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SINGAPORE STANDARD

Specification for eLearning framework

– Part 10 : Digital content framework

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

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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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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.