Digitization of Cultural Heritage

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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

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)

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 !

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

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

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…. Questions, Comments, Complaints ?