

ISO 13527:2010-09 (E)

Space data and information transfer systems_ - XML formatted data unit (XFDU) structure and construction rules

CONTENTS

<u>Section</u>	<u>Page</u>
1 INTRODUCTION	1-1
1.1 PURPOSE AND SCOPE.....	1-1
1.2 RATIONALE.....	1-1
1.3 STRUCTURE OF THIS DOCUMENT.....	1-2
1.4 DEFINITIONS.....	1-4
1.5 CONFORMANCE.....	1-8
1.6 REFERENCES.....	1-9
2 OVERVIEW OF XFDU PACKAGING STRUCTURE	2-1
2.1 GENERAL.....	2-1
2.2 ENVIRONMENT.....	2-1
2.3 LOGICAL STRUCTURE.....	2-2
3 PHASED RELEASE DESIGN DECISIONS	3-1
4 XFDU MANIFEST COMPLEX TYPE	4-1
4.1 OVERVIEW OF XFDU MANIFEST.....	4-1
4.2 XML SCHEMA.....	4-2
4.3 UTILITY TYPES.....	4-3
5 PACKAGE HEADER	5-1
5.1 OVERVIEW.....	5-1
5.2 XML SCHEMA packageHeader Type.....	5-1
5.3 EXAMPLE: PACKAGE HEADER.....	5-3
6 CONTENT UNIT	6-1
6.1 OVERVIEW.....	6-1
6.2 XML SCHEMA FOR contentUnitType.....	6-1
6.3 EXAMPLES.....	6-3
6.4 SEMANTICS.....	6-5
7 INFORMATION PACKAGE MAP	7-1
7.1 OVERVIEW.....	7-1
7.2 XML SCHEMA INFORMATIONPACKAGEMAPTYPE.....	7-1
7.3 EXAMPLE: AN INFORMATION PACKAGE MAP.....	7-2

CONTENTS (continued)

<u>Section</u>	<u>Page</u>
8 DATA OBJECTS	8-1
8.1 OVERVIEW	8-1
8.2 XML SCHEMA FOR DATA OBJECT TYPE	8-1
8.3 EXAMPLES	8-4
8.4 SEMANTICS	8-5
9 METADATA OBJECTS	9-1
9.1 OVERVIEW	9-1
9.2 XML SCHEMA FOR METADATA OBJECTS	9-2
9.3 EXAMPLE: METADATA SECTION USING OAIS INFORMATION MODEL	9-4
10 BEHAVIOR SECTION AND BEHAVIOR OBJECTS	10-1
10.1 OVERVIEW	10-1
10.2 XML SCHEMA FOR BEHAVIOR OBJECTS	10-1
10.3 EXAMPLE OF DEFINING AN INTERFACE AND PARAMETER	10-3
11 FULL XML SCHEMA—NORMATIVE/RULING	11-1
12 SECURITY CONSIDERATIONS	12-1
12.1 OVERVIEW	12-1
12.2 SECURITY CONCERNS RELATED TO THIS RECOMMENDED STANDARD	12-1
12.3 POTENTIAL THREATS AND ATTACK SCENARIOS	12-2
12.4 CONSEQUENCES OF NOT APPLYING SECURITY TO THE TECHNOLOGY	12-2
12.5 DATA SECURITY IMPLEMENTATION SPECIFICS	12-2
ANNEX A COMPLETE EXAMPLE XFDU (INFORMATIVE)	A-1
ANNEX B UML FOR XFDU (INFORMATIVE)	B-1
ANNEX C LEGEND FOR XML AUTHORITY FIGURES (INFORMATIVE)	C-1
ANNEX D INFORMATIVE REFERENCES (INFORMATIVE)	D-1

Figure

2-1 Environment/Conceptual View of an XFDU	2-2
2-2 XFDU Manifest Logical View	2-4
4-1 First Level Decomposition of XFDUType	4-2

CONTENTS (continued)

<u>Figure</u>	<u>Page</u>
4-2 extensionType Schema Diagram	4-4
4-3 referenceType Schema Diagram.....	4-4
4-4 dataObjectPointerType Schema Diagram	4-5
4-5 fileContentType/binaryData/xmlData Schema Diagram	4-5
4-6 checksumInformationType Schema Diagram	4-6
5-1 packageHeaderType Schema Diagram	5-1
6-1 contentUnitType Schema Diagram.....	6-1
7-1 informationPackageMapType Schema Diagram	7-1
8-1 dataObjectType Schema Diagram	8-1
9-1 metadataObjectType and metadataSectionType Schema Diagram	9-2
10-1 behaviorObjectType Schema Diagram	10-1
11-1 Full XFDU Schema Diagram	11-1

Table

3-1 XFDU Functionality by Recommended Standard Issue	3-1
--	-----