

Developing a digital repository infrastructure for sharing digital resources in the teaching education community

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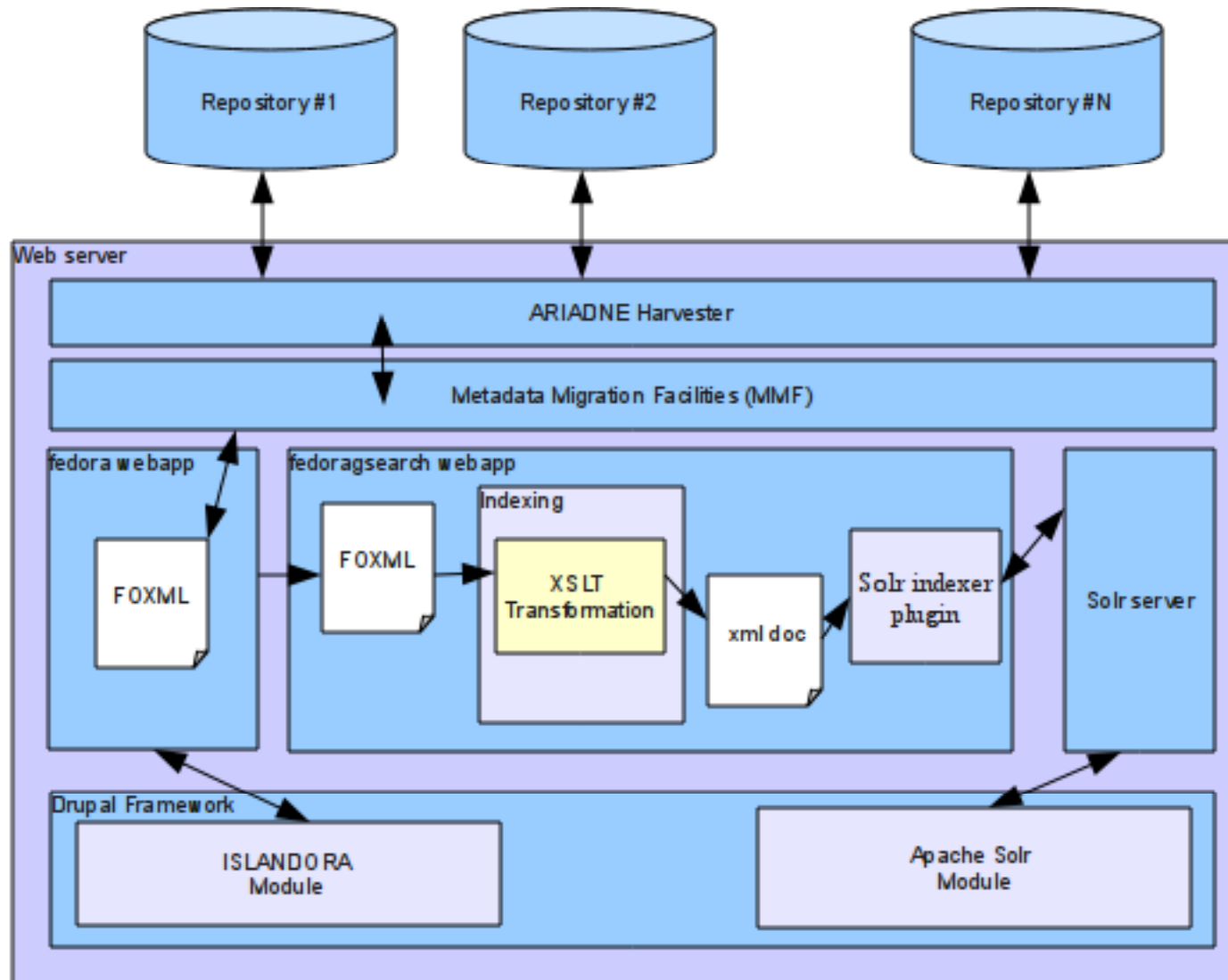
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The main goal

- To establish a highly visible and functional portal with advanced brokerage services that will provide personalised access to a wide-range of Teacher Education (TE) content.
- The system is not devoted to the digital assets themselves, but to the metadata used to describe those digital assets

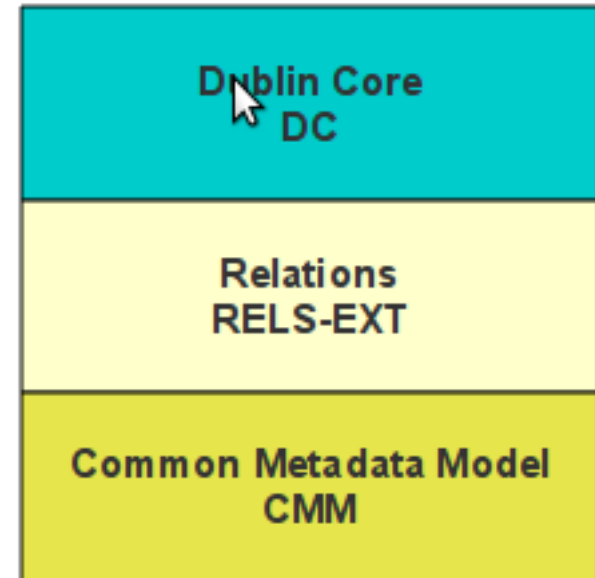


System architecture overview



Metadata (1)

- The central repository contains metadata representing resources from the Teacher Education (TE) domain.
- These metadata are represented in Common Metadata Model (CMM) format, expressed as an application profile of LOM



Metadata (2)

```
-<lom xsi:schemaLocation="http://ltsc.ieee.org/xsd/LOM http://ltsc.ieee.org/xsd/lomv1.0/lom.xsd">
- <general>
- <identifier>
  <catalog>URL</catalog>
- <entry>
  http://www.revistacomunicar.com/index.php?
  </entry>
</identifier>
- <title>
- <string language="es">
  ¿Es el informativo un programa educativo y d
  </string>
- <string language="en">
  Is television news an informative and educati
  </string>
</title>
<language>es</language>
- <description>
- <string language="es">
  El 90 por ciento de la población española con
  dispone de un televisor, como mínimo, y el 22
  y el comportamiento del público, Sofres, los e
  destinaron casi la mitad de su tiempo de ocio
- <te:teacherEducationPedagogical>
- <te:EmploymentMode>
  <value>Blended</value>
</te:EmploymentMode>
- <te:InteractivityType>
  <value>Minimal</value>
</te:InteractivityType>
- <te:DigitalContentType>
  <value>Non-Pedagogically Structured</value>
</te:DigitalContentType>
- <te:Non-PedagogicallyStructuredType>
  <value>ReferenceMaterial</value>
</te:Non-PedagogicallyStructuredType>
</te:teacherEducationPedagogical>
- <classification>
- <purpose>
  <value>discipline</value>
</purpose>
- <taxonPath>
- <source>
  <string language="en">TEOv2 - Knowledge Area</string>
  </source>
- <taxon>
  <id>EducationalTechnology</id>
- <entry>
```



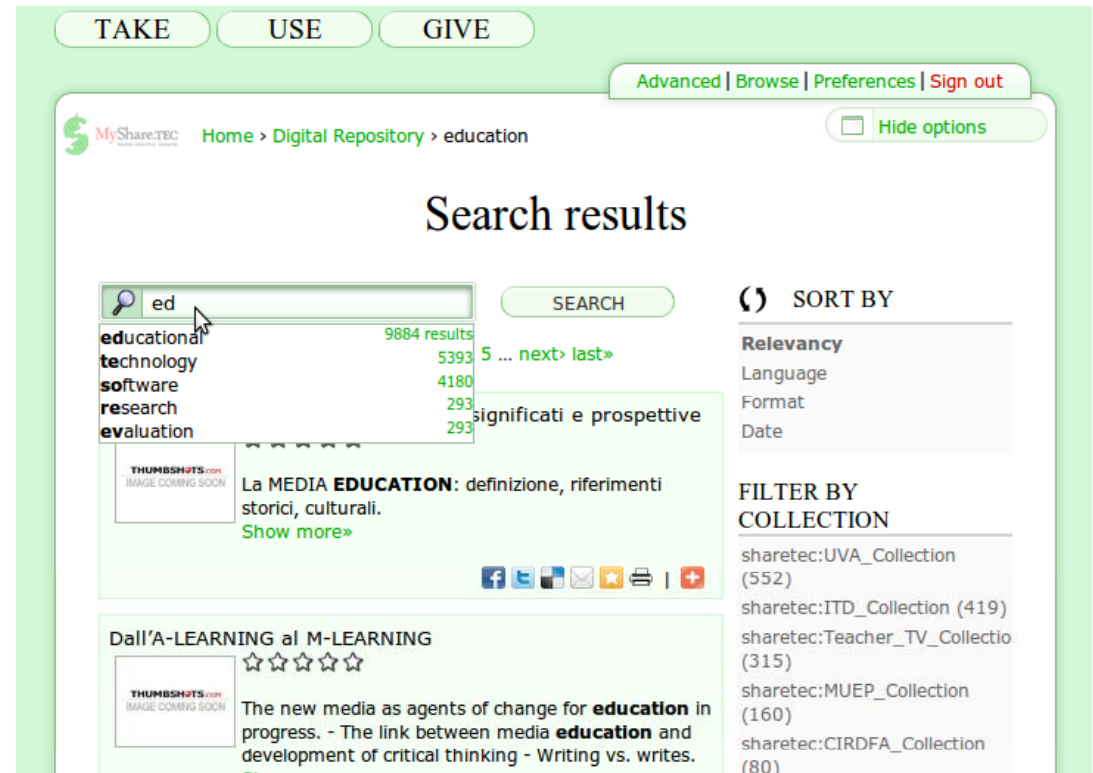
Data capture

- System collect metadata from various *sources*: partners' local metadata repositories and external repositories or additional sources containing such metadata.
- **The ARIADNE Harvester** is used to harvest all these *sources* of metadata using the **OAI-PMH** Protocol
- Harvested records are published in Fedora via **Simple Publishing Interface (SPI)**



Data indexing, searching and browsing

- The Fedora Generic Search Service is used for indexing Fedora FOXML records, and text data streams (DC, RELS-EXT, and CMM datastreams)
- Solr plugin is used for indexing documents via HTTP POST interface of Solr



The screenshot displays the MyShare.TEC search interface. At the top, there are navigation buttons: TAKE, USE, and GIVE. Below these are links for Advanced, Browse, Preferences, and Sign out, along with a Hide options button. The main content area shows the search results for the query 'ed'. A search bar contains 'ed' and a SEARCH button. To the right of the search bar, a table lists search results with terms and their counts: educational (9884 results), technology (5393), software (4180), research (293), and evaluation (293). Below the search bar, there are two search results displayed. The first result is titled 'La MEDIA EDUCATION: definizione, riferimenti storici, culturali.' and includes a 'Show more' link. The second result is titled 'Dall'A-LEARNING al M-LEARNING' and includes a star rating and a 'Show more' link. On the right side of the interface, there are two sections: 'SORT BY' with options for Relevancy, Language, Format, and Date; and 'FILTER BY COLLECTION' with a list of collections and their counts: sharetec:UVA_Collection (552), sharetec:ITD_Collection (419), sharetec:Teacher_TV_Collectio (315), sharetec:MUEP_Collection (160), and sharetec:CIRDA_Collection (80).

Front-end

- Drupal based front-end providing end-user functionalities like commenting, rating, etc.
- Islandora module allowing Drupal users to view CMM records stored as a digital objects in fedora repository.



References

- Share.TEC Project Deliverable D2.2 Common Metadata Model (CMM): version 1, http://www.share-tec.eu/content/1/c6/04/41/02/D2_2_Common_Metadata_Model.pdf
- IEEE Standard for Learning Object Metadata 1484.12.1-2002. IEEE LTSC, http://ltsc.ieee.org/wg12/files/LOM_1484_12_1_v1_Final_Draft.pdf
- The ARIADNE Harvester, http://ariadne.cs.kuleuven.be/lomi/index.php/Harvesting_Metadata
- The Simple Publishing Interface (SPI) Specification, http://ariadne.cs.kuleuven.be/lomi/images/b/ba/CEN_SPI_interim_report.pdf
- Fedora Generic Search Service, <http://www.fedora-commons.org/download/2.2/services/genericsearch/doc/index.html>
- Solr, <http://lucene.apache.org/solr/>
- Drupal, <http://drupal.org/>
- Islandora, <http://islandora.ca/>

