

# LON Newsletter

March 12, 2003 Edition



*News from the developing learning object economy*

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## 1. LON PRESENTS AT IMS GLOBAL LEARNING MEETING

Tom Barefoot of LON recently participated in the IMS Global Learning Consortium Quarterly Technical Board Meetings in Vancouver. Tom and LON's Chief Systems Architect, Tracy Flynn, have been actively involved in the IMS Digital Repositories Interoperability working group for the last 18 months. On January 24th the IMS Technical Board voted to approve the DRI Specification version 1.0 as an international specification for eLearning. This adoption will open the doors for wide implementation of the DRI specifications in the eLearning industry, enabling interoperability for SCORM or IMS conformant learning objects and software tools. This also enables implementers to access the LON Search and the LON DOI Registry and to exchange learning objects between authoring tools and Learning Management Systems. This specification was approved by Microsoft, IBM, Cisco, SUN, Apple and more than 20 other companies.

Tom gave a presentation to 60 of the delegates on the technical aspects of the DRI specifications, and also gave a presentation to the Open Technical Forum that showed how LON was using the Open Standards and Specifications to build an interoperable network for the secure exchange of learning objects over the Internet.

## 2. WHERE DOES THE IMS DRI SPECIFICATION FIT IN THE EVOLVING WORLD OF ELEARNING SPECIFICATIONS?

The DRI Specification addresses how users and tools interact with repositories to input, discover, locate, and deliver learning object metadata and the associated content.

The DRI specification defines a specific set of functions and protocols that enable a diverse range of eLearning systems to communicate with each other. It is based on established standards such as the Simple Object Access Protocol (SOAP with attachments) and the XQuery XML search language developed by the World Wide Web Consortium. The specification acknowledges a wide range of content formats and is applicable to both learning object repositories as well as other traditional content sources such as libraries and museum collections.

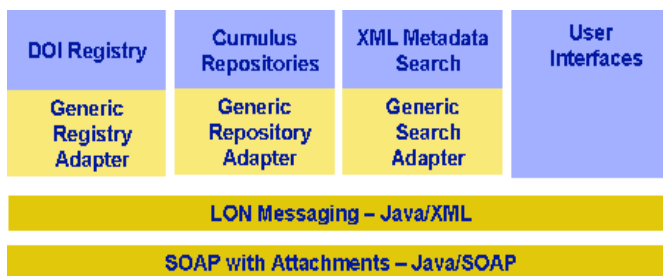
### *DRI in a Nutshell*

- ◆ DRI Recommendations for Search
  - . XQuery for XML metadata, Z39.50 for libraries and SQL for databases.
- ◆ DRI Recommendations for a Web Services Messaging Solution
  - SOAP with attachments over HTTP
  - Definition of GET, PUT, FIND messages
- ◆ DRI requires that a Learning Object Repository work with IMS Metadata and Content Package Specifications
  - Recognizes that Digital Libraries and other repositories will have other formats and other metadata
- ◆ DRI does not prescribe internal requirements for a Learning Object Repository or what happens when a learning object is put into the repository **Recommendation for Unique Identifiers for content in Digital Repositories:**

The DOI – Digital Object Identifier, an actionable unique identifier (ANSI/NISO Z39-84-2000) was developed by the publishing industry based on the Handle System. The International DOI Foundation manages the DOI Registry Agents and a global redundant network to insure continuous operations. DOI allows multiple resolutions and redirection to a DRM Engine or other services.

LON is the Digital Object Identifier (DOI) Registry Agency for Learning Objects. The IMS DRI Spec recommends DOI (or OpenURL, or PURL) for unique identifiers for learning objects in repositories. LON can offer DOI's for use in the LON Registry (Public) or for private registry implementations inside an enterprise.

LON has implemented the DRI messaging with 33 messages and has built an SDK (Software Development Kit) to facilitate vendors implementing the DRI Spec with their software tools or repositories. LON will have the SDK available in April. The SDK will save DRI implementer's months of work. Because of the layered design, future extensions will be easy to implement.



LON has implemented key functions of the DRI Specifications as the core of LON's Network Services:

- ◆ Single Sign-on for enterprise environments – simple authentication
- ◆ XML Repository for Metadata
- ◆ X-PATH, XQuery Search
- ◆ DOI Registry Service
- ◆ Repository Services Registry
- ◆ Canto Cumulus Digital Media Asset Management Software for LO Repository
- ◆ IMS DRI SOAP with Attachments messaging

The IMS DRI provides an international specification for interoperability in the eLearning supply chain. LON and others will build on this specification to provide network services to content authors, publishers, learning management systems and users.

### 3. DoD eLEARNING RFP's Now 30% SCORM

Dr. Robert Wisher, who has been acting Director of the Advanced Distributed Learning Initiative, has recently been appointed permanent Director. Bob reports that plans for the U.S. Department of Defense to require SCORM conformance in all RFP's for training and documentation systems provided to the DoD is working its way through the Office of the Secretary of Defense and is expected to be enacted later this year. Bob says that, in anticipation of this requirement that more than 30% of current RFP's include a requirement for SCORM conformance. This shows that adoption is increasing and the pending requirement will further accelerate adoption all along the eLearning content supply chain.

#### 4. **AAP/LON WORKING GROUP STARTS: INSTRUCTIONAL DESIGN OF STANDARD LEARNING OBJECTS**

LON is leading a Working Group on Instructional Design of Standard Learning Objects. The working group is sponsored by McGraw-Hill and the Association of American Publishers (AAP) with guest participants from the Department of Defense and key universities.

The working group will focus on the creation of standard learning objects for advanced distributed learning environments. Core working group size will be limited to a small number of active participants in order to achieve the specific goals of the group. A broader "observer group" will also be formed to create opportunities for individuals interested in learning from working group activities.

#### 5. **LON OFFERS SCORM WORKSHOPS**

LON is now offering half-day seminars on The Strategic Importance of SCORM to help organizations understand the implications of the shift to Standard Reusable Learning Objects, as well as a new one-day seminar for technical implementers of SCORM. This seminar helps content producers or service bureaus to move rapidly up the SCORM learning curve so that they can incorporate SCORM into their existing production workflows.

#### 6. **LON DEVELOPS CANTO PLUG-IN**

LON is almost ready to announce completion of a SCORM compatibility Plug-in for Industry Leading Canto Cumulus Digital Media Asset Management repository software. LON has been working with Canto to develop an implementation of the DRI network specifications and a SCORM adapter to enable Cumulus to ingest a SCORM 1.2 conformant Learning Object. The LON Plug-in will enable a powerful, scalable Learning Objects Repository to be easily provided to a wide range of customers by LON's professional services group.

#### 7. **DUTCH PUBLISHERS MEET WITH LON, PLAN FUTURE EFFORTS**

The Dutch Publishers Association invited LON to address its members on February 20th. Herman Pabbruwe, LON Director, gave the presentation in the Netherlands. In the coming months, LON will work with a number of Dutch publishing houses to identify opportunities to apply the SCORM standard and work with DOI's in order to repurpose their content in educational settings.

#### 8. **AAP/PSP CONFERENCE SESSION ON CONTENT SALES TO GOVERNMENT**

***"Selling Content to the U.S. Government"*** was the subject of a presentation made by LON President, John Purcell at the Association of American Publishers / Professional and Scholarly Publishing 2003 Annual Meeting in Washington, D.C. on February 3rd. Much of the session focused on the many projects that LON facilitated for publishers

working with the Department of Defense. The session also looked at new projects currently being developed.

## **9. LON LEADS NAVY - PUBLISHER PARTNERSHIP**

The Navy Bureau of Medicine recently recognized the effort of LON, the Association of American Publishers, and major publishers in its Newsletter. The projects described in the newsletter below were developed under the agreements among the AAP, Department of Defense, LON, and major publishers. Portions of the newsletter article follow:

Partnering with Publishers -- NMETC Branch Campuses lead the way to the future Naval School of Health Sciences (NSHS) San Diego, NMETC and NHCS Great Lakes are partnering with publishers to develop new and inventive ways for delivering knowledge content.

Under an agreement to develop, test and evaluate advanced distributed learning technology, NSHS and NHCS have been working with publishing leaders, Lippincott and Elsevier to develop unique electronic training modules. These partners are leading the way to find more efficient and effective ways to deliver knowledge to Hospital Corpsmen. The new course modules will be included in the basic Hospital Corpsman and Independent Duty Corpsman curriculums.

In another joint effort, NSHS and NHCS plan to work together with Lippincott to develop Anatomy and Physiology (A&P) modules for both schools.

Mr. John Purcell of Learning Objects Network (LON) Corporation (the facilitator of this agreement) has expressed a strong interest in supporting Navy Medicine initiatives. He states "publishers are very interested in learning from these pilots. The publishers benefit from working closely with Navy Medicine to apply and further develop the emerging advanced distributed learning specifications." Other publishers currently working with Navy Medicine include McGraw-Hill and Pearson.

## **10. ADL CoLAB UPDATE**

LON is now in the implementation phase of a network of distributed repositories with the ADL Joint Military CoLab in Orlando, the CoLab in Alexandria, and the Academic CoLab at the University of Wisconsin. Each repository site already has an instance of the Canto Cumulus Enterprise Digital Media Asset Management software as the core repository. Work with the CoLabs on defining which SCORM metadata will be presented inside the Repository is being completed now. LON will next be assisting each site to install the supporting software and the LON DRI networking and messaging software. This will enable each site to search for content on the LON XML metadata repository service and to use the LON DOI Registry Service to resolve the location of the chosen content and retrieve the content. This will be the first commercial grade implementation of the IMS Digital Repository Interoperability Specifications.