

ISO/IEC JTC 1/SC36

LETSI Liaison Report

Learning Education, and Training Systems Interoperability

The LETSI Foundation's mission is to shorten the adoption cycle for innovations in elearning: new products, teaching methods, and business models. The successful introduction and broad adoption of new products – perhaps several generations of new products, each building on top of the others – will require that these new systems, apps, and web-based services conveniently exchange data about learners and learning with the enterprise LMS and with each other.

LETSI's first project, called Runtime Web Services (RTWS), defined a web service transport mechanism for the CMI data (IEEE 1484.11.1) that underlies SCORM. This exploratory work has been taken over by the U.S. Advanced Distributed Learning Initiative in their TinCan project with contractor Rustici Software. The TinCan folks replaced the CMI data model with "activity stream" data, designed to enable runtime reporting from all sorts of web-based and mobile learning activities. They also introduced the key concept of a Learning Record Store, a new product category that records activity stream data from learning activities and makes that data available to other systems and data analytics engines. Recently, the ADL released version 1.0 of this communication spec, which they call xAPI. In cooperation with the AICC, the ADL is also attempting to map the xAPI's model of an autonomous learning activity ecosystem back into the world of LMS-based launch and control of content.

In 2012, LETSI and the IEEE LTSC partnered in a joint study group to consider the future of the CMI standard. We discussed the impact of new technologies including tablets, HTML5, data analytics, MOOCs, robo grading, artificial intelligence, and social learning. We relaxed our assumptions about educational institutions and business models such as classroom-based teaching, cohort-based advancement, school-based certification, and textbook publishing. In early 2013, under the auspices of IEEE Industry Connections, an IEEE Standards Association program, we helped launch a research & development collaboration to define and demonstrate an "actionable data book for STEM education," the ADBook.

The ADBook project explores the future of the book in education. As teachers embrace online and mobile learning, the tablet-based offerings from educational publishers will increasingly incorporate a variety of cloud-based learning activities and resources. These next-generation ebooks and etextbooks will look more like mobile apps than books. They will need to exchange data with a growing list of educational systems including student management, lesson planning, record keeping, learning analytics, assignment scheduling, and collaborative learning. The goal of the ADBook project is to define the extensions to the IDPF's EPUB 3 standard that will be needed to implement the added functionality required of educational ebooks in a way that will allow them to plug-and-play with other systems.

LETSI continues weekly deliberations about future directions in educational technology, focused largely on data interoperability in an expanded ecosystem among emerging LET product categories. Our proceedings and our papers are public. We hope to continue this pattern of work where our initial investigations into interoperability issues result in spinoff-activities with realistic objectives.

LETSI liaison status with ISO/IEC JTC 1/ SC36 remains critical to our goal of serving the cutting edge of innovation in elearning. While the LETSI folk are all volunteers and are not often able to attend the SC36 meetings, we carefully monitor the activities of the SC36 working groups and we hope that our work will remain relevant to yours.