

## About This Standard

Mandated

**Standard Identifier** ISO/TS 19139:2007

### **Title of Standard**

Geographic information -- Metadata -- XML schema implementation, 17 April 2007

### **Standards History**

Introduced to Registry	Date Emerging	Date Mandated	Last Status Update	Last Status Review	Inactive/Retired
2007-11-06	n/a	2007-11-06	2007-11-06	2007-11-06	n/a

**Standards Body** [ISO](#)

[Broken Link?](#)

**URL to Access or Acquire** <http://www.ansi.org>

### **Working Group**

**Primary Owner** Geospatial Intelligence TWG (GWG)

**Secondary Interest** No Secondary Interest

**Service Area** GEOINT: Geospatial

**KIPs** No KIP Found

### **Standard Applicability**

#### **2007-11-08**

ISO/TS 19139 is applicable to provide a common XML specification for describing, validating and exchanging geographic metadata. It is intended to promote interoperability, and exploit ISO 19115's advantages in a concrete implementation specification.

### **Standard Abstract**

#### **2007-11-08**

This part of the ISO 191XX Family of Standards provides a spatial metadata XML (spatial metadata eXtensible Mark-up Language (smXML)) encoding, an XML schema implementation derived from ISO 19115, Geographic information Metadata. The metadata includes information about the identification, constraint, extent, quality, spatial and temporal reference, distribution, lineage, and maintenance of the digital geographic dataset. ISO/TS 19139 is designed to provide a common XML specification for describing, validating and exchanging geographic metadata. The Standard is intended to promote interoperability, and exploit ISO 19115's advantages in a concrete implementation specification. The implementation specification details the following: The XML schemas will be derived directly from the harmonized ISO 191XX UML master model to ensure one common schema. The transformation of the ISO 19115 and related ISO/TC 211 abstract UML models into XML schema. For informative purposes, scripts for performing the transformation are referenced. This process follows the guidelines defined by ISO 19106. Provides dataset implementation and extension examples. Provides an abstract conformance test suite. Although this specification is directly intended to describe geographic metadata for datasets, the nature of the XML

schema allows the schemas defined here to be applied to datasets, aggregations of datasets, geographic features, feature attributes, feature types, and feature attribute types, etc. While the specifics of non-dataset usage of the XML schemas defined here are outside the scope of this specification, these XML schemas are designed to support these types of implementations.

### **Profiling Questions**

#### **GEOINT: Geospatial**

- Are you using the ISO 19115 Geographic Information Metadata Standard or does your system require an International Standard that provides a clear procedure for the description of digital geographic datasets so that users will be able to determine whether the data in a holding will be of use to them and how to access the data or do you need a common XML specification for describing, validating and exchanging geospatial metadata?

### **Products Incorporating This Standard**

ISO/TS 19139 has been incorporated in the National System for Geospatial Intelligence (NSG) Geospatial Core Metadata Profile, v1.0, August 2007, which has been adopted by the NGA and others through programs such as GeoScout, the Air Force Distributed Common Ground System (AF-DCGS), Analytical Spatial Data Initiative (ASDI), Multinational Geospatial Co-Production Group Technical Group (MGCP), and Geospatial Knowledge Base-Feature (GKB-F).

### **Relevant Information**

In addition to 19139, the following are profiled in the "National System for Geospatial Intelligence (NSG) Geospatial Core Metadata Profile for Discovery and Retrieval, v1.0, August 2007" the Department of Defense Discovery Metadata Specification (DDMS), the ICISM Data Element Dictionary v2.0.3, and the Dublin Core Metadata element Set. This citation was authored by the GWG Metadata Focus Group.

### **Implementation Guidance**

ISO/TS 19139 is among a suite of geospatial standards developed by ISO TC 211 widely used by the geospatial community. The objective is to promote a common suite of geospatial standards to assist the geospatial community in developing interoperable and harmonized functions. This part of the ISO 191XX Family of Standards provides a spatial metadata XML (spatial metadata eXtensible Mark-up Language (smXML)) encoding, an XML schema implementation derived from ISO 19115, Geographic information -- Metadata. The metadata includes information about the identification, constraint, extent, quality, spatial and temporal reference, distribution, lineage, and maintenance of the digital geographic dataset. ISO/TS 19139 is designed to provide a common XML specification for describing, validating and exchanging geographic metadata. It is intended to promote interoperability, and exploit ISO 19115's advantages in a concrete implementation specification. The implementation specification details the following: The XML schemas will be derived directly from the harmonized ISO 191XX UML model to ensure one common schema. The transformation of the ISO 19115 and related ISO/TC 211 abstract UML models into XML schema. For informative purposes, scripts for performing the transformation are referenced. This process follows the guidelines defined by ISO 19118 Geographic information - Encoding. Provides dataset implementation and extension examples. Provides an abstract conformance test suite. Although this specification is directly intended to describe geographic metadata for datasets, the nature of the XML schema allows the schemas defined here to be applied to datasets, aggregations of datasets, geographic features, feature attributes, feature

types, and feature attribute types, etc. While the specifics of non-dataset usage of the XML schemas defined here are outside the scope of this specification, these XML schemas are designed to support these types of implementations. In addition, 19139 is profiled with the Department of Defense Discovery Metadata Specification (DDMS), the ICISM Data Element Dictionary v2.0.3, and the Dublin Core Metadata element Set, in the "National System for Geospatial Intelligence (NSG) Geospatial Core Metadata Profile, v1.0, August 2007" which establishes the necessary full set of metadata to satisfy geospatial needs.

### **Standard Selection Criteria**

#### **Net-Centric Interoperability**

This standard (in conjunction with other ISO TC 211 standards) will form the basis for the interchange and distribution of future geospatial intelligence data. It is to be used specifically with ISO 19115.

#### **Technical Maturity**

This is a mature International Standard. Drafts of this standard were reviewed by experts from a number of nations, and the standard was approved by multiple national standards bodies, including the USA (ANSI). Examples of military systems that use this standard are identified in the Products Incorporating this Standard section.

#### **Public Availability**

This standard is publicly available and may be purchased in either hardcopy (paper) or softcopy (PDF) form from the International Organization for Standardization (<http://www.iso.org>) or ANSI (<http://www.ansi.org>).

#### **Implementability**

This standard has been adopted by the Open Geospatial Consortium (OGC) under an agreement with ISO TC 211.

#### **Authority**

ISO TC 211 - Geographic Information <http://www.isotc211.org/> <http://www.iso.org/>  
<http://www.ansi.org/>

**Standard Type** Non-Military

**Keywords for Search** None