

LETSI White Paper Solicitation on SCORM® 2.0

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To: All interested in Learning, Education and Training Systems Interoperability
From: LETSI
Date: 31 May 2008
Re: Request for input and ideas about the next SCORM

The International Federation for Learning-Education-Training Systems Interoperability (LETSI) has taken on the task of developing the next generation of SCORM, the Sharable Content Object Reference Model. As part of this initiative, LETSI is soliciting White Papers and comments as described below.

The deadline for submission is August 15, 2008. Further information is available at www.letsi.org/SCORM2/, including an FAQ about the SCORM 2.0 process.

What is SCORM 2.0?

SCORM is the *de facto* international standard that allows learning materials to interoperate across software systems. The needs of SCORM adopters vary widely across communities of practice. For example, LETSI's sponsor organizations include national technology policy agencies, school education associations, professional education societies, workforce training organizations, and major corporate adopters that have all used SCORM strategically to allow learning materials to operate across systems and tools, but that have different technological and pedagogical requirements.

To accommodate multiple, diverse constituencies, SCORM 2.0 will have two components:

1. *A general reference model, Core SCORM*, based on widely adopted, accredited learning technology standards that support basic interoperability.
2. *Additional components* that support broadly applicable LET functionality and instructional capabilities based on specifications that are not yet standards.

SCORM 2.0 will be based on specifications and standards that are created and managed using open, transparent processes and that are not encumbered by patents, licenses or other restrictions. It will follow a modular design that allows communities of practice to further extend SCORM 2.0 with functionality and innovations that are important for specific applications. LETSI will play a role in publicizing such extensions and may consider them for future versions of SCORM when there is sufficient interest in the overall community.

Communities of practice will develop profiles of SCORM 2.0 that conform to and build upon the common components. For example, the U.S. Advanced Distributed Learning Initiative will maintain a version of SCORM 2.0 for the U.S. Government.

White Paper Requirements

White Papers are being solicited to gather the broadest possible input for SCORM 2.0. White Papers will be used to identify the issues and ideas that are of top priority to the existing community of SCORM users and potential SCORM users, and to identify tractable approaches to solutions in SCORM 2.0.

Both informal submissions (ideas, wish lists, issues with SCORM 2004, etc.) and longer White Papers describing substantive solutions are welcome. To the extent possible, each White Paper should:

- State what business, pedagogic, or technology problem is being addressed.
- Identify an existing or new specification or standard that should be incorporated into SCORM 2.0 to solve this problem.
- Explain how the solution could be implemented and tested by early 2009.

White Papers should not exceed 10 pages in length and should be submitted in PDF or Microsoft Word 2003 format. A suggested organization for White Papers is:

1. Abstract
2. Problem definition
3. Use cases
4. Stakeholders
5. Proposed solution
6. Integration and other technical issues
7. Existing implementations/prototypes
8. Summary and recommendations

White Papers, comments, suggestions, and requests for information should be submitted by email to scorm2@letsj.org. White Papers are due by August 15, 2008.

All submissions will be posted for public comment, download, and on-line discussion at www.letsj.org/SCORM2. Submissions will be edited or summarized for distribution at an October workshop. Therefore, papers should be submitted under an appropriate Creative Commons license, or otherwise indicate that there are no IP constraints on their use.

White Papers describing substantive solutions will be reviewed for inclusion in the SCORM World Congress planned for the second quarter of 2009. There will be opportunities to demonstrate or describe products or services based on the White Papers during that event.

Again, ideas and proposals of all kinds are welcome. White Papers may address specific issues or cover the entire SCORM 2.0 framework. Some notes on the goals of SCORM 2.0 and suggested topics are included below. Submitters are encouraged to review earlier submissions on the LETSI website, as well as the SCORM 2.0 FAQ which will be updated as questions arise.

SCORM 2.0 – Challenges and Objectives

SCORM 2.0 is intended to be an interoperability model that, like its predecessor, can be used strategically across market sectors and geographical regions. White Papers should discuss the following overarching criteria for SCORM 2.0:

- Support existing and emerging technologies and architectures and encourage innovation in applications across the LET life cycle: authoring and ISD, learning

management, content management, knowledge management, HR systems, mobile delivery, Web 2.0, service-oriented architecture, and hosted learning activities.

- Support multiple learning paradigms and teaching methods, e.g., immersive learning environments, informal learning, community-based learning, blended learning, and collaborative learning.
- Support multiple training and education contexts, e.g., classroom, distance learning, on-the-job performance support, and individual self-study.
- Incorporate a modular and extensible software architecture to provide communities of practice maximum flexibility to profile and experiment.
- Allow convenient migration strategies to preserve existing investments in systems and learning materials.
- Include specifications and standards created and managed using open, transparent processes that are not encumbered by patents, licenses or restrictions that would impinge on its availability to the global LET community. LETSI will create an open source software community to support SCORM adopters and product developers.

Suggested White Paper Topics and Issues

LETSI welcomes White Papers that address *any* area of LET systems. The following list of possible topics and issues is not exhaustive and is meant to be evocative. Papers are welcome from multiple perspectives, e.g., learners, instructors, authors, designers, developers, training managers, IT professionals, administrators, business process owners, policy makers, researchers and technology vendors.

- **Abilities.** Environmental factors and learner abilities affect learning, education and training. How should SCORM 2.0 support the exchange of information across systems?
- **Assessment and Evaluation.** Assessment is a fundamental tool for learning. The business community demands the ability to evaluate the impact of investments in training on worker performance. How might SCORM 2.0 provide better support?
- **Interaction, Collaboration and Community.** On-line interactions and collaboration are shown to provide rich learning experiences. How should SCORM 2.0 enable interoperability across learning systems and the technologies that support collaboration and community building: social networks, chats, wikis, blogs, collaborative learning, team training, multiplayer games, and user-generated content?
- **Content Aggregation.** New models for associating and organizing content (and services) are emerging and existing models may benefit from improvements. How should SCORM 2.0 address these?
- **Competencies.** (Skills, knowledge, abilities, attitudes, proficiency levels, etc.) Competencies are at the core of learning and performance but are currently handled in *ad hoc* and non-interoperable ways. How can SCORM 2.0 enable communities of practice to manage competency-rich learning environments?
- **Immersive Learning Environments.** Simulation, game and virtual world technology are gaining acceptance as learning and performance support technologies. How can SCORM 2.0 support interoperability for this type of learning activity?

- **Learning methods.** How can SCORM 2.0 support a variety of learning methods, new and old: adaptive instruction, mastery learning, problem-based learning, cooperative learning, discovery learning, and so on?
- **Search and Learning Management.** We have all heard about finding “the right content for the right person at the right time.” Search, semantic technologies, data mining, collaborative filtering, tagging, and related technologies have come a long way since the creation of SCORM’s metadata framework for describing content. How should SCORM 2.0 support information sharing and knowledge management?
- **Technologies and Tools.** Software technology and enterprise software architecture have advanced considerably over the last decade. How must SCORM evolve to work properly with modern software systems?

SCORM 2.0 Development Schedule

A Design Document describing the architecture and functionality of SCORM 2.0 will be developed on an aggressive timeline and will focus on solving a prioritized set of business, pedagogic, and technology problems. This document will allow adopters and product developers to begin to incorporate SCORM 2.0 compatibility in their development plans.

May 2008	Open solicitation of white papers
August 15	White paper submission deadline
October 15	3-day technical workshop to discuss best ideas
December	SCORM 2.0 Design Document produced by Working Groups
2Q2009	SCORM World Congress

About LETSI

The federation for Learning-Education-Training Systems Interoperability is sponsored by a dozen organizations with commitments to SCORM and to open, cross-market standards for learning technology. It is organized under the IEEE-ISTO Industry Standards and Technology Organization.

LETSI’s first order of business is to create the infrastructure for the future stewardship of SCORM and to continue to support the global SCORM community.

LETSI is organized into Working Groups. This White Paper Solicitation has been developed jointly by the LETSI Technical Roadmap Working Group, the Working Group on Teaching and Learning Strategies, and the Working Group on Business Requirements.

For more information please see www.lets.org.