



19118 Geographic information – Encoding

This part of ISO 191\*\* Family of Standards specifies the encoding rules that shall be used for data interchange purposes. The encoding rule allows geographic information defined in an application schema to be coded into a system independent data structure suitable for transport or storage. The encoding rule specifies the type of data to be encoded, the syntax, structure and coding schemes used in the resulting data structure. The encoding rule defined shall be used to implement encoding services.

The application schemas shall be defined using the standardized conceptual schema language specified in part 3 – Conceptual schema language and shall be in conformance with the rules mandated in part 9 – Rules for application schemas.

The encoding rule specified shall be compatible with the conceptual schema language chosen, i.e. the Universal Modelling Language (UML). Since there are no encoding rules associated with UML, this part of ISO 191\*\* Family of Standards defines an encoding rule based on the Extensible Markup Language (XML). Even though several encoding rules exist as ISO standards, the emerging Extensible Markup Language seems best fit for defining one internationally adopted encoding rule for geographic information. XML is system and computing platform independent, it has a large market push and it is designed to be interoperable with the World Wide Web.

The choice of one international encoding rule does not exclude application domains and national countries to define and use their own encoding rules that can be platform dependent or more effective with regard to data size or processing complexity.

This part of ISO 191\*\* Family of Standards does not define any digital media communication formats, neither does it define any transfer protocols.

The standard is of particular relevance to the following sectors:

Sector	Of particular interest
Developers of GIS products	Yes
Developers of GIS application systems	Yes
Producers/ suppliers of geographic data	
Users of geographic data and GIS	
Developers of standards	

For further information on this standard and its implementation, please contact ISO/TC 211 secretariat via [www.isotc211.org](http://www.isotc211.org).