

Digitization of Cultural Heritage

Claudia Loebbecke

Department of Media Management
University of Cologne, Germany

claudia.loebbecke@uni-koeln.de
www.mm.uni-koeln.de

Special Thanks to my Colleague
Prof. Dr. Manfred Thaller
www.hki.uni-koeln.de

All Ideas are Equal - Heterogeneous Access to Cultural Heritage -

Let all owners of Cultural Heritage material
prepare their objects,
as *they* see fit!

⇒ Provide different access frameworks for different visions of heritage

Cultural Heritage

'Whatever' is represented in

- Libraries
- Archives
- Museums

Heavily based on research policy of European Commission
over last two decades

mentioned in

'Draft Constitution' of European Union

... broader understanding possible ...

Digitization of Cultural Heritage

Assumption: Visual reproduction of object *more expensive*
than publishing description of this object



Important objects are 'edited';
most important ones are 'scanned';
⇒ Rest remains untreated

Opportunity: 'Rest' becomes increasingly **smaller** !

No museums, archive or libraries, BUT INSTEAD / IN ADDITION

... some hundred of millions easily and freely combinable
digital objects of culture heritage ?

Digitization of Cultural Heritage: Goals

Create high quality reproductions of 'large' amounts of
source material allowing
(under given financial restrictions):

- > Accessible source material at least one order of magnitude
larger than traditional forms of publication
- > Cataloguing by access information
- > Digital representations going beyond print possibilities

Problem: Such 'images' not (barely) searchable

Digitization of Cultural Heritage: (Digital Autonomous Objects) DACOs

- > CORBA, SOAP ⇒ DACOs ...
- > Reference Architecture
- > Behavioristic concept, how web objects should behave
- > New: Concept of Autonomy (without forgetting context)
- > Not demanding specific protocol,
but suggesting behavior which does not build on / require
control over local environment

Digitization of Cultural Heritage: 'Diözesan- and Dom' Library Cologne (1)



- 'Systematic and complete digitization' of library of medieval cathedral
- Test whether complete holdings instead of individual objects can be digitized & replace 'default medium of scholarship'
- *Not* to reproduce what can be done in print, but to open material for study *not accessible by traditional technology*

See also www.hki.uni-koeln.de © Prof. Dr. Claudia Loebbecke, M.B.A. – Dept. of Media Management - University of Cologne

Digitization of Cultural Heritage: 'Diözesan- and Dom' Library Cologne (2)



2001-2004

Volume: About 130,000 pages
Raw data volume: Ca. 35-48 MB per page
= 3.6 TB
= 6,000 CD-ROMs

... sufficiently cost effective to become a matter of routine

Not library any more,
but about half a million freely addressable
'Digital Autonomous Cultural Objects' (DACOs)

© Prof. Dr. Claudia Loebbecke, M.B.A. – Dept. of Media Management - University of Cologne

Digitization of Cultural Heritage: Distributed Digital Incunabula Library



Purpose

- Prototype for 'complete' digitization of all German incunabula (books before 1500)
- 'Broker' directing users to sources
- Fast and cheap development of such servers

Technical Layout

- Digitization of ca. 2,000 - 3,000 titles in two German libraries
- Volume: About 350,000 pages
- Raw data volume: Ca. 12 TB
- Price of Cologne server: 55,000 Euro with 1 TB capacity

About € 0.75 / page
plus metadata &
work environment

After 10 years, migration to next
generation of storage media cheaper than
further maintenance of original media !

See also www.hki.uni-koeln.de © Prof. Dr. Claudia Loebbecke, M.B.A. – Dept. of Media Management - University of Cologne

Digitization of Cultural Heritage: So Far ...



Description of objects cheaper than visual reproduction

With modern digital technology,
reproducing visual appearance of text
cheaper than description

⇒ Turn new technologies to types and amounts of material,
not publicly available until ten years ago

© Prof. Dr. Claudia Loebbecke, M.B.A. – Dept. of Media Management - University of Cologne

Digitization of Cultural Heritage: Outlook - Points of View



Same, Just 'More Beautiful'

- Digital 'facsimiles' of important manuscripts
- Digital 'facsimiles' with intensive development, e.g. word-based linking
- Imitating possibilities of printed objects on screen

Substantially New

- Making largest possible amount of sources available
- Digital corpora with 'flat' access tools
- New technical potential beyond print offerings

© Prof. Dr. Claudia Loebbecke, M.B.A. – Dept. of Media Management - University of Cologne

.... Questions, Comments, Complaints ?

Thank you very much for your attention !

✉ claudia.loebbecke@uni-koeln.de

© Prof. Dr. Claudia Loebbecke, M.B.A. – Dept. of Media Management - University of Cologne