Preserving the Early Born-Digital Heritage of Floppy Disk Magazines

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What are Disk Magazines?

Disk magazines, also called 'diskmags', 'diskzines' or 'magazette' – were a multimedia periodical for reading on personal computers, which were published on digital media exclusively, such as data tapes, floppy disks or CD-ROMs. They differ from so-called "covermounts" which were included in some print magazines, because the main content of diskmags was on the disk and not in the printed component.

The historical peak of disk magazines can be dated roughly to the late 1980s and early 1990s. They were primarily produced in the US, UK, West Germany, Italy, Sweden, Finland and other countries. Wikipedia lists about 200 disk magazine titles from that time, however the list is incomplete and not representative. Most of the disk magazines were in English, but there were more relevant language communities, e.g. in German, Spanish, Dutch, Russian, Polish and Italian.

Reading a disk magazine was only possible on the computer system it was designed for. Many of them were sold in regular newspaper shops for a pocket money, with a relevant secondary readership by trading and pirate copies, while others were distributed only by copying. When the World Wide Web took over in the 1990s, most disk magazines were discontinued or migrated to online platforms, sometimes keeping ‘disk magazine’ in their title.

State of Preservation

Disk magazines were not yet collected or archived systematically by libraries or archives like print magazines were. Further, there is no reliable or comprehensive index that would offer a starting point for systematic research. The situation is precarious. Floppy disks degrade over time and become unreadable after 10-30 years. Even if they are still readable, they require suitable devices to be read. Hardware also deteriorates over time and needs to be repaired, replaced or reconstructed. Access through the original hardware, so it seems, is not a solution for frequent access.

Emulation is a better scenario. It requires bitstream copies of the original disks, and luckily, diskmags have an active fanbase which collects and provides the required files. This is legally questionable due to copyright implications, but if these legal issues can be resolved, these community-created collections would be a good starting point to create a scientific collection.

Another option is migration: extract the media from the disk magazines and provide these in a new environment. This would also allow corpus-based research and systematic search functions. Such "re-digitized" editions would ideally consist of structured transcriptions of the originals, with inclusion of multimedia elements and direct links to emulators, and integration into a linked data network.


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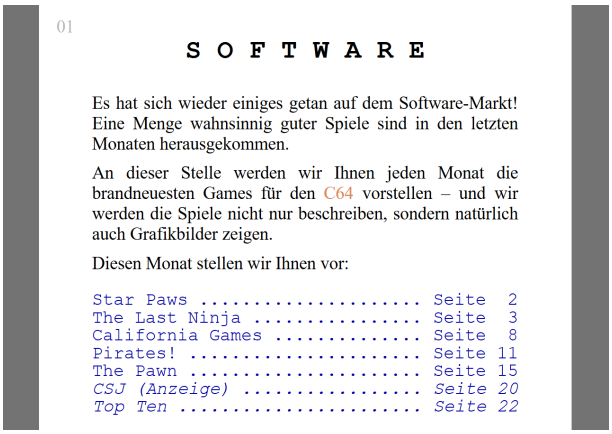

Figures 1-3: Section "Software" from the disk magazine "Magic Disk 64" 11/1987, p. 1; emulated in VICE (left), encoded in TEI-XML (middle) and rendered as HTML in the browser (right); see https://diskmags.github.io/md_87-11.html for a live demo.

One-Year Strategy

A one-year project was recently funded by the consortium "Text +" of the German research programme "National Research Data Infrastructure" (NFDI) to preserve the digital heritage of Disk Magazines. The project will be hosted at the Center of Philology and Digitality, a new department of the University in Würzburg (Germany). The poster will present the design of the project and the planned activities around it.

One aim of this project is to develop and apply media extraction and re-digitization methods for disk magazines. This creates a text resource of particular value for cultural studies, linguistics and media studies. Second, it provides a generalizable best practice for digital text reconstruction from legacy file formats.

The project is designed in multiple stages: (1) Create an international catalog of disk magazines (titles), based on library standards and open for contributions by other parties. Building up the catalog is intended to be an incremental process that builds on combining existing collections, which are usually focused on one system or one language region. OpenRefine (https://openrefine.org/) has proven so far to be very helpful in this process. (2) Extend the catalog by indexing all available issues of German-language disk magazines, including binary copies of the original files, when available. The international catalog of titles and the sub-catalog of German issues will be fed into German library catalogs through FactGrid (https://database.factgrid.de/). (3) The binaries are searched for files containing (possibly compressed) text, then transformed from the respective historical character set standard as closely as possible to UTF-8, with a strict documentation of the character mapping. This stage is more experimental and requires specific knowledge of the various systems. (4) From this, flat hierarchical text files (TEI/XML) are generated and stored sustainably according to FAIR principles by partners of the Text+ consortium.

This project is a contribution to create awareness of early digital heritage for the next generations. For example, providing the texts helps to preserve the original language of content creators and communities. Additionally, the project has a high potential to fill some white gaps in authority records by providing data for the LOD network, which could become points of reference for studies in the same field, e.g. game and software studies.

Another grant application will be filed in 2023 for a project of longer duration. This project will focus on NER and NEL and creating exemplary digital scholarly editions as well.

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