

IEEE Standard for Learning Object Metadata

IEEE Computer Society

Developed by the
Learning Technology Standards Committee

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Developed by the

Learning Technology Standards Committee
of the
IEEE Computer Society

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Abstract: A conceptual data schema that defines the structure of a metadata instance for a learning object is specified in this standard. For this standard, a learning object is defined as any entity, digital or non-digital, that is used for learning, education, or training; a metadata instance for a learning object describes relevant characteristics of the learning object to which it applies. Such characteristics can be regrouped in general, life cycle, meta-metadata, educational, technical, educational, rights, relation, annotation, and classification categories. The conceptual data schema defined in this standard specifies the data elements of which a metadata instance for a learning object is composed and allows for linguistic diversity of both learning objects and the metadata instances that describe them. It is intended that this standard will be referenced by other standards that will define the implementation descriptions of the data schema, so that a metadata instance for a learning object can be used by a learning technology system to manage, locate, evaluate, or exchange learning objects.

Keywords: data elements, data schema, datatypes, data types, IEEE 1484.12.1™, learning objects, learning object metadata, LOM, metadata, schema, vocabulary

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Introduction

This introduction is not part of IEEE Std 1484.12.1-2020, IEEE Standard for Learning Object Metadata.

Metadata is information about an object, be it physical or digital. As the number of objects grows exponentially and our needs for learning expand equally dramatically, the lack of information or metadata about objects places a critical and fundamental constraint on the ability to discover, manage, and use objects.

This standard addresses this problem by defining a structure for interoperable descriptions of learning objects.

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1. Overview

1.1 Scope

This standard specifies a conceptual data schema that defines the structure of a metadata instance for a learning object. For this standard, a learning object is defined as any entity, digital or non-digital, that is used for learning, education or training.

For this standard, a metadata instance for a learning object describes relevant characteristics of the learning object to which it applies. Such characteristics can be regrouped in general, life cycle, meta-metadata, educational, technical, educational, rights, relation, annotation, and classification categories.

The conceptual data schema specified in this standard will allow for linguistic diversity of learning objects and the metadata instances that describe them.

The conceptual data schema defined in this standard specifies the data elements of which a metadata instance for a learning object is composed.

This standard will be referenced by other standards that will define the implementation descriptions of the data schema so that a metadata instance for a learning object can be used by a learning technology system to manage, locate, evaluate, or exchange learning objects.

This standard does not define how a learning technology system will represent or use a metadata instance for a learning object.

1.2 Purpose

The purpose of this standard is to facilitate search, evaluation, acquisition, and use of learning objects, for instance, by learners, instructors, or automated software processes. The purpose is also to facilitate the sharing and exchange of learning objects by enabling the development of catalogs and inventories while taking into account the diversity of cultural and lingual contexts in which the learning objects and their metadata will be exploited.

By specifying a common conceptual data schema, this standard helps to ensure that bindings of Learning Object Metadata (LOM) will likely have a high degree of semantic interoperability. As a result, transformations between bindings will be straightforward.