly, wrote an editor for the game that let us create larger characters. Before the editor allowed us to have the tall version of Dirk, we had what we referred to as 'Dumpy Dirk'. This little character used to bounce and slide around and moved much quicker than the character in the final game. Although we became quite attached to this little guy he was eventually removed in favour of the much larger Dirk."

Released in 1992, *Dragon's Lair* on the SNES matched the earlier NES version with impressive unit sales of around 100,000. History shows that regardless of the game itself, and how successfully

it replicates the gameplay and cartoon visuals of the original, almost any title bearing the *Dragon's Lair* name is a sales success. This is surely due to the initial impact and lasting appeal of the original arcade spectacular. "Videogames are visual media and any game that is as graphically stunning as *Dragon's Lair* is likely to be acclaimed", says Williams, one of Dirk's many fans. "Mix this with strong audio and distinctive characters and you truly have something very special. The original arcade game was criticised by some for its low level of interactivity. Did the other features make up for this? Its continued fame would certainly suggest that they did."



Although it was only loosely based on the original, the SNES version did at least recreate the arcade's attractive scenes.



Unlike the NES version, exploring Singe's castle was not only enjoyable, but actually achievable by mere mortals.



The password system in the SNES game was completely bizarre, with you having to painstakingly guide coloured balls into the correct holes. We've no idea why it was never the norm!

"THE MAIN FEATURE OF DRAGON'S LAIR WAS ITS SUPERB GRAPHICS SO WE FOLLOWED THIS AND THE GAME FEATURED SOME OF THE LARGEST AND MOST DETAILED SPRITES SEEN ON THE NES" ANDY WILLIAMS

CONVERSION CAPERS



THE
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The *Dragon's Lair* arcade game needs no introduction. It's one of those titles that just about every gamer alive is familiar with and has an opinion on. Regardless of whether you love the sheer spectacle of it or you loathe the scripted gameplay, there's no denying its widespread appeal and place in arcade history. And thanks to its amazing cartoon quality graphics, drawn by former Disney animator Don Bluth, it's one of the few Eighties games that still thrills on a visual level.

Before the introduction of DVD technology it was pretty much impossible to accurately recreate the original game. The film-like quality of the visuals and sheer number of scenes (including all of the must-see snippets of Dirk dying) was far too much for retro hardware to handle. But that didn't deter publishers from snapping up the rights to produce home versions. After all, there was more to *Dragon's Lair* than its cartoon presentation. The characters were memorable – blundering Dirk was a lovable hero – and Singe's creepy old castle was superbly realised. Above all, thanks to the impact of the original arcade title, *Dragon's Lair* was an extremely well-known name that had (and still has) real resonance with gamers. It's hardly surprising then that dozens of *Dragon's Lair* games have been released for computers and consoles since the coin-op debuted in 1983.

As we've shown over the previous pages, the home versions vary greatly in style and quality, from loose interpretations to close approximations to in-name-only adaptations of the arcade game. It's beyond the scope of this feature to consider every single tie-in, so rather than comparing the subtle differences between the Spectrum and Commodore 64 versions of the 8-bit *Dragon's Lair* game, for example, or judging the quality of video encoding between the Mega-CD and Jaguar versions, we've chosen instead to consider the different types of game to be licensed from the laserdisc original.

All of the games mentioned here can be played via emulation – a quick search of the web will reveal the game files and the software you need to run them. So if you're feeling daring why not load them up and make up your own mind? The rich legacy of *Dragon's Lair* is waiting to be discovered.

OTHER VERSIONS TO CONSIDER

ESCAPE FROM SINGE'S CASTLE (C64, CPC, SPECTRUM)
ESCAPE FROM SINGE'S CASTLE (AMIGA, ST, PC, MAC)
DRAGON'S LAIR (CD-I)
DRAGON'S LAIR (DVD-ROM, DVD-VIDEO)

ADAM, C64, CPC, SPECTRUM

Coleco deserves praise for at least attempting to recreate memorable scenes from the coin-op on a machine with limited memory and basic display capabilities. Free from the scripted trappings of the original, it does make you wonder why Coleco didn't add more scope and playability to the mini-games. As it is, sections where the player has direct control over Dirk, such as 'falling disk' and 'burning ropes', are too clumsy, rigid and downright difficult to be enjoyable. Software Projects' main contribution was to make its version even harder (based on feedback by external play testers, apparently). Based on sound, graphics and control the C64 version comes out on top.



AMIGA, ST, PC, MAC

The Amiga version may look laughable compared to the later disc-based versions, but it has to be considered a greater achievement by far when you consider the relatively underpowered hardware it was running on. Seeing Dirk in all his full-screen glory on the Amiga was akin to glimpsing the original arcade game for the first time – it really was that much better looking than everything else out there. Only a handful of scenes were included, and unless you were lucky enough to own a supported hard drive you would be forever feeding your Amiga with floppy disks, but these drawbacks can't detract from what is a stunning technical achievement. A real showcase title.



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NES

If you thought the Software Projects game was nightmarishly difficult then this NES version might just make your brain snap. It's not just hard, it's skull-splittingly hard. We'd love to tell you more about the game but after hours of prolonged play we barely made it inside Singe's castle, which is slightly worrying because you start the game standing outside the bloody front door! Dirk can jump, duck and throw daggers, but his preferred skill is collapsing into a pile of bones if anything vaguely threatening touches him. We've watched a video of the game played through to completion and it really isn't worth the hassle. A shame because the graphics are really quite special.



SNES

Dragon's Lair on the SNES plays like an apology for the earlier NES version, making amends for many of its problems. It adopts the same side-on platforming structure but the levels are more expansive, interactive and varied. And it's far more forgiving which was thoughtful of them. The game is firmly in the *Castlevania* mould, with Dirk exploring a large castle and whacking baddies with his sword and other weapons. The graphics are great throughout, and the game opens up nicely and you delve deeper into the castle, but it's always apparent that this is *Dragon's Lair* in name only. Remove Dirk and some familiar looking enemies and you could be playing any SNES platform-athon.



CD-ROM, MEGA-CD, 3DO, JAG

The main drawback of the 16-bit versions was that there was only so much data you could squeeze onto a floppy disk, and due to costs there were only so many floppy disks you could shovel inside a game box. The result was that many scenes were scaled down or sometimes removed altogether. However, with the advent of the CD-ROM, ReadySoft was finally able to deliver the full arcade version to PCs and consoles. Rather than recreating the original graphics it was now all about displaying full-motion video. As the technology was still in its infancy though, the quality of playback varies from system to system. The 3DO version is probably the best, while the Mega-CD version truly is a pixelated mess.



GAME BOY COLOR

Released back in 2001, this pocket-sized version definitely deserves a special mention because no one was expecting a faithful translation of the original coin-op on the GBC – a port of the SNES version seemed much more likely. Moreover, once it was announced, no one actually thought that Digital Eclipse would be able to pull it off – full-screen animation on the GBC seemed a step too far. But many were proved wrong and it worked a treat. Despite a few curtailed scenes and missing animations here and there, handheld fans really could have no complaints and it's a must-have for any fans of the series. It's perfect pick-up-and-play material, suiting the small format surprisingly well, and overall it's one *Dragon's Lair* game that no fan should be without.

