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The Simple Publishing Interface (SPI) Specification

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Foreword

This CWA contains the requirements for the Simple Publishing Interface (SPI), a protocol for storing educational materials in a repository.

This protocol facilitates the transfer of metadata and content from tools that produce learning materials to applications that persistently manage learning objects and metadata, but is also applicable to the publication of a wider range of digital objects.

The decision for this work item was taken by the Learning Technologies Workshop at the 30th meeting on May 10/11, 2007. Work on the CWA actually started at the 33rd meeting in April 2008.

The document has been developed through the collaboration of a number of contributing partners, representing a wide mix of interests, from universities to commercial companies.

Experts from the following organizations have contributed to this document.

Advanced Distributed Learning (ADL)
European Schoolnet
Katholieke Universiteit Leuven
Knowledge Integration
Open University of the Netherlands
Télug
University of Duisburg-Essen
Vienna University of Economics and Business Administration

The final CEN/WS/LT endorsement took place on 2010-01-11. The final text of this CWA was submitted to CEN for publication on 2010-01-14.

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Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN Management Centre.

1. Introduction

This CEN Workshop Agreement (CWA) presents the Simple Publishing Interface (SPI), a protocol for publishing digital objects or their metadata to repositories. This protocol is designed to facilitate the transfer of metadata and content from tools that produce learning materials to applications that manage learning objects and metadata, but is also applicable to the publication of a wider range of digital objects.

The objective is to develop a practical approach towards interoperability between repositories for learning and applications that produce or consume educational materials. Examples of repositories for learning are educational brokers, knowledge pools, institutional repositories, streaming video servers, etc. Applications that produce these educational materials are for instance query and indexation tools, authoring tools, presentation programs, content packagers, etc. The work will concentrate on the development of the simple publishing interface (SPI), an interface for publishing digital materials into a repository. Whilst the development of the SPI specification draws exclusively on examples from the education sector, it is recognised that the underlying requirement to publish content and metadata into repositories crosses multiple sectors.

The following section presents some important requirements for this work. Next, the SPI model enumerates the different messages that are interchanged when publishing metadata and content. This model has been designed such that it is interoperable with v1.3 Simple Web-service Offering Repository Deposit (SWORD) profile [SWORD], Package Exchange Notification Services [PENS] and the publishing specification that was developed in the ProLearn Network of Excellence [PROLEARN SPI]. The intent of this work is thus not to create yet another specification but to create a model that can be bound to existing technologies.

2. Notations and conventions

To distinguish the requester from the system that publishes an entity (a metadata instance or a learning object), two terms are used:

- The term ‘source’ labels the system that issues a publication request. Alternatively, this system can be labeled as requester.
- A ‘target’ identifies the system to which publication requests are sent. This can be a repository component or a middle layer component. Such a middle layer component can fulfill several tasks. It can generate and attach metadata to a resource, disaggregate and publish more granular components or act for instance as an adapter to a third party publishing API.

We refrained from using the terms ‘client’ and ‘server’ as they give a bias towards an interface that is only applicable in client/server applications. Moreover, the scenarios in which the API is used also envisage a source running on a server (e.g. publishing from within an LMS). Furthermore, in the remainder of this CWA, the terms “resource”, “digital content”, “learning object” and “educational material” will be used interchangeably.