SLOVENSKI STANDARD
SIST EN ISO 19115-2:2010

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Geografske informacije - Metapodatki - 2. del: Razširitev za podobe in mrežne podatke (ISO 19115-2:2009)

Geographic information - Metadata - Part 2: Extensions for imagery and gridded data (ISO 19115-2:2009)

Geoinformation - Metadaten - Teil 2: Erweiterungen für Bild- und Rasterdaten (ISO 19115-2:2009)

Information géographique - Métadonnées - Partie 2: Extensions pour les images et les matrices (ISO 19115-2:2009)

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07.040	Astronomija. Geodezija. Geografija	Astronomy. Geodesy. Geography
35.240.70	Uporabniške rešitve IT v znanosti	IT applications in science

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 19115-2

January 2010

ICS 35.240.70

English Version

Geographic information - Metadata - Part 2: Extensions for imagery and gridded data (ISO 19115-2:2009)

Information géographique - Métadonnées - Partie 2: Extensions pour les images et les matrices (ISO 19115-2:2009)

Geoinformation - Metadaten - Teil 2: Erweiterungen für Bild- und Rasterdaten (ISO 19115-2:2009)

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EN ISO 19115-2:2010 (E)

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Foreword

The text of ISO 19115-2:2009 has been prepared by Technical Committee ISO/TC 211 "Geographic information/Geomatics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 19115-2:2010 by Technical Committee CEN/TC 287 "Geographic Information" the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2010, and conflicting national standards shall be withdrawn at the latest by July 2010.

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INTERNATIONAL STANDARD

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Geographic information — Metadata —

Part 2:
Extensions for imagery and gridded data

Information géographique — Métadonnées —

Partie 2: Extensions pour les images et les matrices

Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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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.

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ISO 19115-2 was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*.

ISO 19115 consists of the following parts, under the general title *Geographic information — Metadata*:

⎯ *Geographic information — Metadata*

⎯ *Part 2: Extensions for imagery and gridded data*

Introduction

Imagery and gridded data are important information sources and products used within a geospatial environment by geographic information systems. The production of imagery and gridded data follows one or more process chains that begin with remote sensing data, scanned maps, field data collection or other sensing methods and end with the creation of the end data products. The production process needs to be documented in order to maintain quality control over the end products. In addition, metadata about the geometry of the measuring process and the properties of the measuring equipment need to be retained with the raw data in order to support the production process.

Within the suite of ISO geographic information standards, ISO 19115 defines the guidelines for describing geographic information and services. While the ISO 19115 metadata model does provide some provisions for imagery and gridded data, the requirements were not fully developed at the time ISO 19115:2003 was drafted. To permit the development of ISO 19115 to proceed, inclusion of metadata definitions for imagery and gridded data was deferred until the framework for these data was more fully specified within the suite of ISO geographic information standards. Additionally, other standards that implement metadata for imagery and gridded data have been surveyed and are described in ISO/TR 19121.

The object of this part of ISO 19115 is to provide the additional structure to more extensively describe the derivation of geographic imagery and gridded data. This structure is intended to augment ISO 19115.

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Geographic information — Metadata —

Part 2:
Extensions for imagery and gridded data

1   Scope

This part of ISO 19115 extends the existing geographic metadata standard by defining the schema required for describing imagery and gridded data. It provides information about the properties of the measuring equipment used to acquire the data, the geometry of the measuring process employed by the equipment, and the production process used to digitize the raw data. This extension deals with metadata needed to describe the derivation of geographic information from raw data, including the properties of the measuring system, and the numerical methods and computational procedures used in the derivation. The metadata required to address coverage data in general is addressed sufficiently in the general part of ISO 19115.

2   Conformance

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2.1   Conformance requirements (standards.iteh.ai)

Metadata shall be provided as specified in Clause 6 and Annexes A and B of this part of ISO 19115 and ISO 19115:2003, Clause 6 and Annexes A and B.

User-defined metadata extensions to this part of ISO 19115 shall be defined and provided as specified in ISO 19115:2003, Annex C.

Any metadata claiming conformance with this part of ISO 19115 shall pass the requirements described in Annex C of this part of ISO 19115 and the abstract test suite presented in ISO 19115:2003, Annex D.

2.2   Metadata profiles

Any profile conforming to this part of ISO 19115 shall conform to the rules for creating a profile given in ISO 19115:2003, C.6.

3   Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/TS 19103:2005, *Geographic information — Conceptual schema language*

ISO 19107:2003, *Geographic information — Spatial schema*

ISO 19115:2003, *Geographic information — Metadata*

ISO/TS 19139:2007, *Geographic information — Metadata — XML schema implementation*

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4   Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 19115:2003 and the following apply.

4.1
attribute
named property of an entity

[ISO/IEC 2382-17:1999]

NOTE   Describes a geometrical, topological, thematic, or other characteristic of an entity.

4.2
band
range of wavelengths of electromagnetic radiation that produce a single response by a sensing device

[ISO/TS 19101-2:2008]

4.3
class
description of a set of objects that share the same **attributes**, operations, methods, relationships, and semantics

[ISO/TS 19103:2005]

4.4
coverage
feature that acts as a function to return **values** from its range for any direct position within its spatial, temporal or spatiotemporal **domain**

[ISO 19123:2005]

EXAMPLE   Examples include a raster **image**, polygon overlay, or digital elevation matrix

4.5
data
reinterpretable representation of information in a formalised manner suitable for communication, interpretation, or processing

[ISO/IEC 2382-1:1993]

4.6
data type
specification of a **value domain** with operations allowed on **values** in this **domain**

[ISO/TS 19103:2005]

4.7
dataset
identifiable collection of **data**

[ISO 19115:2003]

4.8
dataset series
collection of **datasets** sharing the same product specification

[ISO 19115:2003]

4.9
domain
well-defined set

[ISO/TS 19103:2005]

4.10
event
action which occurs at an instant

[ISO 19108:2002]

4.11
geolocation information
information used to determine geographic location corresponding to **image** location

4.12
georectified
corrected for positional displacement with respect to the surface of the earth

4.13
georeferencing
process of determining the relation between the position of **data** in the image coordinates and its geographic or map location

4.14
grid
network composed of two or more sets of curves in which the members of each set intersect the members of the other sets in an algorithmic way

[ISO 19123:2005]

NOTE   The curves partition a space into **grid** cells.

4.15
grid coordinate system
coordinate system in which a position is specified relative to the intersection of curves

4.16
grid coordinates
sequence of two or more numbers specifying a position with respect to its location on a **grid**

4.17
gridded data
data whose **attribute values** are associated with positions on a **grid coordinate system**

4.18
ground control point
point on the earth that has an accurately known geographic position

4.19
image
gridded **coverage** whose **attribute values** are a numerical representation of a physical parameter

NOTE   The physical parameters are the result of measurement by a **sensor** or a prediction from a model.

4.20
imagery
representation of phenomena as **images** produced by electronic and/or optical techniques

[ISO 19101-2:2008]

NOTE   In this part of ISO 19115, it is assumed that the objects and phenomena have been sensed or detected by camera, infrared and multispectral scanners, radar and photometers, or similar devices.