

# Table of Contents

SECTION 1	SCORM® CONTENT AGGREGATION MODEL (CAM) OVERVIEW	1-1
1.1.	INTRODUCTION TO THE SCORM CONTENT AGGREGATION MODEL (CAM) BOOK	1-3
1.1.1.	What is Covered in the SCORM Content Aggregation Model (CAM) Book?	1-3
1.1.2.	Using the SCORM CAM Book	1-4
1.1.3.	Relationship with Other SCORM Books	1-5
1.2.	THE SCORM CONTENT AGGREGATION MODEL	1-8
SECTION 2	THE SCORM® CONTENT MODEL	2-1
2.1.	SCORM CONTENT MODEL COMPONENTS	2-3
2.1.1.	Asset	2-3
2.1.2.	Sharable Content Object (SCO)	2-4
2.1.3.	Activities	2-5
2.1.4.	Content Organization	2-6
2.1.5.	Content Aggregation	2-7
SECTION 3	SCORM® CONTENT PACKAGING	3-1
3.1.	CONTENT PACKAGING OVERVIEW	3-3
3.2.	CONTENT PACKAGE COMPONENTS	3-4
3.2.1.	Package	3-5
3.2.2.	Manifest	3-5
3.2.3.	Package Interchange File (PIF)	3-6
3.3.	COMPONENTS OF A MANIFEST	3-7
3.3.1.	Metadata	3-7
3.3.2.	Organizations	3-8
3.3.3.	Resources	3-15
3.3.4.	Content	3-16
3.4.	BUILDING CONTENT PACKAGES	3-17
3.4.1.	Manifest File	3-17
3.4.2.	Content Package Manifest Extensions	3-45
3.4.3.	Content Package Manifest Href Handling	3-45
3.5.	SCORM CONTENT PACKAGE APPLICATION PROFILES	3-52
3.5.1.	Resource Content Package	3-52
3.5.2.	Content Aggregation Content Package	3-55
3.5.3.	SCORM Content Package Application Profile Requirements	3-57
3.6.	BEST PRACTICES AND PRACTICAL GUIDELINES	3-59
3.6.1.	Multiple Organizations for a Single Course	3-59
3.6.2.	Using the <dependency> Element	3-59
SECTION 4	METADATA	4-1
4.1.	METADATA OVERVIEW	4-3
4.2.	LOM METADATA CREATION	4-5
4.2.1.	<lom> Element	4-7
4.2.2.	<general> Element	4-9
4.2.3.	<lifeCycle> Element	4-18
4.2.4.	<metaMetadata> Element	4-25
4.2.5.	<technical> Element	4-34
4.2.6.	<educational> Element	4-46
4.2.7.	<rights> Element	4-56
4.2.8.	<relation> Element	4-59
4.2.9.	<annotation> Element	4-65
4.2.10.	<classification> Element	4-68
4.2.11.	Common Data Types	4-76

4.3.	LOM XML SCHEMA VALIDATION APPROACHES .....	4-81
4.3.1.	Strict Schema Validation Approach.....	4-81
4.3.2.	Custom Schema Validation Approach.....	4-82
4.3.3.	Loose Schema Validation Approach.....	4-82
4.4.	METADATA EXTENSIONS.....	4-83
4.4.1.	Data Element Extension.....	4-84
4.4.2.	Vocabulary Extension.....	4-85
4.5.	METADATA AND SCORM CONTENT MODEL COMPONENTS .....	4-86
4.5.1.	Metadata Describing Content Aggregations .....	4-87
4.5.2.	Metadata Describing Content Organizations .....	4-88
4.5.3.	Metadata Describing Activities.....	4-89
4.5.4.	Metadata Describing SCOs.....	4-90
4.5.5.	Metadata Describing Assets.....	4-91
SECTION 5	SCORM® SEQUENCING AND PRESENTATION .....	5-1
5.1.	SEQUENCING AND PRESENTATION.....	5-3
5.1.1.	<sequencing> Element.....	5-3
5.1.2.	<controlMode> Element.....	5-5
5.1.3.	<sequencingRules> Element.....	5-7
5.1.4.	<limitConditions> Element.....	5-16
5.1.5.	<auxiliaryResources> Element .....	5-18
5.1.6.	<rollupRules> Element .....	5-19
5.1.7.	<objectives> Element .....	5-26
5.1.8.	<randomizationControls> Element.....	5-34
5.1.9.	<deliveryControls> Element.....	5-36
5.1.10.	<constrainedChoiceConsiderations> Element .....	5-37
5.1.11.	<rollupConsiderations> Element .....	5-39
5.1.12.	<sequencingCollection> Element .....	5-41
5.2.	PRESENTATION/NAVIGATION INFORMATION .....	5-43
5.2.1.	<presentation> Element .....	5-43
5.3.	RELATIONSHIP TO CONTENT PACKAGING.....	5-47
APPENDIX A	ACRONYM LISTING.....	A-1
APPENDIX B	REFERENCES.....	B-1
APPENDIX C	DOCUMENT REVISION HISTORY .....	C-1
APPENDIX D	DOCUMENT REVISION HISTORY .....	C-3

# List of Figures

Figure 1.1a: The SCORM Content Aggregation Model Book as Part of the SCORM Bookshelf .....	1-3
Figure 2.1.1a: Examples of Assets .....	2-3
Figure 2.1.2a: Conceptual Makeup of a SCO.....	2-4
Figure 2.1.3a: Conceptual Representation of Activities .....	2-5
Figure 2.1.4a: Conceptual Illustration of a Content Organization.....	2-6
Figure 2.1.5a: Conceptual Illustration of a Content Aggregation.....	2-8
Figure 3.2a: Content Package Conceptual Diagram.....	3-4
Figure 3.3a: Components of a Manifest .....	3-7
Figure 3.3.2.3.1a: IMS Content Hierarchy Terminology .....	3-12
Figure 3.3.3a: Conceptual Illustration of Manifest Resources .....	3-15
Figure 3.5.1a: Example of an Asset Represented as a <file> Element.....	3-53
Figure 3.5.1b: Example of an Asset Represented as a <resource> Element.....	3-54
Figure 3.5.1c: Example of a SCO Represented as a <resource> Element.....	3-55
Figure 3.5.2a: Example of a Content Aggregation Content Package and its Components.....	3-56
Figure 4.5.1a: Application of Metadata Describing a Content Aggregation .....	4-87
Figure 4.5.2a: Application of Metadata Describing a Content Organization .....	4-88
Figure 4.5.13a: Application of Metadata Describing an Activity.....	4-89
Figure 4.5.4a: Application of Metadata Describing a SCO.....	4-90
Figure 4.5.5a: Application of Metadata Describing Assets .....	4-91
Figure 5.3a: Sequencing Rules and Content Packaging Structure Relationship.....	5-47

# List of Tables

Table 3.3.2.3a: Example of Curricular Taxonomy Models .....	3-11
Table 3.4.1a: SCORM Content Packaging Application Profile Table Format.....	3-18
Table 3.4.1b: Explanation of Content Packaging Application Profile Multiplicity Requirements.....	3-18
Table 3.5.3a: SCORM Content Package Application Profile Manifest Element Requirements .....	3-57
Table 4.2a: Explanation of Multiplicity Requirements .....	4-5