*Digital Preservation Planning*

*July 29 2008, London, UK*


# Digital Preservation Planning: Principles, Examples and the future with Planets

**organized in cooperation with DPC**

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http://www.ifs.tuwien.ac.at/~andi

# Outline

- Introduction to Planets
  - Who are we?
  - What are we doing?
  - Why are we doing it?
- The Planets architecture and components
- A first glimpse at Planets Preservation Planning

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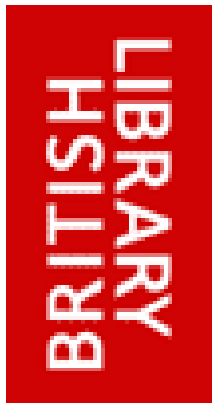
# The Planets project

- 4-year research and technology development project co-funded by the European Union
- Addresses core digital preservation challenges
- Started June 2006 with €15m budget
- Coordinated by the British Library
- 16 partners
  - national libraries and archives
  - leading technology companies
  - research universities
- Builds on strong digital archiving and preservation programmes

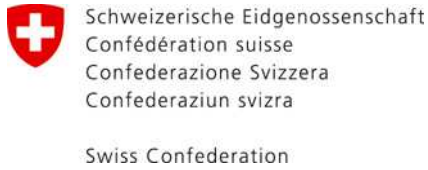
# Planets partners





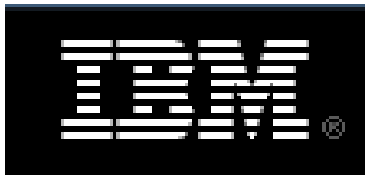

- The British Library
- National Library, Netherlands
- Austrian National Library
- State and University Library, Denmark
- Royal Library, Denmark






- National Archives, UK
- Swiss Federal Archives
- National Archives, Netherlands


# Planets partners




- Tessella Plc
- IBM Netherlands
- Microsoft Research
- Austrian Research Centers GmbH



rechenzentrum
universität freiburg


TECHNISCHE UNIVERSITÄT WIEN

VIENNA UNIVERSITY OF TECHNOLOGY

- Hatii at University of Glasgow
- University of Freiburg
- Vienna University of Technology
- University of Cologne

# The Planets team

**All Staff Meeting, February 2007**

# Aims and objectives

- **Increase Europe's ability to ensure long-term access to its cultural and scientific heritage**
  - Improve decision-making
  - Control costs through increased automation and scalable infrastructure
  - Ensure wide adoption across the user community
  - Establish a market place for preservation services and tools

- **Build practical solutions**
  - Integrate existing expertise, designs and tools
  - Deliver tools and services for operational environments

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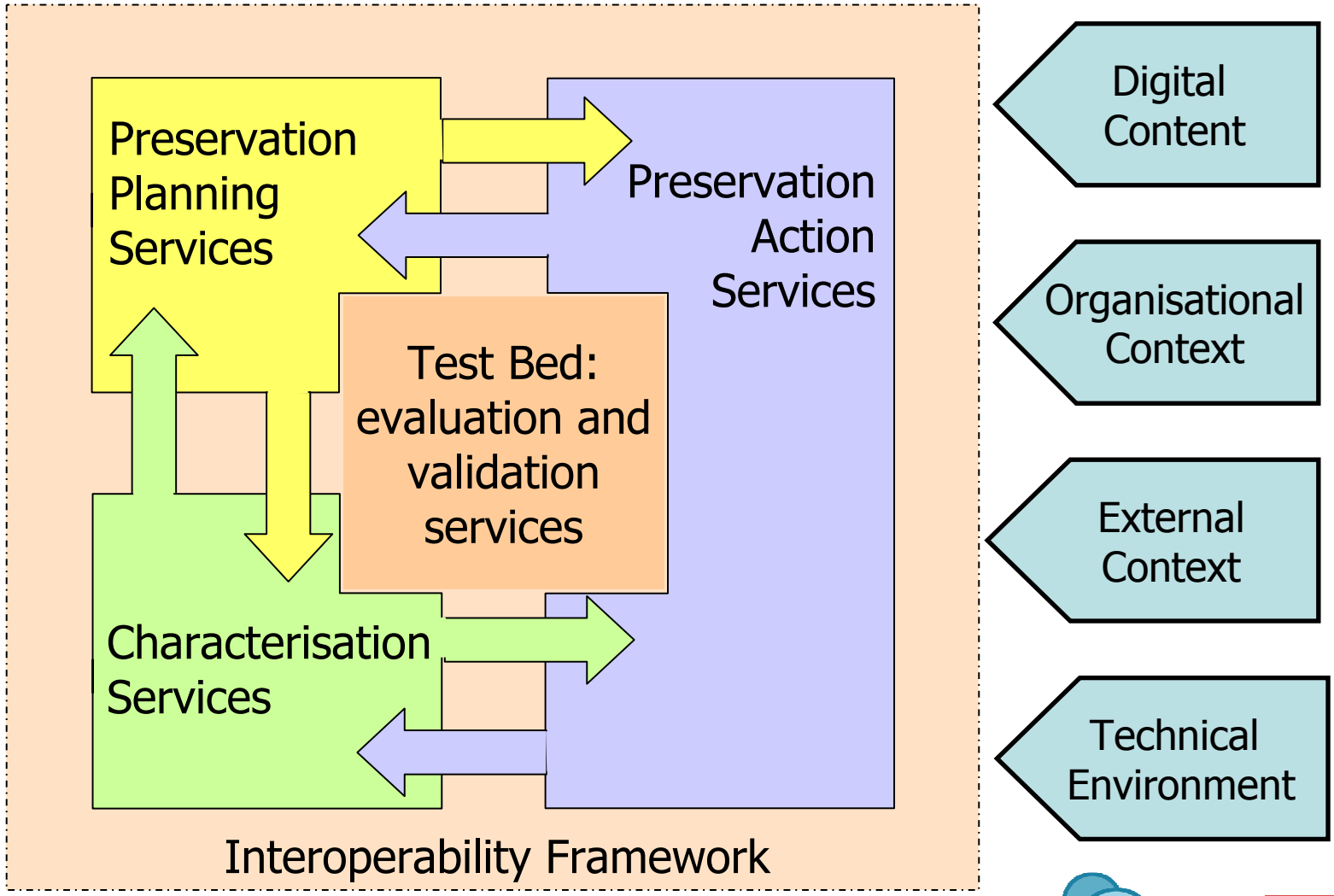
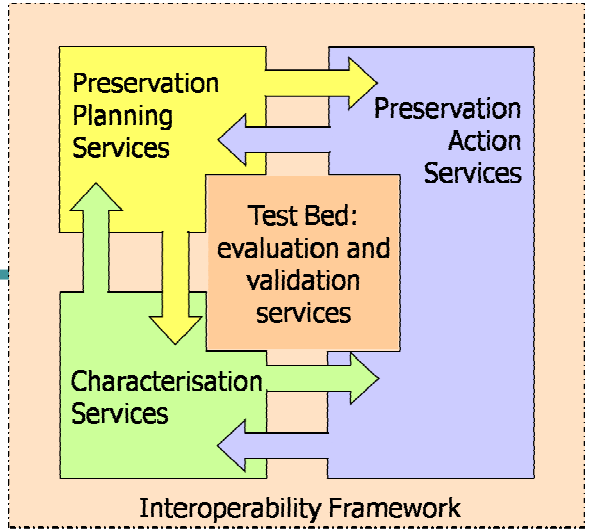
# Planets Architecture

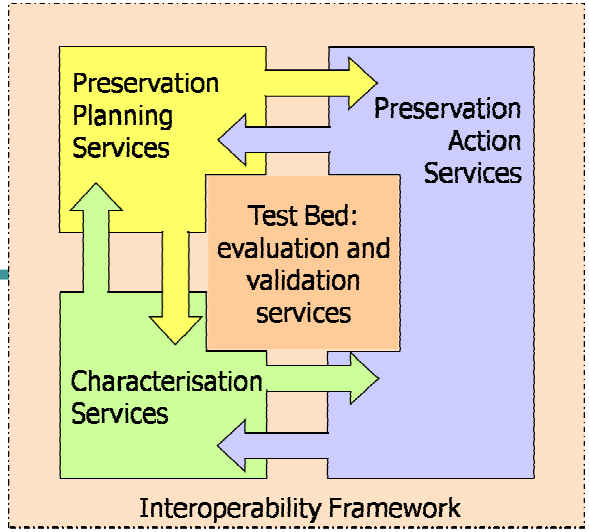


# Preservation Action



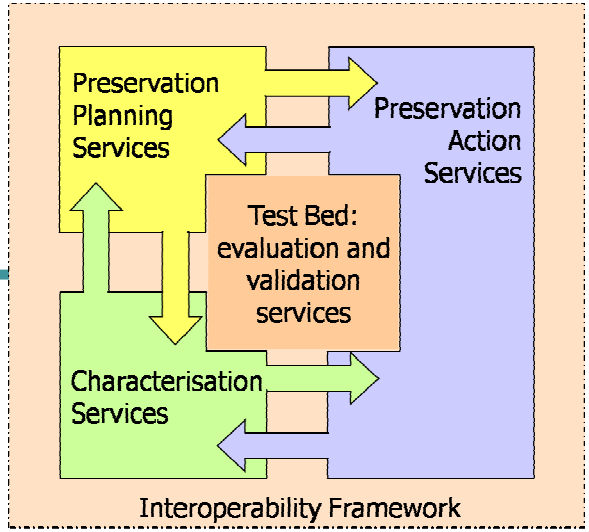

- Transform content
  - Pluggable infrastructure for third-party migration tools
- Transform environment
  - Dioscuri:
    Modular emulation of the full hardware/software environment
  - Universal Virtual Computer (UVC):
    provides a layered durable approach to emulation
- Preservation Action Tools registry
- XML language for describing preservation action tools

# Preservation Characterisation




- Characterisation framework
  - Unifies tools for identifying file formats and extracting object properties
- Characterisation registry
  - Based on the file format registry PRONOM
- eXtensible Characterisation Languages (XCL)
  - Family of XML languages for characterising digital objects
- Comparator verifies effects of preservation actions

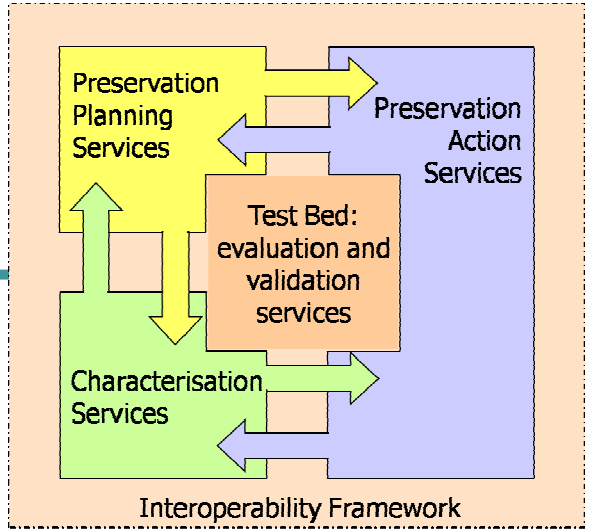
# Infrastructure and Testbed




- Interoperability Framework provides common basis
  - JBoss Application Server
  - Logging, Security Services
  - Registry services
  - User management and Single-Sign-On

- Planets Testbed
  - Controlled environment for the execution of experiments
  - Accumulated experience base collected in registry

# Preservation planning




- Collection profiling services
- Technology watch services
- Risk assessment of digital objects
- Preservation planning methodology
- Tool support: Plato, the Planning Tool

# Summary

- Planets methods, tools, and services help organisations diagnose and treat problems with their digital objects
- High levels of automation and scalable components reduce costs and improve quality
- Empirical data enables improved decision making
- Find out more: http://www.planets-project.eu

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# Preservation Planning

## Why Preservation Planning?

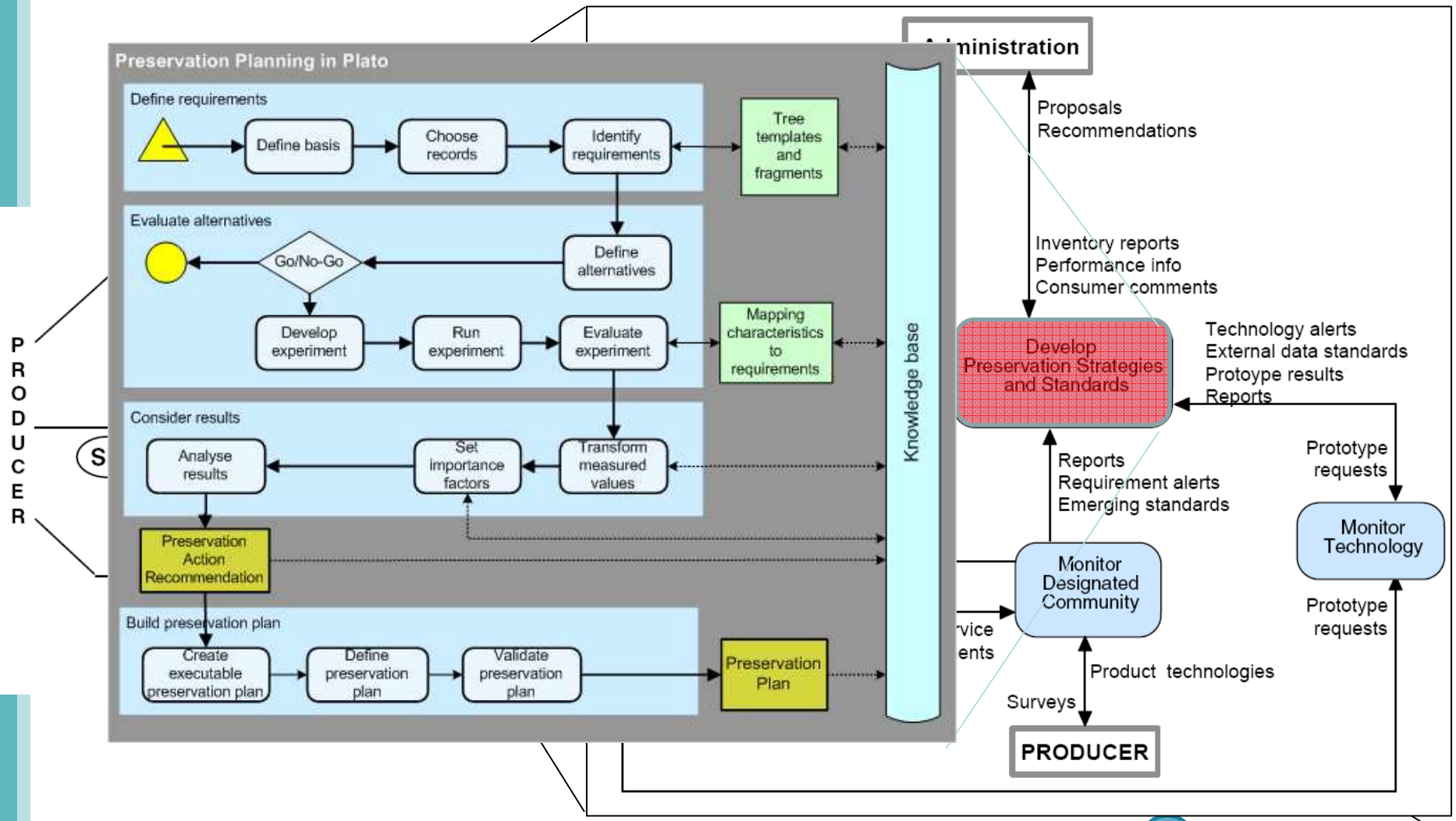
- Several preservation strategies developed
  - For each strategy: several tools available
    - For each tool: several parameter settings available
- How do you know which one is most suitable?
- What are the needs of your users? Now? In the future?
- Which aspects of an object do you want to preserve?
- What are the requirements?
- How to prove in 10, 20, 50, 100 years, that the decision was correct / acceptable at the time it was made?

# Preservation Planning

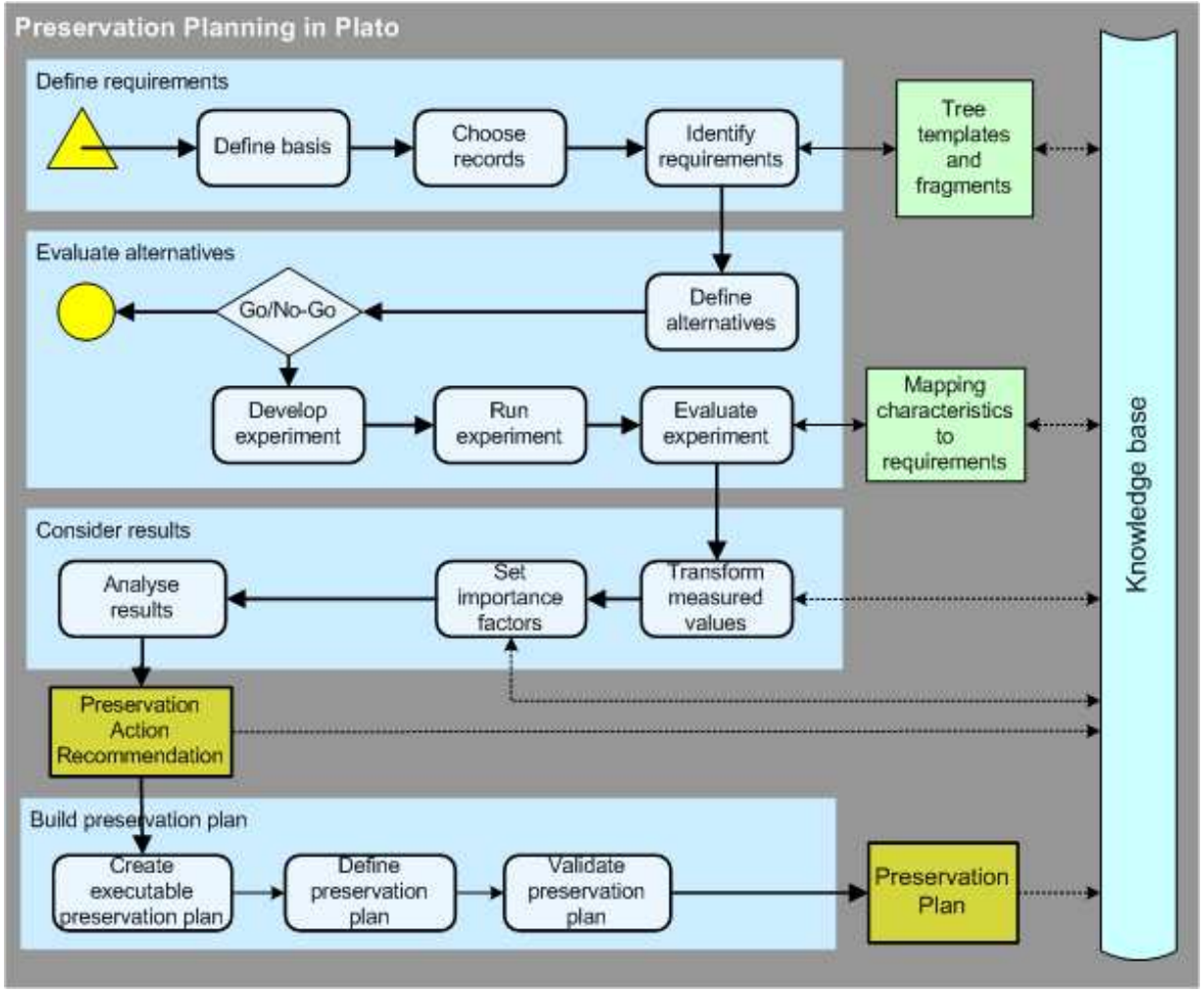
## Preservation Planning Workflow

- Originally developed within the DELOS DP Cluster
  now refined and integrated within PLANETS
- Based on Utility Analysis
- Follows the OAIS model
- Consistent with requirements specified by OCLC/TRAC and
  Nestor criteria catalogue

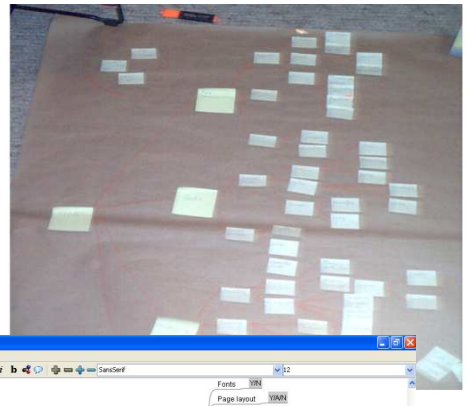
# Preservation Planning

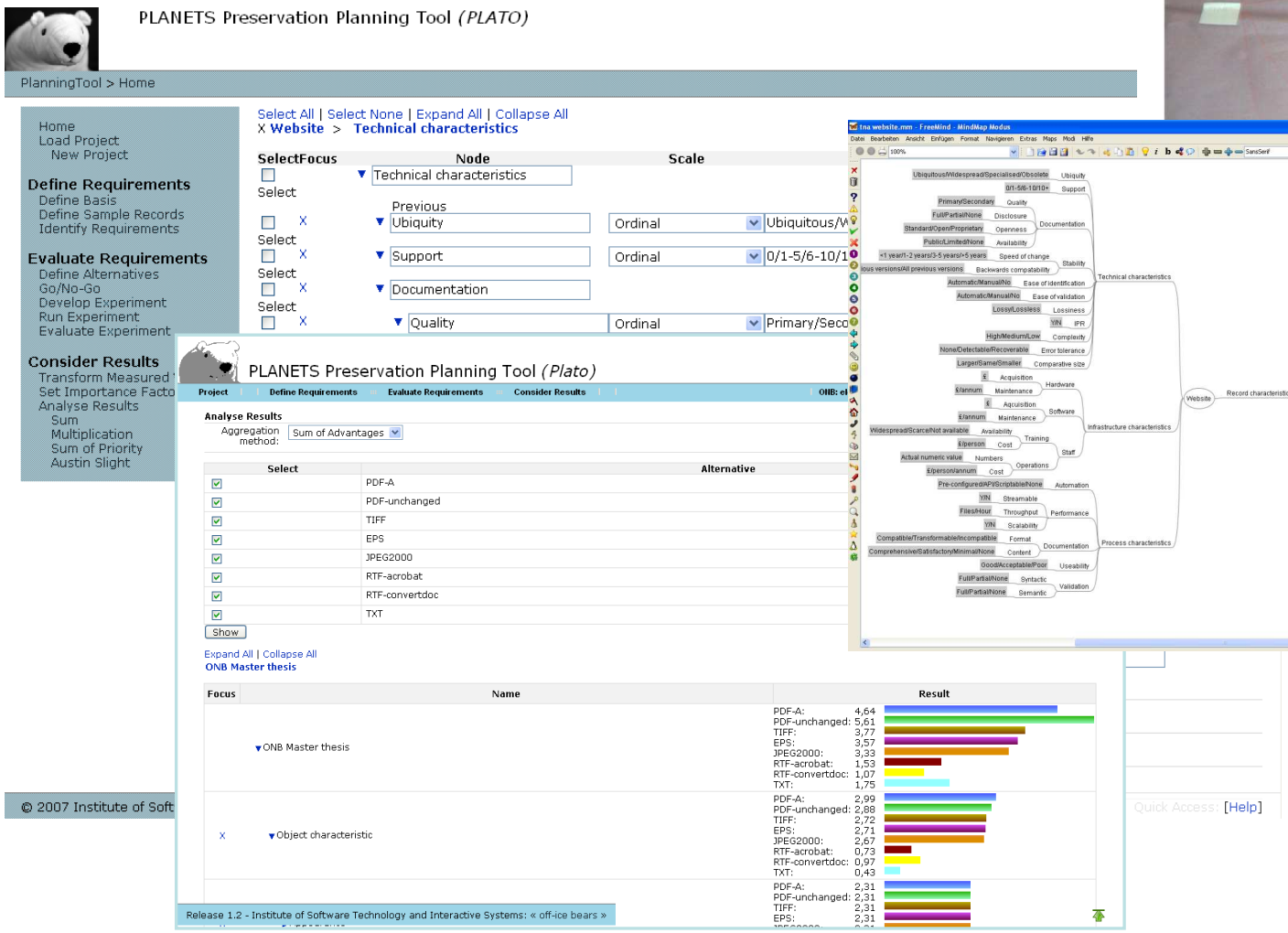


# Preservation Planning Workflow



# Plato




PLANETS Preservation Planning Tool (PLATO)
PlanningTool > Home
Home
Load Project
New Project
Define Requirements
Define Basis
Define Sample Records
Identify Requirements
Evaluate Requirements
Define Alternatives
Go/No-Go
Develop Experiment
Run Experiment
Evaluate Experiment
Consider Results
Transform Measured
Set Importance Facto
Analyse Results
Sum
Multiplication
Sum of Priority
Austin Slight
Select All | Select None | Expand All | Collapse All
X Website > Technical characteristics
SelectFocus
Node
Scale
Technical characteristics
Select
Previous
Ubiquity
Ordinal
Support
Ordinal
Documentation
Quality
Ordinal
PLANETS Preservation Planning Tool (Plato)
Project
Define Requirements
Evaluate Requirements
Consider Results
Analyse Results
Aggregation method:
Sum of Advantages
Select
Alternative
PDF-A
PDF-unchanged
TIFF
EPS
JPEG2000
RTF-acrobat
RTF-convertdoc
TXT
Show
Expand All | Collapse All
ONB Master thesis
Focus
Name
Result
ONB Master thesis
PDF-A: 4,64
PDF-unchanged: 5,61
TIFF: 3,77
EPS: 3,57
JPEG2000: 3,33
RTF-acrobat: 1,53
RTF-convertdoc: 1,07
TXT: 1,75
Object characteristic
PDF-A: 2,99
PDF-unchanged: 2,88
TIFF: 2,72
EPS: 2,71
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RTF-acrobat: 0,73
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TIFF: 2,31
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# Preservation planning

- Evaluating preservation strategies
- Variety of solutions and tools exist
- Each strategy has unique strengths and weaknesses
- Requirements vary across settings
- Decision on which solution to adopt is complex
- Documentation and accountability is essential

- Preservation planning assists in decision making
- Evaluation of strategies on representative sample content according to specific requirements

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Thank you very much for your attention
and
Enjoy the Workshop!

www.planets-project.eu

http://www.ifs.tuwien.ac.at/dp