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AMENDMENT 1
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Geographic information — Data product specifications

AMENDMENT 1: Requirements relating to the inclusion of an application schema and feature catalogue and the treatment of coverages in an application schema

Information géographique — Spécifications de contenu informationnel

AMENDEMENT 1: Exigences relatives à l'inclusion d'un schéma d'application et d'un catalogue d'objets géographiques et au traitement des couvertures dans un schéma d'application

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Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

Amendment 1 to ISO 19131:2007 was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*.

Geographic information — Data product specifications

AMENDMENT 1: Requirements relating to the inclusion of an application schema and feature catalogue and the treatment of coverages in an application schema

Page 9, Clause 10

Replace all of Clause 10 with the following:

10 Data content and structure

10.1 Description of content and structure for all data products

The content information of a data product is described in terms of an application schema and a feature catalogue, and references to these and a narrative description shall be included in the specification.

An application schema provides the formal description of the data structure and content of the data product. It is a conceptual model described using a conceptual schema language such as UML. It shall include the representation of feature types, property types including attribute types, feature operations and feature associations, inheritance relations and constraints. Attribute types cover descriptive, geometric and temporal properties. Associations include spatial and temporal relationships such as topological relations as well as non-spatial relationships (e.g. ownership) that occur between feature types.

The elaboration of the application schema shall be in accordance with ISO 19109:2005, more specifically applying the rules in Clauses 7 and 8, and in particular those in the following subclauses of ISO 19109:2005:

8.3 when the application schema is created in UML;

8.5 when metadata has to be added on feature instances, feature attributes or associations between features (e.g. quality information);

8.6 temporal rules, when describing temporal feature type properties;

8.7 spatial rules, when describing spatial feature type properties with spatial data types;

8.9 spatial referencing using geographic identifiers, when describing spatial feature type properties with geographic identifiers.

A feature catalogue is a repository which provides the semantics of all feature types, together with their attributes and attribute value domains, association types between feature types, and feature operations contained in the application schema. All the feature types, their attributes and attribute value domains, the association types between feature types, and feature operations expressed in the application schema shall be described in a feature catalogue.

The feature catalogue shall be realized in accordance with ISO 19110. It may be included in the data product specification or may be externally referenced by the name of the feature catalogue. The data product specification shall include a description of each of the features in the data product. This shall include a reference to, or a description of, a feature and attribute catalogue as described in ISO 19110.

A formal definition for content and structure of data is given in E.2, which provides a UML model and the corresponding data definitions.

10.2 Additional requirements for coverage data

A coverage is a subtype of feature. Whereas most feature types carry a single value for each attribute of the feature as a whole, a coverage behaves like a function that returns one or more feature attribute values for each of a set of direct positions within a spatiotemporal domain. As a result, an application schema for a coverage provides additional structure for the attributes of the coverage (ISO 19123). It includes a set of spatial and/or temporal attributes that are organized as the domain of the coverage, while the remaining attributes are provided as the range of the coverage. In addition, a coverage may have attributes, associations, or operations that are attached to the coverage as a whole, just as in the case of any other feature type.

A product may include instances of one or more coverage types in addition to instances of other feature types. The application schema for such a product shall describe the included coverage types in accordance with ISO 19123. All of the coverage feature types, their attributes and attribute value domains, the association types between feature types, and feature operations expressed in the application schema shall be described in a feature catalogue.

Page 20, E.2

Replace Figure E.2 with the following: