FEDORA at UNED

2.ª CONFERÊNCIA SOBRE O ACESSO LIVRE AO CONHECIMENTO
Universidade do Minho - Braga

UNED

The Spanish Open University (UNED) is the spanish largest university with more than 200.000 students located around the world.

1376 teachers

6254 tutors

2.000 service staff

A networkd of 60 Associated Centers distributed in spanish Autonomous Communities

14 countries in Latinamerica

E-University

- CiberUned: remote access to University services and applications.
- Internet channel TeleUNED : radio, TV
- Educational Videoconferencing Network (REVC) and comprised of more than 60 installations at the headquarters, the network has been extended to all associated centers. This expansion makes the REVC of UNED the largest videoconferencing teaching network in Europe.
- **The Virtual Classroom:** WebCt, ALF
- Digital library
- OpenCourseWare

Managing rich content

- Learning objects (LMS, OCW)
- Multimedia: videoconference, TV and radio
- Papers, dataset, simulations, dynamic knowledge representation...

Why an Institutional Repository

Digital object

- Management
- Reuse
- Preservation

Rich content

Heterogeneous

Complex

Dynamic

Semantics

Such a repository must:

- Support "Open Access" and "no Open Access"
- Support the whole process of doing and communicating science in a networked world. In the near future our repository must face the challenges coming from a new way of scholarly communication (e-research, e-science)
- Support natively-digital learning system (e-learning)
- Support e-administrative processes

FEDORA

Flexible Extensible Digital Object and Repository Architecture

- Jointly developed by University of Virginia Library and Cornell University. Support from the Andrew Mellon Foundation
- Version 2.1.1

Fedora *Software Distribution Package*

- Open Source (Mozilla Public License)
- 100% Java
- Supporting Technologies
    - Apache Tomcat 4.1 and Apache Axis (SOAP)
    - Xerces 2-2.0.2 for XML parsing and validation
    - Saxon 6.5 for XSLT transformation
    - Schematron 1.5 for validation
    - MySQL and Mckoi relational database
    - Oracle 9i support
- Deployment Platforms
    - Windows 2000, NT, XP
    - Solaris
    - Linux

Why FEDORA

- **Powerful digital object model**: the digital objects, or units of information, in Fedora, may combine any number and any variety of datastreams. These data streams can be local to the repository or may reference content anywhere on the web. For example, one digital object may agregate a scholarly document in multiple text formats, and another may combine the text, images and video that are the basis of a rich web page.
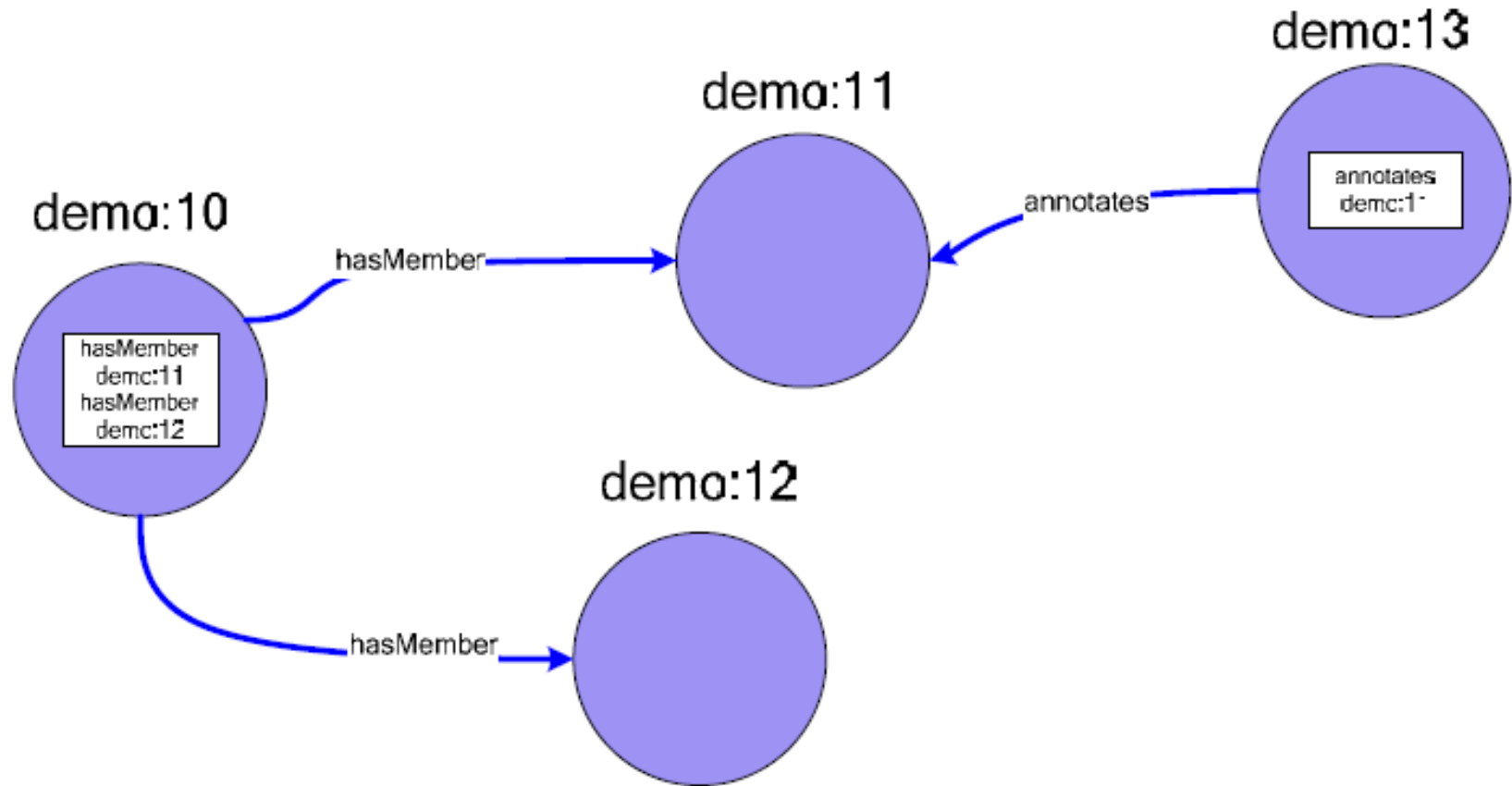
[Digital Object]

Why FEDORA

- **Extensible metadata management**: because metadata and data are treated uniformly in the digital object model, any number and variety of metadata formats may be stored as data streams, alongside the content, in a digital object
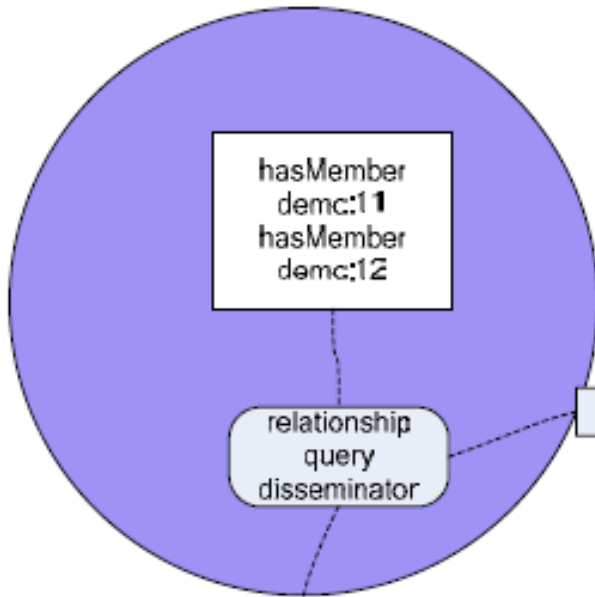- Concerning a previous question:metadata for audiovisual materials

Why FEDORA

- **Expressive inter-object relationships**: digital object contain metadata that expresss any type of relationships such as membership in collections, structural associations like articles in journals or pictures in albums, or taxonomic relationships. Relationship metadata is indexed and can be searched using semantic web query languages.

Relationships among objects

demo:10

hasMember
demc:11
hasMember
demc:12

relationship
query
disseminator

http://host/fedora/get/demo:10/MEMBERS

demo:11
demo:12

Relationship Database
Engine

Kowari triplets database

"itql" ⟹ Access to relationships

Why FEDORA

- Web service integration
  - **Dynamic content delivery**: web services can be associated with any of the data streams in a digital object. As a result, a digital object can deliver dynamic content: the output of a web service processing data in the digital object
  - Fedora repository runs as a **service within a web server**. All of its functionality and all features of its digital object model are accessible through well-defined REST and SOAP interfaces. Thus, it can be easily integrated into a variety of application environments with different user intefaces.

Why FEDORA

- **Version management**: Fedora stores a history of all modifications to digital objects.

- **Configurable security architecture**: fine-grained XML-based access control policies

- **OAI-PMH compliant**: the service exploits Fedora's extensible metadata management, supporting harvesting of any form of metadata delivered by digital objects.

FEDORA web client

- FIRE: from Fedora developpers team, still not released

- [FEZ](#), developped at the Queensland University (Australia)

- Elated

- Vital (Commercial)

- Fedora administrator (no web)

Our Institutional Repository

Currently we are involved in 4 projects:

-Self archiving

E-SpacioUNED

-Special Collections

-Integration of audiovisual materials from our
internet channel Teleuned

-Data provider for the Madrid public universities
consortium open access portal . example

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¡Muitos obrigados!

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