NEW NETWORKING SPECIFICATION IS A KEY MILESTONE FOR ADVANCED DISTRIBUTED LEARNING APPLICATIONS

Learning Objects Network Announces Commercial Software

Boston, MA – February 18, 2003 – The IMS Global Learning Consortium recently released the first version of its Digital Repositories Interoperability (DRI) specification. This standards-based networking specification represents a major milestone in achieving the promise of distributed learning environments where learning content is accessible across the Internet anytime, anywhere. Learning Objects Network has developed an implementation of the specification as a core component of its network services and is offering assistance to early adopter organizations.

The IMS DRI specification represents 18 months of collaborative efforts between leaders in industry, academia, government and standards bodies. It defines the core functions and protocols necessary to allow widespread discovery and access to learning content managed in digital repositories. It provides an initial level of interoperability between digital repositories, metadata search services, Learning Management Systems (LMSs), Learning Content Management Systems (LCMSs) and authoring tools. For more information about the IMS Digital Repositories Interoperability specification see www.imsproject.org/digitalrepositories/index.cfm.

Two members of Learning Objects Network's (LON) technical team made substantial contributions to the specification. Tracy Flynn, LON's Chief Systems Architect, and Tom Barefoot, LON's Chief Operating Officer were active members of the IMS working group and played a significant role in the development of the specification.

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.

Interoperability between the key components of a distributed learning environment is achieved by specifically defining the communication protocols for the following functions:

- **Store**: Describes the way an object is moved into in a repository from an authoring or Learning Management System (LMS) environment and how the object is identified in the repository to make it easy to access.
- **Gather**: Describes the process for gathering and aggregating object metadata exposed by repositories to enable searching of distributed, heterogeneous content sources.
- **Search**: Defines methods for searching a diverse range of metadata sources including repositories, metadata translation gateways, and metadata aggregators. Searches may be conducted using the well-established Z39.50 protocol for digital libraries or the emerging standard XQuery language for XML-based repositories.
- **Deliver**: Describes the process used to request, provide access to, and deliver an object from a repository.

LON has developed an implementation of the Digital Repositories Interoperability specification as the foundation for its global network infrastructure. This was accomplished by adding the interfaces and adapters necessary for network integration of digital repositories, search engines, and learning object registries. These messaging and integration software components are initially being implemented as part of a controlled beta test for the Department of Defense's three Advanced Distributed Learning (ADL) Co-labs and selected partners. The ADL test is being conducted as part of LON's Cooperative Research and Development Agreement (CRADA) with the ADL for developing a SCORM compatible network of distributed learning repositories and search capabilities. Both the IMS DRI specification and LON's commercial messaging and integration software are fully compatible with the ADL's SCORM (version 1.2) interoperability specifications.

LON is offering its messaging and integration software to commercial, government, and academic organizations interested in linking together their disparate content repositories with powerful search and retrieval capabilities. This software will enable organizations to better manage, find, and make use of their critical online digital assets. LON's offering includes a Software Development Kit (SDK) to enable the rapid deployment of the IMS DRI messaging specification and integration of specific

commercial repositories, search services, LMSs, LCMSs, and authoring tools using simple adapters. LON is also offering consulting services to support implementation of its messaging and integration software and development of private or extended eLearning networks.

About Learning Objects Network, Inc. Learning Objects Network (LON) is an Internet infrastructure company enabling secure commerce in high value digital content. LON is implementing secure networks for defense agencies and their key suppliers that are fully compatible with the ADL SCORM specifications. This includes a commercial learning object registry service that enables content to be easily searched, located, and retrieved and is based on the standard Digital Object Identifier technology. LON has been working with the ADL initiative of the U.S. Department of Defense through a Cooperative Research and Development Agreement (CRADA) to design and build a distributed network of SCORM compatible repositories and search capabilities. Through a strategic partnership with the publishing industry's trade association, the Association of American Publishers (AAP), LON is assisting major publishers in the commercial adoption of SCORM-conformant learning objects. Learning Objects Network's educational and consulting services assist companies in assessing the impact of SCORM on their businesses and in achieving SCORM conformance.

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