

SVENSK STANDARD

SS-EN 15982:2011



Fastställt/Approved: 2011-09-22
Publicerad/Published: 2011-10-12
Utgåva/Edition: 1
Språk/Language: engelska/English
ICS: 35.240.99

Metadata for Learning Opportunities (MLO) – Advertising

This preview is downloaded from www.sis.se. Buy the entire standard via <https://www.sis.se/std-81686>

Standarder får världen att fungera

SIS (Swedish Standards Institute) är en fristående ideell förening med medlemmar från både privat och offentlig sektor. Vi är en del av det europeiska och globala nätverk som utarbetar internationella standarder. Standarder är dokumenterad kunskap utvecklad av framstående aktörer inom industri, näringsliv och samhälle och befrämjar handel över gränser, bidrar till att processer och produkter blir säkrare samt effektiviserar din verksamhet.

Delta och påverka

Som medlem i SIS har du möjlighet att påverka framtida standarder inom ditt område på nationell, europeisk och global nivå. Du får samtidigt tillgång till tidig information om utvecklingen inom din bransch.

Ta del av det färdiga arbetet

Vi erbjuder våra kunder allt som rör standarder och deras tillämpning. Hos oss kan du köpa alla publikationer du behöver – allt från enskilda standarder, tekniska rapporter och standardpaket till handböcker och onlinetjänster. Genom vår webbtjänst e-nav får du tillgång till ett lättnavigerat bibliotek där alla standarder som är aktuella för ditt företag finns tillgängliga. Standarder och handböcker är källor till kunskap. Vi säljer dem.

Utveckla din kompetens och lyckas bättre i ditt arbete

Hos SIS kan du gå öppna eller företagsinterna utbildningar kring innehåll och tillämpning av standarder. Genom vår närhet till den internationella utvecklingen och ISO får du rätt kunskap i rätt tid, direkt från källan. Med vår kunskap om standarders möjligheter hjälper vi våra kunder att skapa verklig nytta och lönsamhet i sina verksamheter.

Vill du veta mer om SIS eller hur standarder kan effektivisera din verksamhet är du välkommen in på www.sis.se eller ta kontakt med oss på tel 08-555 523 00.



Standards make the world go round

SIS (Swedish Standards Institute) is an independent non-profit organisation with members from both the private and public sectors. We are part of the European and global network that draws up international standards. Standards consist of documented knowledge developed by prominent actors within the industry, business world and society. They promote cross-border trade, they help to make processes and products safer and they streamline your organisation.

Take part and have influence

As a member of SIS you will have the possibility to participate in standardization activities on national, European and global level. The membership in SIS will give you the opportunity to influence future standards and gain access to early stage information about developments within your field.

Get to know the finished work

We offer our customers everything in connection with standards and their application. You can purchase all the publications you need from us - everything from individual standards, technical reports and standard packages through to manuals and online services. Our web service e-nav gives you access to an easy-to-navigate library where all standards that are relevant to your company are available. Standards and manuals are sources of knowledge. We sell them.

Increase understanding and improve perception

With SIS you can undergo either shared or in-house training in the content and application of standards. Thanks to our proximity to international development and ISO you receive the right knowledge at the right time, direct from the source. With our knowledge about the potential of standards, we assist our customers in creating tangible benefit and profitability in their organisations.

If you want to know more about SIS, or how standards can streamline your organisation, please visit www.sis.se or contact us on phone +46 (0)8-555 523 00



Europastandarden EN 15982:2011 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 15982:2011.

The European Standard EN 15982:2011 has the status of a Swedish Standard. This document contains the official version of EN 15982:2011.

© Copyright/Upphovsrätten till denna produkt tillhör SIS, Swedish Standards Institute, Stockholm, Sverige. Användningen av denna produkt regleras av slutanvändarlicensen som återfinns i denna produkt, se standardens sista sidor.

© Copyright SIS, Swedish Standards Institute, Stockholm, Sweden. All rights reserved. The use of this product is governed by the end-user licence for this product. You will find the licence in the end of this document.

Uppllysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00. Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna uppllysningar om svensk och utländsk standard.

Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.

Denna standard är framtagen av kommittén för IT-standarder för Lärande, SIS/TK 450.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

EUROPEAN STANDARD

EN 15982

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2011

ICS 35.240.99

English Version

Metadata for Learning Opportunities (MLO) - Advertising

Métadonnées pour les opportunités d'apprendre - Publicité

Metadaten für Lernangebote (MLO) - Werbung

This European Standard was approved by CEN on 29 July 2011.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents		Page
Foreword		3
1	Scope	4
2	Normative references	4
3	Terms and Definitions	4
4	Conformance	6
4.1	Conforming Instance	6
4.2	Conforming Bindings	6
4.3	Conforming Applications	6
5	Conventions	7
6	Concepts	7
6.1	General	7
6.2	Learning Opportunity (LO)	7
6.3	Learning Opportunity Provider (LOP)	7
6.4	Learning Opportunity Specification (LOS)	7
6.5	Learning Opportunity Instance (LOI)	7
7	Classes	7
8	Properties	8
8.1	General	8
8.2	Properties used to describe relationships between resources	10
8.3	Properties included from ISO 15836	11
Annex A (informative) Informative data model		12
Bibliography		13

Foreword

This document (EN 15982:2011) 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 European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2012, and conflicting national standards shall be withdrawn at the latest by March 2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

MLO-Advertising (MLO-AD) is a standard addressing metadata sufficient for advertising a learning opportunity.

The goal of MLO-AD is to provide information about a learning opportunity, to enable the learner to make a decision if there is a need for more information about the learning opportunity, and where to find that information.

MLO-AD is a lightweight standard that fits well with existing business processes and technologies. The MLOAD standard facilitates semantic technologies and web architectures to support several mechanisms for exchange of information and aggregation of information by third party service suppliers. The standard is easy to implement to ensure a rapid uptake by the European countries.

At the design level, the group wanted the standard to support the ECTS descriptions and the exchange of ECTS information.

The standard only describes the datamodel for learning opportunities, and does not give any guidance on the vocabularies that are needed to ensure semantic interoperability between different educational and jurisdictional domains. The reason for not addressing vocabularies is that there is a need for frequently updating and maintaining the vocabularies, and that many vocabularies are mandated by the educational and jurisdictional domains where the standard is used.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies the characteristics of electronic representation of Learning Opportunities in order to facilitate their advertising and subsequent discovery by prospective learners.

Key users of the standard will be:

- those who provide opportunities for learning and wish to advertise them;
- those who offer electronic search services that aggregate results from multiple Learning Opportunity providers;
- those who wish to compare Learning Opportunities that have been represented electronically.

This European Standard specifies an abstract model for representing Learning Opportunities. The model specifies three resources about which metadata can be stored to facilitate advertising of Learning Opportunities:

- a) the Learning Opportunity Provider;
- b) the Learning Opportunity Specification; and
- c) the Learning Opportunity Instance.

This European Standard specifies the characteristics of relations between the three resources and recommends a core set of metadata for each.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 15836, *Information and documentation — The Dublin Core metadata element set*

3 Terms and Definitions

For the purpose of this document, the following terms and definitions apply.

3.1

advertising

process of making descriptions of Learning Opportunities available to external systems

NOTE Typically this is for the purpose of encouraging applications from potential learners;

3.2

aggregator

system (application or service) that collates descriptions of Learning Opportunities from multiple Learning Opportunity Providers in order to offer additional functionality to users based on those descriptions, for example to search, browse, and compare Learning Opportunities

3.3

broker

system (application or service) that collates descriptions of Learning Opportunities from multiple Learning Opportunity Providers in order to support one or more business processes, such as mediated application to University, or financial services such as student loans

3.4

provider

party (person or organisation) that offers Learning Opportunities

NOTE Synonymous with Learning Opportunity Provider;

3.5

resource

anything that might be identified

EXAMPLES Familiar examples include an electronic document, an image, a service.

NOTE Attention is drawn to W3C-RDFS for the detailed definition of this term.

3.6

class

group containing members that have attributes, behaviours, relationships or semantics in common

NOTE Attention is drawn to W3C-RDFS for the detailed definition of this term.

3.7

property

specific aspect, characteristic, attribute, or relation used to describe resources

NOTE Attention is drawn to W3C-RDFS for the detailed definition of this term.

3.8

range

range of values that may be used for a property

NOTE Attention is drawn to W3C-RDFS for the detailed definition of this term.

3.9

domain

class of resource to which statements using a property may be made

NOTE Attention is drawn to W3C-RDFS for the detailed definition of this term;

3.10

sub property of

a property that is derived from another property

NOTE Attention is drawn to W3C-RDFS for the detailed definition of this term.

3.11

sub class of

a class that is derived from another class

NOTE Attention is drawn to W3C-RDFS for the detailed definition of this term.

3.12

literal

literal value for a property defined within a statement; this may be a plain literal value (such as a string and language term) or a typed literal value (such as a value and data type specification identifier)

NOTE Attention is drawn to W3C-RDFS for the detailed definition of this term.

3.13 statement

combination of a property and a value specified for a resource

3.14 URI

uniform resource identifier

NOTE As defined by IETF-RFC2396.

4 Conformance

4.1 Conforming Instance

There are two levels at which conformance to this standard may be claimed: strictly conforming and conforming.

A *strictly conforming* instance is a set of structured information constituted only of objects and statements defined by the classes and properties of this standard and fully qualified refinements of the properties defined in this standard.

A fully qualified refinement is defined for the purpose of conformance as a property that explicitly extends a property defined by this standard. A fully qualified refinement must be capable of being processed according to the semantics of the property it extends.

A *conforming* instance may contain additional objects and properties.

NOTE As there are no cardinality restrictions on any of the properties of this standard, an instance consisting only of one or more objects conforming to classes defined in this standard but without any properties is a strictly conforming instance.

4.2 Conforming Bindings

A *strictly conforming* binding is constituted only of bindings to an exchange format of the classes and properties defined by this standard and fully qualified refinements of the properties defined in this standard.

A *conforming* binding may contain additional properties that do not necessarily extend or map to the properties defined in this standard.

Both *strictly conforming* bindings and *conforming* bindings must be capable of being used to generate and validate instances that can be automatically converted to a strictly conforming instance of this standard.

Both *strictly conforming* bindings and *conforming* bindings may impose additional constraints upon the values of properties defined in this standard.

Both *strictly conforming* bindings and *conforming* bindings may impose cardinality constraints on properties defined in this standard.

Both *strictly conforming* bindings and *conforming* bindings may impose cardinality constraints on associations between instances of the classes defined in this standard.

NOTE Attention is drawn to the GRRDL (Gleaning Resource Descriptions from Dialects of Languages), and XSLT (XSL Transformations), both recommendations of W3C.

4.3 Conforming Applications

There are two classes of application that may claim conformance to this standard: conforming providers and conforming consumers.

A conforming provider is an application that is capable of generating and sharing (1) conforming instances , and/or (2) instances that conform to a conforming binding.

A conforming consumer is an application that is capable of processing (1) conforming instances, and/or (2) instances that conform to a conforming binding.

5 Conventions

URIs for classes and properties defined in this European Standard and included from EN 15982:2011 are introduced with the "mlo:" prefixes."

NOTE The namespace for all classes and properties defined in this standard is currently <http://purl.org/net/mlo> (prefix "mlo:"). CEN has initiated a process for the establishment of a Namespace policy and the provision of related services. Upon resolution of this issue the text of this clause will be amended as appropriate.

6 Concepts

6.1 General

In the Informative Annex A, a UML representation of the concepts is presented.

6.2 Learning Opportunity (LO)

A chance to participate in education or training.

6.3 Learning Opportunity Provider (LOP)

An agent (person or organisation) that provides learning opportunities.

6.4 Learning Opportunity Specification (LOS)

An abstract description of a learning opportunity, consisting of information that will be consistent across multiple instances of the learning opportunity.

6.5 Learning Opportunity Instance (LOI)

A single occurrence of a learning opportunity. Unlike a Learning Opportunity Specification, a Learning Opportunity Instance is not abstract, may be bound to particular dates or locations, and may be applied for or participated in by learners.

7 Classes

The following classes represent the Resources defined for Learning Opportunities.

URI: [mlo:LearningOpportunityProvider](#)

Label: Learning Opportunity Provider

Definition: An agent (person or organisation) that provides learning opportunities.

URI: [mlo:LearningOpportunitySpecification](#)

Label: Learning Opportunity Specification

Definition: An abstract description of a learning opportunity, consisting of information that will be consistent across multiple instances of the learning opportunity.