

# Towards a Channel Model for Microfilm

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## 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.*

## Author Biography

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