

Project EMiL – Emulation of Multimedia Objects

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ABSTRACT

In this poster we will present the results of the German research project EMiL (Emulation of Multimedia objects in Libraries). In the project, an emulation-based flexible and automatable access framework for multimedia objects in libraries and museums was developed.

Keywords

preservation strategies; emulation; digital libraries; multimedia; emulation frameworks.

1. INTRODUCTION

The German project EMiL (Emulation of Multimedia objects in Libraries)¹ focused on providing access to multimedia objects of the 90s that usually are stored on CD-ROMs [7]. Objects such as digital encyclopedias or interactive art pieces are difficult to present using current access systems in a reading room or exhibition space, since their original, now out-dated run time environments typically are not supported by the existing access system. This calls for an emulation of the vintage run time systems in order to provide access [5], similar to other research projects on access frameworks [1][2][3][6].

There are several technical challenges for an access framework based on emulation. Because of the variety of possible objects and environments, the EMiL framework must be able to employ a range of different emulators, existing and future ones. Given the huge size of digital collections, especially in libraries, automated procedures are needed. The EMiL framework includes a tool that automatically identifies an emulation environment that supports a chosen object [4]. After the (automated or manual) selection of the run time environment, the EMiL framework deploys the emulation, executes the object in the emulated environment, and shuts down the emulation after usage. Access to the emulated multimedia object is provided to the onsite user through a web browser interface.

EMiL aims at integrating with different catalogues and long-term archiving systems. While the integration with library catalogue systems is work in progress, the integration with a particular long-term archive system has already been tested.

2. POSTER CONTENT

The poster will describe the goals and challenges addressed in the EMiL project. It will visualize the components of the framework and its embedding into the existing infrastructures in libraries and museums.

Sample screenshots of multimedia objects in emulation will give an impression of the access interface (see Figure 1 for a sample cutout).

The poster will also describe reuse possibilities of the EMiL framework.

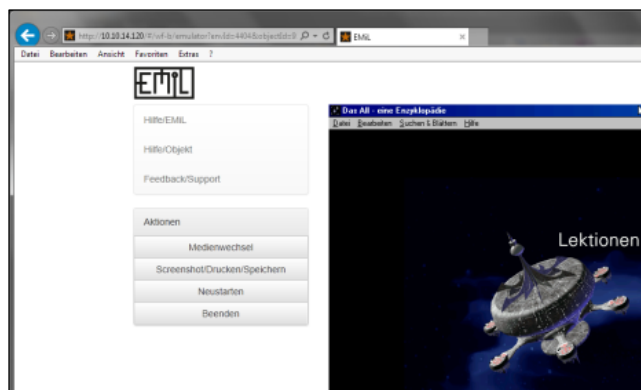


Figure 1. The EMiL access interface (cutout)

3. ACKNOWLEDGMENTS

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4. REFERENCES

- [1] Braud, M., Lohman, B., and van der Hoeven, J. 2012. How to run emulators remotely via the Emulation Framework. Online at <http://emuframework.sourceforge.net/docs/EF-howto-remoteemulation-1.0.pdf>
- [2] Farquhar, A., and Hockx-Yu, H. 2007. Planets: Integrated Services for Digital Preservation. *Int. Journal of Digital Curation* IJDC 2, 2 (2007), 88-99.
- [3] Holdsworth, D., and Wheatley, P. 2001. Emulation, Preservation and Abstraction. In *Research Libraries Group RLG DigiNews* 5, 4 (Aug. 15, 2001) Online at <http://sw.ccs.bcs.org/CAMiLEON/dh/ep5.html>
- [4] Rechert, K., Liebetraut, T., Stobbe, O., Valizada, I. and Steinke, T. 2015. Characterization of CD-ROMs for Emulation-Based Access. *Proceedings of the 12th International Conference on Digital Preservation (iPRES 2015)*, p. 144 – 151.
- [5] Rothenberg, J. 1995. Ensuring the Longevity of Digital Information. *Scientific American*, 272(1) (Jan. 1995), 42-47

¹ <http://www.multimedia-emulation.de/>

- [6] Satyanarayanan, M. 2013. Olive: One-click Execution of Internet-Archived Software. In *NYU Scientific Reproducibility Workshop* (New York, USA, May 30, 2013).
- [7] Steinke, T., Padberg, F., and Schoger, A. 2015. Project EMiL: Emulation-based Access Framework. *D-Lib Magazine*. Volume 21, Number 9/10, <http://dlib.org/dlib/september15/09inbrief.html>.