Abstract:
This seminar focuses on the use of the OAI-PMH, NISO OpenURL and MPEG-21 DIP to store assets in a repository architecture designed for the Research Library of the Los Alamos National Laboratory, and to make the stored assets available in a uniform way to various downstream applications. In the architecture, the MPEG-21 Digital Item Declaration Language (MPEG-21 DIDL) is used as the XML-based format to represent assets as Digital Objects. A Digital Object represented according to the MPEG-21 DIDL syntax is referred to as a DIDL document. Through an ingestion process, these DIDL documents are stored in a multitude of autonomous OAI-PMH repositories. An OAI-PMH compliant Repository Index keeps track of the creation and location of all those repositories, whereas an Identifier Locator keeps track of the location of an individual Digital Object. An OAI-PMH Federator is introduced as a single-point-of-access to downstream harvesters. It hides the complexity of the environment to those harvesters, and allows them to obtain transformations of stored DIDL documents by using an MPEG-21 DIP Engine. An OpenURL Resolver facilitates the delivery of various disseminations of the stored Digital Objects and their constituent datastreams. While these aspects of the architecture are described in the context of the LANL library, the paper will also briefly touch on their more general applicability.

Bio:
Herbert Van de Sompel graduated in Mathematics and Computer Science at Ghent University, and in 2000, obtained a Ph.D. there. For many years, he was Head of Library Automation at Ghent University. After having left Ghent in 2000, he has been Visiting Professor in Computer Science at Cornell University, and Director of e-Strategy and Programmes at the British Library. Currently, he is the team leader of the Digital Library Research and Prototyping Team at the Research Library of the Los Alamos National Laboratory. Herbert has played a major role in creating the Open Archives Protocol for Metadata Harvesting, the OpenURL Framework for Context-Sensitive Services, and the SFX linking server.