

SINGAPORE STANDARD

# **Specification for eLearning framework**

– Part 10 : Digital content framework



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– Part 10 : Digital content framework

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Standards  
SPRING Singapore  
1 Fusionopolis Walk,  
#01-02 South Tower, Solaris  
Singapore 138628  
Email : [standards@spring.gov.sg](mailto:standards@spring.gov.sg)

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The Information Technology Standards Committee appointed by the Standards Council consists of the following members:

	<b>Name</b>	<b>Capacity</b>
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<b>Secretary</b>	: Ms Ho Buaey Qui	<i>Infocomm Development Authority of Singapore</i>
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	Dr Derek Kiong	<i>Institute of Systems Science</i>
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	Mr Tan Bee Teck	<i>Ministry of Defence</i>
	Mr Wilson Tan	<i>Individual Capacity</i>
	Mr Daniel Wee	<i>Nanyang Polytechnic</i>

The Technical Committee on Learning Standards appointed by the Information Technology Standards Committee and responsible for the preparation of this standard consists of representatives from the following organisations:

	<b>Name</b>	<b>Capacity</b>
<b>Chairman</b>	: Mr Lim Kin Chew	<i>SIM University</i>
<b>Members</b>	: Mr Chia Keng Hian	<i>Hwa Chong Institution</i>
	Mr Chua Chet Shiu	<i>Litespeed Pte Ltd</i>
	Mr Budy Harnata	<i>Universitas 21 Global</i>
	Ms Kwek Siew Wee	<i>Nanyang Polytechnic</i>
	Mr Li Ying Hao	<i>E-Book Systems Pte Ltd</i>
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	Mr Son Wei Meng	<i>Nanyang Polytechnic</i>
	Mr Narayanan Shyam	<i>National University of Singapore</i>
	Mr Tan Gek Hua	<i>Republic Polytechnic</i>
	Mr Tan Kah Ching	<i>National University of Singapore Library</i>
	Ms Teng Geok Lin	<i>Ngee Ann Polytechnic</i>

The Working Group appointed by the Technical Committee to assist in the preparation of this standard comprises the following experts who contributed in their *individual capacity*:

	<b>Name</b>
<b>Convenor</b>	: Mr Lim Kin Chew
<b>Members</b>	: Mr Cheng San Chye
	Mr Chia Keng Hian
	Mr Chua Chet Shiu
	Ms Chung Yin Wah
	Mr Budy Harnata
	Mr Michael Heng
	Ms Lee Sai Choo
	Ms Jane Low
	Ms Ng Siew Hiang
	Mr Iz Ong Sey Beng
	Mr Narayanan Shyam
	Mr Tan Gek Hua
	Mr Tan Kah Ching
	Ms Teng Geok Lin

The organisations in which the experts of the Working Group are involved are:

*HP Education Services*  
*Hwa Chong Institution*  
*Infocomm Development Authority of Singapore*  
*Litespeed Pte Ltd*  
*Ministry of Education*  
*Nanyang Polytechnic*  
*National University of Singapore*  
*Ngee Ann Polytechnic*  
*Republic Polytechnic*  
*Universitas 21 Pte Ltd*

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**Contents**

	<b>Page</b>
Foreword _____	7

**CLAUSES**

1	Scope _____	8
2	Purpose _____	8
3	Definitions _____	9
4	Attributes for digital content _____	12
5	Designing and developing considerations of digital resources _____	15
6	Informational and instructional digital content _____	15
7	Use diagram _____	17
8	E-learning content types and learning architectures _____	20
9	Content model _____	21
10	Interactivity of digital content _____	22
11	Model for aggregation of digital learning objects _____	23
12	CISCO's approach to content aggregation _____	24
13	Other ways of structuring learning objects _____	27
14	Development of the digital content _____	30
15	Evaluation criteria for quality digital content _____	31
16	Copyright and licensing considerations _____	34

**ANNEXES**

A	Implementation guidelines specific to the Ministry of Education _____	35
B	References _____	48

**TABLES**

1	Learning object terminology _____	11
2	Learning object attributes _____	13
3	Criteria for digital resources _____	13
4	Characteristics of a digital resource _____	15
5	Roles of the target users of learning objects _____	19
6	Five types of content _____	20
7	Comparing the content models from Reusablelearning.org and CISCO's RLO/RIO Model _____	22
8	Examples of the use of the Guerra Scale _____	23

	<b>Page</b>
9	Some graphic methods for teaching content types _____ 26
10	Digital content development workflow _____ 30
11	Simple evaluation checklist for learning objects _____ 33
12	Evaluation of digital resources (schools) _____ 33
A.1	Packaging of resources in an aggregated digital resource _____ 39
A.2a	Packaging of a web-based resource “Animal Sounds” _____ 40
A.2b	Packaging of a MS PowerPoint resource “Plant” _____ 40
A.2c	Packaging of a lesson package “Pollution” _____ 41
A.3a	Metadata elements to be entered by user _____ 41
A.3b	Metadata elements programmed to be entered by system _____ 42

**FIGURES**

---

1	Pictorial representation of a learning object _____ 9
2	Relationship between digital content, learning object and digital resource _____ 10
3	Terminology for learning objects _____ 11
4	Graphic image – information only _____ 16
5	Instructional digital content with learning object _____ 16
6	Learning package as an aggregation of several content objects _____ 17
7	Learning object use diagram _____ 18
8	Content model for designing learning objects _____ 21
9	The Guerra Scale on interactivity _____ 22
10	Content aggregation _____ 23
11	Example of a detailed representation for content aggregation _____ 24
12	Structure of an RLO _____ 25
13	The RLO as a complete lesson _____ 26
14	Structuring content to become a learning object _____ 27
15	Instructional integrity of a learning object _____ 27
16	Blended learning course _____ 28
17	Another way to organise the constituents of a learning object _____ 29
18	NETg’s Learning Object _____ 29
19	Developing procedure for learning objects _____ 30
A.1a	A web-based resource on “Animal Sounds” _____ 38
A.1b	A MS PowerPoint resource on “Plants” _____ 38
A.1c	A lesson package resource on “Pollution” _____ 38

## Foreword

This Singapore Standard was prepared by the Technical Committee on Learning Standards under the purview of the Information Technology Standards Committee.

This Singapore Standard addresses the design, development, evaluation and sharing of digital content. At the moment there is no known international standard on digital content but there are several leading approaches that have been known developed by well-known companies like CISCO, Adobe and NETg.

Having monitored and reviewed the e-learning trends and practices worldwide, the Learning Standards Technical Committee felt that there is a need to develop a framework on digital content. This framework highlights some widely known digital content models, also known as learning object models. Other areas that are covered in this framework include copyright and licensing considerations and the evaluation criteria.

In preparing this standard, reference was made to websites and publications listed in Annex B.

Attention is drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. SPRING Singapore shall not be held responsible for identifying any or all of such patent rights.

### NOTE

1. *Singapore Standards are subject to periodic review to keep abreast of technological changes and new technical developments. The changes in Singapore Standards are documented through the issue of either amendments or revisions.*
2. *Compliance with a Singapore Standard does not exempt users from legal obligations.*



## Specification for eLearning framework – Part 10 : Digital content framework

### 1 Scope

This standard provides some definitions, rules, ideas and structures which will allow digital learning content to be designed, developed, evaluated and shared. The digital learning content could be deployed in various educational framework meant for content-driven or process-driven learning. It covers also the evaluation criteria.

It does not provide detailed instructions on designing or developing digital courseware. However, the Ministry of Education (MOE) has specific ways of developing digital courseware and these guidelines are found in Annex A.

### 2 Purpose

**2.1** This framework provides a basic foundation for those interested in developing digital content for use in a teaching and learning environment. Essentially, this framework recognises the two interpretations of digital content as that of “learning objects” and “digital resources”.

In the “learning objects” approach, this standard offers a few possibilities to structure and organise contents into a granular form. With better granularity, users can be guided in the following ways:

- Embed learning objectives in the digital content;
- Control the learner’s information overload;
- Incorporate learning activities in the digital content;
- Enable learners to gauge their understanding of the content.

**2.2** In the knowledge economy, learning, education and training increasingly make use of new digital media. More people are using mechanisms like blogs, Flickr and YouTube to post their digital contents whether they are pictures, sounds or video clips.

The reasons for developing a digital content framework are as follows:

- a) Most of the information resources are in the digital format;
- b) Content is essential, as, without which, knowledge cannot circulate or permeate in any organisation in a tangible form;
- c) Users need some kind of structure and “language” for them to share, exchange and collaborate best practices in teaching and learning;
- d) Having a framework and a common language enable users to share course components and to know those parts of a course which can be shared as developing new contents is expensive;
- e) The further development of advanced learning systems and content is based on the digitisation of information content. For example, the ADL (Advanced Distributed Learning) Project, which develops the SCORM specification, defines a “SCO” (sharable content object) as one type of learning object. The ADL Project also provides a common method that makes content interoperable among different learning management systems (LMSs);
- f) There is a need to separate the content from the system(s) that help to deliver the content to the end-users. Users who conceptualise and develop the content need to be recognised for their efforts and their intellectual property needs to be protected from piracy and unauthorised use.