

David Jones - Videogame Preservation Case Study

In June 2019 David Jones, a games designer who worked mostly in the 1980s, posted on social media to ask what he should do with the computer and associated software that he used to develop games like the Magic Knight Trilogy and others

(<https://www.facebook.com/MagicKnightGames/>).

Many of the responses he received urged him to donate them to The Centre for Computing History, so he contacted the museum to make arrangements.

"I posted on Facebook that my computer was available, but there were so many comments saying that it should go to the Centre for Computing History, that I contacted them and was really pleased to find that they would preserve it for future generations to see."



But to David's surprise we were interested in much more than just his computer! His collection consisted of hardware, software and documentation relating to the development of his video games and we were pleased to be able to add them to our collection in their entirety. Our first step was to catalogue the collection according to the procedures used by all accredited museums, describing and documenting the condition of each individual item and assessing the best means of preserving them for the long term and of capturing the story of their creation.

Software

David Jones' collection included a number of floppy disks for the Tandy TRS-80 that contained, among other things, source code for the games. David used the TRS-80 to write and compile his games and then send the executable code to the Sinclair ZX Spectrum via a serial link for testing. In order to begin our preservation work, museum staff and volunteers set about imaging the disks to create working copies of the originals.

Firstly, the disks were visually assessed. The condition of disks are very much affected by how they have been stored. Fortunately, these disks were in good shape. It is important that we

physically assess disks before putting them into our preservation hardware so as to protect the hardware itself and not endanger any future disks put into the system. The preservation hardware itself is also cleaned and tested before any unique disks are inserted into it.

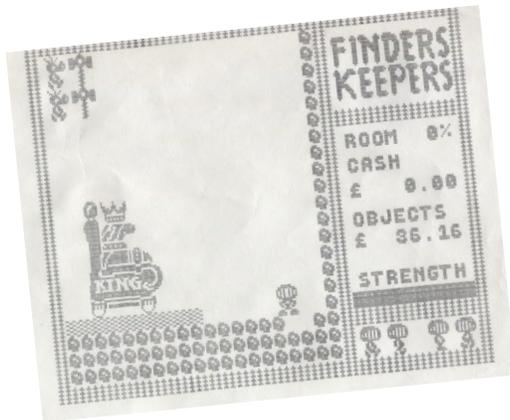
The disks were photographed and the details on the labels entered into the database, together with other information. The disks were imaged using one of a range of imaging methods best suited to the type of disk. The disks were a mixture of formats making the process more complex, but once the formats were identified, converting the disk images into readable files was quite straightforward.

Some disks were slightly more difficult to read due to the age and minor degradation of the disk. It is possible with some imaging software to specify a range of tracks, so the disk can be read in stages. This allows an opportunity to clean the read/write head several times if necessary to minimise the risk of damage to the oxide layer. Each part of the disk can then be combined. This method was applied where required.



The disk images and data form a digital asset within the museum collection. At David's request they have not been made publicly available, although we are permitted to make them available upon request to anyone who wants to visit the museum to use them for research purposes.

Copyright and IP are always respected by the museum. Some donors want their source code or other data made publicly available, others do not. Either way, what is important is that it is preserved here at the museum.

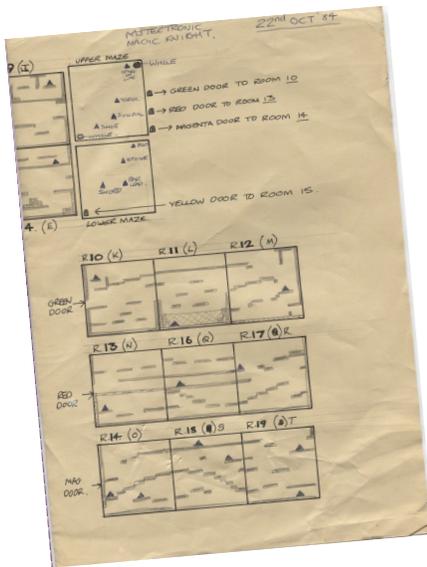


Paper Documentation

There was a considerable amount of paper-based documentation in David's collection. This ranged from design notes, to marketing materials and even financial information. These have been scanned and made available to view online (where appropriate), as they form an important part of the collection in providing context for the games and their creator. The material was scanned to preservation standards, and both the original paper items and the digitised version form part of our collection.

Hardware

David donated his Tandy TRS-80 and other items that he used to develop his games. The museum is fully accredited and follows nationally agreed guidelines for preservation. This involves assessing the hardware for contaminants or mould, and cleaning where appropriate with non-abrasive cleaning materials. The hardware can then be photographed, catalogued and prepared for appropriate storage. As hardware contains a mixture of modern materials, it is always checked for components that can deteriorate over time. This is especially important for memory backup batteries and capacitors. If potentially damaging components are found, these are photographed in situ, removed and documented against the item record in the catalogue. Hardware such as the TRS-80 is stored on Plastezote (non-reactive foam). The final location of the item is then recorded in the catalogue.



Interpretation & Context

Our ongoing processes will add interpretation and context to each of the items, and to David's collection in general. The advantage with relatively modern collection items such as these is that this can be done via both research and through conversation with David. A video interview will be conducted with David in due course (see below).

This additional information is vital to ensure that future generations can understand the methods and intentions for the development of a video game and our reasons for preserving it. Additional contextual information about what was happening in society and in popular culture at the time along with detail on the designer's life can add context to further help future researchers and helps give a wider range of people reasons to value such videogame heritage in the future.

Video Interview

David is currently working in the Netherlands but will be visiting the museum later in 2020. When he does, we will interview him on camera to discuss his collection and his history in video game development. This interview will also be a digital asset and form part of the museum's collection, adding further context to the heritage items. The interview will be available on our website and will also be uploaded to the museum YouTube channel where it can be seen by interested parties beyond our physical reach - people who are unable to visit the museum can still engage with the story.

Collections like David's add to the coherence and comprehensiveness of our overall collection. It is represented on the museum website, with links to each individually catalogued item, at <http://www.computinghistory.org.uk/det/56197/The-David-Jones-Collection/>. For us, there are also broader reasons for doing this kind of work.

Why do we do this?

Because videogames matter. They are more than just code and light entertainment!

Videogame preservation is undoubtedly a challenge because:

- the preservation of videogames has not been taken seriously until relatively recently,
- the legal issues surrounding games preservation are prohibitive in many countries, and
- the technical challenges involved in the preservation of digital content are complex.

But at the Centre for Computing History we believe such material should be preserved for the long-term - and we are not alone. Videogames have become deeply ingrained in our culture, and will continue to be so. Games generate enormous amounts of revenue worldwide, they are forms of personal expression for both creators and users, and they offer a window into the society in which they are created and consumed.

So, future historians will want to know how and why games were created and played and how they were marketed and sold, as well as having access to their code. To understand the complete story, they will need the code, the media, the artwork, the packaging, the hardware for their creation and use and an insight into the creator(s), the consumers and the world in which both lived. For this reason, being able to preserve collections like David Jones' is a privilege.

As part of our museum, the David Jones collection has become an accessible physical and online resource for reference and research. It is important to The Centre for Computing History because it is an excellent example of 80s arcade style video games. The Magic Knight games were a successful series of games that could be played on home computers. The player controlled the hero in a race against time and the games sold well because people enjoyed the engaging puzzles, the good graphics and gaining the skill required to master it. The hand drawn maps in the collection demonstrate how the game was actually quite small, yet to the player at the time it seemed huge. Clearly it had to be small to fit in the very limited memory of the computer and this in itself is an exceptional example of coding and level design.

It also underpins the story of the development of a videogame by an individual who had to spend many months creating a game with no salary until the final release of the game generated royalties that paid him. David was the programmer, graphic designer, level designer and story writer. Today, for large games, these are the roles for individuals or even teams within a large company.

The study of gaming culture is also rapidly growing as an academic field and we play a role in that. Academic attention is beginning to be paid to the structures and narratives of games, their hardware and software and the social practices that surround their creation and consumption. Most games have a relatively short lifespan, but they are cultural objects and each one represents a valuable artefact reflecting the technological, socioeconomic and historical issues of its creation and consumption.



This is also a personal story - David is widely known in computing and gaming circles but not really beyond. It is important for that story to be available to a wider audience. Long prior to David's Facebook post he had been writing a Magic Knight adventure book, but believed his data had been lost. While imaging these disks, that data has been rediscovered and he is now able to reconstruct it, saving him many hours of work and allowing him to tell his own story more easily!

At the museum, this is enormously gratifying work to be involved in!

Thank you David.

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