

COMMISSION ON PRESERVATION & ACCESS

Digitization as a Means of Preservation?

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*Final report of a working group of the
Deutsche Forschungsgemeinschaft
(German Research Association)*

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Preface

Digitization is no doubt the issue that most fascinates and haunts preservation managers in archives and libraries at the moment. The possibilities seem limitless, the advantages are obvious, and from all sides

there is pressure to exploit the new medium for preservation purposes?sometimes to the extent that funds are earmarked for digitization that might previously have been allocated to microfilming or conservation.

Yet, for preservation managers digitization is, in a way, a wolf in sheep's clothing. How does one deal, from a preservation point of view, with a medium that is notoriously unstable, for which 10 years is long term? What is the point of relying on such technology, when we worry about saving paper materials that are slowly degrading over 100 or 200 years? In the midst of all the excitement about the potential of the new medium, it is not always easy to keep all the advantages and disadvantages firmly in mind.

The Deutsche Forschungsgemeinschaft (dfg, German Research Association) is actively involved in preservation of research materials. In allocating grant money to projects, it takes the view that in preservation, the enormous potential of digitization for access should be combined with the stability of microfilm for long-term storage. The DFG thus commissioned a study to investigate the relationship between the two methods and to establish how the two could be profitably combined. The result was a detailed report on the technical requirements and advantages of using microfilm as the basis for digitization, which showed how one can have the best of both worlds and achieve both optimal access and maximum preservation.

The report was made available in German in the fall of 1996 on the Internet and was published in January 1997. In July 1997, the European Commission on Preservation and Access (CPA) published an English translation of the study to make the results widely available in the non-German-speaking world. The U.S. Commission on Preservation and Access is pleased to republish the English version for distribution outside of Europe. The CPA and European Commission would like to thank the Deutsche Forschungsgemeinschaft for its cooperation and the authors, Dr. Hartmut Weber and Dr. Marianne Dör, as well as the translator, Andrew Medlicott, for their work on the English version.

The European and U.S. Commissions on Preservation and Access hope this publication will contribute to the development of balanced strategies for microfilming and digitization.

Introduction

Newspapers, books, manuscripts, and archives have for decades been filmed at public expense to protect them from the endogenous deterioration of paper, or from other causes of damage that threaten books and archival material, and to ensure the permanence of the information they contain. Researchers use duplicate microfilms, rather than fragile originals, for their work.

Because printed materials continue to deteriorate rapidly, a joint Bund-Länder (federal-state) working group in Germany has, in conjunction with a conference organized by the Ministers of Culture of the German states, recommended a further extension of filming. The hectic developments in network and data technology, with their constantly improving capacity for the transmission of document images,

open the way to new forms of use. The victory parade of the Internet and the vista of virtual digital libraries, offering ubiquitous and swift access of consistently high quality to documents, must in the future be incorporated into the concept of any preservation program. With this in mind, the subcommittee of the Deutsche Forschungsgemeinschaft (German Research Association) responsible for questions of preservation suggested in the spring of 1995 the establishment of a working group to discuss questions of digitization, in particular the digitization of microfilm. The group was to consist of librarians, archivists, and technical experts currently working in the field, and would explore the demands of quality assurance, and the possibilities and limits of the new techniques.

The working group was convened in November 1995, with Dr. Hartmut Weber (Landesarchivdirektion [State Archives Administration] Baden-Württemberg, Stuttgart) as chair. The other members were: Professor Dr. Hans Bohrmann (Institut für Zeitungsforschung [Institute for newspaper research], Dortmund); Werner Clausnitzer (ms-Mikrofilm Optical Disc GmbH, Wuppertal); Dr. Marianne Dörner (Bavarian State Library, Munich); Dipl. Kfm. Martin Fock-Althaus (srz Satz-Rechen-Zentrum, Berlin); Dipl. Ing. Hartmut Haux (Zeuschel GmbH, Tübingen); Leo Otte (Classen-Papertronics kg-Convertronics, Essen); and Dr. Hartmut Storp (Dr. Storp Consulting, Ahrensburg).

The group concentrated on investigating the technical state of digitization of microfilm and the changing compatibilities of microforms and digital conversion forms. Filming and digitization tests were carried out with standardized test materials and the results evaluated. The group prescribed minimum standards for the printout quality of microforms (material, image quality, and filming organization) for problem-free digitization. It also set requirements for high-quality digitization, relying on the quality index for the reproduction quality of manuscripts, as this is used as a quality standard for microfilming. In addition to black-and-white film and bitonal digitization, the possibilities for digitizing color microfilm were considered. There were also discussions on the processing of microfilm and on the hardware and software needed for quality control and use of data. The vital questions of data security and migration in digitization projects were a central theme. Aspects of financial viability were taken into account at all points. From the findings of the working group, a strategy for the introduction of digitization into preservation projects could be derived: microfilm has continuing priority as a recording and storage medium because of its quality and stability over time. As a medium for document delivery, the digital form, with its advantages of swift and remote access, in a quality depending on the intended use, should be employed. Direct digitization can achieve a result of higher quality in only a few cases.

The following final report, *Digitization as a Means of Preservation?*, was compiled by the authors, with participation by Hartmut Haux and Martin Fock-Althaus and the support of all members of the working group. It was finalized in the summer of 1996. It documents the state of development and offers recommendations to serve as technical and organizational guidelines for filming and conversion projects (particularly those in the public domain). The working group is aware that the speedy development of technology in this area means that conclusions will not have long-term validity. However, the problems considered here cover the field of digitization in all its complexity, and can thus serve, where appropriate, as a model checklist for the preparation of projects.

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