

Satellite Meeting
"Conservation and preservation of library material in a cultural-heritage oriented context"

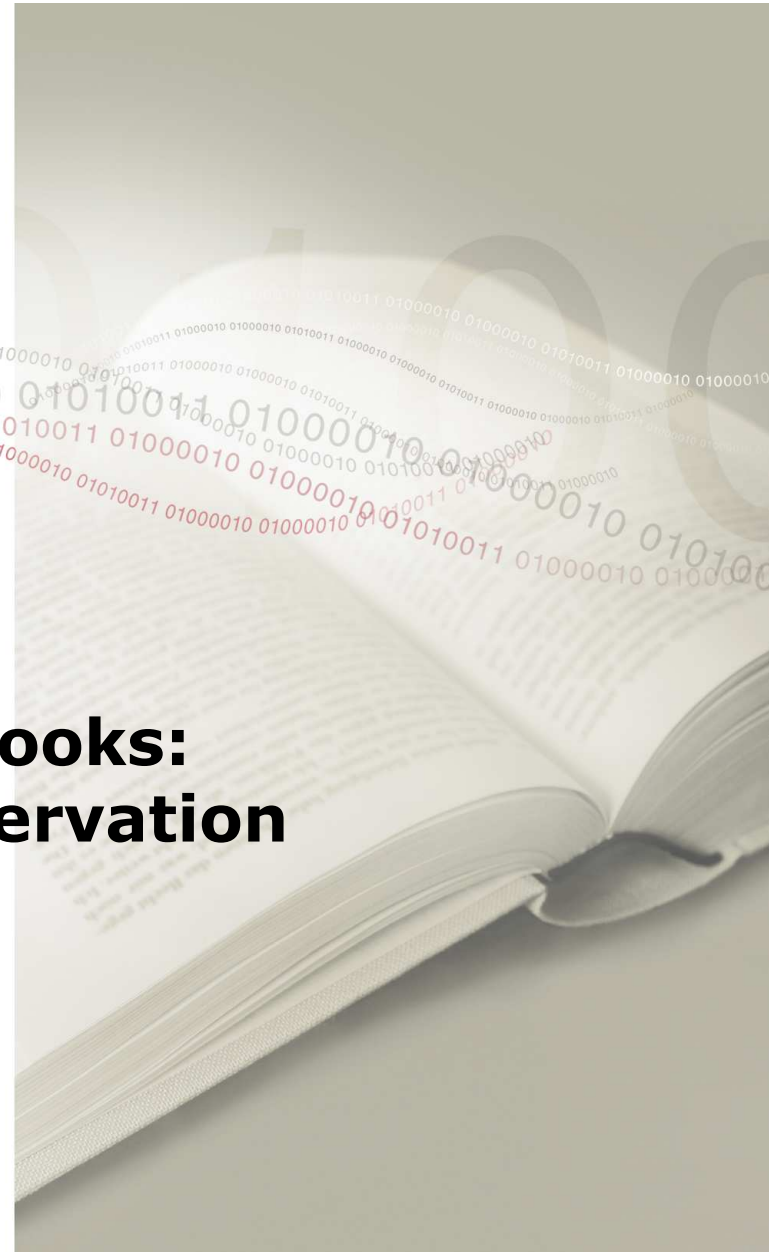
31 August - 1 September 2009
Rome, Italy

Organized by IFLA Core Activity on Preservation and Conservation
and IFLA Preservation and Conservation Section

Thanks to the support of:



Massdigitization of Rare Books: important aspects of conservation





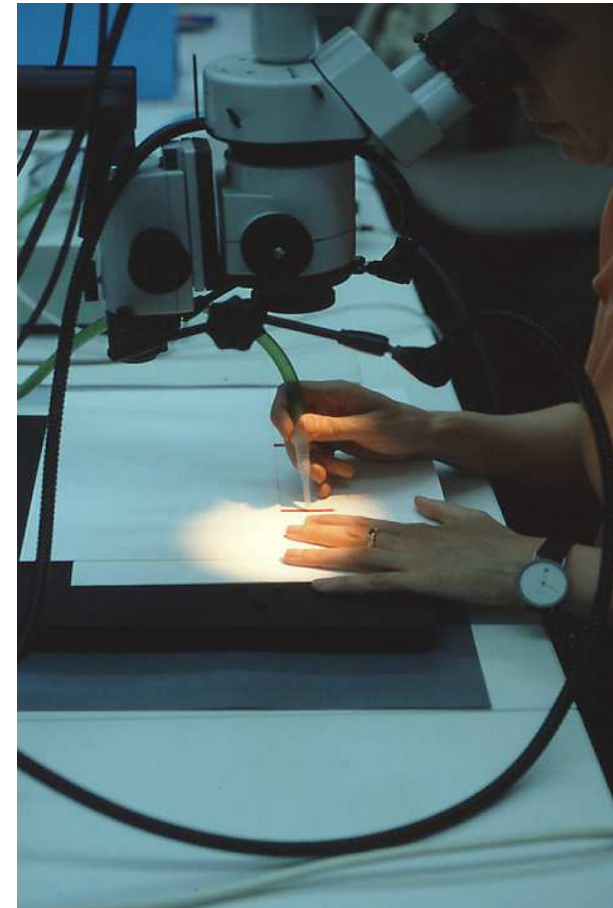
450 Jahre **BSB** Bayerische
Staats**Bibliothek**

Bavarian State Library some facts & figures

- 680 employees
- 10 million volumes
 - 92.000 manuscripts (# 4 in the world)
 - 20.000 incunabula (# 1 in the world)
 - 900.000 rare printed books 1500-1850
 - 8.3 million printed books 1850-2008
- 150.000 incoming volumes p. a.
- more than 40.000 current periodicals
- 12.000 current e-journals, 600 databases
- 450.000 e-books
- 150.000 digitized titles online
- Over 1 million users 2008

Institute of Book and Manuscript Conservation **IBR**

- 1963, 700 sqm
- Staff 16
- Focus on preventive conservation
- Training of conservators:
Bachelor- and Master-Programs





Book on Fencing
ca. 1550 (detail)



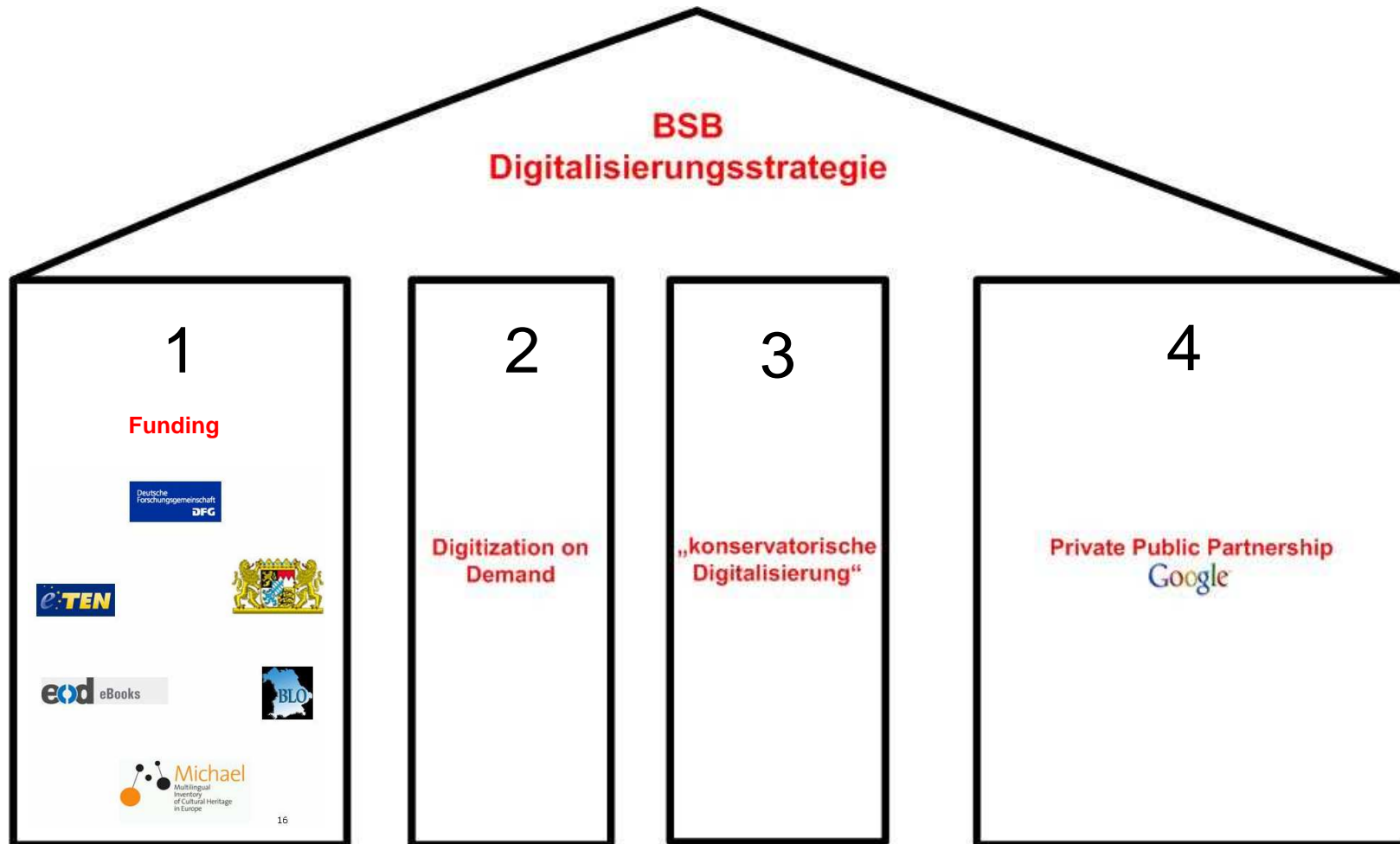
Gold Binding, Illuminated
Gospels, Reichenau,
ca. 1020 (detail)



Globe for the Court
Library, 1575 (detail)

1. Digitization at the Bavarian State Library
2. Materiality of rare books
3. Impact of materiality on digitization
4. Summary

- 1997 Digital Library/Digitization Center (MDZ)
- „Boutique digitization“, e.g.
 - 200 illustrated editions of Vergil's Aeneis 1502-1840
- „Mass digitization“, e.g.
 - 37.000 books from the 16th century
 - 10.000 incunabula editions
 - 1 million copyright free rare books (Google)



- Until now: 150.000 digitized titles online
- Long-term preservation of digital data in cooperation with the Leibniz Supercomputing Center of the Bavarian State since 2004:
>100 terabytes

- ❑ Selection of scanners, or scanner development with companies
- ❑ Training of scan staff in gentle handling of rare books
- ❑ Routine condition control
- ❑ Assistance with scanning of sensitive and high value books
- ❑ Provision of tools



- Scan requirements:
mechanics and materials,
 - No plane pressure (glass sheet!)
 - No direct contact between the glass and the



- weight of glass sheet
- direct contact with text/illustrations



- 120° Opening angle
Spine complex stretched
but tolerable



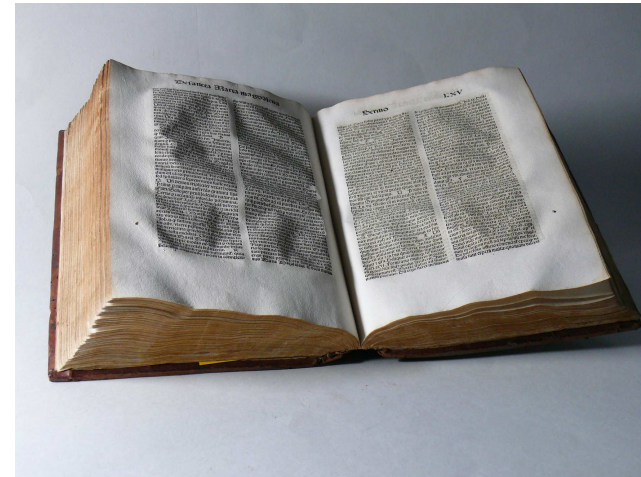
Same book:

- 180° opening angle
Spine complex with
endbands, sewing, spine
lining extremely
overstretched, covering
leather detached

Not tolerable!

Materiality of rare books and the impact on mass digitization

- Distortions of paper
 - by printing process or tight sewing



- Stiff paper
 - by wrong direction of handmade paper within the printing process



- Structure of the spine
 - Making of sewing
 - Sewing cords
 - Spine glueing
 - Spine lining materials



Scan conservation philosophy

Scanners have to be adapted to rare books as individual archaeological objects with their historically given materiality and technique

And not viceversa!

- Opening angle:
 - Type 1+2: 90-120°
 - Type 3: 180°

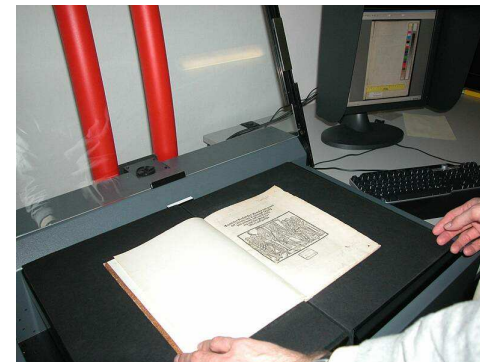


Type 1



Type 2

- Result 16th century:
 - Type 1+2: 70 %
 - Type 3: 30 %



Type 3

- ❑ Book cradle 60° -opening angle, continuously adjustable
- ❑ Up and down-movement of the scan-unit continuously adjustable
- ❑ All parts of ScanRobot in contact with books smooth
- ❑ Pages taken slightly by volume flow (no sucking!)



- Using ScanRobot is much more efficiently as scanning by hand (factor ~ 3)
- ~ 50 percent of 16th century books cannot be scanned by ScanRobot
- ~ 50 percent have to be scanned by hand

prototypes



Microbox,
Nauheim

Bad



ProfiScan

Optimization of manual scanning



Depth of sharpness 19cm;
e.g. item in format DIN A3



- New cradle, April 2009
 - both cradle sides autonomous adjustable

- Under development
 - new Hard- and Software to integrate scanning of covers and foldouts into the process



1. Books as individual archaeological objects require different scan technologies.
2. A multiplicity of codicological parameters decides on the „scanability“ of a book by robot, or by hand, or, on the „non scanability“ of a book (very seldom).
3. Condition control of the books to scan is crucial to decide whether an intervention is necessary **before** digitization. Further damage or even loss of historical substance will be prevented in this way.
4. Further development of scanners is necessary.

Thank you! Your questions?



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Scan-Roboter-Tage 2008



Summit der Hersteller von Scan-Robotertechnologie

Roboter live im Fürstensaal

Präsentationen im
Friedrich-von-Gärtner-Saal

18. – 20. Juni 2008
Bayerische Staatsbibliothek
München

