Simplified NIF for GN4 Input

Purpose: This NIF form is to be used for the submission of New Ideas suggested for inclusion in the GN4 Phase1 and beyond proposals. Budget estimates, information about objectives, impact, benefits, etc. as well as scope must all be supplied.

Submit to: pmo@GÉANT.net by January 31st, 2014 with the subject label starting: GN4Input

Overview

Project Name:	OER Portal Service	**Project Proposer:**	Peter Szegedi, TERENA

Project Type: GN4 Phase1 or longer term	Longer	**Estimated Project Costs (best effort!)**	
Duration proposed	Service adaptation phase followed by a project-long service support activity	Manpower in person-months also identifying specific expertise required	About 40-50 PM per year in average. Web developer, programmer, system integrator, media service developer, rich-media and metadata expert, PR and communications.
Deliverables proposed (If any can be defined at this stage)	Obvious reporting on the achievements of the key milestones listed below.	Hardware and equipment:	At least one VM to host the front-end web portal and the metadata harvesting engine in production.
Milestones proposed (If any can be defined at this stage)	1. Evaluation and assessment of the TERENA OER portal pilot service (pre-condition, outcome of TF-Media). 2. Software/Service developments needed to deploy/adapt the OER pilot into GÉANT. 3. Integration of the OER portal service into the GÉANT service portfolio (including not just technical but all service aspects). 4. Service roll-out into production, promotion, marketing.	Other costs	Costs related to service promotion and marketing beyond the GÉANT community (i.e. reaching out to national content/metadata repositories, museums, librarians, etc.)

1 Background and Reasoning

Provide background information and the context of the project. Explain the reason for the project. What do you want to be different? What do you hope to improve? Why is the project needed? This should be the reason for the project, not the solution.

By definition, **OER (Open Educational Resources)** are teaching, learning, and research objects that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge.

There is a large interest around the global education community in establishing and maintaining OER or Learning Object (LO) repositories as exemplified by the number of existing repositories (e.g., MERLOT, MAOR), organizations building and sustaining them (e.g., MITOpenCourseWare, GLOBE), contributors integrating learning objects in repositories (e.g., OpenContent), and users of these learning objects (e.g., Universities, Libraries). The fundamental reasons are:

- the growing educational demands in all countries,
- the limited capacity of face to face education to fulfil the demand in a timely manner (i.e. emerging MOOCs),
- the effort and cost involved to build multimedia learning materials, and the new possibilities offered by the Internet.

While it is a fact that millions of LO/OER can be found on the Internet using search engines like Google, there is no guarantee that a query will lead to trustable, properly licenced material on which high quality open education can be built.

Well managed OER repositories that aggregate high quality content offer a solution to this problem.

Many of the universities operate local content repositories (using community open-source or home-grown software tools) where they store recorded lectures, handbooks, presentations and other teaching-learning materials. In some countries, the NREN provides a centralise repository to universities where all the content can be aggregated to and made available for public or selected user groups. Some of the repositories only aggregates the metadata of the OER (i.e. the information about the learning object) and leaves the content in its originating domain (i.e. in the local content repository of the University). These repositories often called metadata repositories or simply referatories.

The main motivation for developing a metadata repository (European-level aggregation point) and an OER portal (central access front-end) service in GÉANT would be to support the NRENs and their stakeholders (i.e. the broader GÉANT community) in engaging with open education by providing repository services.

The GÉANT OER service intends to aggregate metadata (not the content) at the European-level and helps Universities and NRENs to get to the next level (reach the critical mass in terms of the number of objects) towards exposing their OER to global repositories (such as GLOBE for instance).

The potential partners actively participating in the former TERENA task force TF-Media and willing to contribute to an OER service development in GÉANT are:

- **GRNET, IUCC, SWITCH, FCCN, RedIRIS, and NIIF;**
- **UVigo, ISEP, UPMC, UPV, Kaunnas Univeristy and Tel Aviv University.**

2 Objectives, Impact and Benefits

Provide one or more bullet points to briefly describe the primary objective(s) of the project in terms of the desired outcomes. This should be expressed in the form: 'To ensure…', 'To implement…', 'To service...', 'To improve...', 'To innovate...', 'To optimize...', 'To save...', etc. For each objective mention the benefits to identified stakeholders (e.g. end-users, NRENs, large international research projects, industrial research partners, high level education, etc.) should be mentioned. A description of the expected overall impact must also be provided.

The TERENA task force TF-Media (2010-2013) came up with the idea to try and implement a European-level OER metadata repository for the benefit of the Research and Education community gathered under TERENA/GÉANT. The basics of such a service have been discussed and summarised by the task force. For details, please visit:

https://confluence.terena.org/pages/viewpage.action?pageId=33751325

TF-Media was concluded in December 2013. In 2014, TERENA is willing to facilitate the development of an OER portal pilot service in form of a small project. It is expected that by mid-2015 the service pilot will get to the stage where it can be seamlessly adopted into GÉANT as part of the GÉANT production service portfolio. **This NIF is to perform the work that needs to be done in order to pick the TERENA OER pilot service, evaluate, develop, and bring to the next level as part of GÉANT.**

The main objectives are:

- Connect the yet scattered institutional/national OERs and unlocking the deep-web by enabling structured searching and reuse.
- 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.

GÉANT can make a suite of online services and tools available to its partners for the exchange of learning resources, and facilitates the access to the worldwide Open Community (i.e. GLOBE) guided by the following principles:

- Keep the barrier of entry to GÉANT OER low and participation high.
- Provide open specifications and community source code as much as possible, openly shared among and beyond community members.
- Use open standards, where appropriate, and contribute back to the development of these standards based on experiences and best practices.
- Respect and build on European values.
- Operate as a community of peers

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.

3 Scope

Describe the areas expected to be covered or impacted by the proposed activity, such as organisational areas, systems, processes, resources.. i.e. what is 'in scope'. This is not a list of what will be done but identifying the services, areas or what, will be affected.

Also please enumerate specific items which although they could perhaps be related are intentionally not addressed by your proposal ("Out of Scope").

3.1 In Scope

- Create a European-level metadata repository for the GÉANT/TERENA community that helps NREN stakeholders to reach the critical mass and join global repositories.
- Use existing open-source tools (ARIADNE, PuMuKit) and apply metadata standards (LOM, OAI-PMH)
- Leverage on CampusdoMar, MAOR, SwitchCollections, SURFmedia, and other NREN-led service developments.
- Liaise with other OER and repository services in the broader community (EUNIS, museums, libraries, Europeana, DCH-RP project partners, etc.)

3.2 Out of Scope

- Do not aggregate content only metadata.
- Do not develop new software tools only integrate existing platforms.
- Do not compete with YouTube, Google and other commercials but create additional value.

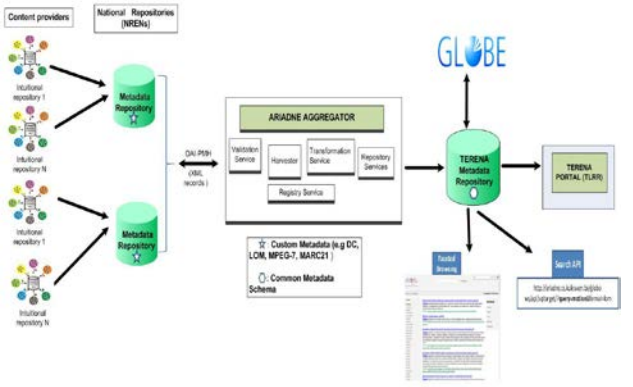
4 General Information

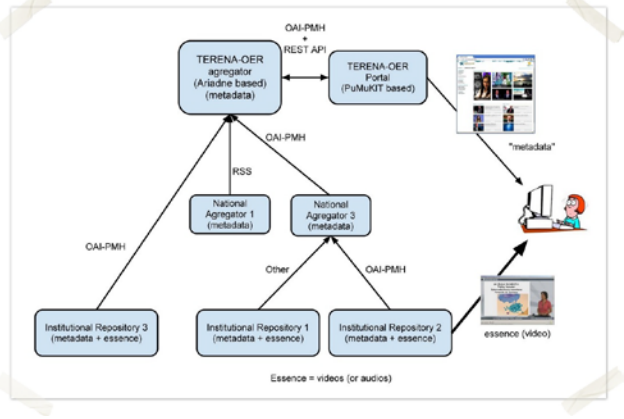
Outline any potential issues, risks, dependencies, assumptions, constraints and limitations or any other points that may be useful to help assess the proposal.

The pre-condition of this GÉANT activity is the work being done at TERENA with regard to the development of the TERENA OER pilot service during 2014.

- Risk might be that the TERENA pilot cannot reach the stage to be seamlessly migrated into GÉANT (needs more efforts than expected).
- Mitigation to this would be to initiate a small project under the TERENA technical programme in 2014 (to be discussed by the TTC) to facilitate developments.

The high-level OER service architecture has already been proposed by TF-Media task force of TERENA as depicted below:





It uses the ARIADNE metadata harvesting and aggregation engine (contributed by GRENT) and the PuMuKit based OER portal fronted (contributed by UVigo). The pilot engine harvests 11 local (Uni/NREN) repositories at the moment and able to integrate YouTube channels and other commercial repositories.

A preliminary concept look&feel (TERENA-branded) of the portal front-end has also been mocked up by the task force participants in 2013.