



imaging & media lab
University of Basel
PEVIAR Newsletter June 2008

Introduction

We are happy to announce two milestones for the PEVIAR project: the publication of important results at this year's Archiving conference, and the beginning of a related new project, MONOLITH, which will integrate the concepts and results of PEVIAR in a marketable product.

Publication of results at Archiving 2008

From June 24-27, 2008, the Society for Imaging and Technology's Archiving conference will take place in Bern, Switzerland. The PEVIAR project has submitted a contribution, which has been accepted and will be presented at the poster session on Thursday, June 26, in the afternoon. We present our results regarding the achievable data density for writing binary data on microfilm and our first channel model for simulation and development of coding schemes. Please find at the end of this document the abstract of our paper, which will be published in the conference proceedings. For further information about our results or to obtain copies of the paper, please contact Florian Müller at florian.mueller@unibas.ch.

MONOLITH project started

In May 2008, the Imaging and Media Lab was able to launch a project involving the PEVIAR group and an industrial partner, Fachlabor Gubler AG. The project is co-sponsored by the Swiss Confederation's innovation promotion agency, CTI. Under the name MONOLITH, the

project develops a marketable digital archiving solution based on microfilm. MONOLITH makes use of the basic knowledge obtained in PEVIAR and focuses on the development of an archiving solution that brings to bearing all the advantages of a hybrid, long-term and technology-independent storage medium and makes them available to institutions and enterprises that need solutions for their digital assets. A first prototypical implementation of the workflow has been completed and is operational. Production of digital archive film rolls has begun. The entire project is set to achieve its goals by the end of 2009. The project website is www.peviar.ch/monolith. For details, please contact Dr. Peter Fornaro at peter.fornaro@unibas.ch.

+++Archiving 2008 Paper Abstract+++

Technological advance causes obsolescence and unpredictable lifetimes of digital storage media and systems. We present PEVIAR, a digital archival solution based on microfilm that offers superior lifetime and independence from proprietary hardware and software technologies. Digital data is to be stored as a 2-dimensional raster image. In order to determine the technical parameters of our system, we carry out an investigation of the device setup given by a recorder, the film itself and a scanner. We measure the modulation transfer function of these components and the granularity of the film material. We also propose a 2-dimensional channel model incorporating intersymbol interference. From our examinations we conclude that a resolution of $8\mu\text{m}$ can be achieved.