



EUNIS 2013- RIGA

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Meital-

Inter University Computation Center for E-Learning

ISRAEL

<http://meital.iucc.ac.il>



OER-TERENA



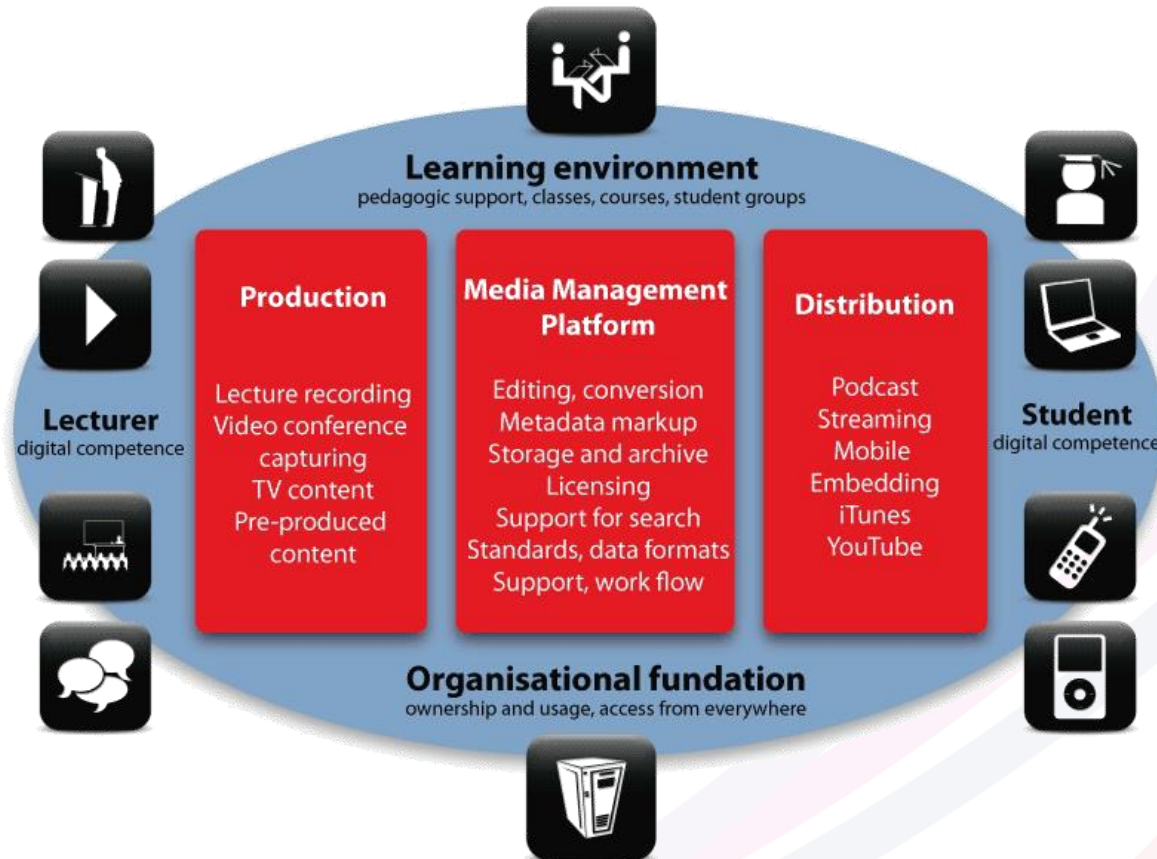
About TERENA

- › TERENA offers a forum to collaborate, innovate and share knowledge in order to foster the development of Internet technology, infrastructure and services to be used by the research and education community.
- › TERENA is first and foremost a collaborative organisation.
- › Its core business is to bring together managers, technical specialists and other people in the research networking community with their counterparts from other countries in Europe, mobilising the expertise and experience of hundreds of professionals in the research and education networking area.



TERENA TF-Media Task Force

2010-2011: Media Management and Distribution
2012-2013: Applied Media in Teaching and Learning



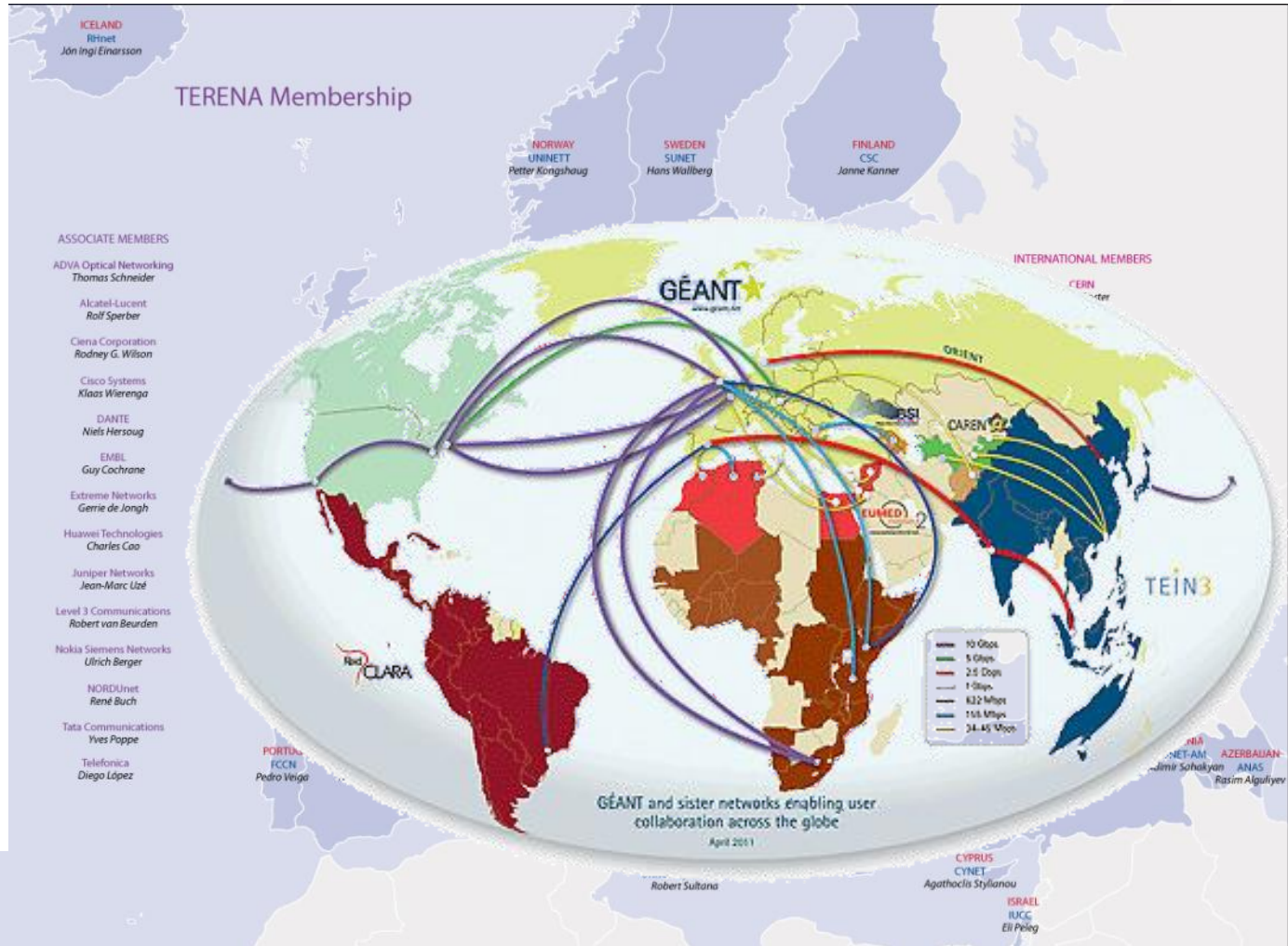


TERENA Community

Trans-European Research and Education Networking Association



Abbreviation	TERENA
Motto	networking the networkers
Formation	13 June 1986 as Réseaux Associés pour la Recherche Européenne (RARE)
Legal status	Association
Purpose/focus	To promote and participate in the development of a high-quality international information and telecommunications infrastructure for the benefit of research and education
Headquarters	Amsterdam, Netherlands
Region served	Europe
President	Pierre Bruyère
Main organ	TERENA General Assembly
Website	www.terena.org





TERENA Activities

- TERENA Compendium

- Printed

- On-line: <http://www.terena.org/activities/compendium/>

- TERENA Networking Conference

- Seminars

- Technical workshops

- Trainings

- Task Forces

- Meetings

- Small projects

- EC funded projects

- Services

- Pilots

- OER-Terena**





About Meital



- › Inter-University Center for e-Learning (IUCEL)
- › Part of the Israeli IUCC– The Inter-University Computation Center
- › Assists Israeli institutions of higher education (universities and academic colleges) in advancing the use of e-learning technologies

- Organizes an annual national e-learning conference
- Research fund
- Newsletter & social media
- National & International connection and cooperation



Meital's workgroups

- › Learning environments
- › New technologies
- › Methodologies and staff development
- › Specific content areas
- › Intellectual property rights
- › Common standards



Partnerships

- [MERLOT](#)
- [GLOBE](#)
- [Creative Commons Israel](#)
- [Open Courseware Consortium](#)
- [EDEN](#)
- [Sloan-C](#)





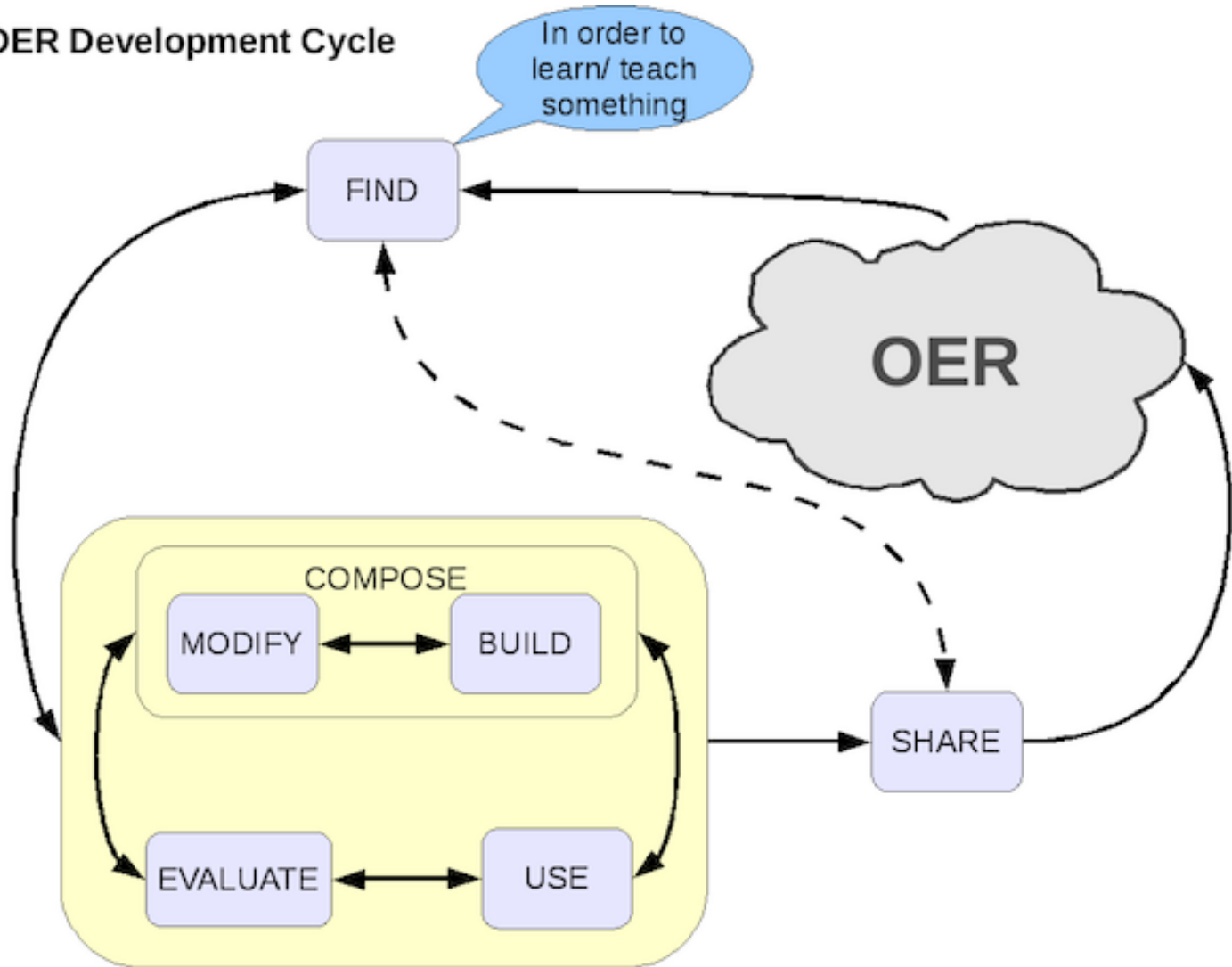
OER – Open Educational Resources

“Open Educational Resources are digitized materials offered freely and openly for educators, students and self-learners to use and re-use for teaching, learning and research” (Hylén, 2005).



OER development cycle

OER Development Cycle





UNESCO: 2012 Paris OER Declaration

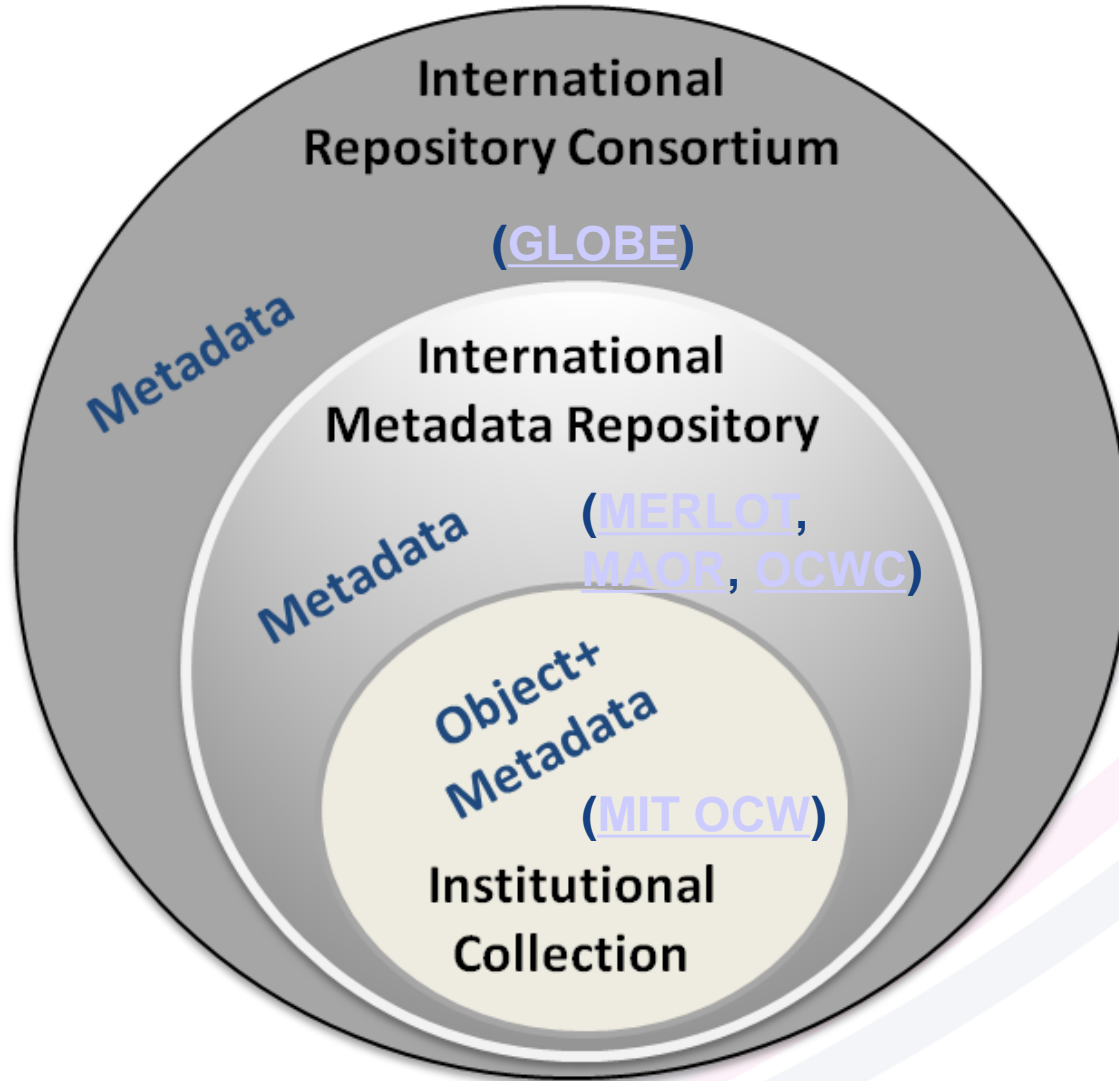


- › *Foster awareness and use of OER*
- › *Facilitate enabling environments for use of ICT*
- › *Reinforce the development of strategies and policies on OER*
- › *Promote the understanding and use of open licensing frameworks*
- › *Support capacity building for the sustainable development of quality learning materials*
- › *Foster strategic alliances for OER*
- › *Encourage the development and adaptation of OER in a variety of languages and cultural contexts*
- › *Encourage research on OER*
- › *Facilitate finding, retrieving and sharing of OER*
- › *Encourage the open licensing of educational materials produced with public funds*

http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/Events/English_Paris_OER_Declaration.pdf



Material distribution and sharing levels





TERENA OER Pilot

Pan-European Metadata Repository

Institutional referatory

- Links to content from people in an institution or organization
- Content hosted anywhere online



Curation of metadata



Global referatory

- Aggregates content listings from global referatories and repositories
- Links and provides traffic to global referatories and repositories
- Content hosted anywhere online



OER



Institutional remixing platforms

- Allows remixing and editing of content on site
- Content typically created locally but enables global edits and unique version creation



Institutional

Global



TUFTSOPENCOURSEWARE
TUFTS UNIVERSITY

Institutional repository

- Allows upload and hosts resources from local content providers
- Traditionally 'closed' but opening gradually

MITOPENCOURSEWARE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY



Curation of content

Global repository

- Allows upload and hosts resources from global content providers

MERLOT
Multimedia Educational Resource
for Learning and Online Teaching



The TERENA Open Educational Resource pilot

- › OER-Terena project aims to create a European-wide federated repository.
- › OER-Terena initiative for higher education institutions and NERs around the world in general, and in Europe in particular.



Objectives

- Enable lecturers, teachers and students easier access and search of relevant LO
- Encouraging the remixing, use and reuse of digital learning objects
- Promoting peer review as well as colleague and user comments
- Public, widespread use
- Promoting lifelong learning, Anytime Anywhere, and Openness



Step #1 - Mapping national repositories (survey)

- › Defining metadata aggregation element set
- › Defining the type of services that can be provided by the TERENA OER portal
- › Defining the common learning objects

Kostas Vogias¹, Ilias Hatzakis¹, Nikos Manouselis², Peter Szegedi³
1 Greek Research and Technology Network
2 Agro-Know Technologies
3 TERENA TF-media

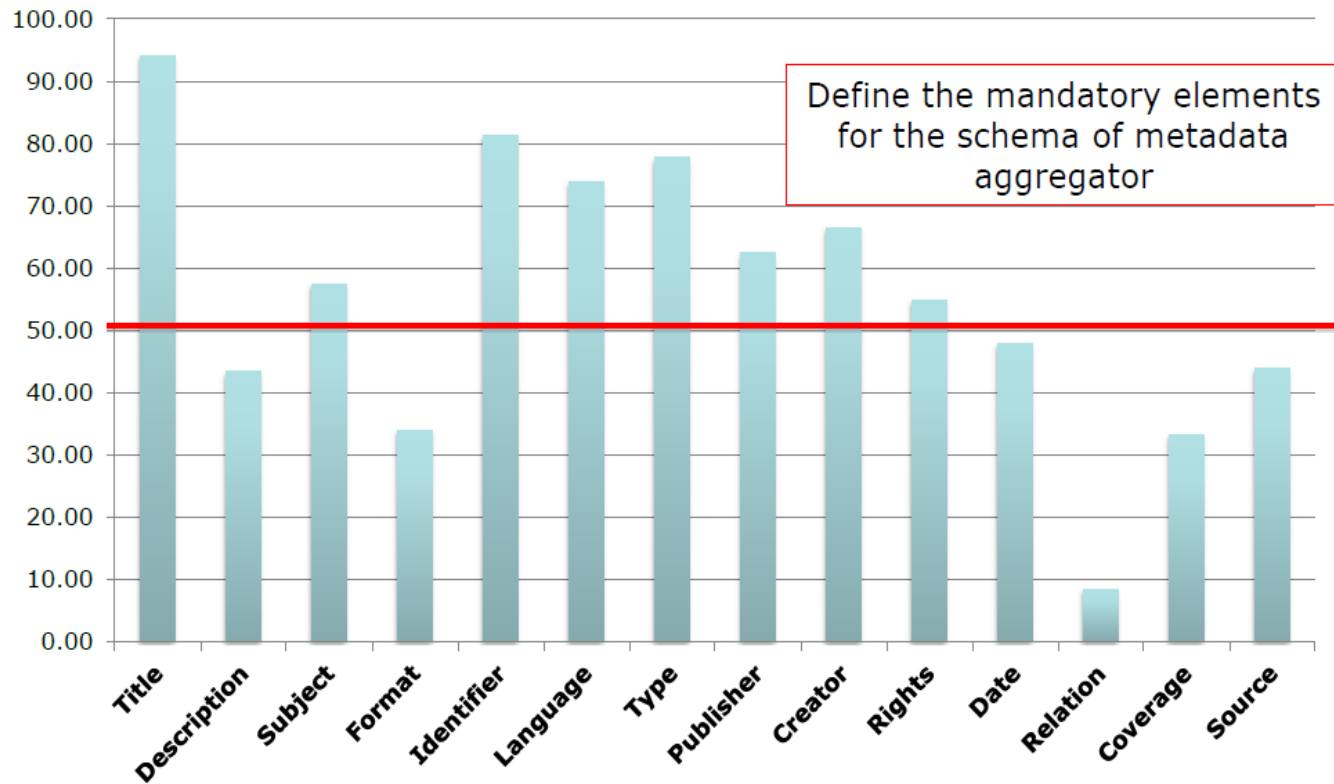


Element usage

Element	Switch	UOL	OBAA	RiuNet	SCAM	Campus do Mar	wikiwijs	Malopolskie
Title	52.62	100.00	100.00	100.00	99.96	100.00	100.00	100.00
Description	47.67	0.10	0.00	0.17	99.96	100.00	0.00	99.44
Subject	52.45	100.00	0.00	96.84	10.49	100.00	0.00	100.00
Format	0.00	0.00	0.00	0.00	73.31	100.00	0.00	98.89
Identifier	52.62	100.00	100.00	100.00	100.00	97.24	0.00	100.00
Language	3.10	95.34	0.00	99.91	92.45	100.00	100.00	100.00
Type	52.33	99.31	0.00	96.57	74.12	100.00	100.00	100.00
Publisher	47.38	44.84	0.00	43.97	65.43	100.00	100.00	97.78
Creator	52.45	92.76	89.09	99.67	65.43	100.00	0.00	32.78
Rights	52.62	0.20	0.00	100.00	89.27	100.00	96.07	0.00
Date	0.00	31.15	100.00	6.38	45.89	100.00	0.00	98.89
Relation	0.00	15.87	0.00	3.83	0.00	0.00	0.00	47.22
Coverage	0.00	67.66	0.00	97.94	0.00	0.00	0.00	100.00
Source	51.85	0.00	0.00	100.00	100.00	0.00	0.00	99.44

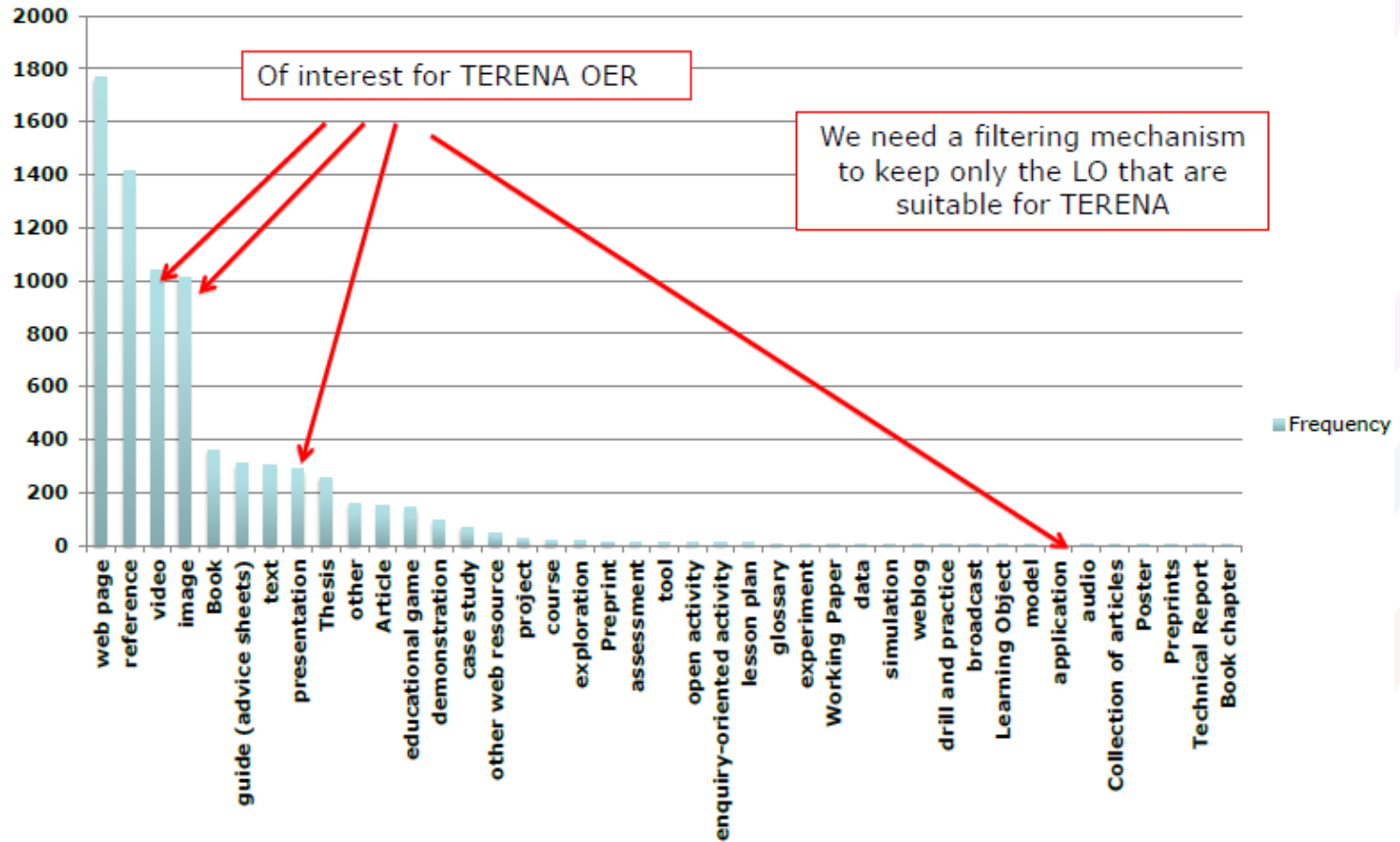


Average Element Usage





What type of digital objects



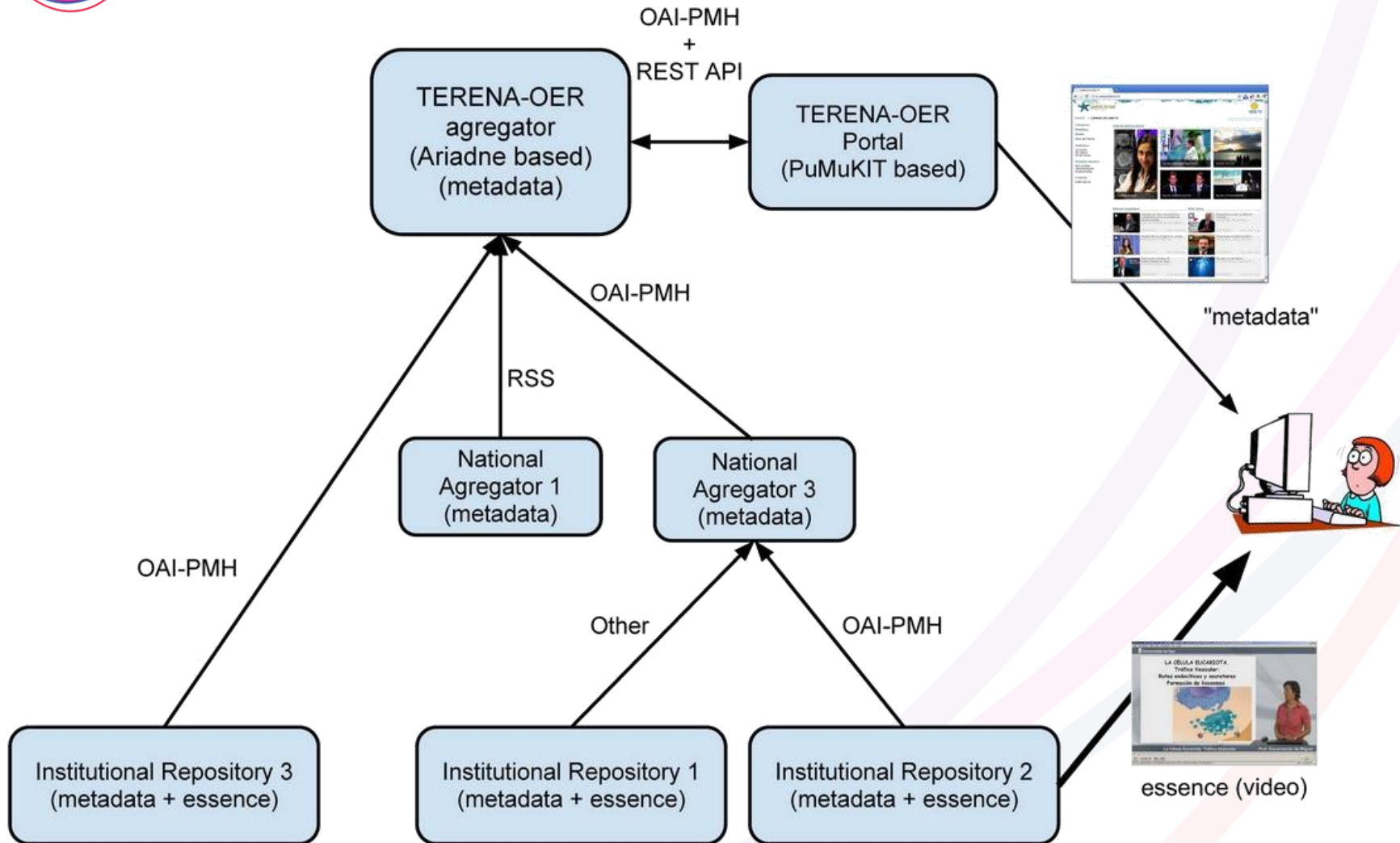


The pilot project milestones

- › A European level metadata aggregation portal for Open Educational Resources, specially focused on audiovisual learning objects
- › TF-Media defines the minimum requirements for a common metadata schema (e.g., 8 LOM fields) and the way how metadata can be harvested (e.g., OAI-PMH protocol)
- › Start collecting metadata from the national repositories and make them available via the TERENA portal.
 - › **Bridge the gap between the national repositories**



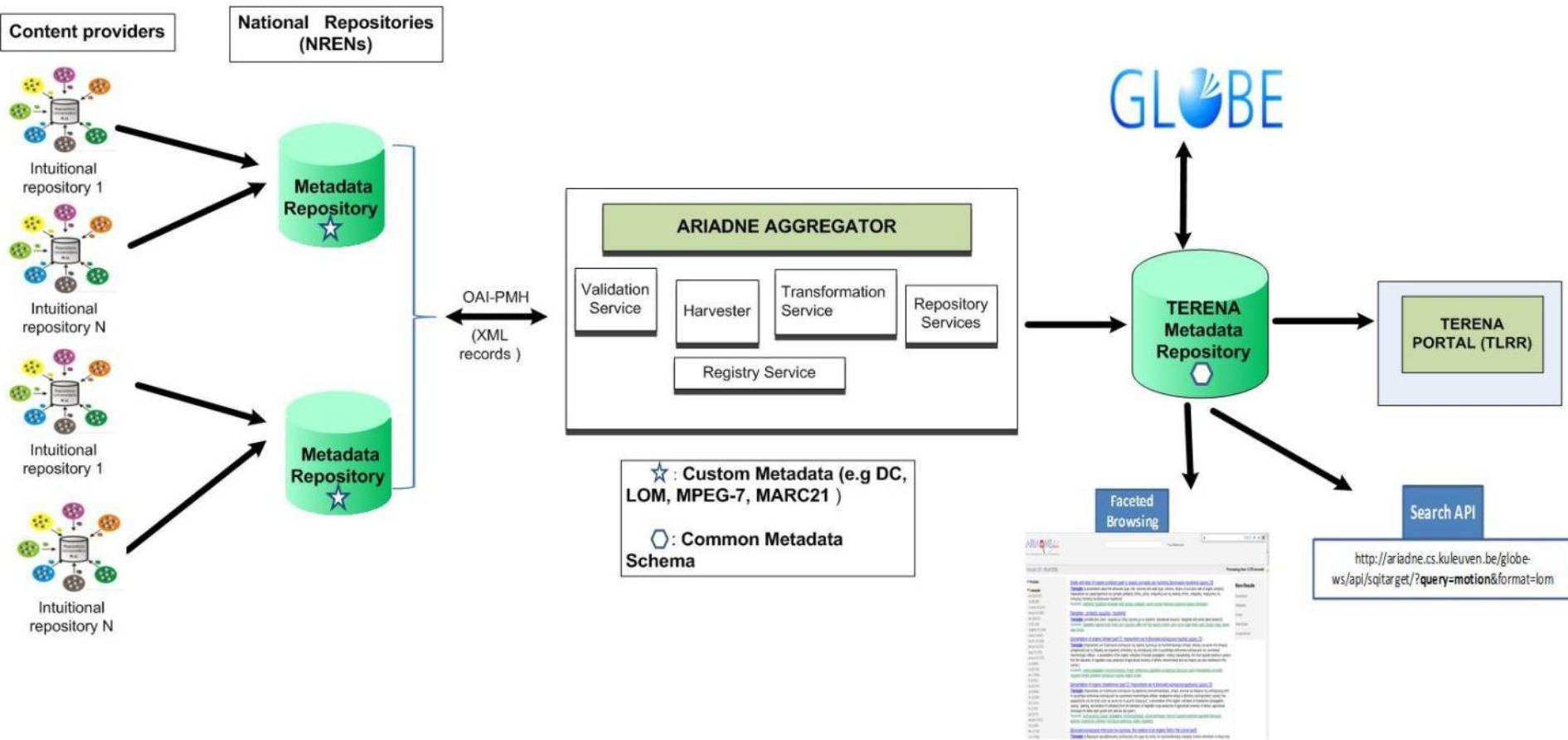
TERENA OER: Architecture DRAFT



Essence = videos (or audios)



Implementation option





Portal features DRAFT

Search

Category



Search results

Reset :Objects 1-10 of 38191 results Sort results by

* Found 38191 objects keywords

Paradata

★★★★★:Peer reviews avg
 ★★★★★:Comments (40) avg
 (Personal collections (364
 (Learning exercises (9

DNA from the Beginning is an animated tutorial on DNA, genes and heredity. The...

DNA from the Beginning

Author: Cold Spring Harbor Laboratory
Material type: Simulation
Audience: College General Ed
Date modified: Sep 19, 2012

Metadata



[More Info](#)

License

Thumbnail

URL



GLOBE



> 1,000,000 Learning resources



1,000,000 Learning Resources

- › ARIADNE (513,703)
- › European Schoolnet (185,940)
- › LACLO (40,957)
- › MERLOT (32,735)
- › OERcommons (30,903)
- › KERIS (7,439)
- › LORNET (2,295)
- › MEITAL (5,000)
- › OU Japan (1,761)
- › OERAfrica (1,703)



The Integration Plan

Reaching a common definition of the metadata fields for the Terena-OER for all NRENs, Universities and content-provider involved, based on the LOM, the Dublin core, or similar standards. This will help us to create a common language for the metadata. This effort can be led by both ARIADNE and MAOR.

To promote the development of the European educational portal for learning objects repository, Terena-OER portal. This portal will be one step above the national repository (NREN's or University), and will be able to pull the Metadata to the central Terena-OER by harvesting, web services, OAI repository or batch upload. This will enable us to create the repository that suits the academic user with relevant learning object. The MAOR system can help to promote that stage, with a little modification and development, that can serve as an independent Terena-OER portal.

After we will have the Terena-OER Portal, with a significant number of our learning objects (recording courses, simulation, animation etc.), we will connect to the GLOBE/ARIADNE/OCW-C or to any global metadata repository. We can connect to those repositories by harvesting, federated search or SQL. It is also worth noting that today, repository such as GLOBE functions as federate of federations. I think that Terena-OER can, and should be a federation.



Thank You



MEITAL - Inter-University Center for e-Learning

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<http://maor.iucc.ac.il>



Step #1: Defining Metadata Standard

- **ISRACore** - Israeli standard for learning object metadata
- Common language for the entire Israeli e-learning community (academia, schools, government, industry)
- Compatibility and interoperability in sharing, retrieving, reusing, remixing, and reviewing learning objects
- Defines 16 required core elements and 13 optional elements
- The ISRACore parameters assist the user in locating, assessing and sharing learning objects
- Core elements include ID number, language, educational purpose, author, technical format, etc



Metadata

- › IEEE standard for Learning Object Metadata (LOM)
- › More than 70 metadata elements
- › Not all of them are used



Maor is consisted from three different elements

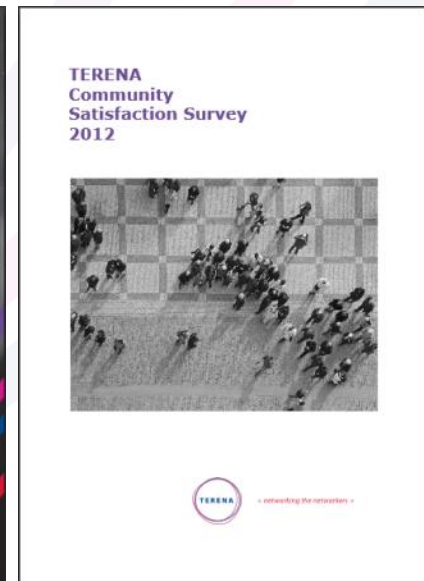
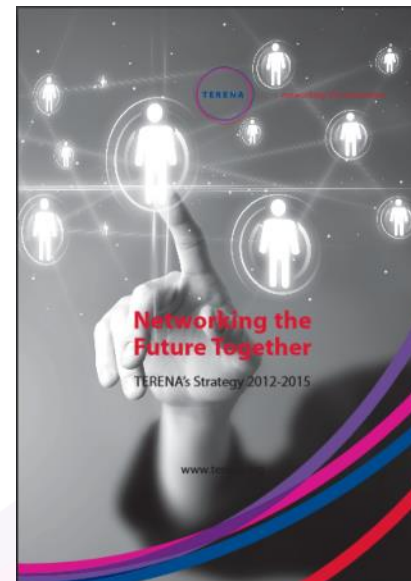
- › Local databases containing LOM in various forms: full course to a blog post
- › Central database containing metadata about the different LO
- › Free submission and peer review



Key to success

- › Trust of our members and
- › Unconditioned dedicated effort from community members
- › **These core values have remained at the heart of TERENA's activities since the beginning and still work well.**

"With TERENA's demonstrated core values of **openness, collaboration and responsiveness, considerable trust** in the association has developed within the community. This trust is the foundation upon which TERENA must build, guided by **a clear strategic vision.**"





Literature review

- › **Ochoa, Xavier, Klerkx, Joris, Vandeputte, Bram, and Duval, Erik. On the Use of Learning Object Metadata: The GLOBE Experience.** Made the first fully quantitative study in a large number of Learning Repositories that belongs to a large organization like Globe
- › **Neven, Filip and Duval, Erik. Reusable Learning Objects: a Survey of LOM-Based Repositories.**
- › **Zschocke, Thomas and Beniést, Jan and Paisley, Courtney and Najjar, Jehad and Duval, Erik. The LOM application profile for agricultural learning resources of the CGIAR** studied the use of LOM for the indexing of learning resources
- › **Manouselis, N, Salokhe, G, Keizer, J, and Rudgard, S. Towards a Harmonization of Metadata Application Profiles for Agricultural Learning Repositories.** Made an analysis of the metadata schemas used by Repositories including Agricultural Learning Resources

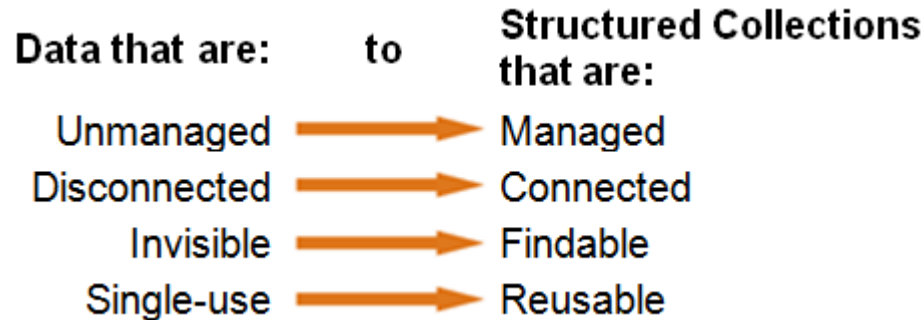


Expected benefits for the end-users:

- › More effective and motivating learning scenarios (learners & trainees).
- › Better productivity and new philosophy of collaboration (authors of pedagogical material).
- › Better communication and co-working schemes (researchers).
- › Possible factor for harmonizing education & training policies throughout Europe.
- › Spare public money by re-using open learning resources.



Motivations



Create a one-stop-shop (broker) for national learning resource organizations, each of them managing and/or federating one or more learning object repositories within the country.

The expected benefits for the users are as follows:

- More effective and motivating learning scenarios (learners & trainees).
- Better productivity and new philosophy of collaboration (authors of pedagogical material).
- Better communication and co-working schemes (researchers).
- Possible factor for harmonizing education & training policies throughout Europe.
- Spare public money by re-using open learning resources.



The pilot project milestones

- › TERENA creates a European level, open source, metadata aggregation broker/portal that leaves the content (i.e. the objects) in its source domain and harvest the metadata from the national level up to the pan-European level. The portal might be hosted and operated by one or more TERENA member organizations.
- › TF-Media defines the minimum requirements for a common metadata schema (e.g., 8 LOM fields) and the way how metadata can be harvested (e.g., OAI-PMH protocol)
- › Start collecting metadata from the national repositories and make them available via the TERENA portal.
- › TERENA OER applies for the GLOBE membership.
- › Potential service enhancements (e.g., Creative Common licensing), and value added components (e.g., integrated player, better user interface, representation of search targets).



TERENA OER Pilot

Pan-European Metadata Repository

