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Entwurf**Schnittstelle für einfaches Publizieren;
Englische Fassung prEN 16425:2012**

Simple Publishing Interface;
English version prEN 16425:2012

Anwendungswarnvermerk

Dieser Norm-Entwurf mit Erscheinungsdatum 2012-05-07 wird der Öffentlichkeit zur Prüfung und Stellungnahme vorgelegt.

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Stellungnahmen werden erbeten

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Gesamtumfang 20 Seiten

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Nationales Vorwort

Dieses Dokument (prEN 16425:2012) wurde vom Technischen Komitee CEN/TC 353 „Informations- und Kommunikationstechnologien für Lernen, Ausbildung und Weiterbildung“ erarbeitet, dessen Sekretariat vom UNI (Italien) gehalten wird.

Gemäß den Kriterien des DINs für den Verzicht auf die Erstellung einer deutschen Sprachfassung wurde auf eine deutsche Fassung verzichtet; DIN EN 16425 enthält somit den englischen Originaltext.

DIN EN 16425 spezifiziert eine Schnittstelle für einfaches Publizieren (Simple Publishing Interface — SPI). Dabei handelt es sich um ein Protokoll für das Publizieren von digitalen Objekten oder deren Metadaten in Repositorien für Lernobjekte. Das Protokoll dient dazu, den Transfer von Metadaten und Inhalt von den Produzenten dieser Lernmaterialien zu Anwendungen, welche Lernobjekte und Metadaten verwalten, zu erleichtern.

April 2012

ICS

English Version

Simple Publishing Interface

Schnittstelle für einfaches Publizieren (Simple Publishing Interface - SPI)

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 353.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (prEN 16425:2012) has been prepared by Technical Committee CEN/TC 353 “Information and Communication Technologies for Learning, Education and Training”, the secretariat of which is held by UNI.

This document is currently submitted to the CEN Enquiry.

This document 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.

1 Introduction

This document 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. It 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 application domains.

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

The following terms are used to distinguish the requester from the system that publishes an entity (a metadata instance or a learning object):

- A 'source' is a system that issues a publication request. Alternatively, this system can be labeled as requester.
- A 'target' is a 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 document, the terms "resource", "digital content", "learning object" and "educational material" will be used interchangeably.

3 Requirements and Design Principles

In this section, some of the requirements for a publishing application programming interface (API) are identified. These requirements stem from different repository architectures where learning resources and metadata instances have to be communicated across system boundaries. SPI enables applications to upload learning resources or metadata to a repository. For example, Figure 1 illustrates how an authoring tool (e.g., OpenOffice) could use SPI to upload a resource directly into a repository. A Learning Management System (LMS) (e.g., Moodle, Blackboard, etc.) could enable teachers to publish their materials transparently into a repository. By doing so, materials are simultaneously made available to students and published into a repository where they can be reused.