DIN CEN ISO/TS 19139-1:2020-01 (E)

Geographic information - XML schema implementation - Part 1: Encoding rules (ISO/TS 19139-1:2019); English version CEN ISO/TS 19139-1:2019

Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Symbols and abbreviated terms **2**
4.1 Abbreviated terms 2
4.2 Namespace abbreviations 2
4.3 UML model stereotypes 3
4.3.1 Overview of UML model stereotypes 3
4.3.2 Stereotypes of classes 3
4.3.3 Stereotypes of attributes 3
4.3.4 Stereotypes of links 3
4.3.5 Stereotypes of packages 4

5 Conformance **4**

6 Requirements for encoding **4**
6.1 Overview of requirements 4
6.2 Rule-based 4
6.3 Quality 5
6.4 Web implementations 5
6.5 Use of external XML implementations 5
6.6 Polymorphism 5

7 Encoding rules **5**
7.1 Overview of encoding rules 5
7.2 Default encoding 6
7.2.1 XML class type (XCT) 6
7.2.2 XML Class Global Element (XCGE) 8
7.2.3 The XML Class Property Type (XCPT) 9
7.3 Special case encodings 10
7.3.1 Overview of special case encodings 10
7.3.2 Abstract classes 11
7.3.3 Inheritance and sub-class encodings 12
7.3.4 Enumeration encodings 15
7.3.5 CodeList encoding 17
7.3.6 Union encoding 19
7.3.7 Encoding of MetaClasses 21
7.3.8 Encoding of externally identified implementations 22
7.4 XML Namespace package encoding 29
7.5 XML schema package encoding 29

8 Additional encodings **32**

9 Encoding for modularity and reuse **32**
9.1 UML packages and XML namespaces 32
9.2 UML model for XML implementation 32
9.3 Implementation Approach for Decoupling XML Packages 33

9.3.1 Overview 33
9.3.2 Implementation Approach Rules 33
9.3.3 Example of Decoupling 35
Annex A (normative) **Abstract test suite** **38**
Annex B (informative) **Backward compatibility** **39**

Bibliography **40**