Share.TEC System Architecture

Krassen Stefanov

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Share.TEC system – 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
System Requirements

To provide several groups of functions:

– Account management functions
– Profile management functions
– Searching and navigation functions
– Authoring (social) functions

Account management functions

• These are functions related to creating and removing user accounts, logging in and out of the system and password reset. They are: register, unregister, log-in, log-out, password reset, profile change.
Profile management functions

• These functions allow the user to modify his/her profile and customize how Share.TEC presents information. They are: **personal profile, custom front page, preferences, multilingual interface.**

Searching and navigation functions

• These functions provide the ability to browse, filter, and search the data which is stored at Share.TEC repository. They are: **browsing (navigation), searching, filtering, and alerts.**
Authoring functions

- These functions allow the user to contribute to the Share.TEC content by providing annotations, ranking and additional references. They are: **annotation, ranking, enriching, and adding references.**
Share.TEC Central Repository

- Contains metadata representing resources from the Teacher Education (TE) domain
- Metadata are stored in CMM format
- OAI-PMH protocol is used for search and retrieval of metadata in CMM format from well-known repositories
- Contains the representation of TEO (Teacher Education Ontology)

Intermediate Repository

- Contains metadata and resources from project partners and external users which can be further enriched
- OAI-PMH protocol is used for search and retrieval of metadata from partners and external repositories
- Metadata is converted via MMF from the data format used in the original repository to CMM
OAI-PMH Harvester

- Special computer program which periodically connects to all metadata sources
- Collects new instances of metadata from these sources
- Validates the collected metadata through the validation service
- Publishes collected and validated metadata to central repository via SPI (Simple Publishing Interface) protocol

Share.TEC Web Portal

- Multilingual user interface
- Personalization
- Simple and advanced range of parameters for query filtering
- Key parameter values automatically set in accordance with the user profile
- A multidimensional data search based on TEO and CMM
Features

Share.TEC system offer a wide range of advanced services available to the end-users

- Searching service (search the central repository for resources based on defined queries, or browsing)
- Ranking resource services
- Preview of metadata resources and of the resource itself

Features (2)

- Provide more comprehensive user feedback (rating and annotating)
- Recommendations and tagging services
- Automatic task scheduler
- User wizards and workflow management
- User Authentication and user management services
Features (3)

- Community visualization and navigation Service
- Community participation Service
- Interactive creation of metadata records using the RICK tool
- Organize resources as favourites from the user via tags

Performance Indicators

- 1800 metadata records harvested from external repositories
- 140 metadata records in CMM format harvested from partners repositories
- 80% of all planned system functions implemented
- All system components integrated
- 830 TEO classes/objects stored in Fedora
**Current status**

- System architecture designed and implemented
- Central and intermediate repositories set and functioning
- CMM and TEO representation models implemented
- Harvesting process put into practice
- Several local and external repositories aggregated
- Central portal with all core functions implemented
- Main search, recommendation and social functionalities implemented

**Remaining challenges / issues**

- Local repositories to be boosted
- System interface need to be improved
- Browsing functionalities to be agreed
- More complex searching and ontology reasoning to be clearly defined
- More external repositories to be added and metadata enrichment to be automated
- Design and implementation of the graphical navigation
Next steps

• Finalize the pilot experiments
• Analyze the user feedback and tune the system in accordance with the user needs
• Design and develop the logging system
• Improve the security
• Design and develop semi-reasoning system
• Increase the number of harvested repositories
• Research how to join other initiatives like LRE, Europeana and DRIVER

Questions?

Contacts: krassen@fmi.uni-sofia.bg