

ISO/IEC JTC 1/SC36

LETSI Liaison Report

LETSI's mission is to shorten the adoption cycle for innovations in elearning: new products, teaching methods, and business models. Several generations of innovation, each building on top of the others, will be required to bring elearning as far into modern life as, say, online shopping or dating. To generate a comparable level of innovation, investors will need to see successful adoption of new elearning products and services, not just pilots and proofs of concept. Being able to conveniently exchange data with installed systems is often a critical requirement for moving successful innovations out of the lab and into the marketplace.

LETSI, in cooperation with other organizations, is involved in the following areas:

1. LETSI's Runtime Web Services working group has created a web service transport mechanisms for the CMI data (IEEE 1484.11.1) that underlies SCORM. This solution solves problems with communicating among web-based learning activities and SCORM LMSs. The specification has been implemented and tested by 8 vendors, including 3 LMSs, and is ready for early adopters who are trying to employ out-of-browser activities in their online learning (games, simulations, intelligent tutoring systems, mobile apps, etc.) A Developer's Guide and code samples are available on the LETSI wiki, letsi.org/rtps.
2. LETSI is working jointly with the AICC, ADL, and IEEE LTSC on the future of the CMI. LETSI believes that, going forward, the CMI data structure should be replaced by a set of small, logically coherent data payloads to allow greater efficiency and flexibility – different kinds of apps sharing specific kinds of data. SC36 members are welcome to join as individuals a 6-month joint study group that we expect to form in September.
3. LETSI's working groups are developing several new data exchange specifications, based on a review of related work in LET and in other industries:
 - *Content as a Service* will produce an entitlement-related data model to address the needs of commercial content publishers who are hosting their advanced learning activities on the web.
 - *Namesets and Shared Data* will, jointly with the AICC, create a universal scheme for sharing arbitrary datasets on arbitrary Internet servers.
 - *LET Activity Description* will produce a new conceptual model of a learning activity, including its behavioral metadata, to support applications for finding, previewing, buying, organizing, assigning, observing, reviewing, participating in, tracking, reviewing, and recommending both web-based and LMS-hosted learning activities.
 - LETSI is also committed to facilitating the adoption of the ISO standard "Access for all" personal needs and preferences for digital delivery (ISO-IEC 24751-2). We would like to explore defining a web service for data describing a learner's accessibility needs that would complement our other service definitions. We need expert participation from the SC36 Accessibility community to undertake this effort.

4. LETSI believes that finding common ground across geographical regions and market sectors (corporate, military, K12, higher ed, professional certification) will increase the potential market size for new products and promote the spread of innovation across markets. We believe that market diversity can be accommodated in future standards via abstraction, extension, and a “scriptable” conformance regimen. This approach will minimize the impact of market variations on developers serving multiple markets. The extension mechanism could also serve as a breeding ground for technical innovations (plugins).

LETSI’s process, pioneered by the Runtime Web Services project, involves open participation in small working groups that produce narrowly scoped deliverables in a fixed time frame. The groups conduct a review of relevant work followed by an agile software development process that involves at least one implementation/test cycle and produces documentation and code samples useful to future developers.

If properly managed, this software-based process will result in better standards faster. More importantly, to achieve LETSI’s goal of accelerating the early adoption of innovative products, teaching methods, and business models, we see the open software activity itself serving as an interim interoperability solution for innovators and early adopters in the years before accredited standards are feasible.

To promote innovation and experimentation in different communities of practice, all of LETSI’s future work will be openly available and unrestricted as regards to derivative works. There are several important parts of this architecture that remain to be defined. LETSI looks forward to working with ISO/IEC JTC 1/ SC36 and others to complete the picture and build a new software infrastructure for elearning.