DELOS
NETWORK OF EXCELLENCE ON DIGITAL LIBRARIES

The DELOS NoE on Digital Libraries: Vision for Next-Generation Digital Library Systems

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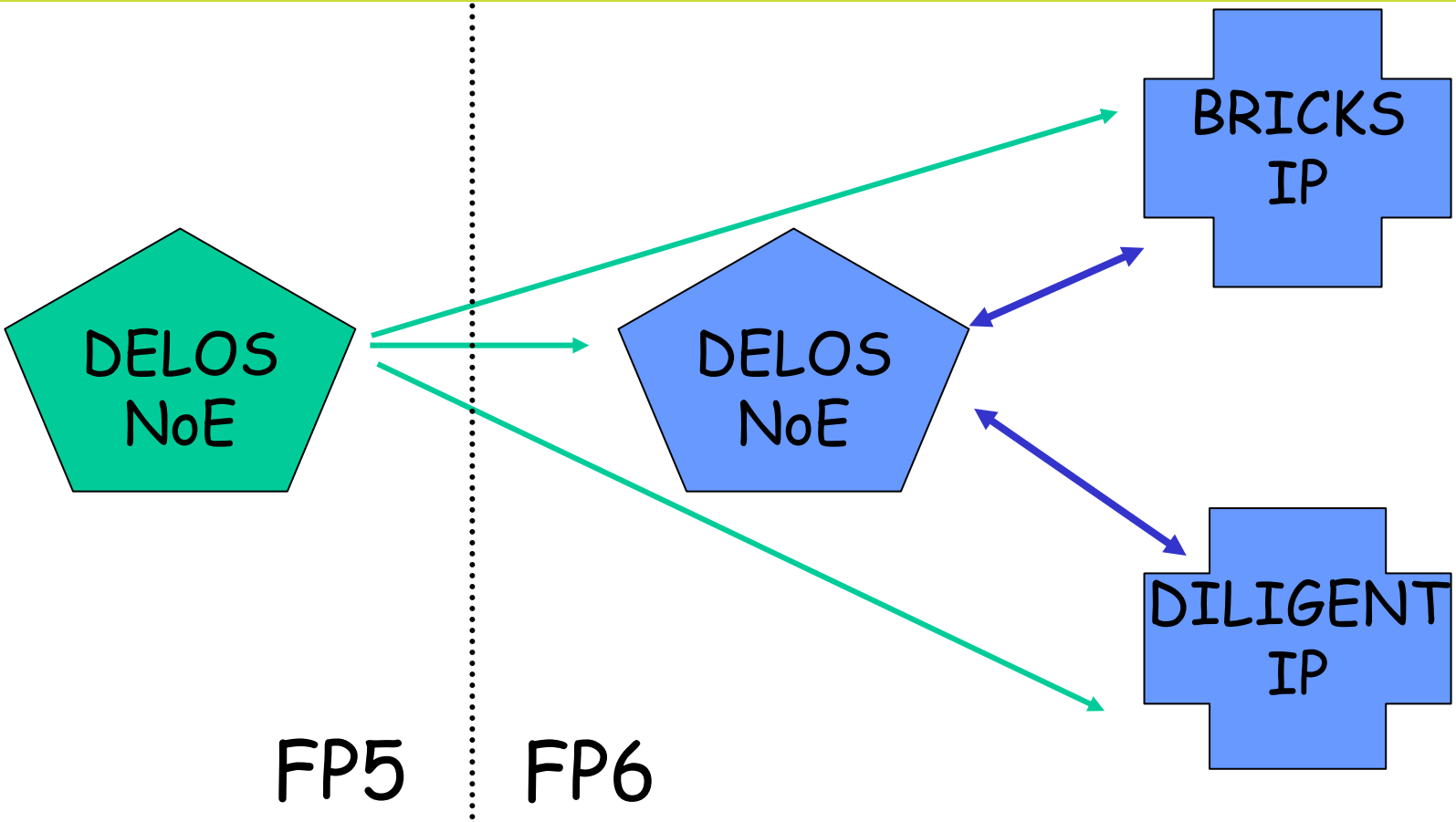
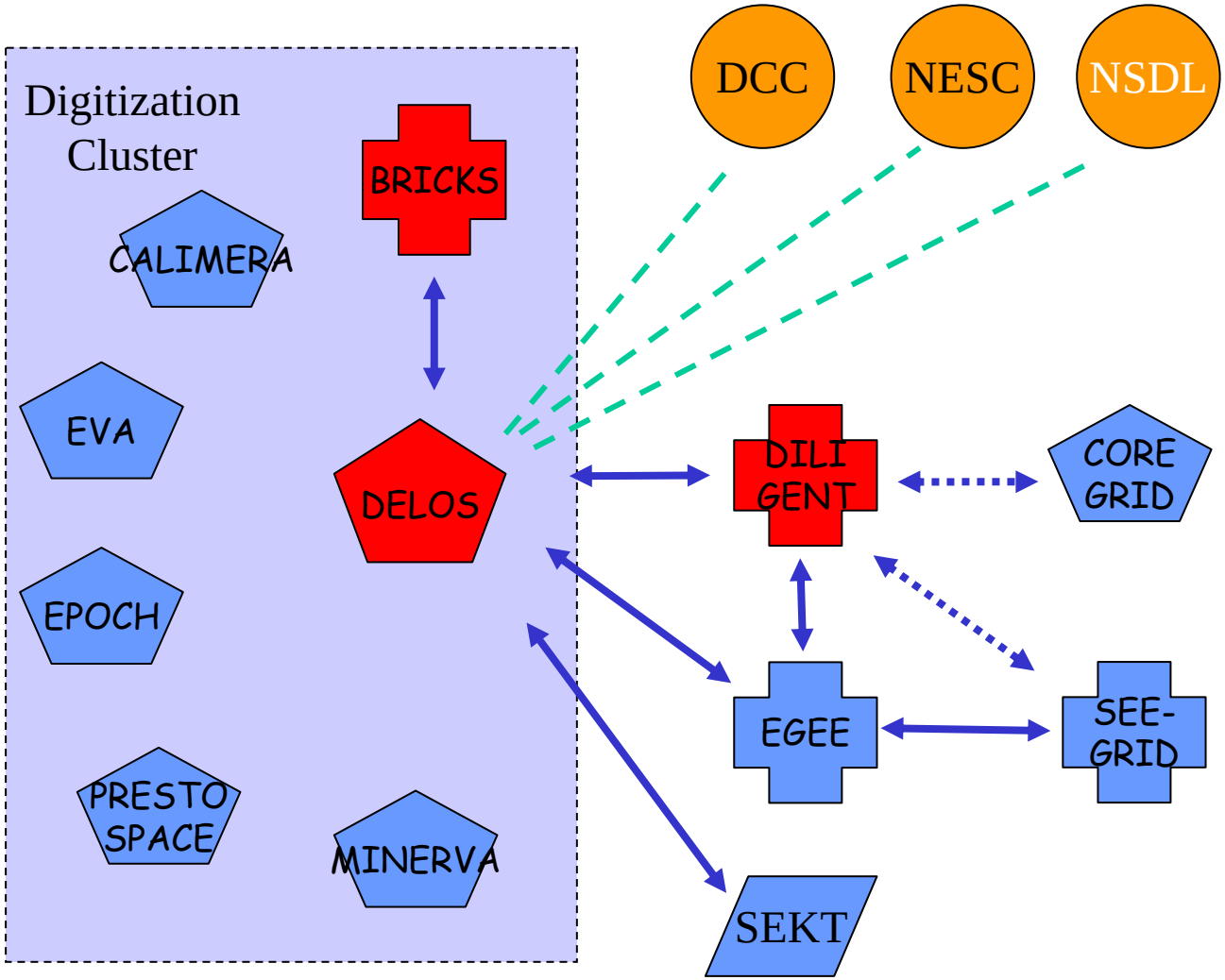
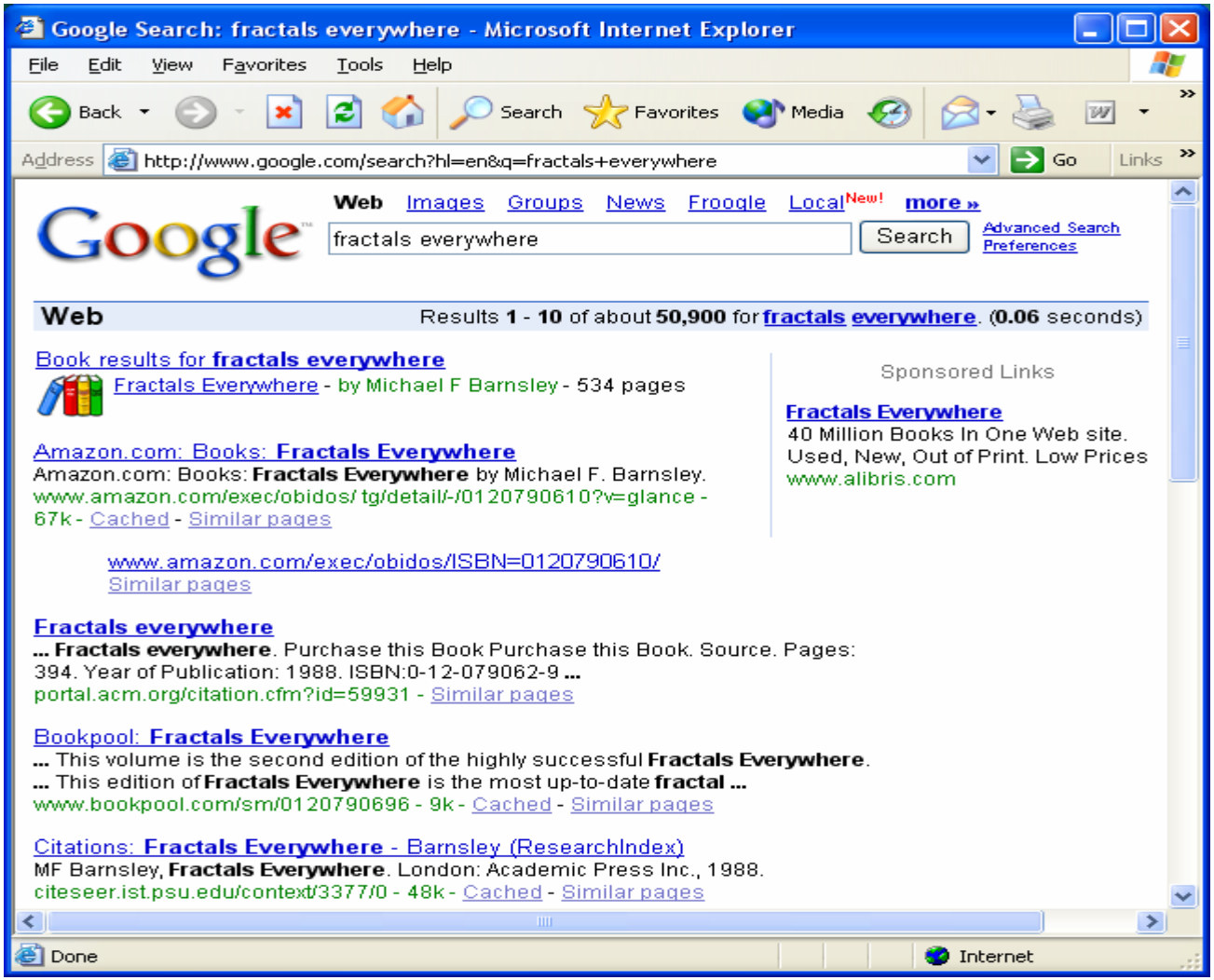
DELOS Project Family Tree



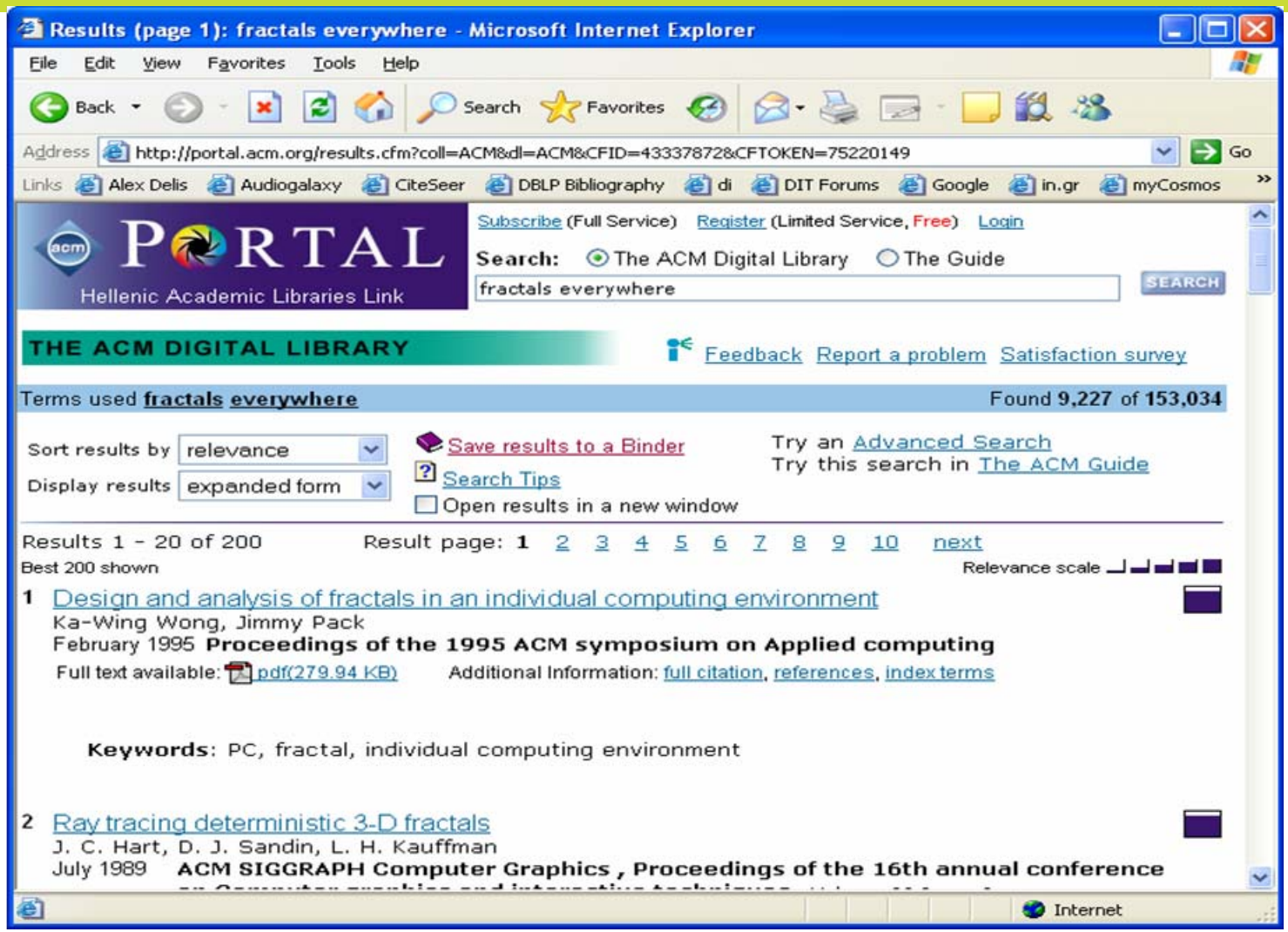
Project Interactions



DL = Search Engine?



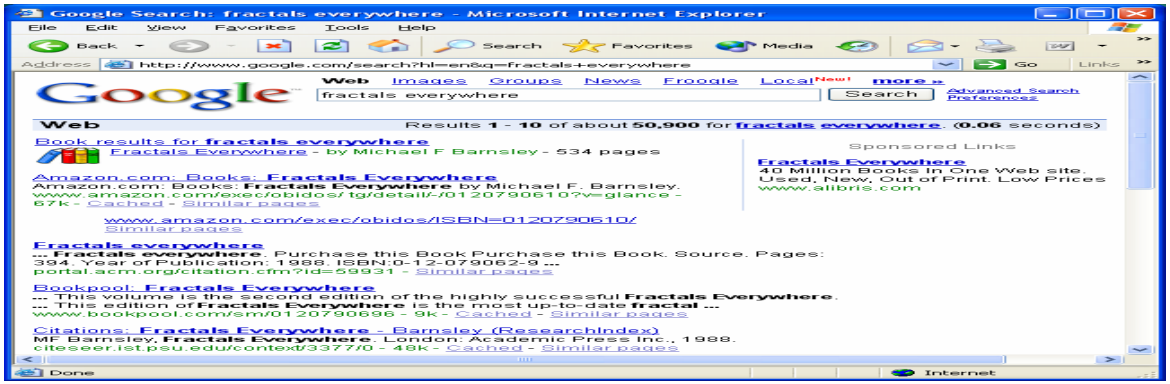
DL = Digitization + Search Engine?



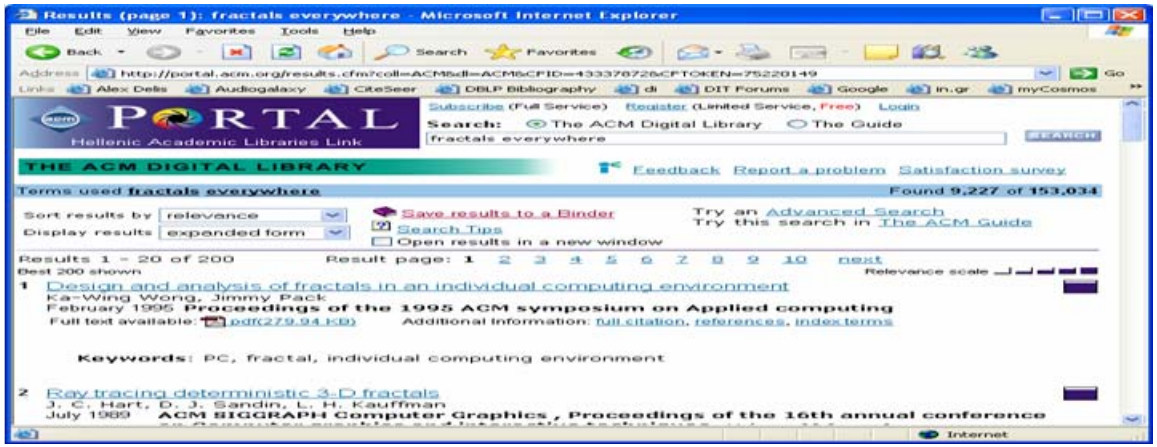
DL Definition

- What: specialized content and services
  - comprehensive
  - rich forms and kinds
  - read-and-expand-mostly
- Why: learning and research
- When: value at depth of time
- How: measurable quality

Classification

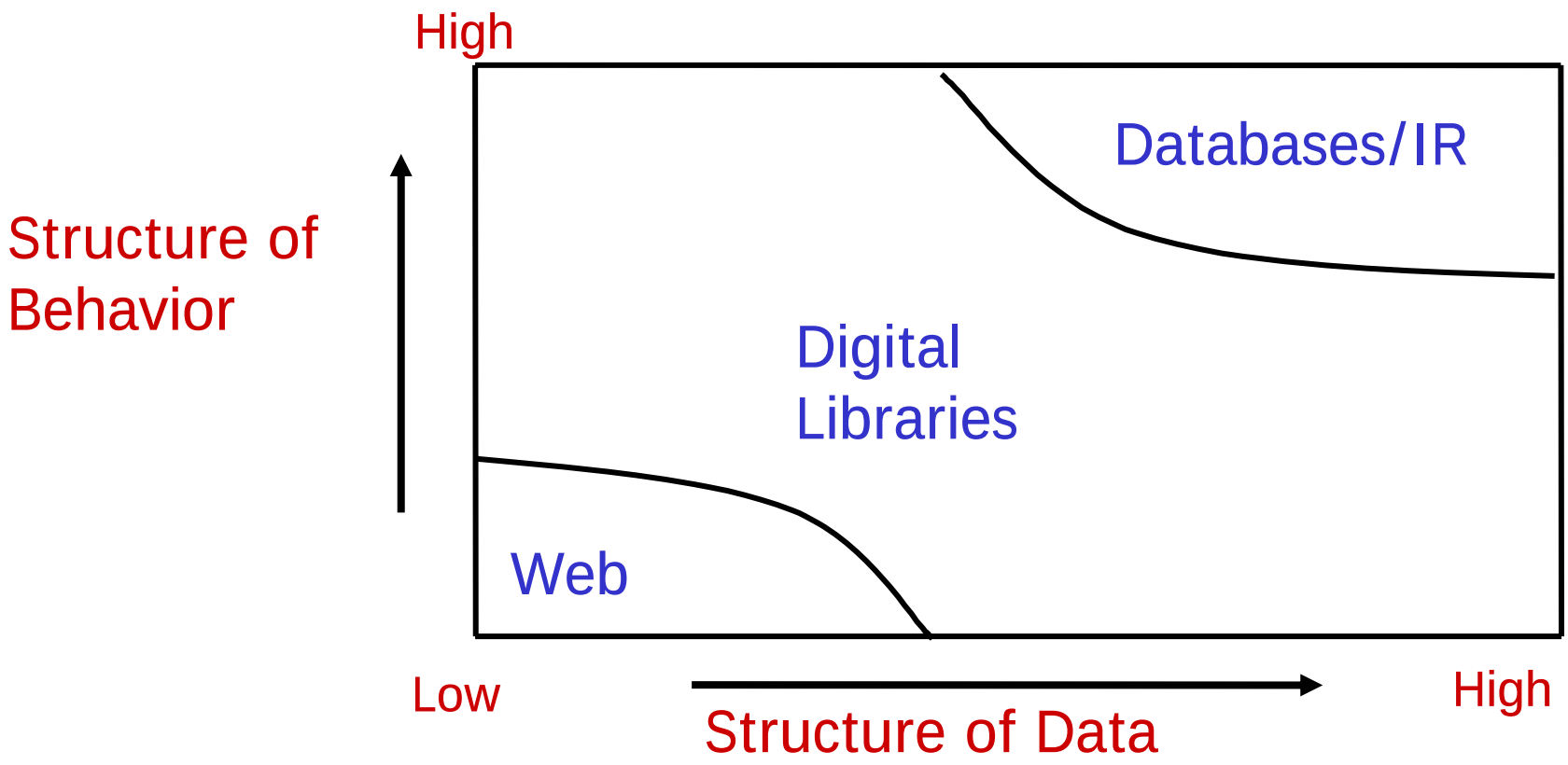


NO

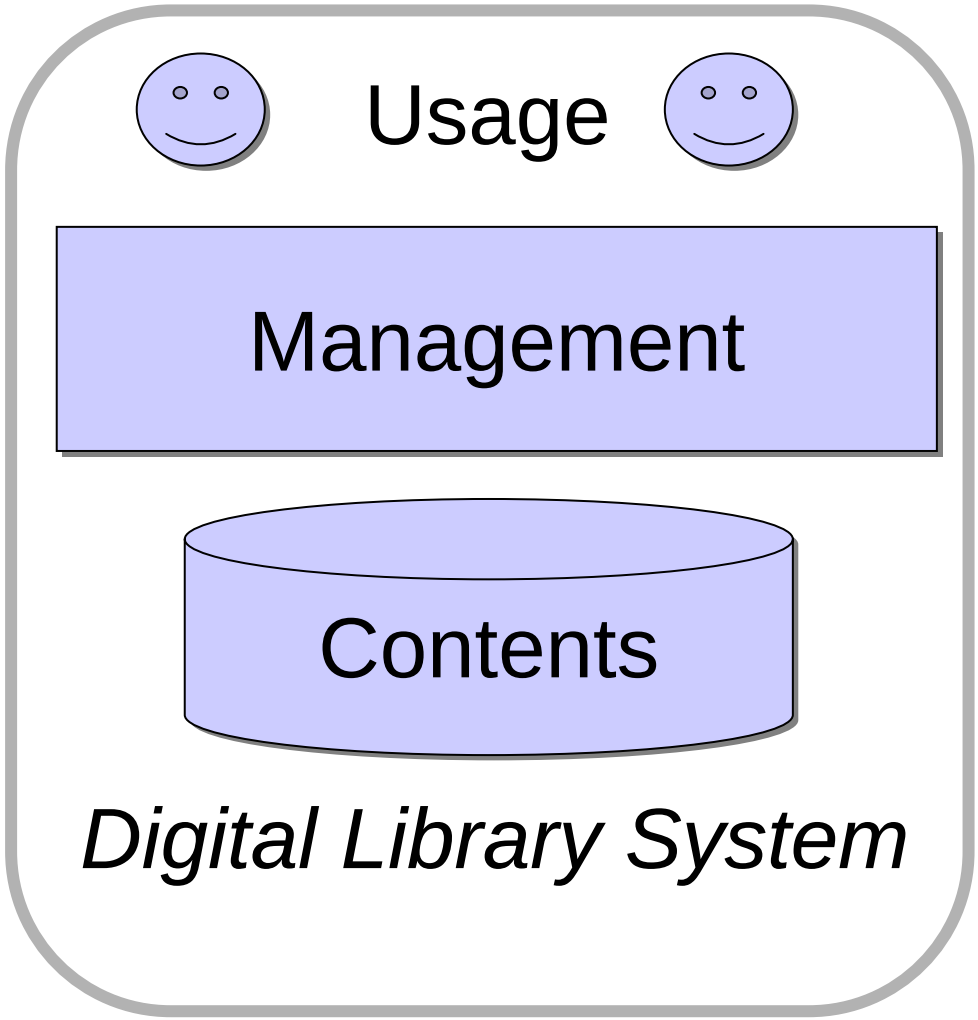


yes

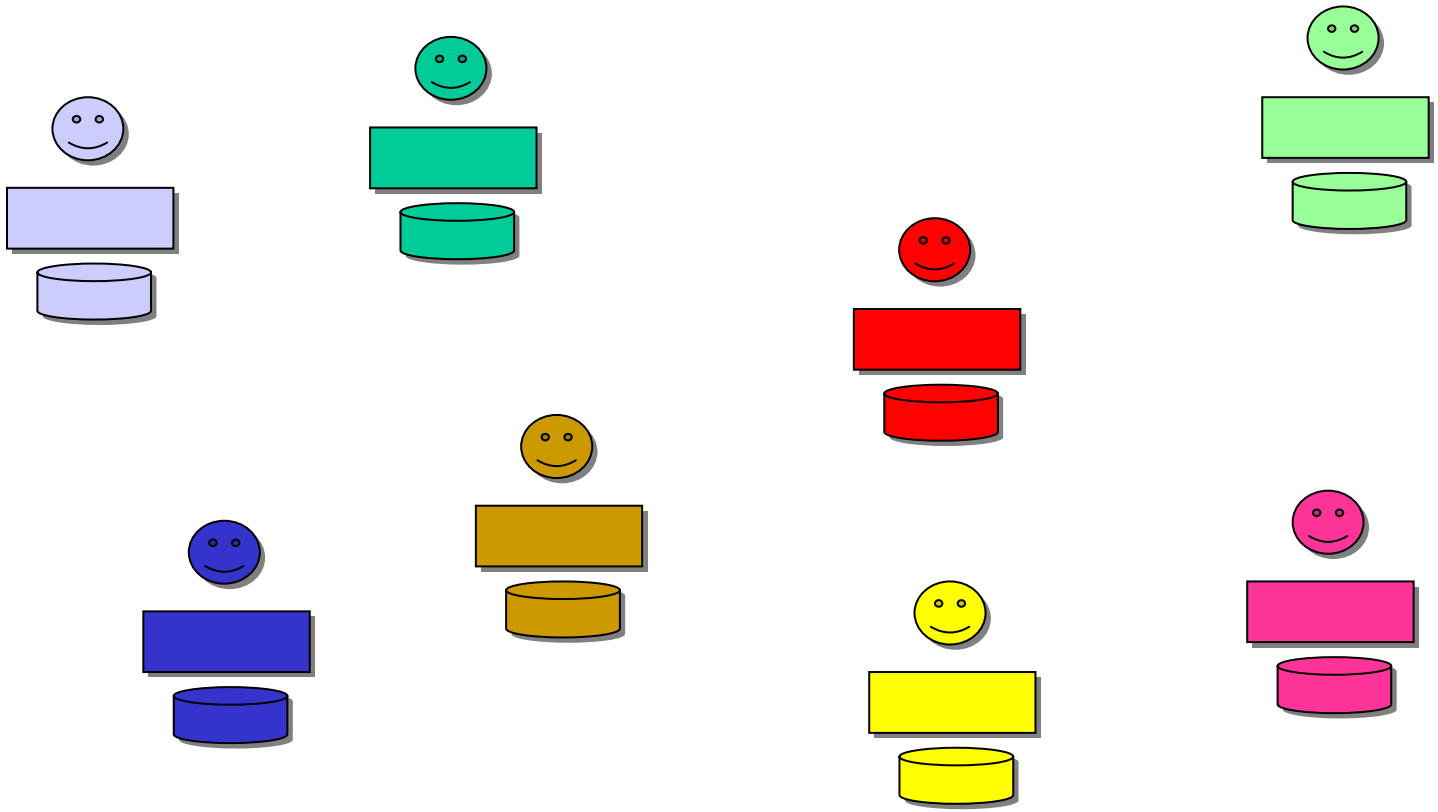
Information Space for DLs



Conceptual Framework



Current Methodology



Current Methodology

Content-centric

Targeted for static storage

Isolated systems

Environment-specific

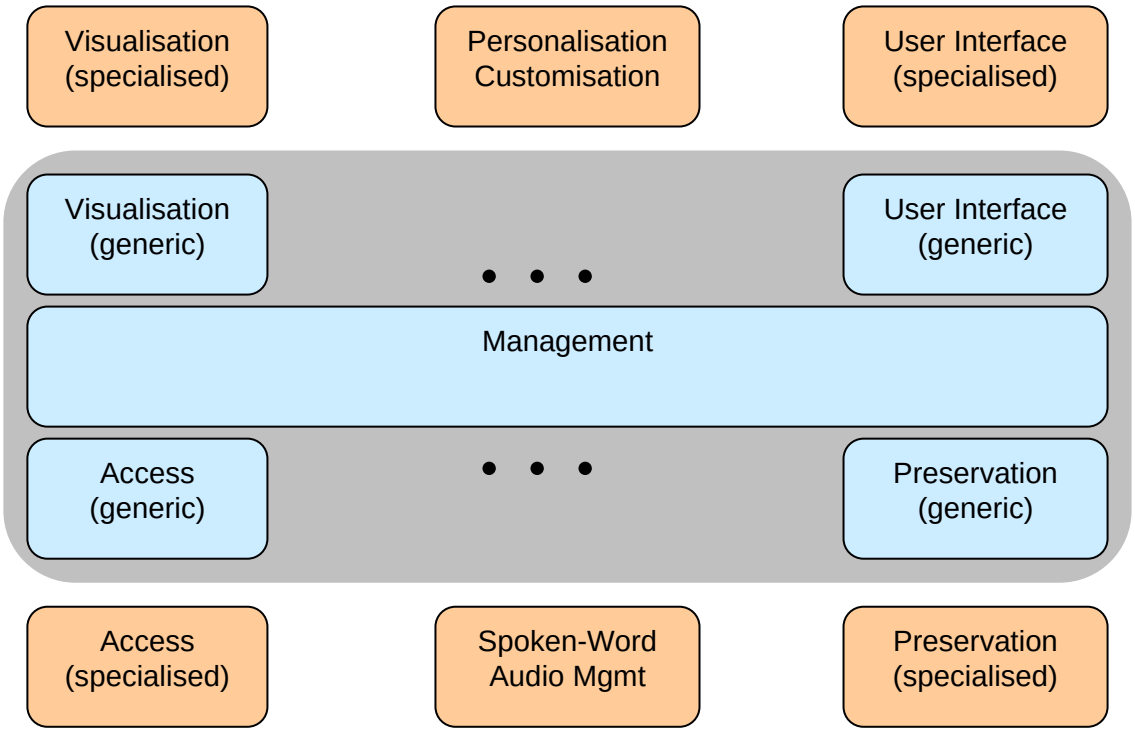
Isolated and repeated efforts

Current Myths

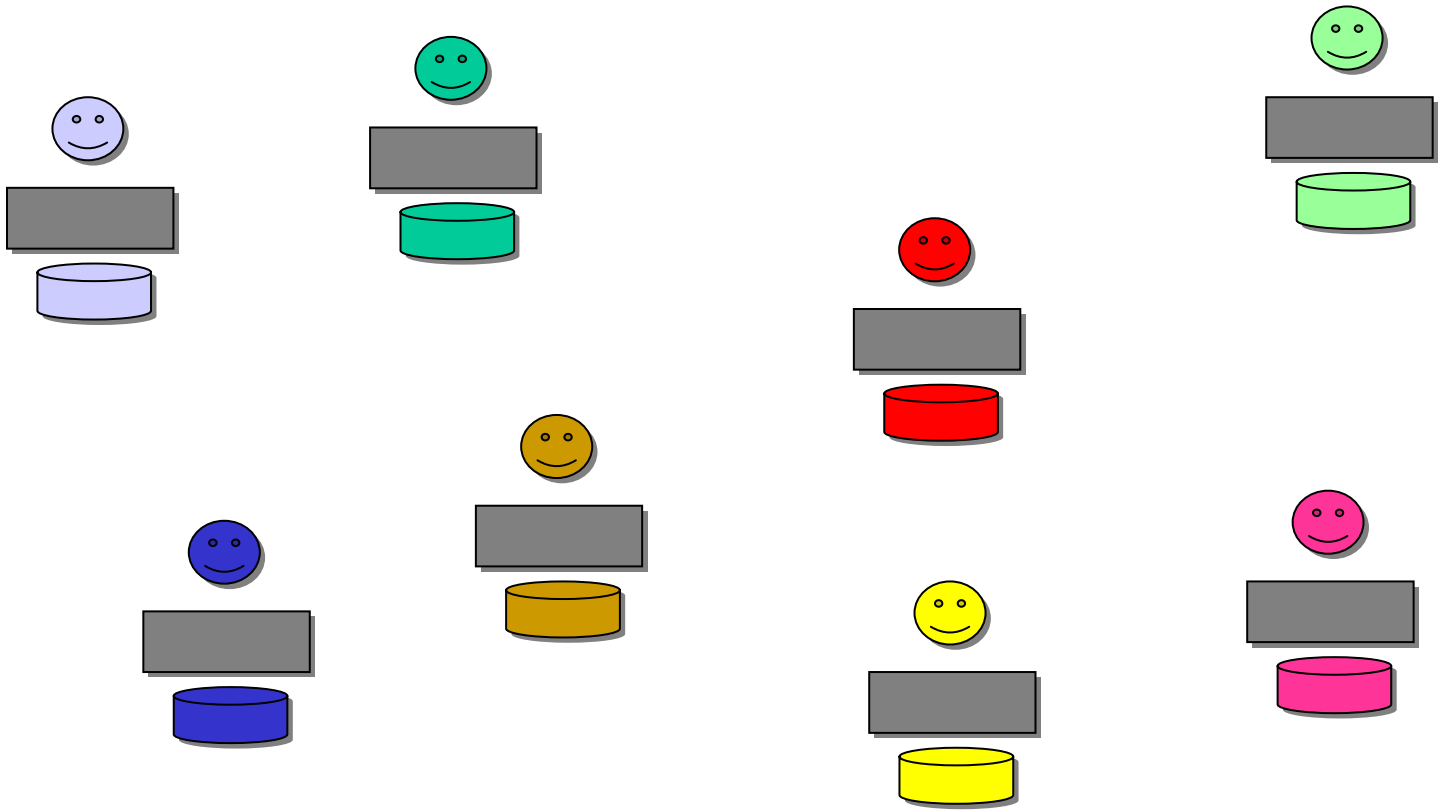
Digital Libraries are for things in Libraries only

Digital Libraries are for Cultural Heritage only

Digital Library Management Systems



Future Development Methodology



Future Development Methodology

Content-centric

Targeted for static storage

Isolated systems

Environment specific/Repeated efforts

Generic DLMS technology to build on

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Grand 10-Year Vision #1

Digital libraries should enable any citizen
to access all human knowledge
anytime and anywhere,
in a friendly, multi-modal, efficient,
and effective way,
by overcoming barriers of distance,
language, and culture
and by using multiple Internet-connected
devices

Grand 10-Year Vision #2

The potential exists for digital libraries to become the universal knowledge repositories and communication conduits for the future, a common vehicle by which everyone will access, discuss, evaluate, and enhance information of all forms

Future Digital Libraries

Content-centric

Person-centric

Targeted for static storage

Targeted for active communication/collaboration

Isolated systems

Global distributed interacting systems

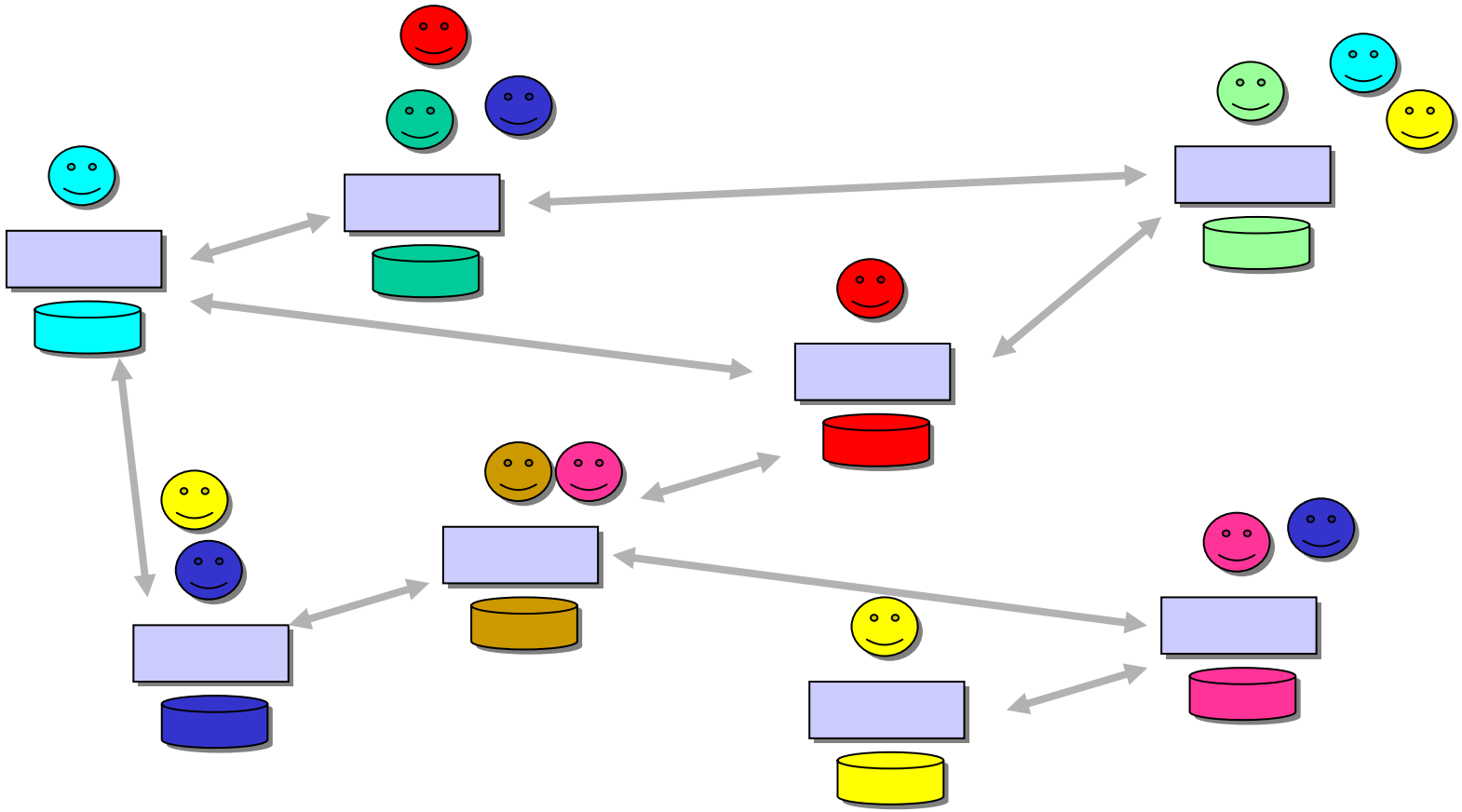
Environment-specific/Isolated and repeated efforts

Generic DLMS technology to build on

Myths about restricted applications

"All" applications

Future Digital Library Development



Stakeholders

- Past-Present: users and providers are mutually exclusive sets
- Future: `user' and `provider' are **roles**
  - Same actor may play both roles at different times
  - DLs at the center of scientific activity (collaboration & communication tool)
  - Increases set of actors and set of applications

Applications

- DLs as parts of larger organizations and application contexts:
  - Health
  - Inclusion
  - Science
  - Government
  - Culture
  - Learning ...
  - Libraries, Museums, Archives, Hospitals, …

Example 1: Virtual University

Insertion of new Project Description

Advanced Querying: Find Similar Image

Coordination:
- Replicate Project Description
- Make Index Up-to-date

DL Search Index

Update Index

Observe Changes

Inst of Building

Replicate Data

Extract Features

Web Servers of Research Groups

Report Repository

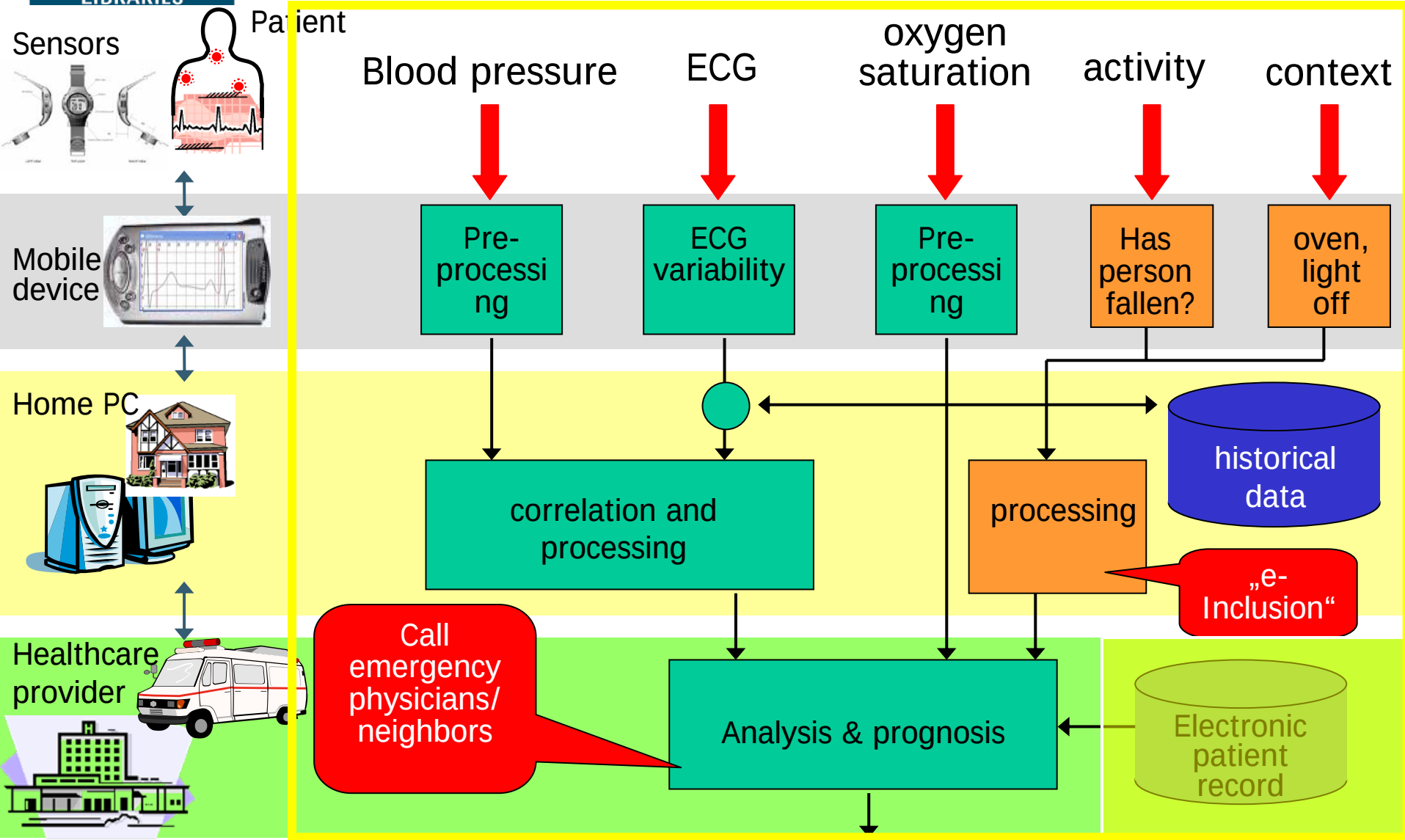
University Research Reports

...

Image Database

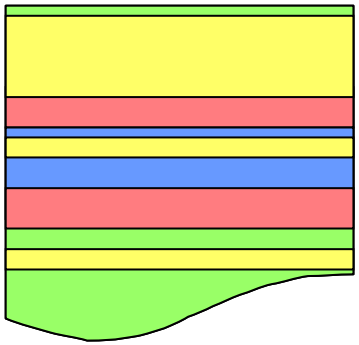
University Library

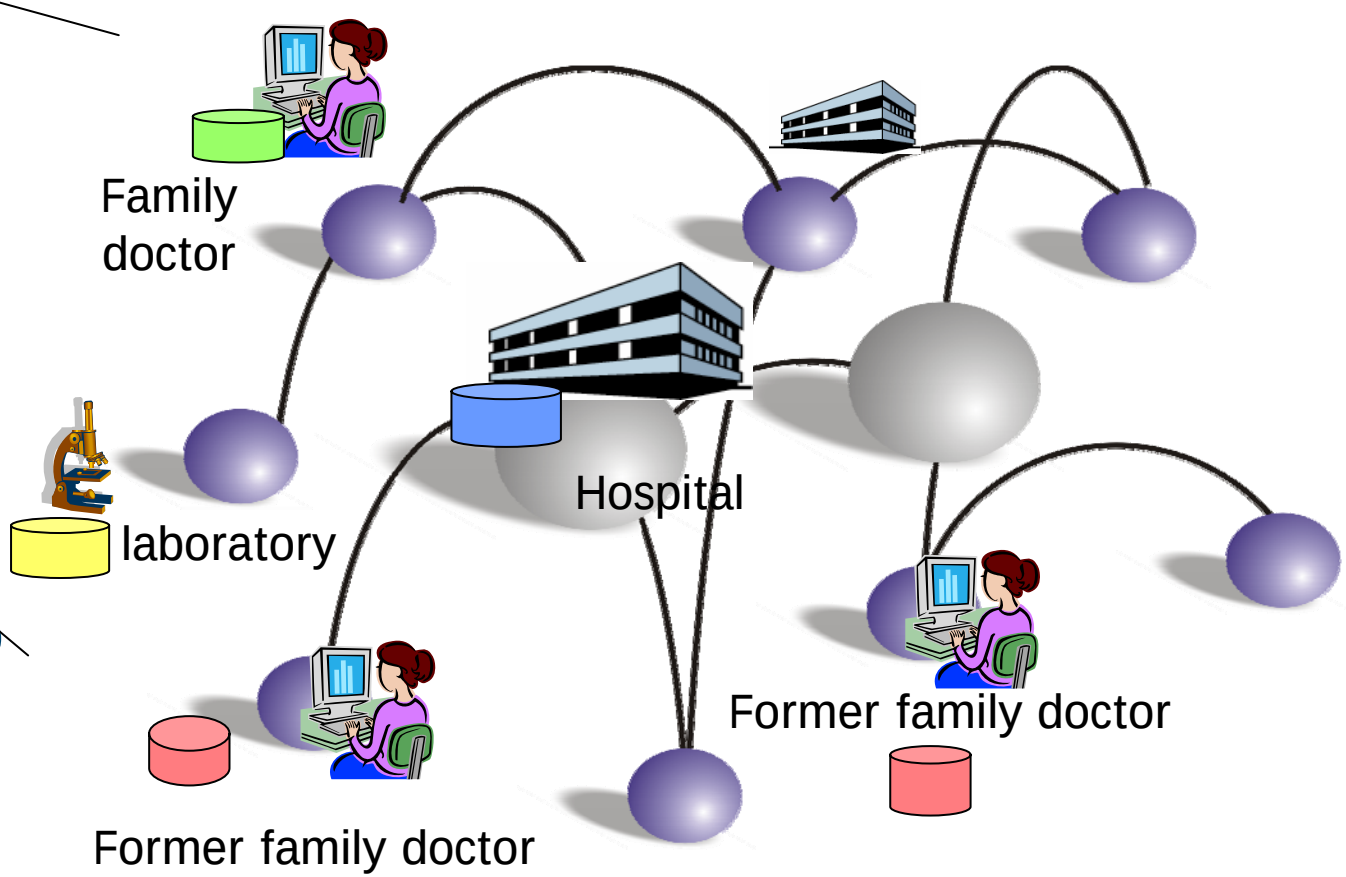
Example 2: eHealth Digital Libraries



Example 2: eHealth Digital Libraries

Electronic Patient Record





- Distributed Info
- Integration
- Protection

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DELOS Agenda (1)

- *Foundational research*
  - Reference Model for Digital Library Systems
- *Systems-related research*
  - Digital Library System Architectures
  - Information Access to Digital Libraries
  - Audio/Visual Digital Libraries
  - Semantic Interoperability in Digital Libraries

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DELOS Agenda (2)

- *User-related research*
  - User Interfaces for Digital Libraries
  - Digital Library Visualization
  - Personalization in Digital Libraries
- *Horizontal issues*
  - Digital Library Curation and Preservation
  - Digital Repositories
  - Digital Library Evaluation Methodologies
  - Digital Library Evaluation Infrastructures

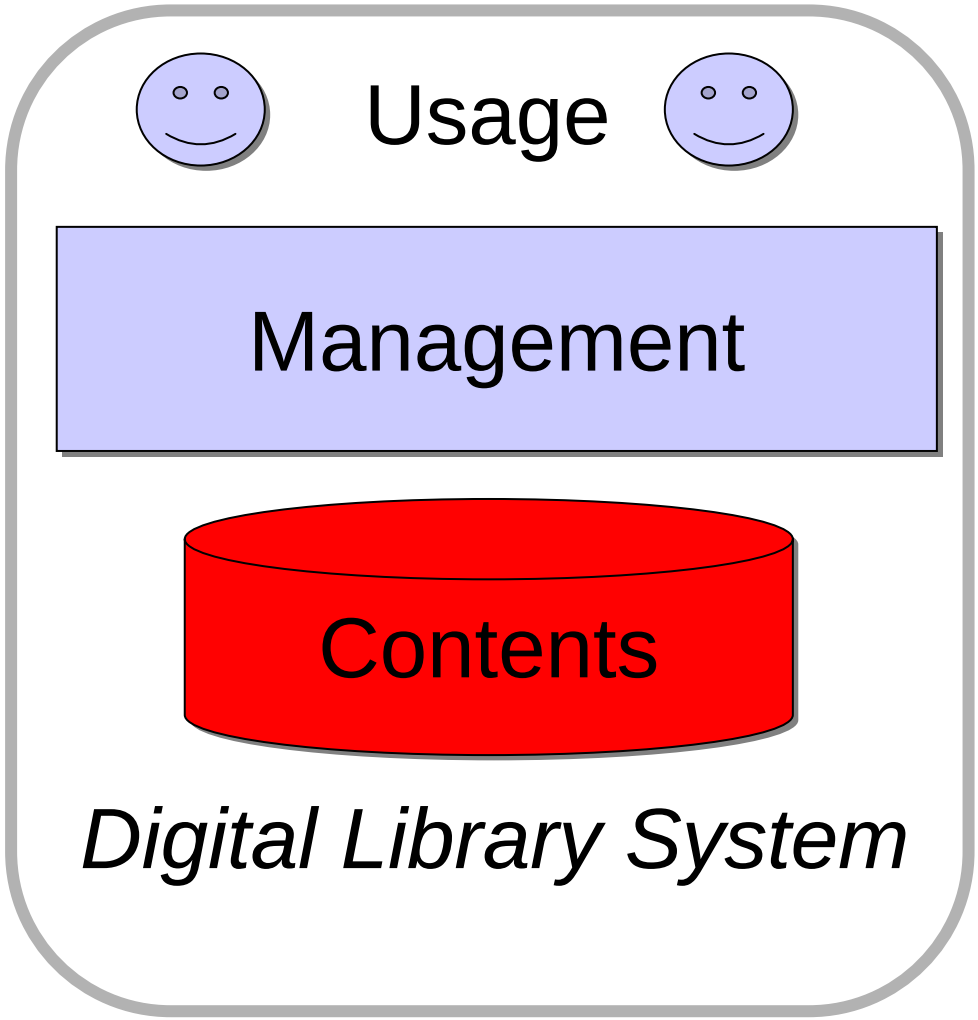
DELOS Agenda (3)

- *Applications*
  - E-Health Digital Libraries

i2010: Digital Libraries

- *Digitization (creating content)*
- *Accessibility (avoiding legal barriers)*
- *Preservation (protecting content from old age)*

i2010: Digital Libraries



i2010 within DELOS vision

- What: specialized content ~~and services~~
  - comprehensive
  - ~~rich forms and kinds~~
  - read-and-expand-mostly
- Why: learning and research
- When: value at depth of time
- How: ~~measurable quality~~

i2010 within DELOS vision

- i2010 a great first step
- i2010 only a first step
- i2010 many steps away from target

i2010 w/n DELOS: separation of concerns

- Digitization and physical preservation of content → member states
- Legality/Accessibility of content → EU

i2010

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i2030(?)

- Integration of content → EU
- Management of content → EU
- Addition of value to content through services → EU

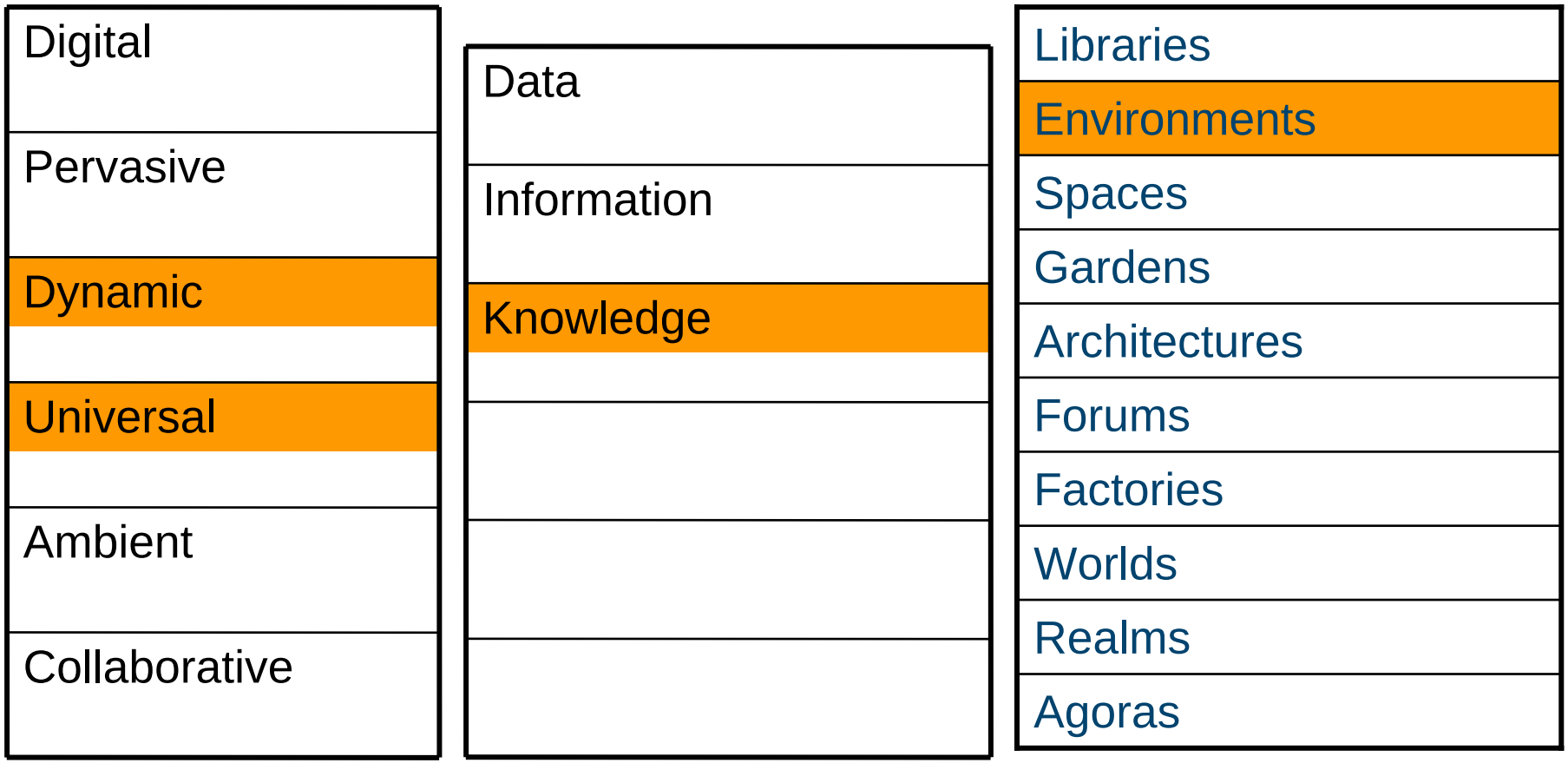
i2010 in parallel with DELOS vision

- Integration of content (e-Content+)
  - Creation of vertical digital repositories
- Management of content (e-Infrastructures)
  - Development and deployment of a pan-European infrastructure
- Addition of value to content through services (e-Learning)
  - Devising sophisticated functionality
  - Serving exciting scenarios
  - Fertilizing “all” applications with this technology

Name

- (Adjective) (bit abstraction) (created entity)
- Digital Libraries
  - Adjective = digital
  - Bit abstraction = <>
  - Created entity = library

Name


Digital
Pervasive
Dynamic
Universal
Ambient
Collaborative
Data
Information
Knowledge
Libraries
Environments
Spaces
Gardens
Architectures
Forums
Factories
Worlds
Realms
Agoras

Rebirth of the Field

DIGITAL LIBRARIES

DYNAMIC
UNIVERSAL
KNOWLEDGE
ENVIRONMENTS

Rebirth of the Field

DIGITAL LIBRARIES

DYNAMIC
UNIVERSAL
COMMONS of
KNOWLEDGE

Rebirth of the Field

DIGITAL LIBRARIES

KNOWLEDGE COMMONS