

Mexican Technical Standard for Geographic Metadata Development



Context

- Technical Standard for the development of geographic metadata (NTM) was defined in the General Management of Geography and Environment (DGGMA) of the INEGI to meet the needs of documentation of spatial data produced in Mexico, keeping compatibility with international standards.
- The Standard was made official by its publication in the Official Gazette dated 24 December 2010. In force since its publication, a period of one year adoption was considered.
- The Standard regulates the data documentation of the Production Information Units in the country and contributes to the development of the National System of Statistical and Geographic Information (SNIEG).



Context

- Since the ISO 19115 standard is very complex and its track to create metadata is complicated, the Standard is created from which the work is facilitated. The Mexican standard sought compliance with the ISO 19115 standard based on specified in its core (i.e. the fundamental elements were selected).
- It is considered most elements of standard geographic metadata the Federal Geographic Data Committee (FGDC) used by INEGI to achieve greater compatibility between the previously developed and the metadata standard, besides contributing to the conversion between FGDC and NTM cause less impact. In addition, some elements defined by the DGGMA within the standard included.



Context

- The Standard was developed in Spanish language and similar to that used in the previous documentation FGDC structure to achieve certain familiarity and understanding of it.
- Metadata implementation requires some expertise and substantial dedication, because, besides knowing well the techniques and basic characteristics of spatial data set or product being documented, it is necessary to know what information should be collected in each section and element of the Standard , how and with what criteria. Therefore, it was necessary to create a document which describes the elements of the standard and considerations for each, to thereby clarify its purpose, to achieve the same interpretation and a common result.



Context

Challenges:

- Getting the community of users of geographic information from the Institute and the State Units know, interpret, adopt and use the Standard together with its developed applications to implement it, so that documents their products or data sets generated more easily and appropriately through metadata.

Proposed solutions:

- Disseminate and promote the Standard, develop applications and training within the Institute and the State Units, as well as to respond to the various problems that arise around the Standard.



Origin

- The International Organization for Standardization (ISO) created the Committee No. 211 for the generation of standards for Geographic/Geomatics Information, 1994.
- The purpose of the International Standard ISO 19115 is to provide a structure for describing digital geographic metadata.
- It is consistent with the standard of the Federal Geographic Data Committee (FGDC), used and distributed in Mexico since 1999.
- Simplifies the establishment of spatial data infrastructure at local, regional and global levels.



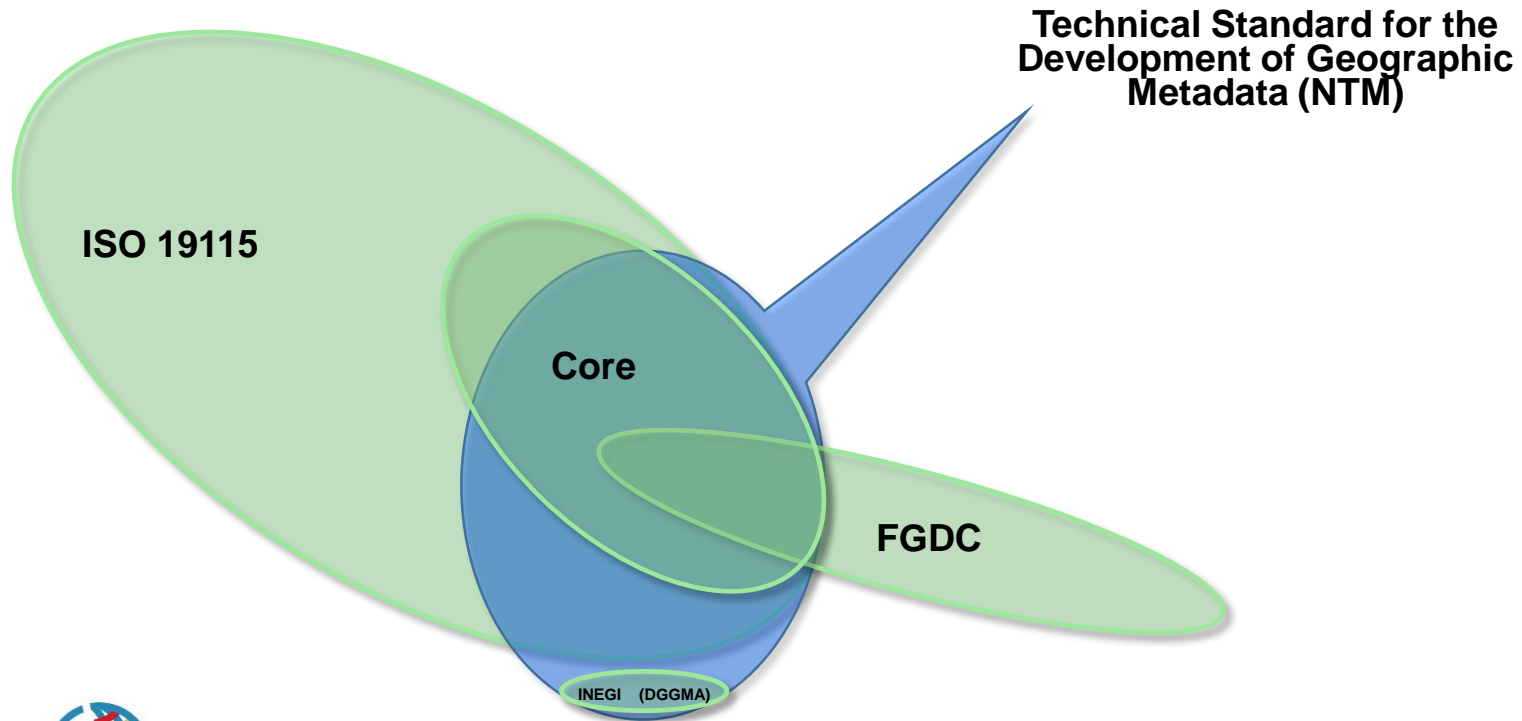
Origin

- The worldwide trend is to implement or migrate to a profile according to the ISO 19115 guidelines, among which are:
 - American Metadata Profile
 - Latin American Metadata Profile
 - Colombian Technical Standard 4611
 - Spanish Core metadata
 - Profiles developed in Cataluña and Navarra
- The proposal of a profile for Mexico arise in 2005, beginning its development and resulting in the Technical Standard for Geographic Metadata Development



Elements that comprise it

- Metadata Profile
 - It is a selection of data elements necessary to document data and geographical products
 - Consist of 149 elements.

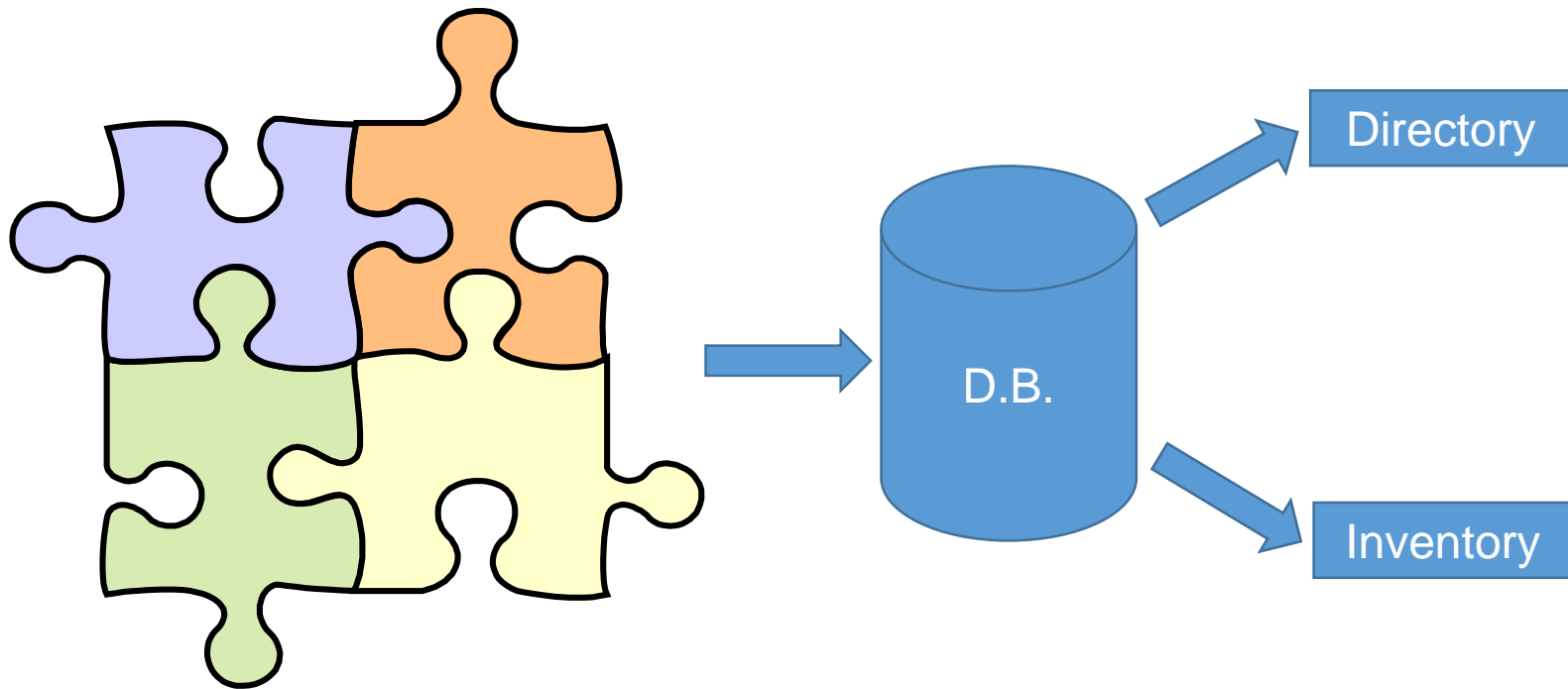


Objectives

- Generate a Mexican standard that meets the need of document the spatial data produced in Mexico, conforms with international standards.
- Integrate a fundamental component to the National Register of Geographic Information to answer the following questions:
 - What is produced?
 - What are their characteristics?
 - What were the inputs used and on what date were they generated?
 - Who has produced the information and how it can be accessed on?

Objectives

- The State Units directory and its inventories can be generated as additional products.



Nucleus Elements

- They are required to identify quickly the characteristics of a data set or product:
 - The topic of the documented data or products
 - Covered territory
 - The time reference
 - Contact information in the State Unit that generated the data sets or products

Nucleus Elements

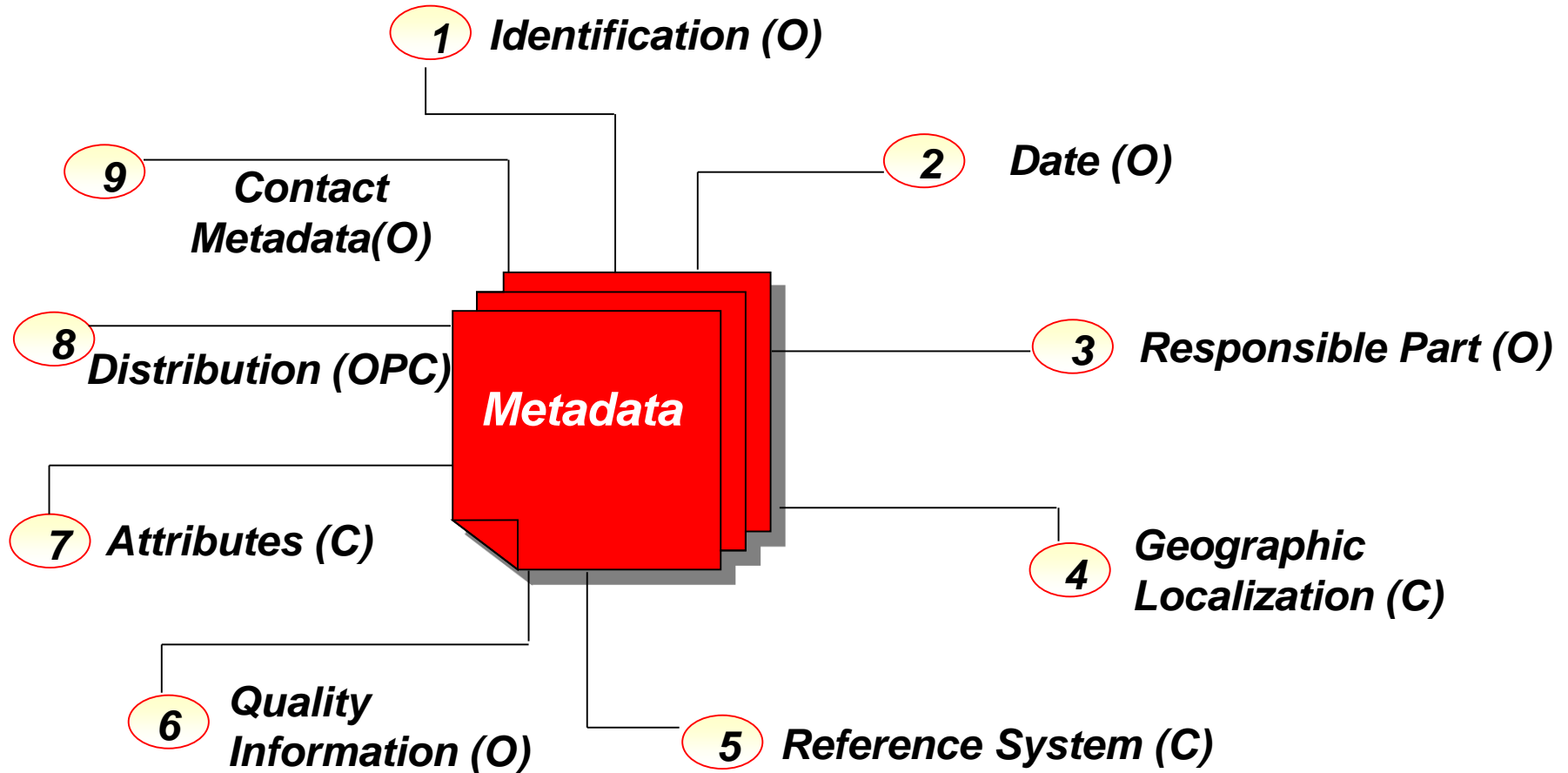
- Core elements of the ISO 19115 selected: all mandatory (O) and conditional (C), and most of the optional (OPC)

Data Set Title (O)	Spatial Representation Type (OPC)
Data Set Date (O)	Reference System (OPC)
Data set Responsible Part (OPC)	Lineage (OPC)
Geographical location Data Set (by 4 coordinates or by geographic identifier) (C)	Online Resource (OPC)
Dataset language (O)	Metadata file identifier (OPC)

Nucleus Elements

Data Set Character Encoding (C)	Metadata Standard Name (OPC)
Data Set Subject Category (O)	Metadata Standard Version (OPC)
Data Set Spatial Resolution (OPC)	Metadata Language (C)
Data Set Descriptive Summary (O)	Metadata Character Encoding (C)
Distribution File Format (OPC)	Metadata Contact Point (O)
Data Set Additional Extension Information (vertical and temporal) (OPC)	Metadata Creation Date (O)

Sections



Sections

- 1. Identification data set (O):
 - Basic information to uniquely identify a data set
- 2. Dates related to the dataset (O):
 - Information of the date of an event considered to generate the data set or product.
- 3. Responsible part for the data set (O):
 - Information of the person (s) responsible (s) and organizations associated with the data set.
- 4. Geographic location of the dataset (C):
 - Mechanism used to represent spatial information in the data set.

Sections

- 5. Reference system (C):
 - The description of the horizontal reference system and / or vertical for coordinates in the data set and the means to encode.
- 6. Quality of information (O):
 - A general assessment of the quality of the data set.
- 7. Attributes (C):
 - Details about the information content of the data set, including the types of entities, their attributes and domains attributes.
- 8. Distribution (OPC):
 - Information about the distributor and options for assembly data

Sections

- 9. Contact information for metadata (O):
 - Information on current metadata and part responsible.

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(Segunda Sección)

DIARIO OFICIAL

Viernes 24 de diciembre de 2010

INSTITUTO NACIONAL DE ESTADISTICA Y GEOGRAFIA

ACUERDO por el que aprueba la Norma Técnica para la elaboración de Metadatos Geográficos.

Al margen un sello con el Escudo Nacional, que dice: Estados Unidos Mexicanos.- Instituto Nacional de Estadística y Geografía.- Junta de Gobierno.

Con fundamento en lo dispuesto en los artículos 26 del Apartado B de la Constitución Política de los Estados Unidos Mexicanos; 17 fracción III, 26, 27, 30 fracciones III y IV, 32 fracciones I y II, 55 fracciones I y II, 57, 58 y 77 fracción VIII de la Ley del Sistema Nacional de Información Estadística y Geográfica; 5 fracción VIII, 24 fracción XIII del Reglamento Interior del Instituto; así como, lo previsto, en la Regla Séptima fracciones III, IV, VII, VIII y XII de las Reglas para la Integración y Operación de los Comités Ejecutivos de los Subsistemas Nacionales de Información, y

CONSIDERANDO

Que el Instituto Nacional de Estadística y Geografía, en su carácter de organismo público con autonomía técnica y de gestión, personalidad jurídica y patrimonio propios, tiene por objeto, entre otros, regular el Sistema Nacional de Información Estadística y Geográfica, cuya finalidad es suministrar a la sociedad y al Estado información de calidad, pertinente, veraz y oportuna, a efecto de coadyuvar al desarrollo nacional;

Que el Instituto, en su calidad de unidad central coordinadora del Sistema, tiene entre sus funciones, las de normar y coordinar el Sistema y las Actividades Estadísticas y Geográficas, que lleven a cabo las Unidades del Estado, tomando en cuenta los estándares nacionales e internacionales, así como las mejores prácticas en la materia;

Que los metadatos son parte fundamental de los Grupos de Datos del Subsistema Nacional de Información Geográfica y del Medio Ambiente, ya que facilitan la comprensión de sus características;

Que los metadatos son necesarios para sustentar el descubrimiento, la evaluación y la aplicación de los datos geográficos más allá de la organización o el proyecto de origen;

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