Towards European Cultural Heritage as Widely Accessible eContent

Professor Dr. Claudia Loebbecke, M.B.A.
Department of Media Management
University of Cologne, Germany
claudia.loebbecke@uni-koeln.de
www.mm.uni-koeln.de

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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 European access frameworks for different visions of Europe's heritage

Agenda
• Introduction: Concepts, Hypothesis, Goals
• Two Examples
• Operational Issues
• Consequences & Recommendation
• Commercial Opportunities
• Outlook - Points of View

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'
… broader understanding possible …

Cultural Heritage as eContent
Basic 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!
Cultural Heritage as eContent: Provocative Hypothesis

Successful digitization

No museums, archive or libraries

BUT INSTEAD

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

Cultural Heritage as eContent: Goals

Create high quality reproductions of ‘large’ amounts of source material

BUT: Such ‘images’ not searchable

Wanted: Presentation 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

Cultural Heritage as eContent: Agenda

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Cultural Heritage as eContent: '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'
• Purpose not to reproduce what can be done in print, but to open material for study not accessible by traditional technology

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Cultural Heritage as eContent: '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)

Cultural Heritage as eContent: Distributed Digital Incunabula Library

Purpose

• Prototype for ‘complete digitization of all German incunabula’ (books before 1500)
• ‘Broker’ directing users to library with digital copy
• Show that such servers can be done fast and cheaply

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

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Cultural Heritage as eContent: Operational Issues
- What technological solutions do we have to systematically digitize large quantities of sources over longer period?
- What does it cost?
- How is it to be organized?
- What precautions are needed to keep material accessible over long period?

Cultural Heritage as eContent: Technical Solutions
- WWW orientation with DBMS in background
- Concentration on access tools
-Obsolete by dwindling prices for storage media
  e.g. 'German incunabula':
  1 TB for € 5,300

Cultural Heritage as eContent: Cost Factors of Digitization
- Raw digitization
- Content and subject classification
- Workflow / Data importation
- Storage capacity
- WWW Server

  Example: 'Incunabula Library'
  About € 0.75 / page
  plus metadata and work environment

Cultural Heritage as eContent: Questions of Organization
- Who digitizes?
- Who selects?
- Who controls access?

Cultural Heritage as eContent: Costs for Physical Survival (Precautions Needed)

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

Calculate costs of migration beforehand!

Example: Prices for DVD-R writers
1998: Ca. US$ 20,000
1999: Ca. US$ 4,500
2001: Bundled with standard PCs
Cultural Heritage as eContent: Intermediate Results

- So far, description of objects cheaper than visual reproduction
- With modern digital technology, reproducing visual appearance of text cheaper than description

Cultural Heritage as eContent: Consequences & Recommendation

What has been published by highly developed technologies of last decades is available;

 العسكرية بإستخدام التكنولوجيا الجديدة توسع التمثيل البصري

Cultural Heritage as eContent: Opportunities for Commercial Exploitation

- **Image server** informing about visual available information
- **Selected images** to be downloaded for free in low quality; images protected by 'watermarks', 'signatures', or both
- For higher resolution, purchase of proprietary software components necessary

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Cultural Heritage as eContent: 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

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Questions, Comments, Complaints?
Beyond this Talk:
Professional Association of Information Systems
www.aisnet.org

Thank you very much for your attention!
claudia.loebbecke@uni-koeln.de